

SWEDEN GNI INVENTORY

September 2025

The GNI Inventory gives a detailed description of sources, methods and models for estimating Sweden's Gross Domestic Product (GDP) and Gross National Income (GNI) in current prices

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Acronyms and abbreviations

AE	Local unit
AG	Employer PAYE returns
AGI	Employer PAYE returns at individual level
AMPAK	Labour statistics based on administrative sources
ANST	Employment statistics based on administrative data
AST	Local Workplace
BAST	Balance Statistics
BHU	Survey on housing and rents
BIS	Bank for International Settlements
BOP	Balance of Payments
BOSM	Number of unlet apartments
BRF	Multiple-occupancy buildings,
BUT	Survey of housing Costs
CAN	The Swedish Council for Information on Alcohol and Other Drugs
CFAR	Central register of enterprises and local units
CFC	Consumption of Fixed Capital
CIF	Cost, insurance, freight
CN	Combined Nomenclature
COFOG	Classification of the Functions of Government
COICOP	Classification of Individual Consumption by Purpose
CPI	Consumer Price Index
E&M	Extrapolation and Models
EAA	Economic Accounts for Agriculture
EC	European Commission
ECB	European Central Bank
ECDC	European Centre of Disease Prevention and Control
EEC	The European Economic Community
EMU	Economic and Monetary Union of the European Union
ESV	The Swedish National Financial Management Authority
EU	European Union
EUDA	European Union Drugs Agency
fAGD	Simplified employer PAYE return
FAME	Fatty Acid Methyl Ester
FAO	Food and Agriculture Organisation of the United Nations
FDI	Foreign direct investment
FE	Enterprise unit
FG	Enterprise group
FI	Swedish Financial Supervisory Authority
FISIM	Financial Intermediation Services Indirectly Measured
FMR	Financial market statistics
FOB	Free on board
FVC	Financial vehicle corporations
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
GNI	Gross National Income
GNIQ	GNI Questionnaire
GVA	Gross value added
HBS	Household Budget Survey

HCS	Household consumption statistics
HEK	Household's finances
HERP	Harmonized European Revision Policy
HFCE	Household final consumption expenditure
HiB	Rents for dwellings
IC	Intermediate consumption
IEEAF	Integrated environmental and economic accounting for forests
IHT	Price Index for Domestic Supply (Internal NA index, year_t weights)
IIP	International Investment Position
IKU	Multi-dwelling buildings
ILO	International Labour Organisation
IMPI	Import Price Index
INFI	Industrial use of purchased goods and services
INSEKT	Standard Classification by Institutional Sector
IPS	Individual pension savings
ITGS	International trade in goods statistics
ITPI	Price Index for Domestic Supply (year_t-2 weights)
ITSS	International trade in services survey
IVP	Production of commodities and industrial services
JE	Legal unit
KAU	Kind of activity unit
KLP	Short-term statistics, wages and salaries, private sector
KOREBA	Quarterly survey for the local government corporations
KU	Income statement
LBR	The Swedish farm register
LFS	Labour Force Surveys
LINDA	Longitudinal Individual Data Base
LISA	Longitudinal integration database for health insurance and labour market studies
LKAU	Local kind activity unit
LSUM	Gross pay based on administrative sources
MCPFE	The Ministerial Conference on the Protection of Forests in Europe
MFI	Monetary Financial Institutions
MMF	Money market funds
MNE	Multinational enterprises
MOSS	Mini One-Stop-Shop
MT	Missing trader
N/A	Not applicable
NA	National Accounts
NACE	The Statistical classification of economic activities in the European Community
NFI	Swedish National Forest Inventory
NPISH	Non-profit institutions serving households
OSS	One-Stop-Shop
OTC	Over the counter (options, derivatives)
PAYE	Pay as you earn
PIM	Perpetual Inventory Method
PPI	Producer Price Index
PPP	Purchasing Power Parity
PRODCOM	Production Statistics in the Community
R&D	Research and Development
RAMS	Labour statistics based on administrative sources

RAPS	System for Regional Analysis and Forecasts
RBFS	Riksbank's regulations and general guidelines
RIPS	Data on Individual pension savings
ROT	Repairs, Conversion, Extension (Tax reduction)
RoW	Rest of the World
RQ	Report on the quality of GNI data
RTB	Total Population Register
RUT	Cleaning, Maintenance and Laundry (Tax reduction)
RUTS	Foreign assets and liabilities
SABO	The Swedish Association of Public Housing Companies
SAD	Subject Area Design
SALAR	Swedish Association of Local Authorities and Regions
SAMU	The system for co-ordination of surveys and samples from the Business Register at Statistics Sweden
SAMW	Swedish Agency for Marine and Water Management
SAS	Scandinavian Airlines
SBR	Statistical Business Register
SBS	Structural Business Statistics
SCB	Statistics Sweden
SDR	Special Drawing Rights
SEPA	Swedish Environmental Protection Agency
SFA	Swedish Forest Agency
SFS	Swedish Code of Statistics
SKL	Swedish National Laboratory of Forensic Science
SLU	Swedish University of Agricultural Sciences
SNI	Swedish Standard Industrial Classification
SoRAD	The Centre for Social Research on Alcohol and Drugs, Stockholm University
SOU	Swedish Government Official Reports
SRU	Standardised accounting statements
STA	The Swedish Tax Agency
SUT	Supply and Use Tables
SVDB	Swedish securities database (SCB)
TSFS	Swedish Transport Agency regulations
UFS	Basis of central government net lending
VAT	Value Added Tax
VINN	Swedish database on securities holdings (Riksbank)

Chapter 1 Overview of the system of accounts

1.1 Introduction

The Swedish economy is usually described as a small and open economy with a relatively high share of public sector activity. The table below shows the main aggregates and their relation to GDP.

Table 1.1 Balance of resources in 2021, SEK million and percentage Share of GDP

Main aggregates of National accounts	SEK million	Per cent
Household Final Consumption Expenditures	2 429 525	45
Government Final Consumption Expenditures	1 410 050	26
Gross Fixed Capital Formation	1 360 714	25
Changes in Inventories*	8 441	0
Exports	2 572 582	47
Imports	2 363 552	44
GDP	5 417 760	
GNI	5 622 565	
Average population, persons	10 415 811	
GDP/capita	520 148	

*Including valuables

The Swedish national accounts summarise and describe the economic activity and development in the country in the form of an accounting system with supplementary tables. These calculations are based on the international guidelines System of National Accounts, SNA 2008 and the EU Regulation 549/2013 European System of National and Regional Accounts, ESA 2010. The published products include the product accounts (GDP), financial accounts and sector accounts. The calculations are published annually, quarterly and monthly, where the annual compilation is the most detailed and monthly figures are published on an experimental basis.

The annual accounts compile independent estimates of GDP from the production and expenditure perspectives, with the production approach somewhat favoured in reconciliation. GDP from the income approach is not a fully independent calculation with some components set residually based on the balancing of the other two. The statistical basis is well developed, with possibilities for comparison between different independent sources. The annual calculations are balanced in a system of supply and use tables, which are further developed to input/output tables. The system also includes employment calculations, with compilations of average numbers of persons employed and hours worked.

1.1.1 Economic territory

The economic territory of the Kingdom of Sweden comprises the geographic territory lying within Sweden's borders, which is under the effective administration and economic control of a single government. Also included in the Swedish economic territory is mobile equipment such as Swedish ships and aeroplanes in international traffic, Swedish fishing boats fishing in international waters and Sweden's embassies and consulates abroad. Conversely the representations of foreign countries in Sweden are counted as foreign economic territory as well as institutions and bodies of the European Union.

The legal requirements surrounding taxation generally results in that a unit active on Swedish economic territory is bound to register a separate legal entity for operations and this entity is covered by the Business Register. The main challenge, as stated in ESA 2.07, is to identify a separate institutional unit for statistical purposes when a single legal entity has substantial operations in two or more territories. The most common structure in such cases is that the activity in countries other than the legal home jurisdiction is run through branches. In line with ESA definitions, branches active on Swedish economic territory that are part of foreign legal entities are included in the Swedish national accounts, while branches abroad belonging to Swedish legal entities are excluded.

1.1.2 The structure of the statistical system

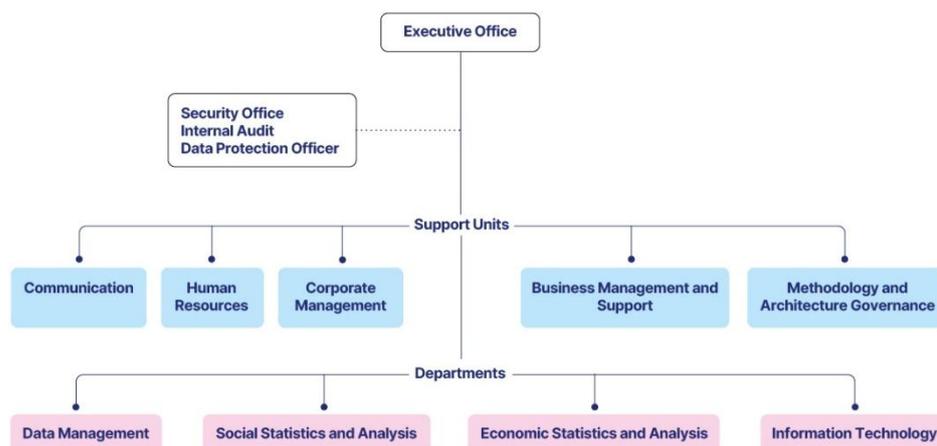
In accordance with the Swedish constitution, authorities in Sweden have an independent role vis-à-vis the government. The task of a public authority is to translate political decisions reached by the Riksdag and the Government into practical action.

Since the middle of the 1990s Sweden has a decentralized statistical system. Much of the responsibility for official statistics in defined subject areas was then transferred from Statistics Sweden to other government authorities. Statistics Sweden continues to be responsible for multi-sectoral statistics, while other agencies are made responsible for other parts of the statistical system that fall under their respective sectoral area of responsibility. Today 29 government authorities have statistical responsibilities (SAMs). The official statistics are divided into 22 subject areas and 102 statistical areas. The government authorities responsible for official statistics decide on the content, quality and scope of statistics within the statistical area(s) for which they are responsible. In addition, SAM is also responsible for making the statistics for which they are responsible available. Except for Statistics Sweden, there are no special appropriations for statistics; funding for statistics is included in the authorities' appropriation framework for their main task.

The main task of Statistics Sweden is to supply users with official statistics as a basis for general information, investigative activities and research. Besides producing and communicating statistical data, Statistics Sweden support and coordinate the Swedish system for official statistics. Statistics Sweden is responsible for producing official statistics in several different subject areas: the labour market, population, housing, construction and building, trade in goods and services, household finances, living conditions, citizen influence, environment, national accounts, business activities, public finances, prices and consumption, education, and research. Regarding appropriations, Statistics Sweden is also responsible for other tasks entrusted to it by the central government, including the coordination of Sweden's official statistics. In dealing with assignments, Statistics Sweden produces official statistics for other government authorities responsible for statistics, as well as other statistics close to its core activities.

A Council for Official Statistics (ROS) was duly established at Statistics Sweden in 2002. The Council, which is an advisory body, deals with matters of principle regarding the availability, quality and usefulness of the official statistics. In October 2014 the Council recommended the statistical agencies to work according to the European Code of Practice instead of the previous used Guidelines for sufficient quality. The Council for Official Statistics consists of heads of authorities responsible for statistics and shall consist of a maximum of twelve members and a chairman and meet annually. The General Director of Statistics Sweden is council's chairman. Six of the members are permanent and the other six are appointed by Statistics Sweden – after consultation with all authorities responsible for official statistics – and are appointed for a period of three years.

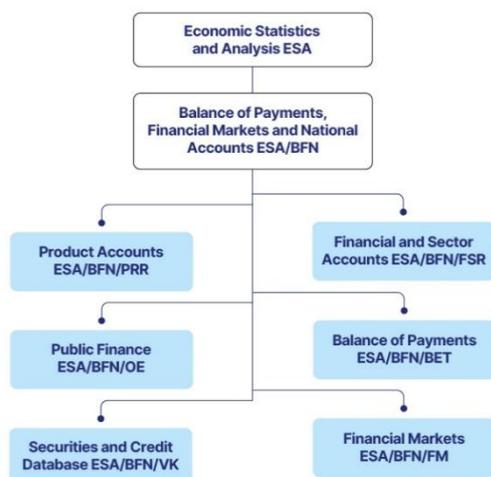
Statistics Sweden has approximately 1 000 employees, including field interviewers around the country. For an overview of Statistics Sweden's organisation, see chart 1.1.

Chart 1.1: Organisation and responsibilities within Statistics Sweden

1.1.3 Organisation of National Accounts within Statistics Sweden

Sweden's national accounts are compiled in their entirety at Statistics Sweden. The department Economic Statistics and Analysis, see chart 1.1 above, is divided into three units where Balance of Payments, Financial Markets and National accounts is one of the units. The unit Balance of Payments, Financial Markets and National accounts is in turn divided into six sections, see chart 1.2 below. The National Accounts consists of three sections, Product Accounts, Public Finance, and Financial and Sector accounts where roughly 50 Full Time Employees were involved in compiling the national accounts in year 2025. The National Accounts sections are responsible for production of GDP, GNI, Real and Financial Sector Accounts, Regional Accounts, Health Accounts, ESSPROS and Excessive Deficit Procedure (EDP). Also, Tourism Satellite Accounts are produced but on assignment. The National Accounts sections are also responsible for the balancing procedures and the production of Supply and Use tables (SUT) and input/output tables.

Moreover, two full time employees are working with support and maintenance of the data bases. All employees at the National Accounts sections, together with staff from the IT unit, are involved in the work of developing new databases for the national accounts. This work is ongoing and is expected to be completed for quarterly accounts in year 2025 and for the annual accounts in the beginning of year 2027.

Chart 1.2: National Accounts organisation

1.1.4 Quality Management at Statistics Sweden

Statistics Sweden's strategy sets out the long-term direction for its operations and aims to achieve the vision "We provide society with useful and trusted statistics". The vision expresses Statistics Sweden's focus on statistical quality, including the importance of relevance and accuracy. Statistics Sweden's operations comply well with current regulations¹. This ensures that the agency fulfils its tasks, achieves its goals and meets other regulatory requirements.

Operations are also largely governed by the EU regulation on statistics² as further developed in the European Statistics Code of Practice (ES CoP), the principles of which make up the cornerstone of the common quality framework of the European Statistical System (ESS). Statistics Sweden, together with the statistical authorities in other EU countries have committed themselves to following this framework. The ES CoP includes principles covering the institutional environment, statistical processes, and statistical outputs.

Swedish official statistics are regulated in the Official Statistics Act (2001:99) and the Official Statistics Ordinance (2001:100). Section 3a of the Official Statistics Act states which quality criteria are to be applied. In addition, Statistics Sweden has issued the following regulations on e.g., quality (Section 16 Official Statistics Ordinance):

- Statistics Sweden's Regulations and general guidelines for the official release, etc. of Official Statistics (2023:6)
- Statistics Sweden's Regulations on Quality for Official Statistics (2016:17)
- Statistics Sweden's Regulations and General Guidelines for the Evaluation of the Quality of Official Statistics (2021:26).

To support the implementation of these regulations, Statistics Sweden has provided A Handbook on Quality for Official Statistics of Sweden and A Handbook on Evaluation of Quality of Official Statistics of Sweden. The national quality framework is supplemented by guidelines developed within the System for official statistics (SOS):

- Guidelines for what constitutes Official Statistics
- Guidelines and routines for revisions of statistical values
- Guidelines and support for the implementation of Section 14 of the Official Statistics Ordinance³.

It is clear in the Swedish quality framework that the quality of statistics should be fit for purpose. The purpose of the statistics is based on the users' prioritized needs. It is also stated that the improvement process involves and cyclical procedure.

The purpose of Statistics Sweden's quality policy is to explain how Statistics Sweden applies the above regulations in its work with quality, the aim of which is to constantly improve the quality of statistics in relation to their purpose and Statistics Sweden's operations in general. Continuous improvements can lead to an increase in quality or efficiency. Everyone at Statistics Sweden, regardless of tasks, affects - directly or indirectly - the quality of the statistics. Work with quality is seen therefore as a central and integral part of the entire agency – in the statistical production process as well as in administrative support processes.

¹ Highlighted here are the Ordinance for Governance and Control (2007:603), the Ordinance for Government Authorities (2007:515) and the Ordinance with the directive for Statistics Sweden (2016:822)

² Regulation (EC) No 223/2009 of the European Parliament and of the Council on European statistics

³ According to section 14 of the Official Statistics Ordinance, all official statistics that are based on data from natural persons is to be broken down by gender if there are no special reasons for not doing so.

Quality is everyone's concern. The quality policy applies to all operations regardless of the form of financing.

1.1.4.1 Working with quality involves a common way of working

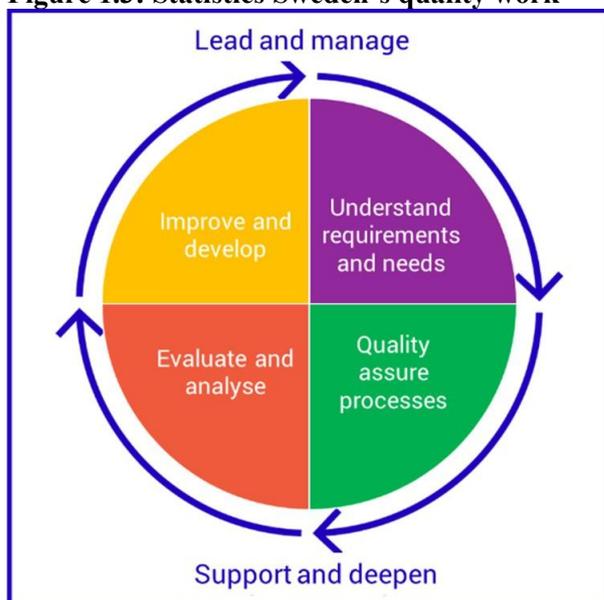
Working with continuous improvements at Statistics Sweden involves a cyclical approach with the following components:

- 1) Understand requirements and needs
- 2) Quality assure processes
- 3) Evaluate and analyse
- 4) Improve and develop

The improvement work needs the proper conditions in terms of:

- Lead and manage
- Support and deepen

Figure 1.3: Statistics Sweden's quality work



1.1.4.2 Understand requirements and needs

As a starting point in all work at Statistics Sweden, there is always a dialogue with users and clients to determine the prioritized requirements and needs that make statistics, data, and other services useable. Specifically, in the production of statistics, dialogue takes place with specific users, in user councils and in conjunction with user studies, in order to systematically develop the content and quality of the statistics in other regards.

1.1.4.3 Quality assure processes

Our processes are standardized, efficient and quality assured thanks to increased digitization and automation. Local quality support systems are designed to suit specific processes. In the production of statistics, these local systems are based on Statistics Sweden's general Statistical Production Support (SPS). The SPS explains common methods, tools and procedure that govern the production of statistics.

1.1.4.4 Evaluate and analyse

The results of all processes are evaluated against the established quality requirements and needs to be met. Each process is evaluated and analysed systematically and regularly to form the basis for improvements and development efforts. Proposals for risk management and improvement measures can either be applied directly at the operational level or included in the planning of improvements and development at the tactical or strategic level.

Evaluation of the quality of the statistics is done in relation to the purpose of the statistics and the established quality requirements (fit for purpose). The evaluations provide input to improvements and can be used to strengthen the dialogue with users regarding their needs.

1.1.4.5 The cyclical improvement procedure and fitness for purpose

Statistics Sweden's cyclical procedure for evaluations supports the fitness for purpose perspective and is straightforward and consistent with the general principle of continuous improvements i.e. PDCA: Plan, Do, Check, and Act, see figure 2.

Figure 1.4 - Cyclical procedure of the annual self-evaluation of the quality of official statistics⁴



As seen in figure 4, the purpose of the statistics, which is stated in the quality report, is an important starting point. As previously, the term survey is used in a broad sense. The purpose of the statistics, quality requirements, survey design and the achieved quality comprise four links in a chain where the achieved quality builds on the earlier links. The purpose gives rise to quality requirements in terms of the quality components. The survey design in principle should be such that the quality requirements are satisfied. The achieved quality should reflect the objectives of the survey design. The achieved quality is evaluated regularly. Findings and conclusions are used in coming production rounds, for example to adjust the survey design. In this way, quality is set in relation to the purpose of the statistics reflecting its fitness for purpose.

A selection of statistical products is evaluated by international experts with the evaluation programme of ASPIRE (A System for Product Improvement, Review and Evaluation)⁵. The accuracy of the statistics is evaluated in relation to six quality assurance factors to give input for improvements from a fitness for purpose perspective.

The statistical products chosen for evaluation by ASPIRE vary each year. Quarterly GDP as separate statistical product was last selected for ASPIRE in the 2021 round. Since then, however, several key inputs to GNI, such as the Production Value Index, Producer and Import Price Index, Quarterly

⁴ According to, [Evaluation of the quality of official statistics - a handbook, version 3.3](#)

⁵ A System for Product Improvement, Review and Evaluation, ASPIRE (scb.se)

Economic Statistics, and Research and Development in Sweden, have been among the products chosen for evaluations regarding 2024 and 2025 with focus on the purpose to serve GDP (and GNI) with accurate statistics.

1.1.4.6 Improve and develop

Based on evaluations and analyses of results and processes, decisions are made on prioritized activities that are performed on an operational, tactical, or strategic level. Activities consist of improvement measures which can be quality-enhancing in line with changing requirements and needs. They may also aim to streamline operations or limit risks.

Managers at all levels are responsible for the work with quality in each section, unit and department. This includes follow-up of the effects and results of planned, decided and implemented improvement actions.

Risks of not fulfilling the agency's tasks, reaching the agency's goals or meet other requirements on the agency's operations are identified at an operational, tactical, and strategic level and managed in the form of measures in action plans and roadmaps.

At Statistics Sweden, the overall responsibility for the work with quality as well as management and further development of the quality framework is centralised within the organisation.

Support for the work on quality is available in the form of guidelines, manuals, instructions, tools, and templates on the intranet and in SPS, for the production of statistics.

Training and other competency development initiatives are carried out on an ongoing basis to develop and deepen knowledge and abilities.

Quality studies and other investigations are also carried out, if needed, to deepen understanding and knowledge, identify shortcomings and support the improvement of methods, tools, and procedures.

Statistics Sweden participates in international collaborations at various levels to develop and deepen the work on quality. Through cooperation, we take advantage of experiences and good examples from other countries and share our experiences with others.

Statistics Sweden provides support in quality issues to other agencies responsible for statistics by contributing to joint development work, arranging training sessions and seminars as well as providing guidance.

1.1.4.7 Quality declaration for Statistics Sweden's statistics

Statistics Sweden communicates its quality commitment by way of a special quality declaration which summarises what users can expect of Statistics Sweden.

The quality of the statistics for which Statistics Sweden is responsible should be fit for purpose. Statistics Sweden therefore commits itself to

- 1) have dialogue with the users of statistics to understand their needs and how the statistics are used.
- 2) formulate and specify the purpose based on the prioritized needs to be satisfied.
- 3) design and perform the statistical production with consideration to the quality requirements that follow from the purpose, regarding:
 - Content
 - Accuracy

- Timeliness and punctuality
 - Accessibility and clarity
 - Comparability and coherence
- 4) report the quality of the statistics at the time of the official release.
 - 5) evaluate the quality of the statistics and, if necessary, improve it with consideration to the purpose and related quality requirements.
 - 6) re-formulate the purpose in dialogue with the users in step with changing needs.

Statistics Sweden always balances the purpose and quality requirements with applicable constraints such as costs and the response burden. Consideration must also be given to statistical confidentiality and the availability of data.

1.1.5 Quality Management at National Accounts

1.1.5.1 Quality Management System at National Accounts

In 2012 Statistics Sweden implemented a quality management system for National Accounts (NA), including GDP. The quality management system (QMS) is designed to reduce the risk of errors being made in the production process, support the management and employees in the work, increase traceability of data etc. The QMS for the NA is ultimately the tool that secures the quality and efficiency in the production process of NA to generate statistical information of high quality to the users. Important inputs to the QMS are the requirements in ESS Code of Practice and the process support system in Statistics Sweden.

Beside GDP the QMS for NA includes non-financial and financial sector accounts, regional accounts, EDP, tourist satellite accounts, ESSPROS, health accounts, and supplement on contingent liabilities and potential obligations to the EDP related questionnaire (Directive 2011/85).

The QMS developed for the NA is built upon three components: IT environment where the NA is produced, a support system for the managers and staff working at the NA department and a control system based on internal and external revisions.

The QMS is described in the National Accounts quality manual. Information on quality management, quality work at SCB and management model is included as a module in the program developed for new employees at the NA department.

The IT environment

To reduce, or even eliminate, the possibility of IT-related errors all systems are documented, tested and implemented in a systematic way that there is no doubt regarding responsibility for maintenance and development or changes made due to adjustments in the everyday production. Excel spread sheets are standardized and designed in such ways to assure e.g. traceability.

At present Statistics Sweden have separate IT-system for non-financial and financial accounts although the basic calculations up until NA level data is performed in standardized Excel spread sheets (standardized format/design and documentation). The results from the Excel files are then uploaded to the IT-systems. The standardized workbooks are version controlled and stored in a standardized structure matching statistics Sweden's general production process. Access to the folders is given on demand and is controlled by creating access group linked to the folders. Review of access is conducted yearly and the assignment of access is based on an established policy that is in line with Statistics Sweden's recommendations.

It is the standardized sheet structure, the version control of files, the new folder structure and the work instructions in the QMS combined that secure the part of NA production system that consists of workbooks in Excel. An ongoing project is to construct a new IT-system where non-financial, financial accounts and EDP for general government is compiled in an integrated IT-system. The goal is to develop an effective integrated system with a high degree of traceability of data and input/output validation procedures.

The Support System

The production of NA is managed by lists of activities along with job descriptions stored in the NA quality management system, NIKE. The system indicates who (roles and responsibilities) that perform what (activity), when (planning), where (IT Environment) and how (work instruction). Furthermore, the execution of the activities is logged. A member of the management team has a special responsibility for development and administration of the quality management system.

NIKE is the hub of the production process. Staff members use the activity lists as a tool for planning their work. The lists are personalized to fit the individual needs of staff. The lists indicate at what point in time the activity should be undertaken. Hyperlinks to work instructions are imbedded in the activity lists. The IT environment is at present outside of the support system. The work instructions point to the IT environment but for safety purposes Excel spreadsheets and SAS scripts are stored in a separate designed folder structure. After performing an activity, the staff member signs the activity in the activity list. The construction of the activity lists and their maintenance are done as part of regular work of staff members. The GDP Co-ordinator is monitoring the GDP-list of activities. The product accounts head of the unit is formally responsible.

For GDP there are about 1500 different activities in the activity list. For most activities, as described above, there are specific documentation/instructions. Each activity also contains information on the staff member responsible and at what time the work should be finished. The staff member responsible for the activity should mark when the activity is done. The activities are for example planning of the production round, start-up meetings, collection of input data, various calculations, analysis steps, controls, review, reconciliation, publication/delivery issues. All documentations are easily available to the NA-staff through NIKE. The activity list, including documentations, is updated in connection with each notification.

Several measures of quality control and examination of the data and results take place within the National Accounts. Generally speaking, the scrutiny performed is primarily done through manual controls of the data at various stages of the compilation process. In all contexts, the time series perspective is key. Prior to the actual commencement of the compilation process, a first analysis of the source data delivered to the National Accounts takes place. This can typically result in discussions with the supplier of the source data concerning anomalies or in other ways divergent or problematic data. These discussions can, if warranted, lead to amendments in the source statistics. The following step implies scrutinizing the resulting estimations. The National Accounts experts responsible for the various calculations enter the results in a common IT-system, enabling analyses from many different perspectives. However, the bulk of the examination work is done within a system of supply and use tables covering approximately 425 product groups. Comparing the use in the economy to the supply allows ample room for plausibility checks. This step of the scrutiny uncovers many of the varying kinds of problems that can arise when different data sources are combined and compared in supply and use tables. This portion of the compilation process takes place over the course of several weeks and the problems detected are often discussed with and referred back to the source statistics. Once the calculations are complete, the results are once again scrutinized at an aggregate level.

The Control System - as part of the work of continuous improvement

In a quality management system, it is important to work with continuous improvements aided by a control system. The control system has three different levels.

First level is manager follow-ups. The management regularly monitors the content and use of quality management system. In connection with every production period, there is always an evaluation meeting (evaluation of the production process) with all staff member involved in the production of NA. These meetings are documented and form the basis for the work of continuous improvement.

Statistics Sweden's internal audit is the second level of review. The audit focuses on how the actual execution of a process conforms to the corresponding work instruction. It is Statistic Sweden's Quality Director that ultimately decides which products are to be audited.

The third level of control is the internal review carried out by Statistic Sweden's Chief Audit Executive. The internal review focuses on reviewing the processes for internal management and control and making suggestions for areas of improvement.

In addition to these three different levels of the control system there are external reviews of the NA carried out by The Swedish National Audit Office, Eurostat and international experts.

1.1.5.2 Data delivery agreements between national accounts and primary statistics

The work with Service level agreements, SLA, started in 2004 and has gone on since then. In 2019 the SLA were transformed into Description of delivery agreements. Agreements are drawn up between the National Accounts and the Statistics Sweden units for data delivery to NA. The purpose of these agreements is to adapt the input to NA calculations in terms of content and quality and to assure the quality of the input according to NA's needs. All statistical sources that make up input (data) of any part of NA calculations are reviewed regarding components whose significance affects the quality of the statistics. The different quality assessment and improvement components are based on MIS: 2001:01 "The Quality concept and recommendations for quality declarations of official statistics" but this has been augmented by several quality aspects mainly due to the cooperation between NA and the producers of primary statistics.

The agreements also contain information on what kind of data should be delivered, documentation and comments on changes, revisions and shortcomings. The data delivery forms and dates are also included. Future improvements and exchange/education of personnel between the NA and primary statistics are also put forward.

As of 2025 agreements are in place regarding the 80 most important input-products within Statistics Sweden. The agreements are only updated with changes in data delivery. A few agreements are also reached with external suppliers of input statistics, e.g. with The Swedish National Financial Management Authority, The Swedish Board of Agriculture and The Swedish Transport Agency.

1.1.5.3 Management and governance at the National Accounts

Planning and follow-up at the National Accounts is carried out in accordance with Statistics Sweden's management process. Leadership and employeeship are detailed in Statistics Sweden's leadership and personnel policies. The processes for management and governance within the National Accounts are documented in the quality manual.

Competence

The National Accounts department actively contributes to the goals set at Statistics Sweden. Integral to this, both at the agency level and at the National Accounts department, are systematic efforts to strengthen the competence, both in terms of staff and in terms of organization. The aim is for the

National Accounts department to be viewed as an attractive workplace by those with the desired set of skills. The interesting and challenging tasks within the National Accounts are conducive to employee satisfaction and professional growth. The staff has a generous approach to their work and actively contribute to the transfer of knowledge between colleagues. Action plans for the skills development of the staff are employed and updated yearly in conjunction with the operational planning.

The head of the department is responsible for the recruitment of new personnel. Any recruitment needs are discussed within the management team and often stem from requests from the respective heads of unit. The recruitment process follows the procedures of Statistics Sweden. Employee introduction to the National Accounts is done in accordance with a pre-set model. The centralized checklists are combined with departmental specific lists to form a comprehensive introduction to both Statistics Sweden and to the National Accounts department. The introduction includes for example reading instructions to the surveys and information on the centralized production and quality systems.

The steering group for the coordination of the economic statistics (SAMEK) has developed an overarching skills development plan for the system of economic statistics. Prior to the yearly operational planning, the management team discusses any lack of competence and the need for skills development within the respective department. The identified needs are entered into the action plan for the upcoming year. In addition, each coworker's development is a topic for discussion with his or her closest manager at regular staff appraisals. Each coworker has a tailored action plan, reviewed and updated regularly. The staff appraisals are held according to the standardized procedures set at Statistics Sweden. The tailored action plans include both internal and external training and courses. It is up to each respective coworker to locate appropriate courses not offered in-house. Application to courses offered within Statistics Sweden is primarily done through centralized applications available to all employees via the intranet, Inblick.

Also available on Inblick is a National Accounts training course consisting of twelve educational videos with accompanying presentations.

The management (head of department or unit) decides on course participation. The participants are in turn responsible for saving the relevant course material in the appropriate folders within the National Accounts folder structure.

In ample time prior to the termination of an employment, the coworker's tasks are to be handed over to a colleague designated by the closest management. Consultation with higher-up management is sometimes necessary, as in the case when recruitment is needed. The co-workers concerned are also consulted regarding the planned changes and are also ultimately responsible, together with their closest manager, for deciding the details of the hand-over.

Management process

There are several roles with assigned responsibilities within the National Accounts. These are described in the department's rules of procedure. The manning of the roles is reviewed in the yearly resource planning, or when needed in connection to personnel changes.

Along with a department head, there is also a department administrator and an economic controller. The head of the department has an advisory board with the dual purpose of offering guidance in issues concerning the department and of providing a forum for information and knowledge exchange. The board consists of the department head (chair), the head of the units within the department, senior advisors, the economic controller and a representative from human resources.

All products within the National Accounts organizationally belong to a specific section and the responsibility for the product lies with the head of the section. The operational responsibility is in certain cases delegated to a designated coordinator.

Every other week a bulletin, informing of ongoing production, projects, courses, meetings and so forth, is distributed among all staff at the department.

Resource allocation takes place at the departmental level through Statistics Sweden's yearly operational planning. The department's management team is responsible for the planning process, based on centralized instructions and routines. The planning process pertains to both grant-financed and contract-financed operations.

1.1.5.4 Statistical quality

1.1.5.4.1 Quality declaration for the National Accounts

The quality declaration for the National Accounts has improved in recent years, especially regarding the section on accuracy. The latest version of the quality declaration can be found at the link below:

[Quality declaration National Accounts, quarterly and annual calculations, 2024 quarter, 2022 year](#)

1.2 The revisions policy and the timetable for revising and finalizing the estimates

Revisions of time series and single estimates are a common feature within the work of national accounts. The first version of the national accounts for a specific period are published very soon after the close of that period. These early calculations are based on preliminary data and must therefore be revised when more final data becomes available. Other common reasons for revising the national accounts are changes in the current regulations and the appearance of new primary statistics.

1.2.1 The revisions policy and the timetable for revising and finalizing the estimates

The first compilation of the national accounts for a given year is published two months after the reference year. The calculation is based on preliminary statistics. The product accounts (GDP from the production and expenditure sides) are produced by a quarterly method, based on quarterly or monthly statistics, and the data for the whole year are the sum of four quarters. The non-financial sector accounts are always compiled and released together with product accounts. The preliminary annual product accounts can be revised at all releases of the quarterly accounts, i.e. t+5 months, t+8 months and t+11 months. The non-financial sector accounts the year t-2 and t-3 may be revised at t+14 and t+26 months respectively if it does not have an impact on GDP or the compensation of employees from the Rest of the World (RoW) and to RoW.

The detailed annual accounts are compiled 17 months after the reference year and are based on a complete set of annual source data. The compilation is carried out in the framework of a detailed system of Supply and Use tables (S/U-tables) and the supply and use tables are released around t+20 months after the reference year⁶.

⁶ A simplified version of the supply and use table is released at t+5.

Table 1.2.1 Revision policy annual accounts

Year	February	May	August	November
T-1	First annual estimate	Revision first estimate	First preliminary Annual accounts	Second preliminary Annual accounts
Comment	Based on monthly and quarterly source statistics. There is some adjustment to the first result from the annual source for municipalities.	Based on monthly and quarterly source statistics. There is some adjustment to the first result from the annual source for municipalities.	Preliminary annual statistics on government consumption, production and saving are available	Annual source statistics on government consumption by cofog
T-2		Final estimat Annual accounts		
Comment		Based on complete set om annual data for GDP		
T-3			Final estimate income to Row and from Row	
Comment			Annual surveys on Direct investment bi-annual surveys on Portfolio investments.	

1.2.1.1 Implementation of the Harmonized European revision policy (HERP)

In national accounts in general, and in HERP, a distinction is made between routine (current) revisions and benchmark revisions. Benchmark revisions (or major regular revisions) relate to an overhaul of the time series and are generally undertaken at less frequent intervals. HERP recommends five years between benchmark revisions and the first recommended harmonized year was 2019 followed by year 2024 and with the next benchmark revision scheduled for 2029.

When it comes to the benchmark revisions Sweden follows the timetable of HERP. The last benchmark revision was implemented in 2024. A smaller revision was also carried out in 2025 to deal with three issues that were implemented neither in the data transmitted to Eurostat nor in nationally published benchmark revision in May 2024, but were implemented in the GNI questionnaire (GNIQ) and report on the quality of GNI data (RQ) 2024. The next benchmark revision is planned for 2029.

The national policy is not fully in line with HERP regarding the current revisions. Based on national user interest the Swedish annual accounts are released at an earlier date than what the ESA 2010 transmission programme states and because of this NA and BoP are not always aligned, as recommended by HERP. For the time being the data for GNI own purposes and the data transmitted according to the ESA 2010 transmission programme, as well as nationally published data, are fully aligned.

1.2.2 Major revisions since the last version of the Inventory

Since the last version of the GNI Inventory, based on sources and methods used in 2020 with reference year 2015, two revisions have been carried out. One larger benchmark revision, in 2024, where several changes in sources and methods were introduced, and one minor revision in 2025. As mentioned above the reason for the minor revision was three issues that were implemented neither in the data transmitted to Eurostat nor in the nationally published benchmark revision in May 2024, but were implemented in the GNIQ and RQ 2024. Thus, the minor revision 2025 fully aligns the data transmitted to Eurostat, nationally published data and data for GNI own purposes.

1.2.2.1 Benchmark revision 2024, GNIQ and RQ 2024

A benchmark revision was carried out in 2024 and implemented in the GNIQ and RQ 2024. The year 2021 was the main benchmark year for the revision which covered the period from 2018 and onwards⁷. As a result of the revision total GNI (ESA 2010) was increased by between 31 and 145

⁷ For nationally published data the revision covers the year 1993 and onwards.

billion SEK in current prices for the years 2018-2022⁸. The table 1.2.2 below show the revision as it was disseminated in the GNI questionnaire in September 2024, covering the open years at that point and until 2022 for which annual accounts had been carried out.

Total output and intermediate consumption were revised substantially and the main changes in sources and methods were due to:

- Consolidation within public administration
- Action point 7b Review of GFCF of purchased software
- Action point A2 Holding gains in trade margins
- Action point 7d Exhaustiveness adjustments (N6) benchmark
- Action point A3 on Branches
- Kind of activity unit (where kind of activity unit mainly concerned consolidation of activity units)

On the expenditure side several changes were made to household consumption (HFCE) where the largest impact came from action point 7a New benchmark for HFCE, but also from supplement for undercoverage in the National apartment register.

The largest revisions within the general government originated from a reclassification of public companies, from market producers to the general government. The largest impact came from the reclassification of a public transportation corporation.

The two main contributors to the revisions on gross fixed capital formation (GFCF) were Action point 7b Review of GFCF of purchased software and treatment of a foreign trade flow.

Exports have been revised upwards for all years but one, and imports upwards for all years. For both export and imports the main changes stem from a review of the Survey on International Trade in Service Statistics (ITSS) and a review of value added tax in exports and imports. In the ITSS review further work has been done on reclassifying transactions in the credit card data from travel services to exports and imports by product. Based on this a more detailed calculation on the amount of VAT that should be excluded from the credit card transactions have been implemented.

The revisions made to the Compensation of employees paid and received from the rest of the world stem from a change of method for D12. Moreover, for Compensations of employees paid to the rest of the world a new data source, monthly work declarations from the Swedish Tax Agency, has been implemented, i.e. salaries (D.11).

⁸ For year 2022 preliminary monthly and quarterly source data have been replaced by annual source data in many parts of the accounts. This refers to both GDP and primary income. In addition, GDP for 2022 has been balanced in the framework of supply and use tables.

Table 1.2.2 Revisions in the Benchmark revision 2024, SEK million, years 2010-2022

GNI QUESTIONNAIRE 2024 Table R1: GDP and GNI (ESA2010) and GNI (ESA95) 2010-2022 As of 30/09/2024		SWEDEN million SEK												
code ESA 2010		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
PRODUCTION APPROACH														
Output of goods and services (at basic prices)	P1	0	0	0	0	0	0	0	0	-116200	-95478	-118158	-116042	231836
Intermediate consumption (at purchasers' prices)	P2	0	0	0	0	0	0	0	0	-62653	-63966	-91749	-45565	406581
Gross value added (at basic prices)	B1G	0	0	0	0	0	0	0	0	-53547	-31512	-26409	-70477	-174745
Taxes on products	D21	0	0	0	0	0	0	0	0	188	145	205	223	-59
Subsidies on products	D31	0	0	0	0	0	0	0	0	-3802	-3760	-2201	-2020	-2685
EXPENDITURE APPROACH														
Total final consumption expenditure	P3	0	0	0	0	0	0	0	0	30409	28893	33774	30902	60195
Household final consumption expenditure	P3	0	0	0	0	0	0	0	0	27762	28218	31378	27419	55090
NPISH final consumption expenditure	P3	0	0	0	0	0	0	0	0	-31	1263	886	773	-1408
General government final consumption expenditure	P3	0	0	0	0	0	0	0	0	2678	-588	1510	2710	6513
Gross capital formation	P5	0	0	0	0	0	0	0	0	-46728	-40813	-41450	-51473	-133586
Gross fixed capital formation	P51g	0	0	0	0	0	0	0	0	-40936	-36468	-36552	-44596	-133275
Changes in inventories	P52	0	0	0	0	0	0	0	0	-5792	-4345	-4898	-6877	-633
Acquisitions less disposals of valuables	P53	0	0	0	0	0	0	0	0	0	0	0	0	322
Exports of goods and services	P6	0	0	0	0	0	0	0	0	-4050	16208	16482	27501	-12280
Imports of goods and services	P7	0	0	0	0	0	0	0	0	29564	32185	33219	75610	86448
INCOME APPROACH														
Compensation of employees	D1	0	0	0	0	0	0	0	0	25988	27108	26804	30407	36905
Gross operating surplus and mixed income	B2G+B3G	0	0	0	0	0	0	0	0	-79387	-58683	-53123	-101259	-210324
Taxes on production and imports	D2	0	0	0	0	0	0	0	0	248	2	213	261	530
Subsidies	D3	0	0	0	0	0	0	0	0	-3714	-3680	-2119	-1911	-1830
Gross domestic product (ESA2010)	B1*G	0	0	0	0	0	0	0	0	-49933	-27897	-24413	-68680	-172119
Compensation of employees received from the rest of the world	D1	0	0	0	0	0	0	0	0	1574	1697	1402	1249	4182
Compensation of employees paid to the rest of the world	D1	0	0	0	0	0	0	0	0	11401	11026	10213	11980	14674
Taxes on production and imports paid to the institutions of the EU	D2	0	0	0	0	0	0	0	0	0	0	0	0	0
Subsidies received from the institutions of the EU	D3	0	0	0	0	0	0	0	0	0	0	0	0	470
Property income received from the rest of the world	D4	0	0	0	0	0	0	0	0	-9	47	-1599	9166	75207
Property income paid to the rest of the world	D4	0	0	0	0	0	0	0	0	2	-1366	-3661	-8241	37886
Gross national income (ESA2010)	B5*G	0	0	0	0	0	0	0	0	-59771	-35813	-31162	-62004	-144820
Less total impact of differences in definitions between ESA2010 and ESA95 on GNI (ESA2010 minus ESA95)		0	0	0	0	0	0	0	0	0	0	0	0	0
Gross national income (ESA 95)	B5*G	0	0	0	0	0	0	0	0	0	0	0	0	0

1.2.2.2 Minor benchmark revision 2025, GNIQ and RQ 2025

The main reason for the minor revision 2025 was three issues not implemented in the nationally published benchmark revision in May 2024 or in the data transmitted to Eurostat but implemented in the GNIQ and RQ 2024. Thus, the minor revision 2025 fully aligns the data transmitted to Eurostat, nationally published data and the data for GNI own purposes, i.e. GNIQ and RQ 2025.

The three issues mentioned above are listed below.

- *Holding gains and losses.* Adjustments of trade margins to deal with the fact that the valuation principles for inventories of the goods sold differ between corporate accounting (lowest value principle) and the National Accounts (replacement value).
- *Include foreign branches in Sweden and exclude Swedish branches abroad.* Identification of branches in Sweden and abroad, in order to align the treatment to ESA2010, i.e. to include foreign branches in Sweden and exclude Swedish branches abroad.
- *Holding gains in intermediate consumptions.* Correction of the holding gains in intermediate consumption implemented in the GNIQ and RQ 2024 for the years 2021 and 2022 but implemented neither in the data transmitted to Eurostat nor in the nationally published benchmark revision May 2024.

Moreover, there were some other revisions mainly derived from the allocation of FISIM, that was revised for the years 2021-2022, which had causal relationships with action point A3 Treatment of branches, which were implemented in GNIQ and RQ 2024. In addition, for the year 2022 revisions were made both for congestion income and for output in NACE A02 deriving from revisions in the source statistic (SBS).

The balancing of the revision due to these issues lead to revisions in other components of GDP as well. The impact on the main components from the minor revision 2025 for years 2010-2022, are shown in table 1.2.3.

Table 1.2.3 Revisions due to the minor revision 2025, SEK million, years 2010-2022

GNI QUESTIONNAIRE 2025 Table R1: GDP and GNI (ESA2010) and GNI (ESA95) 2010-2022 As of 30/09/2024		SWEDEN million SEK												
code ESA 2010		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
PRODUCTION APPROACH														
Output of goods and services (at basic prices)	P1	0	0	0	0	0	0	0	0	0	0	0	-1236	9007
Intermediate consumption (at purchasers' prices)	P2	0	0	0	0	0	0	0	0	0	0	0	-2730	-97
Gross value added (at basic prices)	B1G	0	0	0	0	0	0	0	0	0	0	0	1494	9104
Taxes on products	D21	0	0	0	0	0	0	0	0	0	0	0	0	0
Subsidies on products	D31	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPENDITURE APPROACH														
Total final consumption expenditure	P3	0	0	0	0	0	0	0	0	0	0	0	214	-1525
Household final consumption expenditure	P3	0	0	0	0	0	0	0	0	0	0	0	213	-1433
NPISH final consumption expenditure	P3	0	0	0	0	0	0	0	0	0	0	0	0	0
General government final consumption expenditure	P3	0	0	0	0	0	0	0	0	0	0	0	1	-92
Gross capital formation	P5	0	0	0	0	0	0	0	0	0	0	0	419	-896
Gross fixed capital formation	P51g	0	0	0	0	0	0	0	0	0	0	0	308	-511
Changes in inventories	P52	0	0	0	0	0	0	0	0	0	0	0	111	-385
Acquisitions less disposals of valuables	P53	0	0	0	0	0	0	0	0	0	0	0	0	0
Exports of goods and services	P6	0	0	0	0	0	0	0	0	0	0	0	361	14275
Imports of goods and services	P7	0	0	0	0	0	0	0	0	0	0	0	-500	2750
INCOME APPROACH														
Compensation of employees	D1	0	0	0	0	0	0	0	0	0	0	0	0	-2335
Gross operating surplus and mixed income	B2G+B3G	0	0	0	0	0	0	0	0	0	0	0	1494	11439
Taxes on production and imports	D2	0	0	0	0	0	0	0	0	0	0	0	0	0
Subsidies	D3	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross domestic product (ESA2010)	B1*G	0	0	0	0	0	0	0	0	0	0	0	1494	9104
Compensation of employees received from the rest of the world	D1	0	0	0	0	0	0	0	0	0	0	0	0	0
Compensation of employees paid to the rest of the world	D1	0	0	0	0	0	0	0	0	0	0	0	0	0
Taxes on production and imports paid to the institutions of the EU	D2	0	0	0	0	0	0	0	0	0	0	0	0	0
Subsidies received from the institutions of the EU	D3	0	0	0	0	0	0	0	0	0	0	0	0	0
Property income received from the rest of the world	D4	0	0	0	0	0	0	0	0	0	0	0	-4951	-1796
Property income paid to the rest of the world	D4	0	0	0	0	0	0	0	0	0	0	0	14843	12850
Gross national income (ESA2010)	B5*G	0	0	0	0	0	0	0	0	0	0	0	-18300	-5542
Less total impact of differences in definitions between ESA2010 and ESA95 on GNI (ESA2010 minus ESA95)														
Gross national income (ESA 95)	B5*G	0	0	0	0	0	0	0	0	0	0	0		

1.2.3 Planned actions for improvements.

The next major revision is planned for 2029.

1.2.3.1 Planned actions for improvements of base statistics

Planned actions for improvements of base statistics in the upcoming revisions include:

- A comprehensive register with information from digital annual reports, DIÅR-Register.
- Access to the Riksbank's new database with payment transactions on a weekly basis.
- Balance of payments, reinvested earning on foreign direct investment. Improving the compilation and replacing the current method.

1.2.3.2 Planned actions for improvements of the National Accounts

Planned actions for improvements of the National Accounts in the upcoming revisions include:

- Implementation of data from new or improved base statistics, see section 1.2.3.1.
- Implementation of transversal reservation I Production of electricity by households and II on the Treatment of non-resident VAT traders in GNIQ and RQ 2026.
- Implementation of new ESA

- Implementation of new NACE
- Implementation of CPA version. 2.2
- Review of Compensation of employees received/paid from/to the rest of the world.
- Updating of some outdated benchmarks
- Hidden economy, a new report from the Swedish tax authority available for implementation in NA.
- Review of the calculation for construction of secondary homes (GFCF)
- Both European agricultural guarantee fund (EAGF) that should be recorded as subsidies (D.3) and European agricultural fund for rural development (EAFRD) that should be recorded capital transfers (D.7/D.9) is recorded as subsidies (D.3). This issue will be checked for the second time as a small issue, but NA will investigate the possibility of having source statistics divided to enable correct recording.
- Review of the compilation for part of Other real estate management (L68B). Investigation and comparison of sources for rented dwellings including the stratification method, SBS and The Swedish tax authority's information on income of renting of dwellings in the property valuation.
- Correction of a compilation error for intermediate consumption of NPISH. Purchased R&D should be deducted from intermediate consumption of NPISH. Purchased R&D is counted for as GFCF.
- A review of the calculations for NACE A01 (Crop and animal production, hunting and related service activities), NACE A02 (Forestry and logging) and NACE A03 (Fishing and aquaculture) will be carried out. The aim is to implement SBS completely, i.e. the standard approach outlined.
- In the income approach wages and salaries paid abroad (D.1) differ from wages and salaries to the rest of the world (D.1) in the transition from GDP to GNI. The correct figure is in the compilation of transition from GDP to GNI. Since the income approach is not estimated independently the incorrect data causes error in the distribution between operating surplus and wages and salaries, thus not affecting GDP. However, this issue will be corrected no later than the next benchmark revision.

1.3 Outline of the production approach

The table below includes the estimates for all kinds of producers: Market producers, Producers for own final use and Other non-market producers. Market producers also include market producing KAUs of local government institutional units. The category Producers for own final use comprises of units engaged in the production of housing services in owner-occupied dwellings, literary and artistic originals and building and construction in municipalities and households.

Table 1.3.1: Breakdown of Output, Intermediate Consumption and Gross Value Added by NACE-sections, SEK million, 2021

NACE Rev 2	Output	IC	GVA	
A	Agriculture, forestry and fishing	197 035	134 220	62 815
B	Mining and quarrying	83 521	30 994	52 527
C	Manufacturing	2 236 686	1 537 837	698 849
D	Electricity, gas, steam and air conditioning supply	234 307	111 412	122 895
E	Water supply; sewerage, waste management and remediation activities	93 069	62 098	30 971
F	Construction	765 036	447 088	317 948
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	972 887	427 855	545 032
H	Transportation and storage	614 159	382 860	231 299
I	Accommodation and food service activities	151 354	90 522	60 832
J	Information and communication	816 100	420 691	395 409
K	Financial and insurance activities	302 002	94 415	207 587
L	Real estate activities	759 905	359 383	400 522
M	Professional, scientific and technical activities	696 708	321 255	375 453
N	Administrative and support service activities	275 486	114 412	161 074
O	Public administration and defence; compulsory social security	304 598	99 644	204 954
P	Education	385 885	105 310	280 575
Q	Human health and social work activities	738 237	216 497	521 740
R	Arts, entertainment and recreation	123 634	63 966	59 668
S	Other service activities	107 825	38 746	69 079
T	Activities of households as employers; undifferentiated goods- and services- producing activities of households for own use	2 847	0	2 847
Total		9 861 281	5 059 205	4 802 076

1.3.1 Reference framework and main data sources

1.3.1.1 Swedish Statistical Business Register

All statistics intended to provide information on the Swedish economy presuppose that there should be coordination of definitions of inquiry units, industries, size criteria, ownership categories and other recording variables. This in turn imposes the need for registers, which describe these links and the status of the various units at different points in time. Such a register constitutes the framework for all economic statistics. These basic requirements of coordination are met with the aid of Statistics Sweden's Business Register (SBR). The register covers enterprises, departments and agencies of government, organisations, and their activity units. Each enterprise has a unique corporate identification number, and each activity unit has a number unique to it, which makes it possible to computerise the information and to establish links between different materials providing information.

The Business Register is a live register in which circumstances at a particular point in time are described. From a statistical point of view, however, it is more relevant that the register should describe circumstances at different points in time. Information on changes is therefore also stored and documented. By specifying the time at which changes take place it is possible to follow the populations to be studied and at any time to update sampling frames and samples for changes which have taken place, and which are relevant to the period to be reported on.

Besides administrative units, legal entities and business establishments, the Business Register also include statistical units: enterprise units, kind of activity units and local kind of activity units. The SBR is a comprehensive register covering all enterprises in the country. Thanks to coordinated sampling, in which branches of statistics use the same register and sampling frame, all enterprises are included in the inquiry population. No enterprises are excluded, which might easily be the case if different registers were used for different branches of statistics. To sum up, it can be said that the Business Register ensures the maintenance of very high quality.

1.3.1.2 Sources

Since the start of 1997 the Swedish Structural Business Statistics (SBS), conforming to the EU regulation on Structural Business Statistics, have been the main source for the output calculations of market production. However, the Swedish SBS are considerably more comprehensive than is required by the Regulation (EU) 2019/2152 on European business statistics. The SBS cover all industries apart from financial enterprises. In the SBS major enterprises are surveyed by questionnaire. For all the other enterprises administrative material from the Swedish Tax Agency is used in combination with sample surveys for information on specific activities on a detailed level. For certain industries however, sources other than the SBS are also used. For agriculture, forestry and fishing, material from the Swedish Board of Agriculture, the Swedish University of Agricultural Sciences, the Swedish Forest Agency and the Swedish Agency for Marine and Water Management is also used. For NACE 64-66 Financial and Insurance activities, the main source is financial market statistics. For Mining and Manufacturing, the Production of commodities and industrial services census survey (IVP) is used in combination with the SBS and the quarterly Business inventories survey. The SBS and the quarterly Business inventories survey are compiled by kind of activity unit. The IVP use kind of activity unit (KAU) as its main level of reporting, with an additional further breakdown of reporting from some large KAUs by local units.

Government activities are covered by comprehensive data from the Swedish Financial Management Authority (ESV) for central government and collection of annual accounts for local government. The main source for the NPISH calculations is the wage and salary data, Gross pay based on administrative sources (LSUM), which all employers supply to the Tax Agency for every person employed. The data provide complete coverage and include wages and salaries paid and pay-related benefits. NPISH estimates are also based on the annual NPISH sample survey and comprehensive and detailed information on income, expenditures, investments and balances for the needs of NA-compilations. The compilation for Church of Sweden, which is a part of NPISH, is based on a survey. The survey contains comprehensive and detailed information on income, expenditures, investments and balances for the needs of NA-compilations.

1.3.2 Valuation

Output is valued at the basic price, i.e. the price the producer receives excluding all taxes and including any subsidies received on products. This valuation is also used in the primary statistics. Intermediate consumption is valued at the purchaser's price, i.e. the price paid by the enterprises for products exclusive of deductible VAT. This valuation also coincides with the valuation obtained in the primary statistics. Value added is obtained residually and is thus correctly valued at the basic price.

1.3.3 Transition from private accounting data to national accounting concepts in accordance with ESA 2010

Several adjustments of the output and intermediate consumption values from the primary statistics are required in order to meet the definitions of ESA 2010. Discrepancies between company accounting and ESA 2010 mean that most industries need to be adjusted for the same differences in definition. The primary statistics may show slight differences in structure, so that some adjustments only concern certain industries. See table 1.3.2 for a summary of the conceptual adjustments made in transition from the basic data source to national account concepts. All listed components are described in section 3.4.

Table 1.3.2: Conceptual adjustments by producers, SEK million, 2021

Item	Output			Intermediate consumption			Value added	
	Market producers	Non-market product	Total	Market producers	Non-market product	Total	Total	Total
Total	-284 215	-14 985	-299 200	-405 349	-14 985	-420 334		121 134
<i>Of which</i>								
Allocation of FISIM		4 703	4 703	84 168	4 703	88 871		-84 168
Allocation of Insurance		829	829	24 184	829	25 013		-24 184
Insurance premiums			0	-25 702		-25 702		25 702
Other operating income/costs	-24 007		-24 007	-12 125		-12 125		-11 882
Distributive transactions			0	-3 806		-3 806		3 806
Profit from property sales	-5 602		-5 602			0		-5 602
Work preformed for own use	-17 341		-17 341			0		-17 341
Own account software	90 856		90 856			0		90 856
Own account R&D	78 992		78 992			0		78 992
Own account mineral exploration	474		474			0		474
Purchased software		-15 729	-15 729	-55 572	-15 729	-71 301		55 572
Purchased R&D		-4 788	-4 788	-30 792	-4 788	-35 580		30 792
Holding gains	-18 116		-18 116	39 239		39 239		-57 355
Sectoral reclassification	-16 434		-16 434	-18 134		-18 134		1 700
Branches	-16 037		-16 037	-7 996		-7 996		-8 041
Congestion charges	18 996		18 996			0		18 996
Economic territory	-1 050		-1 050			0		-1 050
Recycling	-3 417		-3 417			0		-3 417
Financial leasing			0	-31 157		-31 157		31 157
Other taxes on production			0	-33 127		-33 127		33 127
Correction on reimbursements			0	13 077		13 077		-13 077
Subcontractor services	-233 455		-233 455	-316 324		-316 324		82 869
Taxi operation services	-4 584		-4 584	-4 584		-4 584		0
Dwellings	-130 276		-130 276			0		-130 276
Heating costs			0	-26 384		-26 384		26 384
Fiscal monopoly profits	-2 900		-2 900			0		-2 900
Winnings	-314		-314	-314		-314		0

1.3.4 Use of direct and indirect methods

Direct information (Survey & Censuses, Administrative records and Combined data) contributes with a large share of the total sources for output and for intermediate consumption. These parts are benchmarked every year.

Indirect methods are used to calculate the value of output within a few items.

Benchmarks and extrapolation are used to a minor extent in the calculations. When used it is only for certain parts of the value of output or in some cases to determine parts of intermediate consumption.

The general method for the estimation of the consumption of fixed assets is the Perpetual Inventory Method (PIM). Consumption of fixed assets is calculated annually and is based on the information available on gross fixed capital formation. This means that the same classifications used in the compilations of gross fixed capital formation provide the benchmark for the calculations of consumption of fixed assets. The consumption of fixed assets is calculated for all producers.

The value of dwelling services is compiled with a stratification method. The calculations are performed stratified by various categories and regions in accordance with EU regulation (EU) 2021/1949 based on data from the National apartment register.

FISIM is calculated using the method outlined in annex A, chapter 14, to Council Regulation (EU) No 549/2013 of 21 May 2013 (ESA 2010).

Insurance is calculated on an annual basis and is therefore regularly updated. The method follows the methodology outlined in ESA 2010 chapter 3.17.

Other extrapolation and models contain a large part for output and intermediate consumption connected to information about value-added tax (VAT) for the intermediate consumption of general government. The production of non-market producers is calculated as a sum of costs, and therefore value-added tax is adjusted both on the income side and the cost side. The VAT model is calculated annually in the tables for supply and use. The theoretical tax amount for each unit of the general government is then adjusted in accordance with the real amounts from the Swedish Tax Agency.

For NACE K66, Activities auxiliary to financial services, output and intermediate consumption are being derived from calculations in NACE 64 and NACE 65, which are based on administrative data.

Major parts of the intermediate consumption for owner occupied dwellings, NACE L68, is based on a model which is calculated annually.

For other NACE, other extrapolation and models involve relatively small amounts and concerns additions for forestry and logging (NACE A), Municipal non-profit organisations (NACE O) and entertainment, literary and artistic originals (NACE J and R).

Output of trade margins and transport margins are obtained by direct methods, primarily based on data from the Structural Business statistics. These total margins are then distributed to products and uses in the system of supply and use tables. For more information see section 3.13.4.

1.3.5 Exhaustiveness

The calculations of market production from the output side are mainly based on the SBS. This is a comprehensive material, which includes all industries except NACE-sections K and T. For agriculture, forestry and financial enterprises however, other source material is also used. For some industries the data of the SBS are supplemented by material from other sources/inquiries to allocate figures on a more detailed level. Following the Tabular Approach, the general approach for exhaustiveness adjustments in the Swedish NA is to start out in the production approach of GDP identifying producers and activities that are not covered in the business register or the source statistics. Adjustment for non-exhaustiveness is made by use of several different exhaustiveness methods.

For (N1) a production value related to the caring of children by nursemaids is added. Explicit supplements have been made for illegal activities. In this context alcohol and tobacco, drugs, prostitution and gambling are included (N2). An explicit supplement for construction carried out on work on owner-occupied dwellings is made (N3). Explicit supplements to the value of output for hidden production have been applied for several industries. In addition, intermediate consumption has been adjusted in some industries. A smaller part of the adjustment for misreporting refers to VAT evasion without complicity (N6). A supplement is made for part of the car benefit and own account firewood (N7a), see table 1.3.3.

Studies conducted by the National Audit Office in 1998 and the Swedish Tax Agency in 2006 and 2020 have been used as a basis for the estimates of the undeclared economy. Statistics Sweden has a continuous exchange of information with the Swedish Tax Agency (STA) and incorporates results from any new investigations that the STA make. However, the nature of these activities imply that it is difficult to quantify the value of hidden output or value added from studies, so that the scope of the supplements undertaken also must be based on assessments and analyses. In some cases, also other sources tend to be somewhat relevant. Comparisons between supply and use of products on a detailed level can be very valuable in these circumstances.

Income in kind (benefits) and gratuities. The Tax Agency has a long list, instruction SKV 304, on what items that should be recorded as benefits in kind. Estimates are included in the annual income declaration collected. The most important form of income in kind in Sweden consists of the car benefits, which an employer provides for his employees. Concessionary cars are imputed into the employer's output value and household consumption. Housing concessions are captured in the calculation model applied. A rental value is calculated for all dwellings in the country and is assigned to final use.

Gratuities are relatively uncommon in Sweden. It is mainly in the restaurant and taxi trades that tips are given. Information from 29 May 2015, Dnr 131 356228-15/111, on the webpage of the Tax Agency on treatment of tips states that when restaurant guests pay tips added as an extra amount electronically this is regarded as an income in the business and as a salary to employees if they receive

these amounts. Tips paid in cash directly to the restaurant personnel is not regarded as an income in the business but as a taxable income of the employee and should be included in the income declaration that every person must provide to the Tax Agency.

Data on government activities are regarded as comprehensive and no exhaustiveness elements are added. This is in accordance with the investigations reported by the Tax Agency in 2020.

Table 1.3.3: Exhaustiveness by typology (N1-N7), SEK million, 2021

Item	N1	N2	N3	N4	N5	N6	N7	Total exhaustiveness
Output	1191	5262	4896	0	0	137903	5027	154279
IC	0	0	2864	0	0	-23201	0	-20337
GVA	1191	5262	2032	0	0	161104	5027	174616

1.4 Outline of the income approach

1.4.1 Reference framework

GDP estimated from the income approach comprises the revenue generated by gross value added and the net of taxes on production and imports less subsidies. The different types of income are compensation of employees, gross operating surplus, gross mixed income and taxes less subsidies on production. Of these, compensation of employees, taxes, subsidies, gross operating surplus for non-market producers are calculated explicitly and independently. The value of market producers' gross operating surplus and gross mixed income depends partly on estimates for imputed shares of the economy and partly on the adjustments made for production values and intermediate consumption values in the determination of the gross value added in the system of national accounting in relation to available business accounting information.

The starting point for estimating the gross value added at basic prices for market producers are the compilations made in respect of production and intermediate consumption by product and by industry. Production and intermediate consumption are primarily determined by industry and then allocated to the institutional sector the activity units belong.

For the financial corporation sector (S.12) and the general government sector (S.13), there are strong links between industry and institutional sector in the NA estimates. However, there is one small exception regarding self-employed (S.14) that are active in the financial industry (K.66), which means that production and intermediate consumption in the financial and insurance industry (K.64-K.66) is slightly larger than production and intermediate consumption in the financial corporation sector (S.12). In the case of general government market producers are allocated to their industries. That is, the institutional sector, general government is larger than that of the government non-market producers. This division is made from the beginning of the compilation process and allocated both by the activity unit dimension and institutional sector dimension.

The most extensive work regards the separation of units self-employed belonging in the household sector from corporate and quasi-corporate units in the non-financial corporate sector. These units are currently compiled together for each of the industries included in the NA compilation process. Information of turnover regarding household units are available. Therefore, a central part of the work is to estimate intermediate consumption as well as taxes and subsidies for the industries of the household sector (S.14).

Much of the work of the national accounts regards the determination of income and expenses that are within the framework of ESA2010 concepts of production and intermediate consumption. In some cases the estimates regards, so-called imputed values, that are developed and applies in areas such as dwellings and vacation homes. When this work is completed for each industry or institutional sector there are gross value added data derived for each industry and each institutional sector. Furthermore, explicit estimates are made for the compensation of employees (D.1) from a variety of sources, assumptions and models. Similarly, compensation of employees is allocated both by industries and institutional sectors. Total amounts concerning other taxes on production (D.29) and other subsidies on production (D.39) are given from the general government, a certain part of the other production subsidies are given from the EU. Diligent efforts are made to allocate these other taxes on production and other subsidies on production to both industries and institutional sectors. Just as the measure gross value added is a balancing item the measures of gross operating surplus and gross mixed income are balancing items.

For activity units that are non-market-producers in the economy the starting point for calculating gross operating surplus is the assumption that net operating surplus is equal to zero. This means that value added can be estimated by the sum of costs approach and that the gross operating surplus is dependent on estimates of consumption of fixed capital. Gross value added for the non-market-producers in the

economy are in contrast to market producers estimated as compensation of employees, paid other taxes on production, consumption of fixed capital minus received subsidies on production. Furthermore, adding estimates of intermediate consumption, will then determine the value of output.

For activity units that are market-producers in the economy there are explicit projections, for both industries and the institutional sectors, of their parts needed to arrive at gross operating surplus and gross mixed income, i.e. output (P.1), intermediate consumption (P.2), compensation of employees (D.1) other taxes on production (D.29) and other subsidies on production (D.39). The household sector's gross operating surplus is derived from owner-occupied dwellings and is a subset of the industry Real estate activities (L.68), which in itself is a calculated industry with parts of corporations, tenant owners' associations and data calculated from the total stock of houses and vacation homes in the economy. Mixed income in the households' sector (S.14) is derived from the production of self-employed, intermediate consumption expenditure, compensation to its employees, paid other taxes on production and received other subsidies on production. To the main source for this is the comprehensive survey of corporate economy, Business statistics, (SBS) in which the self-employed are extracted as a subset of each industry. Balancing procedures are then applied by industry to distribute conceptual differences between business accounting and national accounting and other extrapolations and models as well as amendments in order to achieve a comprehensive and complete calculations.

Just as in the production approach addition of the net of taxes on products (D.21) and subsidies on products (D.31) are made to reach the GDP at market prices. A more detailed description of taxes on products is provided in chapter 7.1 and of subsidies on products in chapter 3.29.

1.4.2 Main data sources

1.4.2.1 Consumption of fixed capital

Consumption of fixed capital denotes the reduction in value, which an asset undergoes as a result of normal wear and tear. The calculations for depreciation of fixed assets found in accounting material covering enterprises as well as the departments and agencies of government and non-profit institutions serving households, follows classification and valuation principles different to those used for capital consumption in the national accounts system.

It is therefore necessary to construct a special calculation system for consumption of fixed capital in the national accounts. In the national accounts consumption of fixed capital is valued at replacement cost. Replacement cost is the cost in the current period of acquiring a new asset of the same kind, in order to estimate the cost of consuming the asset in the current period (known as current cost accounting). Replacement cost corresponds to the price of a new asset that would induce a producer to provide the asset to a willing buyer.

Consumption of fixed capital is calculated on the basis of information available on fixed capital stocks. The value of these can be obtained by direct calculation based on knowledge of the number of assets and their output prices. Such calculations are made for permanent dwellings, holiday homes and various types of transport equipment. Alternatively, consumption of fixed capital is calculated based on the value of the stock of fixed assets by accumulation of gross fixed capital formation.

The main sources for the calculation of consumption of fixed capital are thus data on gross fixed capital formation and the corresponding deflators, numerical data, prices for various items of transport equipment and tax assessment values for dwellings and holiday homes.

1.4.2.2 Wages and salaries

The total value of wages and salaries for the economy as a whole is based mainly on monthly PAYE tax return per employee and annual income statement, LSUM (registerbaserad lönesummestatistik). LSUM is Statistics Sweden's adaptation of the gross pay by income statements (KU) from employers to the tax authorities and individual-level employer PAYE returns (AGI). In addition, certain supplements and deductions are included relating to demarcations, reclassifications and under-coverage. The income statements are monthly statements of gross cash wages and other taxable remunerations, which resident employers render to income recipients and the tax authorities prior to tax assessment. LSUM is the sole and obvious source for the estimation of total wages and salaries. The strength of these statistics lies in their complete coverage of the data-providing units and their consistent classification by sector and industry in accordance with the Business Register database (SBR). Classification by industries is geared to both institutional and functional units, an indispensable basis for cross-classification of factor inputs. Under-coverage may arise because not all employers comply with their obligations under the tax assessment legislation or because the corporate identification number of the enterprise (which is used to identify the unit) is missing in the SBR for one reason or another, which gives rise to a supplement covering about 8.3 per cent of the payroll total.

1.4.2.3 Social contributions

The term "social contributions" (sociala avgifter) is used in the Swedish national accounts to denote pay-related compulsory social contributions and voluntary contributions regulated by agreements between the organisations of employers' and employees respectively. Social contributions laid down by law are calculated with the aid of data from the National Social Insurance Board. Data on social contributions regulated by agreement for employees of departments and agencies of government and local and central government public-service undertakings are obtained from the records of The Swedish National Financial Management Authority (ESV), Statistics Sweden's summaries of local government and county council accounts and from the National Government Employee Salaries and Pensions Board (SPV). Data on enterprise contributions regulated by agreement are obtained from the Financial Supervisory Authority, Statistics Sweden's financial statistics for enterprises and the Pensions Registration Institute (PRI).

1.4.2.4 Taxes and subsidies on production

The calculations for central government taxes on production and subsidies are mainly based on the records of the ESV for the income of departments and agencies of government by revenue headings, which are recorded on a monthly basis. Some parts of the taxes on production are based on yearly tax assessments such as property taxes, which to some extent are allocated to local government sector. The costs of local government subsidies are based on the summaries of local government accounts. Data on EU taxes on production and subsidies are also obtained from ESV.

1.4.2.5 Operating surplus

Non-financial corporations

Operating surplus is calculated for the sector as a whole. The basis is the enterprise data for the sector, which is available from the Business statistics. Since this data is not fully adapted to national accounts definitions, adjustments are made to it and supplements provided for the under-coverage of tenant-owners' associations.

Financial corporations

This institutional sector has a demarcation, which coincides with the functional industries NACE K.64-K.66 except for a small part that is self-employed in the financial services area. Other taxes on production, net, wages and salaries and social contributions are deducted from value added at basic prices in these industries in accordance with the sources referred to above.

Local government

The operating surplus is generated in the local government public service undertakings. The calculation starts with external sales and deducts wages and salaries, social contributions, other taxes on production and consumption of fixed capital that corresponds to the sales. These components are calculated in the same way as for the non-market producers of the local government sector.

Social security

The value arises from the real estate management of the National Pension Fund. The profit-and-loss account for this activity is included in the end-of-year accounts of the fund. Net operating surplus is only observed for a number of years in the sector and the latest observation is from 1998, the last year when the sector was direct owner of real estate. For other years gross operating surplus consists only of consumption of fixed capital.

Owner-occupied dwellings

These include privately owned homes and holiday homes. Real estate tax is deducted from value added and a supplement is applied for the value of other subsidies in accordance with data from the Swedish Financial Management Authority (ESV). Consumption of fixed capital is calculated in a model based on data from real estate tax assessment and real estate price statistics. In the model, a geometric rate of capital consumption by 1.22 percent for owner occupied dwellings and 1.28 for holiday homes is applied. These rates correspond to average service lives of 75 and 70 years respectively. The proportion of owner-occupied dwellings among all individual houses and holiday homes is set to 1, meaning that operating surplus in industry L68A corresponds to operating surplus in S14.

1.4.3 Independence in relation to other strategies

The income approach, as it currently features in the Swedish national accounts, is dependent on both the production and expenditure approaches in the final balancing process. However, the various components are more or less independent of other strategies. In the income approach total wages and salaries are obtained from the income statements (KU). This source is separate from the Business statistics and sources for the general government sector, but constituent units in the various sources are coordinated through the Business Register (SBR). Wage and salary data for non-profit institutions serving households are based entirely on income statements. Social contributions, as regards the legally compulsory portion, are measured with reference to the income of general government. The portion regulated by agreement, which is based on insurance, is measured through the insurance companies. In the case of provision by transfer to an account within the enterprise, the measurement takes place both at enterprise level and through the Pensions Registration Institute (PRI), which registers pension funding by transfers to special accounts. In the general government sector social contributions are measured using the same source as in the production and expenditure approaches.

Operating surplus and mixed income

Sector-by-sector operating surpluses in non-financial corporations, financial corporations, central government, municipalities, social security institutions, owner-occupied housing and in non-profit institutions is calculated from the same sources as the corresponding output calculations. Mixed income is also corresponding to the output calculations.

1.4.4 Valuation and recording

The following is a summary of the valuations and recording applicable to the income approach for the economy as a whole:

- GDP at market prices measured from the expenditure and production side.
- Taxes on production. For taxes on products, see section 1.3. Other taxes on production are based on the data from the ESV, which are recorded monthly and on a cash basis and are period-reallocated in order to obtain accrued values. In practice income is time lagged, for example income reported in income statements for February to January is recorded as income for the calendar year.
- Subsidies. Expenditure without period reallocation.
- Wages and salaries. The total of wages and salaries reported in the income statements indicates wages paid in cash, including benefits recorded in the year they are paid. Compensation during sick leave etc. paid by the employer is also included.
- Social contributions. Compulsory social contributions are recorded on payment with period reallocation by one month. Agreement-regulated contributions follow accounting principles in enterprises and insurance corporations and the records of departments and agencies of government.
- Net operating surplus, non-financial corporations and mixed income for households. Accounting data are adapted to national accounts concepts, inter alia for the valuation of inventories and costs of financial leasing. Accounting values for capital consumption are replaced by calculated values and valuation at replacement cost (current cost accounting).
- Net operating surplus, financial corporations. The operating surplus is calculated residually on the basis of value added at basic prices in accordance with the output calculations.
- Net operating surplus, general government sector. These are mainly obtained from the accounts of the municipalities. The values are calculated for consumption of fixed capital.
- Net operating surplus, owner-occupied dwellings. Value added in accordance with the output calculations. The values are calculated for consumption of fixed capital.
- Consumption of fixed capital. Calculated in a model based on capital stocks valued at replacement cost and geometric rates of capital consumption (PIM method).

1.4.5 Transition from private accounting data to national accounts concepts

The procedure is as described in sections 1.4.2.5 and 1.4.4 above.

1.4.6 Use of direct and indirect measurement methods

The following is a summary of the procedure as regards the income approach and the economy as a whole:

- Measurement methods for GDP are in the main direct.
- Taxes on production and subsidies are measured directly.
- Wages and salaries are measured directly with the aid of administrative material. Supplements are calculated for wage and salary payments not reported.
- Social contributions are measured directly.
- Net operating surplus for non-financial corporations is measured directly and adjusted for certain definitional differences. The adjustments are subject to certain indirect calculation effects. The operating surplus of financial corporations is measured as value added less net of production taxes

and subsidies. The same applies to owner-occupied dwellings and mixed income. The operating surplus of the general government sector is measured directly.

- Consumption of fixed capital is based on a calculation model.

1.4.7 Roles of benchmarks and extrapolation

The basis to the current estimates of the institutional sector accounts according to ESA2010 according to the primary source of Business statistics (SBS) are different from 1997 and onwards comparing with the older sources. The difference is, among other things, the extent of the examination and the distribution of non-financial companies and self-employed in the households sector who are active in the market producing part of the economy. This affects the valuation of and the distribution between non-financial corporations and self-employed of production, intermediate consumption, gross value added, compensation of employees, gross operating surplus and gross mixed income in the accounts. Periods prior to 1997 are calculated by models using extrapolation with respect to these transactions in order to maintain comparability over time.

1.4.8 Exhaustiveness

The income approach in the current structure for the economy as a whole has the completeness determined by GDP in the calculations of output and expenditure.

1.5 Outline of the expenditure approach

1.5.1 Household final consumption expenditure

1.5.1.1 Reference framework

Household consumption consists of all expenditure of Swedish households on goods and services in their role as consumers. Consumption may take place both in Sweden and abroad, so that tourist expenditure and expenditure of diplomats and military personnel abroad are included while expenditure incurred by non-resident households present on Swedish territory is excluded.

1.5.1.2 Main sources and methods

Household consumption expenditure defined in accordance with the national account principles are not available in any single statistical source. Instead, compilations are based on a number of separate calculations based on a range of different source materials that are combined to ensure coverage of HFCE as a whole. Main sources and models used are:

- Household consumption statistics, 54.0 percent of HFCE. Household consumption statistics is compiled, among other, from the Structural Business statistics (SBS). SBS has information on sales from all companies in Sweden. The statistics are divided by industries. In order to divide sales from SBS into household consumption and other consumption, transaction data from banks, card issuers and card payment terminals (card acquirers) are used to split the sales by counterpart. The statistics show whether the purchase is registered on a private card or a company card and are subsequently used to split sales and identify the share sold to households acting as consumers.
- Stratification model for dwellings, 19.7 percent of HFCE. For rented dwellings number of square meters and actual rents paid per square meters are calculated for HFCE. The same model is applied for tenant ownership rights. For owner occupied dwellings a rental value is compiled based on actual rents paid by tenants for a comparable dwelling.
- Energy balances, 5.6 percent of HFCE. The calculations for the energy consumption of households are undertaken in the special energy balances of the national accounts.
- Financial services & allocation of FISIM and insurance, 4.8 percent of HFCE. This compilation is based on materials from the Swedish Financial Supervisory Authority, the Riksbank and internal Statistics Sweden materials on statistics on financial sector result.
- Administrative Records & accounts from municipalities and regions, 4.4 percent of HFCE. This compilation is based on records from central government authorities and local governments on payments made by households. A first category of these concerns payments for use of publicly provided services such as health or social care. A second category refers to areas where regulation means public authorities collect information on payments from households for various goods or services households procure in areas such as prescription of medications, gambling services or income in kind in the form access to company cars for private use.
- Vehicle register, 3.7 percent of HFCE. This compilation uses data on number of new cars registered, recorded by identification number and prices per vehicle model.

Figures from these, and a number of additional more minor components, are adjusted using information from the International trade in services survey to add consumption expenditure of Swedish households made abroad and remove expenditure by non-residents made in Sweden, where these adjustments have an overall share of 0.5 percent of HFCE. While the above-mentioned materials all are based on annual available information some components of household expenditure that these do not cover are instead extrapolated from benchmarks set in previous years, which was done for 3.1

percent of overall HFCE in the compilation of 2021. This lack of coverage in certain areas has been an area of continued work in subsequent years where this share has been roughly halved in the compilation of the year 2023 which has been achieved through an expansion of coverage in the HCS.

1.5.1.3 Other available materials and crosschecking

A great effort to catch data is made in household budget surveys and surveys on household expenditure, i.e. HBS and households housing cost. These surveys have been carried out at intervals for many years. Statistics Sweden has attempted to measure household expenditure in terms of definitions which coincide as closely as possible with those of the national accounts.

Swedish HBS-statistics have however for a long time struggled with quality problems, primarily related to longstanding issues with low response rates and with households finding it difficult to respond to questionnaires. A redesigned HBS was implemented in 2021, resulting in significantly improved response rates. But unfortunately, even the redesigned HBS, does not provide sufficiently detailed information to meet the needs of the NA and CPI.

While these remaining issues guided the decision to develop a new baseline source in the Household Consumption Statistics, the HBS remains the best alternative source material for a comprehensive HFCE-estimate largely aligned with NA-definition, meaning that it makes a valuable tool for crosschecking compiled NA-figures. For 2021 such a comparison points to largely consistent figures for the two approaches of the full NA-compilation and the final HBS-result without any adjustments, where the NA estimate for total household consumption is somewhat higher than those reported by the HBS, although the NA-total fall within the confidence interval provided by the survey.

1.5.1.4 Valuation

Valuation is based on the purchaser's price, i.e. the price the purchaser pays at the time of purchase in accordance with ESA 2010. Generally, estimates of HFCE are collected from sources that provide measures in purchaser's prices, e.g. the Household consumption statistics. If HFCE estimates are based on some other source, e.g. company book-keeping, an adjustment with VAT is made to the account figures, which are provided in basic prices.

Consumption of goods produced on own account is valued at production cost with a supplement for VAT regarding agriculture products produced by enterprises normally producing for selling. This treatment is based on Swedish VAT legislation. However, consumption of goods produced by households as consumers has no addition for VAT. For used goods sold in the household sector through a third party, only the margin realised on the sale is included. In the case of purchases paid for in instalments, it is the purchase price including all supplements in the form of delivery and installation charges, which makes up the value of the product in question. The interest element is not included in the value. Interest charges are not regarded as household consumption but are treated as a transfer between borrower and lender.

1.5.1.5 Transition from concepts used in private accounting and administrative concepts to ESA 2010 national accounts concepts

In cases where the source records expenditure is exclusive of VAT, for example the Business statistics, a conversion is carried out in order to obtain the value, which is correct by definition.

With most materials used in compilations being designed primarily for the purpose of use in NA HFCE calculations, most of these adjustments are made in the compilations of these various sources meaning there is little need for explicit conceptual adjustments in the NA-compilations. These are limited to allocation of Insurance and FISIM.

1.5.1.6 Use of direct and indirect measurement methods

Direct measurement methods are used for most expenditure in household consumption. However, indirect methods are applied to calculate a utility value for all dwellings other than rented accommodation. Indirect methods are further used to record the utility value of car benefits and of financial services.

1.5.1.7 Roles of benchmarks and extrapolation

The calculations for household consumption expenditure are based both on expenditure amounts measured annually and on extrapolations of benchmarks in a certain year with the aid of various indicators. For 2021, 17 items corresponding to 3.1 percent of overall HFCE were calculated using benchmark levels maintained with continued extrapolations.

1.5.1.8 Exhaustiveness

Adjustments for purposes of exhaustiveness are made for

- Underground producers of output of paid domestic services.
- Illegal producers engaged in prostitution, distilling of alcohol, gambling and smuggling.
- Misreporting by producers concerning tax fraud made either with or without agreement from the purchasing household.
- Adjustments for statistical deficiencies in data concerning producers' own withdrawal of agricultural goods and firewood for own final use and a correction made to the additions made to HFCE for income in kind in the form access to company cars for private use.

These together make up 4,1 percent of overall HFCE, 3,1 percent of which is made up of misreporting by producers which is compiled on the basis of tax audit data from fiscal authorities.

1.5.1.9 Independence in relation to other approaches

Household consumption expenditure is based on separate calculations for the various purposes. With the aid of comparisons with other material, inquiries and calculations there are in many cases possibilities for checking the plausibility of the household expenditure calculations produced. In Sweden large amounts of data in a number of administrative registers are coded in the same way, which to a great extent facilitates comparisons.

1.5.2 Non-Profit Institutions Serving Households (NPISH)

1.5.2.1 Reference frame and main data sources

Added to actual household consumption expenditure is an expenditure item not allocated to purpose, consisting of consumption in non-profit institutions serving households (NPISH). NPISHs include associations working to promote the interests of households without any profit incentive. Bodies such as trade unions, churches, political parties, sport associations and welfare organisations count as NPISHs. The main source for the NPISH calculations is the wage and salary data (LSUM), Gross pay based on administrative sources, which all employers supply to the Tax Agency for every person employed. The data provide complete coverage and include wages and salaries paid and pay-related benefits.

Another main source is the survey on Non-profit institutions serving households. This source gives detailed information on income as payments for sold goods/services and expenditures, recorded as intermediate consumption distributed by 32 different NACE-activities. Figures on wages and salaries

and number of employees are also collected but as this is a sample survey the registers from the Swedish Tax Agency are used instead as they are comprehensive.

The third main source is a survey containing data for the Church of Sweden. The survey is divided into three different parts covering different activities within the Church. The activities of the parishes are covered in one part of the survey, and the activities of the dioceses in another one. The third part of the survey contains a special collection of data covering the ownership and management of land, forests and buildings belonging to the Church. The survey contains comprehensive and detailed information on income, expenditures, investments and balances for the needs of NA-compilations.

1.5.3 General government final consumption expenditure

1.5.3.1 Reference framework

In the national accounts the Swedish general government sector consists of three sub sectors – central government, local government and the social security sector. State government is not included as an administrative sector within Swedish general government.

Central government includes all administrative departments of central government and other central authorities and institutions whose powers range over the entire economic territory, apart from the administration of the social security sector. This demarcation coincides to a large extent with the legal entity of the State. Also included are non-profit institutions, which are controlled and largely financed by central government. The legal form of these institutions is that of representational associations, other foundations or funds, social security funds and public corporations and establishments along with a few public limited corporations.

In 2021 the local authorities comprised 290 civic primary municipalities (primärkommuner, pk), 20 regions, 182 municipal associations (kommunalförbund, kfb) and 173 corporations. The calculations of the local government sector also include the Swedish Association of Local Authorities and Regions (Sveriges kommuner och regioner), SKR) and non-profit institutions (ideella organisationer, IO) belonging to the local government sector.

Local government activity consists of social services such as care for the elderly, child-care and social assistance matters, the public sector school system and education for children, young people and adults, planning and building matters, health and environmental protection, cleaning and waste disposal, emergency services, water supply and sewerage, public order and safety and health and medical care including dental care. In addition, the local authorities pursue activities in the fields of recreation and culture, housing, energy and industry, public transport and tourism promotion.

The output of cleaning and waste disposal, water supply and sewerage, housing and energy is produced by units classified as market producers. Hence these are not included in calculations for the consumption expenditure of municipalities.

The social security sector includes units whose main activity consists of managing funded social security systems. The social security sector comprises of the Swedish Pension Agency and the AP-funds number 1, 2, 3, 4 and 6, which are buffer funds in the Swedish national income pension scheme.

1.5.3.2 Main data sources

The main data source for the central government is the Basis of central government net lending (UFS) compiled by the Swedish National Financial Management Authority (ESV). The basic documentation for these records is obtained from the government accounting system and therefore covers all expenditure of departments and agencies of government, also those financed otherwise than by way of the national budget. All expenditure is thus classified in the real economic distribution as consumption, investment or transfers and by type of expenditure and purpose.

The main sources for the calculation of the consumption expenditure of local government are the annual accounts, collected by Statistics Sweden for primary municipalities, municipal associations and regions.

Other sources used for the calculation of local government consumption include the annual reports of the Swedish Association of Local Authorities and Regions, Statistics, quarterly survey for the local government corporations (KOREBA), employment statistics from Statistics Sweden and material from the National Agency for Education and National Board of Health and Welfare. The main source for the five private hospitals in Sweden is the Structural business statistics and the annual report for each private hospital.

The sources for consumption expenditure of the social security sector are the annual reports of the national pension funds, a quarterly survey including revenues and expenditure carried out by Statistics Sweden and a survey conducted by the Swedish Pension Agency which is made available to Statistics Sweden. Data concerning the consumption expenditure of the Swedish Pension Agency is collected by ESV and passed on to Statistics Sweden, as well as from their annual report.

1.5.3.3 Motivation for significant choice of data sources

The statistical sources for central government, primary municipalities, municipal associations and regions provide comprehensive coverage, i.e. all units are included. The sources used are based on the accounting system of the institutional units, which as far as possible is adapted to the requirements of the national accounts. There is continuous development of sources in order to conform to the needs of the national accounts in respect of reliability and level of detail and extended requirements to comply with ESA2010.

1.5.3.4 Independence in relation to other approaches

The expenditure of the general government sector on consumption and investment is based on the accounting of the institutional units for expenditure and income. In the calculation of total consumption expenditure there is a subdivision into the components intermediate consumption, wages and salaries, social contributions, other taxes on production, other subsidies on production, capital consumption, sales, other assets produced on own account and social transfers in kind. Data at current prices are obtained from the respective source.

1.5.3.5 Valuation

Consumption expenditure consists of the output value for the activity units of general government classified as other non-market producers, minus their sales income plus their purchases from market producers of goods and services, which are supplied to households directly without further processing as social transfers in kind.

+ Intermediate consumption including deductible VAT

+ Wages and salaries

+ Social contributions

+ Other taxes on production

– Other subsidies on production

+ Consumption of fixed capital

= Value of output

– Sales of goods and services

- Production for own final use
- + Social transfers in kind
- = General government consumption expenditure

1.5.3.6 Transition from accounting data to national accounts concepts

The underlying material to calculate general government consumption expenditure is obtained from the total accounting records of the various sub sectors, which are made available for the national accounts. The material is obtained from departments and agencies with widely divergent activities and is arranged in a common accounting system. Through close cooperation with the suppliers of statistics, the compilation of records has been adapted in such a way that data which need to be classified in a different way in the national accounts can be identified.

1.5.3.7 Use of direct and indirect measurement methods

Direct measurement methods are used in the calculations for the general government sector apart for consumption of fixed capital. Also Capitalized software and R&D are compiled with the help of information from the Surveys based on the Frascati manual and on Software included in the SBS and the survey on IT together with government sources.

1.5.3.8 Roles of benchmarks and extrapolation

The calculations are based on annual data at current prices and extrapolations are therefore not used.

1.5.3.9 Exhaustiveness

The underlying material provides complete coverage since data are collected for all activities. A plausibility check of the material is always carried out when it is received by Statistics Sweden. Comparisons in the form of time-series are also used in order to detect any major divergences between years. The material is also returned to the data suppliers, in the form of key figures, which facilitate comparisons between different local authorities. The suppliers then have an opportunity to correct their data if they think that an error has occurred.

1.5.4 Gross fixed capital formation

1.5.4.1 Reference framework and main data sources

The annual SBS is the main source for market producers and producers for own account to establish investment totals for the main aggregates, combined with the quarterly investment survey which contains additional information about the breakdown of investments by type. Additionally, the Frascati survey on research and development as well as the survey Enterprises' IT expenditure, provides important data on capital formation of immaterial assets. Information on gross fixed capital formation for the central government sector is available from the comprehensive material collected by the Swedish National Financial Management Authority and from the summary accounts for the local government sector. Additional and more detailed information about the data sources used is available in chapter 10.4.

1.5.4.2 Valuation

Gross fixed capital formation is valued at purchaser's prices including delivery and installation charges. In cases where market prices are not available, for example regarding capital assets produced on own account, the purchaser's price is estimated as the sum of costs, and a mark-up is added to estimate a market price equivalent. The valuation also contains all other costs associated with the

acquisition, e.g. customs duties and other taxes on products and costs of transport, architectural services and installation. Non-deductible VAT is included. VAT for the investment of departments and agencies of government is also included.

For buildings and installations, which normally have a production time reaching over several periods, the total investment value is split up so that the amount recorded for each period in principle corresponds to the part which is completed during that period. Often, however, as a close approximation, payment instalments made during the period are recorded.

Gross fixed capital formation is entered at the time when ownership of the asset passes from the vendor to the user. In the case of financial leasing the amount is entered when the user – the lessee – takes possession of the asset, even though it continues to be owned by the lesser during the entire period of the lease. Investment on own account is entered when it is produced.

1.5.4.3 Transition from the concepts used in private accounting and administrative concepts to concepts used in the national accounts in accordance with ESA 2010

Swedish legislation allows direct depreciation of so-called 1–2-year investment, i.e. capital assets of limited value with an economic life of less than 3 years. ESA 2010, on the other hand, treats this as gross fixed capital formation. The areas affected by the distinction between the accounting legislation and the national accounts concepts are, on the one hand, software investment and, on the other hand, investment in machinery and equipment. A special question is introduced in the SBS to capture short time investments.

Parts of the expenditure listed in the SBS as intermediate consumption is conceptually seen as gross fixed capital formation by the national accounts. Therefore, in the compilation of national accounts, reallocations of parts of the SBS values of both software and research and development, from intermediate consumption to gross fixed capital formation, are carried out. More specific information about these calculations regarding gross fixed capital formation of immaterial assets are found in chapter 5.10.

1.5.4.4 Use of direct and indirect measurement methods

Direct information is collected from the sources except for models for leasing, software, and dwellings. In order to distinguish transport equipment from the main group “machinery and transport equipment” in the SBS, information from vehicle and ship registers are used.

1.5.4.5 Roles of benchmarks and extrapolation in the investment calculations for buildings, machinery and transport equipment excluding leasing

The compilations are largely based on annual information. However, a benchmark estimation model is used to calculate capital formation in purchased software. In addition, benchmark and extrapolations are used for a few other minor items. More detailed information is available in chapter 5.10.

1.5.4.6 Exhaustiveness

A number of methods are used in order to ensure exhaustiveness in accordance with the N1-N7 taxonomy to exhaustiveness. The various approaches are outlined in chapter 5.10 regarding calculation methodology and in chapter 10.3 regarding source statistics.

1.5.5 Changes in inventories

1.5.5.1 Reference framework

The inquiry population for most of the industries in the inventory inquiry is obtained from Statistics Sweden's business register.

1.5.5.2 Main data sources

The statistics are mainly based on data collected directly from enterprises by Statistics Sweden's (SCB) questionnaires. The inquiries are quarterly and cover mining, manufacturing and the trade industries. Changes in inventories in the service industries are based on data from the SBS. Statistics on changes in inventories in agriculture are based on estimates produced by the Swedish Board of Agriculture and in forestry the sources consist of information from the Swedish University of Agricultural Sciences (SLU) and the National Board of Forestry. Data on changes in quantities within the Electricity and gas industry, as well as for some minor additions to the mining and manufacturing and trade industries, are collected from surveys at Statistics Sweden (SCB) known as the Quarterly fuel statistics and the Monthly fuel and gas statistics. The statistics on changes in inventories in central government are produced by the Swedish National Financial Management Authority (ESV).

1.5.5.3 Valuation

The value of the inventories of enterprises is equal to the value of stocks acquired minus the value of stocks disposed of during the calculation period and is measured in the inquiries as the difference between opening and closing inventories. Changes in inventories are converted in such a way that they only give the change in the volume of inventories excluding holding gains and losses – either through re-valuing book-keeping values or by using the quantity revaluation approach. Inventories of materials and supplies as well as goods for resale must be valued at replacement cost, and inventories of work-in-progress and finished products at their sale price.

1.5.5.4 Use of direct and indirect measurement methods

Direct measurement methods are used for changes in inventories.

1.5.5.5 Exhaustiveness

In the process of balancing between supply and use, there may be a need for adjustments to changes in inventories. The material collected is balanced, and any deficiencies in the main quarterly source are adjusted primarily in conjunction with the balance reconciliation.

1.5.6 Exports and imports of goods and services

1.5.6.1 Reference framework and main data sources

Statistics Sweden, which is responsible for the statistics on international trade in goods, collects data on Intrastat (trade with other EU countries) and compiles these with Swedish Customs data on Extrastat (trade with non-EU countries). Data are collected from all enterprises with total exports of goods to other EU countries to a minimum value of SEK 4 500 000 or imports of goods from other EU countries to a minimum value of SEK 9 000 000. To divide the total export of goods data into intra EU and extra EU, the shares from Extrastat and Intrastat are used. Regarding international trade in services, the primary data source is the International trade in services survey (ITSS). The survey is done by Statistics Sweden on behalf of the central bank. The statistics are produced according to Balance of payment manual 6 (BPM 6) on close to 50 different types of services (EBOPS). Almost all

information is available by country breakdown from 2012 and onwards and this data is used for the distribution of the total population by intra and extra EU-countries.

1.5.6.2 Valuation

According to ESA 2010 imports and exports of goods are to be valued free on board at the border of the exporting country (FOB) for total exports and imports.

1.5.6.3 Transition from the concepts used in survey and administrative concepts to concepts used in the national accounts in accordance with ESA 2010.

Data for both Extrastat and Intrastat are collected according to the Combined Nomenclature (CN) and linked to the product classification applied in the national accounts' product accounts. Data on exports and imports of goods and services are specified in accordance with the product classification used in the product accounting system and are compiled at the same level of detail in the quarterly and annual calculations. Collected data on trade in services are mainly in accordance with the standard drawn up jointly by the OECD and Eurostat for statistics on international trade in services. The data need to be converted to some extent to the product classification used in the national accounts.

International Trade in Goods Statistics (ITGS) collect data regarding goods crossing the border while the NA record exports of goods at change of economic ownership irrespective of corresponding physical movements of goods across borders. To ensure exhaustiveness various approaches are used. For example, in the national accounts goods sent abroad for processing must be deducted from ITGS figures since there is no change of ownership, and the fee that the processor receives from the principal must be added as a service.

1.5.6.4 Main approaches taken with respect to exhaustiveness

No exhaustiveness adjustments, N1-N7 are made for exports and imports.

1.6 The balancing or integration procedure and main approaches to validation

1.6.1 Role of supply and use tables

GDP and GNI are calculated and compiled in that part of the national accounts system known as the product accounts. The annual calculation is performed and balanced in a system of supply and use tables. The supply and use tables (SUT) are the basic tables which is further processed to Input-Output tables. The table system also includes employment calculations with the average numbers of employees and hours worked per industry/purpose.

The degree of detail in the Swedish system is such that the output calculations are performed on around 425 product groups and 96 industries; household consumption expenditure is recorded for 162 purposes in accordance with COICOP; consumption expenditure of departments and agencies of government is allocated to sectors, industries and functions (COFOG), which makes 84 uses. Gross fixed capital formation is broken down by sector, industry and function (COFOG), split on 238 uses in the economy.

The production approach to GDP and the expenditure approach to GDP are calculated independently. The income approach to GDP is not in all parts independently calculated, thus the gross operation surplus and mixed income is balance of items from the production approach and sector accounts.

In the calculation of an annual sequence all data are calculated in accordance with the sources and methods described. These constitute the basis for the supply and use tables. When the first version of the supply and use tables have been produced at both current and constant prices, the actual analysis work is undertaken and can be divided into two stages where the first step is data validation, which also include some manually balancing, and the second step where the automatic balancing is processed.

Data validation process: In the data validation step the main task is not to reconciling the balances but involves examination and quality checking for around 425 product groups with the help of supply and use tables. Source data is subject to detailed analysis, which can be about going back to the primary statistics to conduct verification and cross checking of the material. Further, in the data validation step the information on price changes and volume changes for the different components of supply and use play important parts. SUT cover several years and a time series approach to price changes and volume changes is often fruitful to detect strange occurrences in the estimates. Gathering information from alternative sources, e.g. from the VAT register or from trade organizations, and comparing them with the results of the SUT is another important aspect of data validation. When the data validation step is finished the residuals between supply and use of individual products could have been reduced, enlarged or unchanged. The data validation step also includes the process to determine which products, if any, who have a need to be manually balanced. Products that are manually balanced is not balanced completely, but large imbalances should be solved. Most often manually balanced products are balances that are known to have problems and investigations has been made or are ongoing.

Balancing procedure: The balancing procedure, after the data validation process, is in every stage done with automatic balancing procedures, hereafter the SCM model, which ensures an objectively balancing process. The aim of the final, automatic balancing procedures is to eliminate the residual of every product group, and thus also the total residual. No manually or macroeconomic adjustments is done as a part of the automatic balancing procedure. The assessment is that this balancing method facilitates an improved analysis of imbalances between supply and demand in the economy. The production approach is assessed to be more exhaustive than the expenditure approach. This is also reflected in the total error estimates underlying the automated balancing process where GDP from the production approach have a smaller total error compared to GDP from the expenditure approach.

1.6.2 Other strategies applied in the validation of GDP

1.6.2.1 Labour input, productivity trends, trends in earnings

Labour input calculations form an integral part of the national accounts. Data are calculated using the same industry classification as the output calculations. The calculations apply to the average number of persons employed and hours worked, with a breakdown by employers and employees. The national accounts may also obtain data from private firms for a better interpretation of the statistics. These data are combined with data on production, intermediate consumption, value added, wages and salaries etc., and the industry-by-industry analysis is supplemented by an analysis of industry-by industry labour productivity trends and trends in earnings. The analysis may result in adjustments to any of the input variables.

1.6.2.2 Sector accounts

The Swedish national accounts are complete in the sense that they comprise both product accounts and real and financial sector accounts. The product accounts take precedence over the sector accounts in the calculation procedure, but the calculation of a year is not completed until both the product accounts and sector accounts are finalised. The calculation of the institutional sectors is not entirely separate from the product accounts calculation. Total income is determined from GDP. This means that the trend in incomes and their allocation to sectors are an interesting variable of analysis, as also the distribution of net lending by sectors.

1.6.2.3 Various other approaches to increase quality

Other tasks are involved in the strategies to validate and increase quality of GDP. Among others in deep cooperation with the Large Case Unit. This unit has made a large contribution to increased quality both in source statistics and in national accounts. *EDP, VAT, Satellite- and Regional accounts* contain national accounts data broken down on a more disaggregate level than the original NA. These compilations then help to verify and check the national estimates. *Quality management, internal and external quality checks*: Quality reports have been produced for several years for all statistical products. Statistics Sweden continuously works towards the standardization of working methods, IT support and methods that serve to increase quality assurance and quality control. *Description of delivery agreement*: Agreements are drawn up between the National Accounts and the Statistics Sweden units for data delivery to NA. The purpose of these agreements is that the input to NA calculations will be adapted in terms of content and quality and be quality assured according to NA's needs. *Meetings and seminars*: In connection with every quarterly release of NA data the National Accounts Division holds seminars with the most important users of the NA, mainly government authorities. The users of the NA statistics then give their views on the material and also criticize and question the estimates produced.

1.7 Overview of the adjustments for exhaustiveness

Following the Tabular Approach, the general approach for exhaustiveness adjustments in the Swedish National Accounts, is to start out with the production approach of GDP identifying activities that is not covered in the business register or in the source statistics. Adjustments for non-exhaustiveness is made by use of several different exhaustiveness methods.

Statistics Sweden's Business Register has an important role in the context of exhaustiveness. It contains all production units relevant for the economic statistics by industry and sector. There are no income or VAT thresholds where economic activities do not need to register for taxation according to the Swedish tax legislation and accordingly no thresholds in the business register on what units that are included. The units are all identified by a unique organization number. The register is updated weekly with information from the Tax Agency registrations and annually from surveys to major industries. Also, information from any other survey or personal contact with companies is used for updating purposes.

In the benchmark revision 2019 the SBS data were introduced for several industries that previously had been based on other source data and the SBS are thereby the main source for output, intermediate consumption and gross value added for all non-financial activities (except owner occupied dwellings). Making this change also shifted the focus more towards the production approach and the production approach is considered as the most exhaustive approach to GDP. This is also reflected in the total error estimates underlying the automated balancing process where GDP from the production approach have a smaller total error compared to GDP from the expenditure approach.

1.7.1 The production approach

The sources for the production approach on the industry level generally covers the total population, where SBS is the main source. Major enterprises are surveyed by questionnaire, whereas data for all other enterprises are obtained from administrative material supplemented by surveys for information on a detailed level. Adjustments are made for differences between accounting rules and the definitions applied in the national accounts.

The main component of non-exhaustiveness in the production approach is N6, misreporting by the producer. Individual estimates on two-digit NACE level are mainly based on intermittent audit studies by the Swedish Tax Agency, with the last one published in 2020. The report from 2020 estimates hidden income for the whole economy at SEK 91 billion per year on average for the years 2010-2016. This corresponds to a share of 2,3 percent of GDP, as compared to 3,2 percent of GDP in the previous report. The difference in results is in part due to different methods for grossing up the results of the audits to the total population of enterprises. The methods used in the report from 2020 are better at producing accurate results, particularly by a new method of correcting for the cases when the wage sum or the surpluses and deficits among the audited companies are not representative within their stratum. Taking into account the change in methodology, the report concludes that the share of hidden work has not increased and may have slightly decreased, although the evidence is not conclusive. No adjustments are made for the categories N4 and N5. The basis for this is that there are no monetary thresholds for when a producer is not obliged to register according to the tax legislation, or for being excluded in the business register or in the main data sources. However, some errors of coverage exist, and further reading can be done in section 3.1.1. The value added for types of non-exhaustiveness adjustments and the methods used are shown in table 1.7.1.

Table 1.7.1 Types and elements of non-exhaustiveness by exhaustiveness method – Production approach (GVA), SEK million, 2021

Types and elements of non-exhaustiveness	Exhaustiveness methods						Total
	Quantity-price	Use of tax audit data – from the fiscal authorities	Special survey	Model	Benchmark extrapolation	Time use surveys	
N1 Producers that should have registered but did not	1191						1191
Caring of children by nursemaids	1191						1191
N2 Illegal producers that fail to register	5262						5262
Prostitution	710						710
Home-distilling of alcohol	145						145
Illegal gambling	577						577
Smuggling of drugs, alcohol, tobacco, narcotics	3830						3830
N3 Producers are not obliged to register						2032	2032
Constr. and repair of owner occupied dwellings						2032	2032
N4 Registered legal persons are not included in statistics							
-							
N5 Registered entrepreneurs not included in statistics							
-							
N6 Mis-reporting by producers		155360		5744			161104
Hidden production and intermediate consumption		155360					155360
VAT evasion without complicity				5744			5744
N7 Statistical deficiencies i data	529			4498			5027
Production of own account goods	529						529
Part of car benefits				4498			4498
Total per exhaustiveness method	6982	155360	0	10242	0	2032	174616
Share from each individual method	4,0%	89,0%	0,0%	5,9%	0,0%	1,2%	100%

1.7.2 The expenditure approach

Most of the exhaustiveness adjustments on the expenditure approach are made on household expenditure (HFCE). In addition to HFCE an adjustment is also made on gross fixed capital formation (GFCF). The non-exhaustive types N1, N2 and N3 correspond to the adjustments made on the production approach. The main component of non-exhaustiveness in the expenditure approach is also N6. The exhaustiveness adjustment for this exhaustiveness type refers to consumption where VAT fraud occurs. N7 farmers withdrawals of goods are added on the expenditure approach but is covered in the source data for output and thus not part of N7 on the production approach. A part of car benefits as well as production of own account goods correspond to the adjustments in the production approach, see more in sections 7.1 and 7.2. The types of non-exhaustiveness adjustments according to the expenditure approach are shown in table 1.7.2 and 1.7.3.

Table 1.7.2 Types and elements of non-exhaustiveness by exhaustiveness method – Household consumption expenditure, SEK million, 2021

Types and elements of non-exhaustiveness	Exhaustiveness methods					Total
	Quantity-price	Use of tax audit data – from the fiscal authorities	Special survey	Model	Benchmark extrapolation	
N1 Producers that should have registered but did not (underground producer)	1191					1191
Paid domestic services	1191					1191
N2 Illegal producers that fail to register	5262					5262
Prostitution	710					710
Home-distilling of alcohol	145					145
Illegal gambling	577					577
Smuggling of drugs, alcohol, tobacco and various medicines for drug use	3830					3830
N6 Mis-reporting by producers		83961				83961
Hidden production, agreed to exclude VAT		31054				31054
Hidden intermeditate consumption, agreed to exclude VAT		2457				2457
Hidden production, without agreement to exclude VAT		50450				50450
N7 Statistical deficiencies in data	529	1700			4498	6727
Farmers withdrawals of goods		1700				1700
Firewood, own-account	529					529
Car benefit, part of					4498	4498
Total	6 982	85 661	0	0	4 498	97 141
%	7%	88%	0%	0%	5%	100%

Table 1.7.3 Types and elements of non-exhaustiveness by exhaustiveness method – Gross fixed capital formation, SEK million, 2021

Types and elements of non-exhaustiveness	Exhaustiveness methods	Total
	Time use surveys	
N3 Producers are not obliged to register		
Owners' production/construction and repair of owner occupied dwellings	4896	4896
Total	4896	4896
%	100%	100%

1.7.3 The income approach

GDP by the income approach is not independently measured and the exhaustiveness adjustments for the income approach are aligned to the adjustments in the production approach. Most exhaustiveness adjustments are allocated to compensation of employees to gross mixed income. The types of non-exhaustiveness adjustments by income item are shown in table 1.7.4.

Table 1.7.4 Types and elements of non-exhaustiveness by income item – Income approach, SEK million, 2021

Item	Type of exhaustiveness adjustment						
	N1	N2	N3	N6	N7	Total exhaustiveness	%
Compensation of employees				111 604	4 498	116 102	
Non-Financial Corporations				99 900	4 355	104 255	
Financial Corporations				2 776	121	2 897	
General Government							
Households				8 928		8 928	
NPISH						22	22
Gross operating surplus			1 947	-2 686	391	-348	
Non-Financial Corporations			1 947	-720	385	1 612	
Financial Corporations				-1 966	28	-1 938	
General Government							
Households							
NPISH					-22	-22	
Mixed income	1 191	5 262	85	52 186	138	58 862	
Taxes on production and imports							
Subsidies							
Total	1 191	5 262	2 032	161 104	5 027	174 616	
By exhaustiveness method							
Quantity-price	1 191	5 262			529	6 982	4%
Use of tax audit data – from the fiscal authorities				155 360		155 360	89%
Special survey						0	0%
Model				5 744	4 498	10 242	6%
Benchmark extrapolation						0	0%
Time use surveys			2 032			2 032	1%
Total	1 191	5 262	2 032	161 104	5 027	174 616	100%

1.8 The transition from GDP to GNI

The transition of GDP to GNI is obtained by adding compensation of employees to/from the Rest of the World (RoW) plus net property and entrepreneurial income minus net taxes (i.e. adjusted for subsidies received from the RoW).

The Balance of Payments (BoP) is to be considered as the main data source for compilation of primary income from/to the rest-of-the-world. All concepts in BPM6 are implemented in the Balance of Payments. Statistics Sweden collects the bulk of the source material on commission by Riksbanken, the Swedish Central Bank. To get gross accrual estimates on taxes to and subsidies from EU, data from the Swedish Financial Management Authority (Ekonomistyrningsverket ESV) is used.

There is full consistency between the Rest of the World (RoW) sector within the institutional sector accounts and the Balance of Payments (BoP). BoP follows BPM6, so no adjustments are made for consistency with ESA 2010.

One conceptual adjustment is made which refer to FISIM. FISIM correction is included in interest received from and paid to the rest of the world.

1.8.1 Compensation of employees to/from the Rest of the World

The data covers non-residents working in Sweden and Swedish residents working abroad for less than one year.

The data is elaborated in cooperation with the Trade of Service statistics, BoP and the statistics on Income Statements. These estimates are mainly based on detailed information from income statements for individuals. Compensation of employees from the RoW to Sweden is estimated with a benchmark method where information from income statements provides the benchmark and data on hours worked and wage indices are used for extrapolation the benchmark value from 2015. Compensation of employees from Sweden to the RoW is estimated by direct use of information from income statements.

When it comes to non-residents working on Swedish embassies, data have been made available from the Swedish Ministry for Foreign Affairs covering both D11, wages and salaries and D12, social contributions. For residents working in foreign embassies a specific supplement is made for embassies where a benchmark value from 2013 have been extrapolated with wages and salaries for the Nordic countries.

1.8.2 Taxes on production and imports paid to the Institutions of the EU

Data on taxes only exist on the outflow side. The data are obtained directly from the Swedish National Financial Management Authority (ESV) and consist of customs duties and sugar levies. These make up parts of Sweden's dues or contributions to the EU and are recorded as transactions which affect directly taxes on production and imports.

However, the GNI levy, which is the biggest part of Sweden's contributions to the EU, is recorded instead as a current transfer. After introduction of ESA 2010 the recording of VAT is the same as for the GNI levy, i.e. recorded as current transfer from central government to EU. The revenue referring to VAT is at the same time recorded as central government tax revenue.

1.8.3 Subsidies granted by the Institutions of the EU

The data on subsidies apply both to subsidies on products and to other subsidies on production from the EU and thus only affect the inflow side. It is mainly a case of subsidies to agriculture. These data are obtained from the Financial Management Authority.

1.8.4 Cross-border property income

1.8.4.1 Interest

Returns on financial assets and liabilities include interest. Interest flows in the Balance of Payments (BoP) statistics are reported or calculated on an accrual basis and are structured according to the Balance of Payments functional categories Foreign Direct Investment, Portfolio Investment, Other Investment and Reserve assets.

Interest flows from Foreign Direct Investment

Interest flows from debt positions within direct investment relationships are reported on an accrual basis by the respondents in the monthly FDI survey.

Interest flows from Portfolio Investment

These flows comprise of interest on bonds and money market instruments, which are calculated and distributed by resident sectors, by counterpart country/rest of the world and by currency.

Interest flows from Other Investment

All the major banks report Other Investment interests flow by country. Estimates for other monetary financial institutes are calculated based on the reports from the banks. Other investment interest flows from non-financial enterprises are covered by the survey on Balance Statistics for non-financial companies (BAST).

Adjustment to interest from Other Investment debt positions is made to account for estimated interest flows defined as FISIM (see chapter 3 for more details).

Interest flows from Reserve assets

All earnings on foreign exchange reserves and related transactions with the IMF are reported by the Riksbank to Statistics Sweden. The Riksbank receives interest on its holdings of Special Drawing Rights (SDR) and other remuneration from IMF. Income from investment in foreign currency, deposits and securities is derived on a monthly basis.

1.8.4.2 Income from corporations - revenue from shares and equity capital

The income concept, in addition to interest, also covers dividends on shares in portfolio investments as well as dividends and reinvested earnings from direct investments. Returns on portfolio shares comprise dividends on holdings amounting to less than 10 percent of voting rights. Data regarding dividends on portfolio equity securities are based on calculations.

Dividends on shares in a direct investment enterprise are recorded in accordance with accounting principles meaning that dividends are recorded at the time the dividend (paid or anticipated) is recorded in the books of the FDI enterprise/ investor (as of the date they are declared payable).

The income on direct investment equity is calculated from earnings reported according to the Current Operating Performance Concept (COPC). The earnings are recorded before deduction of withholding taxes on distributed earnings and interest. Write-offs, capital gains and capital losses are not included. The data are obtained from the consolidated annual accounts of the direct investment enterprise groups. Dividends within FDI relationships are reported in a monthly (cut-off) survey which includes the largest corporations. This monthly survey is complemented by the annual FDI survey (larger sample survey) where additional dividends are reported.

1.8.4.3 Reinvested earnings on foreign direct investment to/from the Rest of the World

Reinvested earnings are the part of the direct investment enterprise income on equity which is not distributed to the shareholders but are retained in the direct investment enterprise. These earnings are calculated as the difference between the company's total earnings profit after tax and the distributed

profit. Whereas dividends are recorded when they are payable, reinvested earnings are attributed to the year for which the company declared the profit. Data on distributed profits are obtained via the annual and monthly direct reporting discussed above. Sweden has reviewed sources and methods used in the compilation of reinvested earnings (RIE) on foreign direct investment (FDI). In Sweden, potential impact on RIE on FDI can originate from Research and Development (R&D), software, mineral exploration and originals. New sources and methods have been incorporated to align the estimates to ESA2010⁹

⁹ According to the approved work on Transversal reservation IV: Reinvested earnings on foreign direct investment.

1.9 Main classifications used

1.9.1 The main classifications used for the production approach are as follows:

- Output of goods and services (production) and intermediate consumption are broken down by industry using NACE 2007 Rev.2., with a level of detail of compilation of almost 100 industries.
- Output of goods and services (production) and intermediate consumption are broken down by product using SPIN 2015, the Swedish application of the EU Classification of Products by Activity (CPA 2008). The level of detail of the compilation is 425 products (product groups).

1.9.2 The main classifications used for the income approach

- Wages and salaries are broken down by industry with the same level of detail (almost 100 industries) as the main components within the production approach.

1.9.3 The main classifications for the expenditure approach to measuring GDP, the following classifications are used

- Household final consumption expenditure is broken down according to the Classification of Individual Consumption by Purpose (COICOP) and by product (SPIN 2015). The level of detail of the compilation is 162 COICOP groups and 238 products.
- NPISH final consumption expenditure is broken down by industry using NACE 2007 Rev.2., with a level of detail of compilation of 32 industries.
- General government final consumption expenditure is primarily classified according to purpose, and subsequently by industry. The classification by purpose follows Consumption of Functions of Government (COFOG). Compilation is made mainly on four-digit COFOG level, and to a lesser extent on five-digit COFOG level.
- Gross fixed capital formation is primarily broken down by type of asset, but also by industry and product. The level of detail of the compilation is 35 types of assets. The definitions of the different types of assets are based on the ESA 2010 non-financial asset classification (AN).
- Changes in inventories are primarily broken down by type of inventory, and subsequently also by product. The level of detail of the compilation is 13 types of inventories. The definitions of the different types of inventories are to a great extent based on the four ESA 2010 (AN) categories (a) materials and supplies, (b) work-in-progress, (c) finished goods and (d) goods for resale.
- Exports and imports of goods: Source data on exports and imports of goods is delivered to the National Accounts broken down to a level of detail of approximately 9000 CN codes at an eight-digit level. This source data is subsequently linked to approximately 200 product groups (classified as goods in the Swedish National Accounts) based on SPIN 2015. In addition, a few CN codes are linked to product groups classified as services.
- Exports and imports of services: Source data on exports and imports of services is delivered to the National Accounts broken down to a level of detail of 160 ITS service types. This source data is subsequently linked to approximately 65 product groups (classified as services in the Swedish National Accounts) based on SPIN 2015. In addition, a few ITS service types are linked to product groups classified as goods.
- The level of detail of the supply and use tables is 425 products (product groups), i.e. the finest level of detail used in the compilation of the Swedish National Accounts.

1.10 Main data sources used

Table 1.10.0 Statistical Business Register and VAT Register

Organisation	Data Source
Statistics Sweden	Statistics Sweden's Statistical Business Register
Swedish Tax Agency	The VAT Register - Administrative data

Table 1.10.1 Statistical surveys and other data sources used for the production approach

Organisation	Data Source
Statistics Sweden	Structural Business Statistics (SBS)
Swedish Board of Agriculture	Economic Accounts for Agriculture, EAA
Swedish Forest Agency	Operations in large-scale and small-scale forestry
Swedish National Forest Inventory	Felling volumes in forestry and wood measurement
Swedish Agency for Marine and Water Management	Fishing statistics
Statistics Sweden	Production of commodities and industrial services, IVP
Swedish Energy Agency	Annual energy statistics for electricity, gas and district heating
Swedish Financial Supervisory Authority	Financial enterprises, annual financial data
Swedish Financial Supervisory Authority	Insurance companies, annual financial data
Riksbanken (Sweden's central bank)	Riksbank's Financial Market Statistics

Table 1.10.2 Statistical surveys and other data sources used for the income approach

Organisation	Data Source
Statistics Sweden	Gross pay based on administrative sources
Statistics Sweden	Structural Business Statistics (SBS)
Swedish National Financial Management Authority	Basis of central government net lending, UFS
Statistics Sweden	Annual accounts for municipalities and county councils
Swedish Financial Supervisory Authority	Financial enterprises, annual financial data

Table 1.10.3 Statistical surveys and other data sources used for the expenditure approach

Organisation	Data Source
Statistics Sweden	Household consumption statistics
Statistics Sweden	Food sales
Statistics Sweden	Revenues and expenditure survey for multi-dwelling buildings
Statistics Sweden	Survey of rents for dwellings
Statistics Sweden	Housing costs
Swedish National Financial Management Authority	Basis of central government net lending, UFS
Statistics Sweden	Annual accounts for municipalities and county councils
Statistics Sweden	Non-Profit Institutions Serving Households
Statistics Sweden	Economic report Church of Sweden
Statistics Sweden	International trade statistics in goods (Intrastat)
Swedish Customs	International trade statistics in goods (Extrastat)
Statistics Sweden	External trade in services
Statistics Sweden	The income and costs of the SAS consortia
Statistics Sweden	Research and Development (R&D) - Frascati Manual
Statistics Sweden	Statistical register for vehicles
Statistics Sweden	Investment survey
Statistics Sweden	Enterprises IT expenditure
Statistics Sweden	Business inventories
Statistics Sweden	Monthly fuel and gas statistics
Statistics Sweden	Quarterly fuel statistics
Statistics Sweden	New construction of residential buildings
Statistics Sweden	National apartment register

Table 1.10.4 Statistical surveys and other data sources used for the transition from GDP to GNI

Organisation	Data Source
Statistics Sweden	Foreign Direct Investments – assets and income
Statistics Sweden	Balance statistics for non-financial companies, incl. balance of payment

Chapter 2 The Revision policy and the timetable for revising and finalizing the estimates. Major revisions since the last version of the GNI Inventory

2.1 The revision policy and the timetable for revising and finalizing the estimates

Revisions, or altered data for periods that have already been published, are endemic to the national accounts. They arise for several reasons and can be due to for example revisions of the source statistics themselves, to the development of new models, to the implementation of new, or other source data or to previous errors in the data published.

There is a strong interest among users in having access to national accounts data very shortly after the close of the reporting period. A consequence of this is that the first accounts by necessity are based on preliminary data and therefore need to be revised as more final data becomes available.

An important characteristic of the national accounts is that the quality of the time series must be maintained. Discontinuities in the time series are not acceptable. This means that reorganizations of the statistical source material following the addition of new statistics, which give rise to new statistical benchmarks, impose the need for revisions of the national accounts.

Parts of the accounts can be based on benchmarks set at various intervals where the interval for setting a new benchmark should be maximum every five years. The calculations undertaken pending the setting of new benchmarks are done through extrapolation using indicators. When a new benchmark is calculated, the need may arise to revise intervening periods.

The methods used in the calculation of the national accounts undergo development and change over time. Methodology changes are generally introduced in conjunction with the incorporation of revised data into the accounts. Methodology changes may themselves also give rise to revisions to some extent, e.g. better balancing methods.

For a number of reasons, it is desirable to coordinate several different revisions to the same point in time. This is clearly preferable from a resources point of view. From the users' point of view the position is less clear-cut: there may be an interest in having the revised data incorporated as soon as possible, but there is also a strong interest in having time-series that remain in place for some years and that are not constantly subjected to major or minor adjustments.

2.1.1 Revision policy of the Swedish national accounts

The table below describes the revision policy for the Swedish NA for the annual estimates. The first compilation of the national accounts for a given year is published 2 months after the end of the reference year. Annual accounts are calculated in preliminary versions until a complete set of annual source data are available; a final version of annual accounts is compiled t+17 months after the reference year. Detailed comments on the revision policy are provided in table 2.1.1 below.

Table 2.1.1 Revision policy annual accounts

Year	February	May	August	November
T-1	First annual estimate	Revision first estimate	First preliminary Annual accounts	Second preliminary Annual accounts
Comment	Based on monthly and quarterly source statistics. There is some adjustment to the first result from the annual source for municipalities.	Based on monthly and quarterly source statistics. There is some adjustment to the first result from the annual source for municipalities.	Preliminary annual statistics on government consumption, production and saving are available	Annual source statistics on government consumption by cofog
T-2		Final estimat Annual accounts		
Comment		Based on complete set om annual data for GDP		
T-3			Final estimate income to Row and from Row	
Comment			Annual surveys on Direct investment bi-annual surveys on Portfolio investments.	

End of February, release of fourth quarter and first annual estimate of year t-1:

- The year (t-1) may be subject to revisions.
- For the non-financial sector accounts year t-3 and t-2 may be revised if it does not have an impact on GDP or the compensation of employees from the Rest of the World (RoW) and to Row.

End of May, release of the first quarter of year t and final annual accounts year t-2.

- The year (t-2) and (t-1) may be subject to revisions due to the annual calculations for year (t-2) being complete.

A complete set of annual source data are available like Structural Business Statistics, Production of commodities and industrial services, Annual financial data for financial enterprises and insurance enterprises, the Dwelling register and Research and development in Sweden (see further chapter 10). The work on the annual accounts gets under way in January but intensifies during April and May for the release at the end of May. The compilation is carried out in the framework of a detailed system of Supply and Use tables(S/U-tables) consisting of more than 400 products and 100 industries that are fully balanced.

End of August, release of the second quarter year t:

- The year (t-1) may be subject to revisions.
- For the non-financial sector accounts the complete time series may be revised if it does not have an impact on GDP or the compensation of employees from the Rest of the World (RoW) and to Row.

Preliminary annual source statistics for government consumption for year t-1 are available at this point and are introduced into the accounts.

End of November, release of the third quarter year t and final GNI:

- The year (t-1) may be subject to revisions.
- For the non-financial sector accounts year t-3 and t-2 may be revised if it does not have an impact on GDP or the compensation of employees from the Rest of the World (RoW) and to Row.

Detailed annual source statistics for government consumption for year t-1 are available at this point and are introduced into the accounts. Final annual data for t-3 from the Foreign Direct Investments survey as well as from the survey on Portfolio investments are included in NA.

Revisions outside of the regular process

There are several reasons why revisions, that are not part of the regular process, may be performed. Such reasons include revisions that have an impact on GNI and the EDP. All significant revisions that are not scheduled are announced on the webpage at least two weeks prior to the publication of the revised statistics. The announcement on the webpage includes both the scope of the revisions as well as the reasons for them.

2.1.2 Implementation of the Harmonised European revision policy (HERP)

For many years, Eurostat has worked towards a harmonised European revision policy (HERP) and guidelines on HERP regarding ESA 2010 data were released in 2019. In national accounts in general, and in HERP, a distinction is made between routine (current) revisions and benchmark revisions. Benchmark revisions (or major regular revisions) relate to an overhaul of the time series and are generally undertaken at less frequent intervals. HERP recommends five years between benchmark revisions and the first recommended harmonised year was 2019 followed by year 2024 and with the next benchmark revision scheduled for 2029.

When it comes to the benchmark revisions Sweden follows the timetable of HERP. The latest benchmark revision was implemented in 2024. This was followed by a smaller revision in 2025 in order to implement three issues that were not implemented in the data transmitted to Eurostat nor in nationally published benchmark revision in May 2024 but implemented in the GNI questionnaire (GNIQ) and report on the quality of GNI data (RQ) 2024. The next benchmark revision is planned for 2029 and there are no planned major revisions outside the agreed schedule for the harmonised European revision policy of national accounts.

The other recommendations of HERP and their implementation in the Swedish NA are commented below. The national policy is not fully in line with HERP concerning the second last point.

- **Consistency of annual and quarterly data.** The Swedish national accounts comprise annual and quarterly accounts that are fully integrated; the quarterly accounts are aligned to annual data when the latter become available. The non-financial sector accounts, with accounts for primary and secondary income distribution, use of income and capital formation and savings for institutional sectors are released together with the production accounts (GDP) both in the quarterly and annual accounts. *This meets the recommendation in HERP that states that quarterly and annual data should be aligned.*
- **Length of time series.** When benchmark revisions are carried out the time series are generally revised back to the 1993 and on a more aggregated level back to 1980. *This meets the recommendation in HERP that states that revisions should at least cover consistent time series as required in the ESA Transmission Program.*
- **Supply and use tables.** Annual accounts are compiled in a detailed system of Supply and Use tables (S/U-tables) consisting of more than 400 products and 100 industries. The S/U-tables are disseminated around t+20 months after the reference year. *This meets the recommendation in HERP that states that the supply and use tables (SUTs) should be transmitted annually and within three years after the reference year.*
- **Timing within the year and consistency of national accounts and BOP/IIP.** Based on national user interest, the Swedish annual accounts are released at an earlier date than that stated in the ESA 2010 transmission programme. The earlier release has consequences on the alignment between NA and BoP, recommended by HERP. In accordance with the HERP recommendation, BoP is open for revisions of the time series at the release of the data for the third quarter which takes place at the end of November each year. Time series revisions of GDP, however, take place in May in conjunction with the release of the final annual accounts for year t-2.

- **Consistency of national accounts data for administrative purposes.** Presently, after the minor revision in year 2025, the data for GNI own purposes and the data transmitted are fully aligned. *The HERP states that dissemination of the results of a (harmonized) benchmark revision, national accounts data used for administrative purposes should be fully consistent with data transmitted to Eurostat as part of the ESA 2010 TP.*

HERP also comments on the consistency of non-financial and financial accounts and acknowledges that financial accounts often have more frequent revisions of the time series than the non-financial accounts and for this reason allow for extra benchmark revisions of the non-financial accounts if needed. In Sweden, this could be the case if the Balance of Payments data are revised and there are no revisions on variables that have an impact on EDP or GNI.

Revisions of the source data underlying GDP and GNI

There are no source statistics that have regular revisions in such a way that it will have an impact outside the four-year revision span, open years, of GNI for own purposes. All regular revisions in source data could be accommodated within the GNI revision span. Population and housing censuses are commonly statistics that are revised less frequently but in Sweden the Population and housing census are based on registers and the statistics are released annually.

2.1.3 History and impact of benchmark revisions

Prior to the harmonised European revision policy (HERP), where certain years for disseminating benchmark revisions are recommended based on 5-year intervals, there was no strict timetable for such revisions in the sense that they were undertaken at certain specified intervals.

During the 1980s and 1990s some major revisions were undertaken at relatively long intervals, as well as some revisions covering a longer period but more limited in scope. Often the publication of the revisions coincided with base-year changes. During the 2000s major revisions have been carried out more frequently due to demands according to regulations as well as improvements in source data.

ESA95 (SNA93): The implementation of SNA93/ESA95 was published in May 1999. As well as adaptation to new international standards, this also involved changes in classifications, a major review of calculation methods and the incorporation of new data. The accounts were produced on the most detailed level from the year 1993 and onwards. This was followed by a new revision, published in December 1999 and covering the entire period from 1993.

Major revision 2002: The introduction of the comprehensive Structural Business Statistics made necessary another major revision published in 2002 covering the years 1993 and onwards. In accordance with decisions by Eurostat, the EU's statistical office, Statistics Sweden had to change the treatment of value added tax in the government sector and also had to change institutional sector for the premium pension system.

VAT: The recording of VAT according to the Swedish taxation rules, allowing tax reduction for certain government activities was to be changed since all transaction according to ESA95 must be recorded gross, inclusive of VAT. The premium pension system is a defined contribution and funded system administrated by the Premium Pension Authority, PPM. Such a pension system should not be reported as a part of the public sector when reporting the general government sector deficit to Eurostat. PPM should instead be considered a publicly owned insurance company that has a premium pension liability regarding households. The changed treatment had impact on the accounts for the years 1995 and onwards.

FISIM: In 2005, all member countries were supposed to allocate Financial Services Indirectly Measured, FISIM, to the respective users. Prior to this, uses of these services were withdrawn in a lump sum from market producers and producers for own account.

Major revision 2007: The revision in 2007 comprised a new extended structural business statistics, a changed method for collecting foreign trade of services, a changed valuation method for export and import values, a new method for compiling public non-market production in constant prices, a new estimate for hidden economy and the introduction of illegal activities as well as a general update of miscellaneous items.

Major revision 2010: This revision covered an overview of several household consumption estimates, gross fixed capital formation in dwellings, travel services, trade, financial services and a general update of miscellaneous items. The revision covered the period from 1993 and onwards.

ESA2010 (SNA2008): The major revision of the time-series 1993-2012, from September 2014, stemmed from the new ESA2010 regulation as well as a general revision of methods and statistical sources. Also, the time-series spanning from 1950 to 1992 was revised by employing a method using both chaining and direct revisions of the details dependent of the regulation. The single most contributing factor was the level of increase of Gross Fixed Capital Formation, which in turn was due to expenditures for Research and Development (R&D) and military Weapon systems. Other changes in the ESA 2010, merchanting and goods sent abroad for processing and other minor changes did not have any notable net impact (and should not have had an impact).

Major revision 2019: This benchmark revision was released in September 2019 and the revision covered the period from 1993 and onwards. The revision incorporated new, improved and revised annual data sources, methods and calculation models within several areas. One major change was to introduce the Structural Business Statistics (SBS) for compiling output, intermediate consumption and value added for industries that previously were covered by other source data.

Minor revision 2020: In the minor benchmark revision of 2020, the results from the three transaction specific reservations were introduced. The balancing of the revision due to these reservations led to revisions in other components of GDP as well.

- *Harmonization of National Accounts and Balance of Payments.* The work on harmonizing sources and methods in National Accounts and Balance of Payments led to changes for the following items in the National Accounts:

- Bunkering
- Repairs
- FOB-FOB valuation
- Tour operator services
- Transport and transmission services
- Global Production
- Non-residents' consumption in Sweden and Swedish residents' consumption abroad

- *Holding gains and losses.* Adjustments of intermediate consumption are to be made to consider the fact that the valuation principles for inventories of intermediate goods differ between corporate accounting (lowest value principle) and the National Accounts (replacement value).

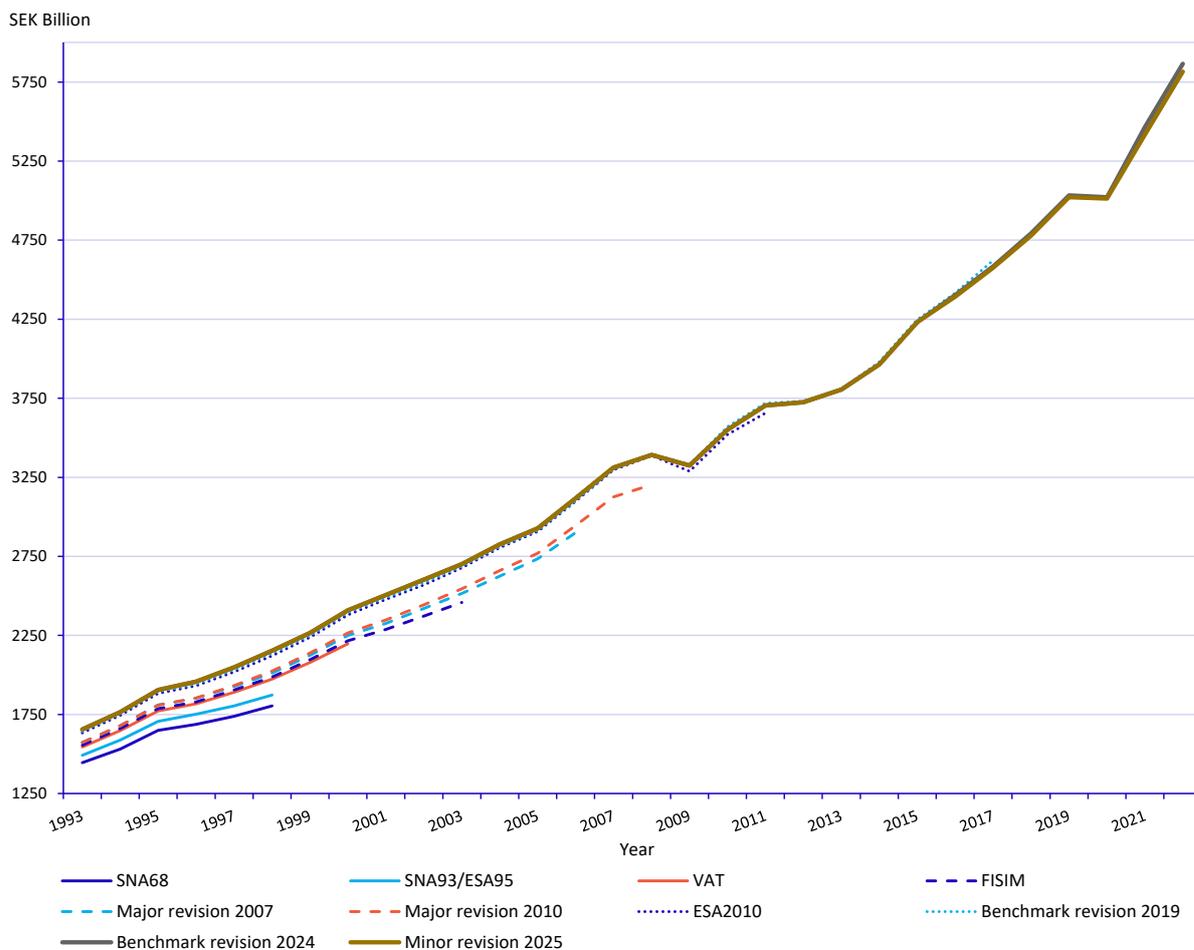
- *Balancing.* A review of the model for the automated balancing of GDP (balancing model) was done. The model is based on a least square method and the mean errors used in the model were adjusted.

Major revision 2024: The revision incorporated new, improved and revised annual data sources, methods and calculation models within several areas. More details of the benchmark revision 2024 are given in section 2.2.2 below.

Minor revision 2025: The reason for the minor revision was that there were three issues that were not implemented in the data transmitted to Eurostat nor in nationally published benchmark revision in May 2024 but implemented in the GNIQ and RQ 2024. Thus, the minor revision 2025 fully aligned the data transmitted to Eurostat, nationally published data and data for GNI own purposes. More details of the minor revision 2025 are given in section 2.2.3 below.

Figure 2.1 shows the size of the most important major/benchmark revisions of the Swedish GDP from 1999 and onwards, with comments on what was revised in each release below the diagram.

Figure 2.1.1 Benchmark revisions of GNI



2.2 Major revisions since the last version of the GNI Inventory

Since the last version of the GNI Inventory, which was based on sources and methods used in 2020 with reference year 2015, implementation of the transversal reservation TR IV Reinvested earning on foreign direct investment was done in the GNIQ and RQ 2021 but first implemented in the data transmitted to Eurostat as well as nationally published data in May 2024. Moreover, two revisions have been carried out. One major benchmark revision that was implemented in GNIQ and RQ 2024 (benchmark revision 2024), where a number of changes to sources and methods were introduced and one minor revision, that was implemented in GNIQ and RQ 2025 (minor revision 2025). The main reason for the minor revision 2025 was that there were three issues that were not implemented in the nationally published benchmark revision in May 2024 but implemented in GNIQ and RQ 2024. The minor revision 2025 fully aligned the data for GNI own purposes (GNIQ and RQ 2025) and the data transmitted to Eurostat as well as nationally published data.

2.2.1 GNIQ and RQ 2021 TR IV Reinvested earning on foreign direct investment

In GNIQ and RQ 2021 the results from the transversal reservation TR IV Reinvested earning on foreign direct investment were introduced. New sources and methods have been incorporated to align the estimates of reinvested earnings to the requirements of ESA2010. The table 2.2.1 below shows the revision as it was disseminated in the GNI questionnaire and report on the quality of GNI data in September 2021. The issue Reinvested earning on foreign direct investment were introduced in the data transmitted to Eurostat and in nationally published data in the benchmark revision in May 2024.

Table 2.2.1. Cross-border flows of RIE on FDI years 2010-2019, million SEK

GNI QUESTIONNAIRE 2021 Table 1: GDP and GNI (ESA2010) and GNI (ESA95) 2010-2019 As of 30/09/2021			SWEDEN million SEK									
	code ESA 2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
PRODUCTION APPROACH												
1	Output of goods and services (at basic prices)	P1										
2	Intermediate consumption (at purchasers' prices)	P2										
3	Gross value added (at basic prices)	B1G										
4	Taxes on products	D21										
5	Subsidies on products	D31										
EXPENDITURE APPROACH												
6	Total final consumption expenditure	P3										
7	Household final consumption expenditure	P3										
8	NPISH final consumption expenditure	P3										
9	General government final consumption expenditure	P3										
10	Gross capital formation	P5										
11	Gross fixed capital formation	P51g										
12	Changes in inventories	P52										
13	Acquisitions less disposals of valuables	P53										
14	Exports of goods and services	P6										
15	Imports of goods and services	P7										
INCOME APPROACH												
16	Compensation of employees	D1										
17	Gross operating surplus and mixed income	B2G+B3G										
18	Taxes on production and imports	D2										
19	Subsidies	D3										
20	Gross domestic product (ESA2010)	B1*G										
21	Compensation of employees received from the rest of the world	D1										
22	Compensation of employees paid to the rest of the world	D1										
23	Taxes on production and imports paid to the institutions of the EU	D2										
24	Subsidies received from the institutions of the EU	D3										
25	Property income received from the rest of the world	D4	3424	3245	-6507	1022	14669	-5321	-11026	-10152	5682	-9062
26	Property income paid to the rest of the world	D4	-4064	-3159	-6602	1112	17681	-4021	-1469	-2243	5680	-10418
27	Gross national income (ESA2010)	B5*G	7488	6404	95	-90	-3012	-1300	-9557	-7909	2	1356
28	Less total impact of differences in definitions between ESA2010 and ESA95 on GNI (ESA2010 minus ESA95)		7488	6404	95	-90						
29	Gross national income (ESA 95)	B5*G	0	0	0	0						

2.2.2 GNIQ and RQ 2024 Benchmark revision 2024

A benchmark revision was carried out in 2024 and implemented in the GNIQ and RQ 2024. The year 2021 was the main benchmark year for the revision and the revision covered the period from 2018 and onwards¹⁰. Total GNI (ESA 2010) was decreased by between 31 and 145 billion SEK in current prices for the years 2018-2022. Table 2.2.2 below shows the revision as it was disseminated in the GNI questionnaire in September 2024, covering the open years at that point (including years for open reservations) and up until 2022 for which annual accounts had been carried out.

Table 2.2.2 Revisions in the Benchmark revision 2024 years 2010-2022, million SEK

GNI QUESTIONNAIRE 2024 Table R1: GDP and GNI (ESA2010) and GNI (ESA95) 2010-2022 As of 30/09/2024		SWEDEN million SEK												
code ESA 2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
PRODUCTION APPROACH														
Output of goods and services (at basic prices)	P1	0	0	0	0	0	0	0	-116200	-95478	-118158	-116042	231836	
Intermediate consumption (at purchasers' prices)	P2	0	0	0	0	0	0	0	-62653	-63966	-91749	-45565	406581	
Gross value added (at basic prices)	B1G	0	0	0	0	0	0	0	-53547	-31512	-26409	-70477	-174745	
Taxes on products	D21	0	0	0	0	0	0	0	-188	-145	-205	-223	-59	
Subsidies on products	D31	0	0	0	0	0	0	0	-3802	-3760	-2201	-2020	-2685	
EXPENDITURE APPROACH														
Total final consumption expenditure	P3	0	0	0	0	0	0	0	30409	28893	33774	30902	60195	
Household final consumption expenditure	P2	0	0	0	0	0	0	0	27762	28219	31378	27419	55090	
NPISH final consumption expenditure	P3	0	0	0	0	0	0	0	-31	1263	886	773	-1408	
General government final consumption expenditure	P3	0	0	0	0	0	0	0	2678	-588	1510	2710	6513	
Gross capital formation	P5	0	0	0	0	0	0	0	-46728	-40813	-41450	-51473	-133586	
Gross fixed capital formation	P51g	0	0	0	0	0	0	0	-40936	-36468	-36552	-44596	-133275	
Changes in inventories	P52	0	0	0	0	0	0	0	-5792	-4345	-4898	-6877	-633	
Acquisitions less disposals of valuables	P53	0	0	0	0	0	0	0	0	0	0	0	322	
Exports of goods and services	P6	0	0	0	0	0	0	0	-4050	16208	16482	27501	-12280	
Imports of goods and services	P7	0	0	0	0	0	0	0	29564	32185	33219	75610	86448	
INCOME APPROACH														
Compensation of employees	D1	0	0	0	0	0	0	0	25988	27108	26804	30407	36905	
Gross operating surplus and mixed income	B2G+B3G	0	0	0	0	0	0	0	-79387	-58683	-53123	-101259	-210324	
Taxes on production and imports	D2	0	0	0	0	0	0	0	-248	-2	-213	261	-530	
Subsidies	D3	0	0	0	0	0	0	0	-3714	-3680	-2119	-1911	-1830	
Gross domestic product (ESA2010)	B1*G	0	0	0	0	0	0	0	-49933	-27897	-24413	-68680	-172119	
Compensation of employees received from the rest of the world	D1	0	0	0	0	0	0	0	1574	1697	1402	1249	4182	
Compensation of employees paid to the rest of the world	D1	0	0	0	0	0	0	0	11401	11026	10213	11980	14674	
Taxes on production and imports paid to the institutions of the EU	D2	0	0	0	0	0	0	0	0	0	0	0	0	
Subsidies received from the institutions of the EU	D3	0	0	0	0	0	0	0	0	0	0	0	470	
Property income received from the rest of the world	D4	0	0	0	0	0	0	0	-9	47	-1599	9166	75207	
Property income paid to the rest of the world	D4	0	0	0	0	0	0	0	2	-1366	-3661	-8241	37886	
Gross national income (ESA2010)	B5*G	0	0	0	0	0	0	0	-59771	-35813	-31162	-62004	-144820	
Less total impact of differences in definitions between ESA2010 and ESA95 on GNI (ESA2010 minus ESA95)		0	0	0	0									
Gross national income (ESA 95)	B5*G	0	0	0	0									

2.2.2.1 Major changes to sources and methods

GDP in current prices amounted to 5 416 billion SEK for the benchmark year 2021, a downward revision of SEK 62 billion or 1.3 per cent. Total output and intermediate consumption were revised substantially due to several issues were changed consolidation within public administration and kind of activity unit where the most significant. The largest level changes in current prices on the expenditure side were recorded for imports of goods and services (+3,3 per cent), gross fixed capital formation (-3.2 per cent) and for household final consumption expenditure (+1.2 per cent). Exports of goods and services were revised upward by (+1.1 per cent), resulting in a downward revision of net exports of 18,8 per cent, or SEK 48 billion SEK. The main changes to sources and methods to each approach to GDP and the transition to GNI are described below. An overview of the main changes to methods and sources are given in table 2.2.3. Action points that lead to changed methods are separately shown in the table. The revisions are then further shown and commented in section 2.2.2.2 and onwards for the benchmark year 2021.

¹⁰ For nationally published data the revision covers the year 1993 and onwards.

Table 2.2.3 Main changes to methods and sources

Production approach	Code ESA 2010	Description of main changes to method and sources
Output of goods and services	P1	AP A2 - Holding gains AP A3 on branches AP 7d Exhaustiveness adjustments (N6) benchmark AP 7e: New benchmark for N2 illegal economic activities (N2) Consolidation public administration Kind of Activity Unit (Sold, internal transaction) Kind of Activity Unit (own production) Treatment of a foreign trade flow Congestion income Addition for gravel (construction industry) Under-coverage in the National apartment register
Intermediate consumption	P2	AP A3 on branches AP 7b Review of GFCF of purchased software AP 7c Review of benchmark, IC for the owner-occupied dwellings AP 7d Exhaustiveness adjustments (N6) benchmark Consolidation public administration Kind of Activity Unit Treatment of a foreign trade flow Conceptual adjustment for bought R&D
Gross value added (at basic prices)	B1G	
Taxes on products	D21	
Subsidies on products	D31	
Expenditure approach		
Total final consumption expenditure	P3	
Household final consumption expenditure	P3	AP A7a: New benchmarks for HFCE/COICOP AP A7d: New benchmark for illegal economic activities (N2) Under-coverage in the National apartment register
NPISH final consumption expenditure	P3	
General government final consumption expenditure	P3	Changed consolidation within public administration
Gross capital formation	P5	
Gross fixed capital formation	P51g	AP A7b: Review of GFCF of purchased software Kind of Activity Unit Consequence treatment of a foreign trade flow
Changes in inventories	P52	Stumpage value (value of standing timber)
Acquisitions less disposals of valuables	P53	
Exports of goods and services	P6	Review International Trade in Service Statistics VAT, exports and imports of goods and services Enterprise specific adjustments, exports of goods and services
Imports of goods and services	P7	Review International Trade in Service Statistics VAT, exports and imports of goods and services
Income approach		
Compensation of employees	D1	Stemmed from AP 7d Exhaustiveness adjustments (N6) benchmark
Gross operating surplus and mixed income	B2G+B3G	
Taxes on production and imports	D2	Requirements within GFS and EDP, EDP action point no. 21.
Subsidies	D3	Reclassification of units into the general government Changed consolidation within public administration
Gross domestic product (ESA2010)		
Compensation of employees received from the rest of the world	D1	The method for D12 has been changed
Compensation of employees paid to the rest of the world	D1	New data source and the method for D12 has been changed
Taxes on production and imports paid to the institutions of the EU	D2	
Subsidies received from the institutions of the EU	D3	
Property income received from the rest of the world	D4	
Property income paid to the rest of the world	D4	
Gross national income (ESA2010)		
	B5*G	

2.2.2.2 Production approach

The main changes to sources and methods as well as the impact of other categories of revisions are shown in table 2.2.4 below, comments are provided below the table.

Table 2.2.4 Revisions on the production side and the impact on GNI

Item	Code	2018		2019		2020		2021	
		Value	GNI %*	Value	GNI %	Value	GNI %	Value	GNI %
Main changes to sources and methods	B1G	-59089	-1,2%	-44054	-0,8%	-38609	-0,7%	-70410	-1,2%
AP A2 Holding gains		-8273	-0,2%	-11337	-0,2%	-3614	-0,1%	-18116	-0,3%
AP A3 on branches		-12972	-0,3%	-6957	-0,1%	-8128	-0,2%	-9676	-0,2%
AP 7b Review of GFCF of purchased software		-49877	-1,0%	-53685	-1,0%	-52925	-1,0%	-59236	-1,0%
AP 7c Benchmark related to the IC for owner-occupied dwellings		-4610	-0,1%	-4567	-0,1%	-5595	-0,1%	-6138	-0,1%
AP 7d Exhaustiveness adjustments (N6) benchmark		17184	0,3%	17961	0,3%	17737	0,3%	24463	0,4%
AP 7e: New benchmark for N2 illegal economic activities (N2)		2237	0,0%	2825	0,1%	1851	0,0%	1517	0,0%
Consolidation public administration		-1080	0,0%	-1088	0,0%	-1268	0,0%	-1199	0,0%
Kind of Activity Unit		5438	0,1%	6237	0,1%	6952	0,1%	6192	0,1%
Kind of Activity Unit (Sold, internal transaction)		-14745	-0,3%	-18219	-0,4%	-18543	-0,4%	-19791	-0,3%
Kind of Activity Unit (own production)		14745	0,3%	18219	0,4%	18543	0,4%	19791	0,3%
Treatment of a foreign trade flow		0	0,0%	0	0,0%	0	0,0%	0	0,0%
Conceptual adjustment for bought R&D		-10081	-0,2%	-8172	-0,2%	-11304	-0,2%	-14426	-0,3%
Congestion income		1346	0,0%	1980	0,0%	7325	0,1%	6749	0,1%
Addition for gravel (construction industry)		-3635	-0,1%	-3788	-0,1%	-4421	-0,1%	-3370	-0,1%
Under-coverage in the National apartment register		4581	0,1%	4845	0,1%	5065	0,1%	5048	0,1%
Large Case Unit review		0	0,0%	0	0,0%	0	0,0%	0	0,0%
Sum of other non-material revisions		653	0,0%	11692	0,2%	9716	0,2%	-2218	0,0%
Change in balancing	B1G	5542	0,1%	12542	0,2%	-1167	0,0%	11566	0,2%
	D21	-188	0,0%	-145	0,0%	-205	0,0%	-223	0,0%
	D31	-3802	-0,1%	-3760	-0,1%	-2201	0,0%	-2020	0,0%
Revision GDP production approach	B1*G	-49933	-1,0%	-27897	-0,5%	-37780	-0,7%	-57047	-1,0%

*Impact GNI %

- Holding gains in trade margins (Action point A2) – Since 2019 trade margins in the Swedish NA have been based on SBS data. These trade margins include holding gains. Based on information on holding gains in inventories for traded goods, according to the survey on inventories, estimates for holding gains in trade margins have been derived and excluded in the national accounts.
- Treatment of branches (Action point A 3 Branches) – Branches on the Swedish economic territory belonging to foreign enterprises in sector 11, non-financial companies, have been verified that these are included in the Swedish NA. Some small under coverage have been detected and additions have been made for branches that are missing in the SBS but found in the European group register. Branches abroad in Swedish enterprises have earlier been included in the national accounts data. Information from the EGR as well as country by country data estimates for output and intermediate consumption on Swedish branches abroad have been derived and excluded from the accounts.
- Review of GFCF of purchased software (Action point A7b) – The survey *Enterprises' IT expenditure* has been thoroughly reworked to provide more details on software expenditure with a breakdown of both type of accounts as well as splits between intermediate consumption and investments. Results from the new survey have been introduced into the NA benchmark, showing a lower level of GFCF in software than the previous extrapolation model estimated. The revision affects intermediate consumption due to that companies report expenditures on software as a cost in SBS whereas NA should post this as gross fixed capital investment.
- Benchmark for intermediate consumption for the owner-occupied dwellings (Action point A7c) – Old benchmark that has been extrapolated has now been replaced with source data that are available on an annual basis.
- Exhaustiveness adjustments (N6) benchmark (Action point A7d – Exhaustiveness adjustment N6, miss-reporting by the producer, has undergone a revision following a new audit study from the Swedish Tax Agency (STA).
- Benchmark for N2 illegal economic activities (N2) (drugs, alcohol, tobacco) (Action point 7e) – A new method for the consumption of drugs has been implemented. It relies on data from wastewater analysis performed in about 50 Swedish wastewater plants stratified over 6 regions over the years 2013-2020.

- Changed consolidations within public administration – In recent years, Eurostat has clarified how accounting should take place. Partly within the working groups GFS TF and COFOG TF. Partly included guidance in the updated COFOG manual. It clarifies what should be recorded as purchases/sales and what should be recorded as transfers. The change has a large impact on intermediate consumption and sales that both are reduced, but only a minor impact on GDP (and GNI).
- Statistical units, kind of activity units – In the work of implementing the statistical enterprise unit, to fulfil regulations in the business register and SBS, some changes were also made concerning kind of activity units. This mainly concerned consolidation of activity units, lowering both output and intermediate consumption.
- Treatment of a foreign trade flow – After thorough discussions with a large company and internal investigation, it has been clarified that a change in treatment of a foreign trade flow concerning R&D services has led to an equal reduction in both output and IC on the production side as well as a decrease in GFCF on the expenditure. It relates to a large actor with substantial and regular flows of both imports and exports of R&D services. In their own business accounting, as well as in reporting to the SBS they only record the net of these two flows as costs and income. Based on an argument that this actor did not report production of R&D services that could cover their exports of the product this case was previously handled by adjustments made in the SBS where production of this product was added on top of reported figures, with a corresponding adjustment made to IC to hold value added constant. The added output entered our overall GFCF-compilation as additional supply which there translated to additional investments. The import and export flows also entered the GFCF-compilation in the same way as all trade flow of this product, as increases and decreases of supply respectively. In the benchmark revision NA have reviewed this approach and concluded that all SBS-adjustments of reported figures could be removed while maintaining consistency between sources. Foreign trade remains the same, with imports as before translating to investments while this export flow is seen as corresponding to sales of IPP-assets rather than as relating to production. The removal of all adjustments in the SBS thus result in equal decrees in output and IC for the company. However, because of this the purchased R&D is lowered with the same amount witch also affect the conceptual adjustment of R&D which in turn affects intermediate consumption. Thus, the net effect on intermediate consumption is zero.
- Congestion income – The congestion income that is generated in the integrated EU market for electricity has previously only partially been included in the national accounts. This income has now been incorporated as a production value in NACE D.35.
- Addition for gravel (construction industry) – The production addition in the construction industry for gravel, rock and clay, own production is removed. Today NA use the SBS to calculate the construction industry and this addition, after some investigation, is considered obsolete.
- Undercover in the national apartment register – This change in methods and sources derives from action point AP.19 in GNI verification cycle 2016-2019. This point was to be followed up in the verification cycle 2019-2024. At the GNI visit in year 2023, it was decided that an adjustment for undercover would be implemented in the benchmark revision 2024 as the results were close to the material threshold.
- Large Case Unit review – Output of Goods and services as well as intermediate consumption has been revised because of corrections made to the 2019 SBS. The revision follows a Large Case Unit review of reported values from a large entity. The changes affect both output and IC by the same amount meaning there are no net effects on gross value added.
- The item Balancing reflects the automated balancing with a least square method, see also chapter 6, the balancing or integration procedure, and validation of the estimates.

2.2.2.3 Expenditure approach

The main changes to sources and methods as well as the impact of other categories of revisions are shown in the table 2.2.5 below.

Table 2.2.5 Revisions on the expenditure side and the impact on GNI

Item	Code	2018		2019		2020		2021	
		Value	GNI %*	Value	GNI %	Value	GNI %	Value	GNI %
Main changes to sources and methods		-4520	-0,1%	31762	0,6%	-8713	-0,2%	6534	0,1%
Total final consumption expenditure	P3	55508	1,1%	57708	1,1%	40382	0,8%	33744	0,6%
Household final consumption expenditure	P3	52861	1,1%	57033	1,1%	37986	0,7%	30261	0,5%
AP 7a New benchmarks for HFCE/COICOP		49966	1,0%	53232	1,0%	33341	0,6%	25759	0,5%
AP 7e Benchmark for N2 illegal economic activities		2237	0,0%	2825	0,1%	1851	0,0%	1517	0,0%
Undercoverage in the National apartment register		4581	0,1%	4845	0,1%	5065	0,1%	5048	0,1%
Reclassification of units into the general government		-3923	-0,1%	-3869	-0,1%	-2271	0,0%	-2063	0,0%
Change in balancing		-25099	-0,5%	-28815	-0,6%	-19975	-0,4%	-13777	-0,2%
Total		27762	0,6%	28218	0,5%	18011	0,3%	16484	0,3%
NPIH final consumption expenditure	P3	-31	0,0%	1263	0,0%	886	0,0%	773	0,0%
Sum of other non-material revisions		-31	0,0%	1263	0,0%	886	0,0%	773	0,0%
Total		-31	0,0%	1263	0,0%	886	0,0%	773	0,0%
General government final consumption expenditure	P3	2678	0,1%	-588	0,0%	1510	0,0%	2710	0,0%
Consolidation within public administration		-1201	0,0%	-1197	0,0%	-1338	0,0%	-1242	0,0%
Government public and private sector classification		4235	0,1%	3885	0,1%	4710	0,1%	4440	0,1%
Sum of other non-material revisions		-356	0,0%	-3276	-0,1%	-1862	0,0%	-488	0,0%
Total		2678	0,1%	-588	0,0%	1510	0,0%	2710	0,0%
Gross capital formation	P5	-43586	-0,9%	-34835	-0,7%	-41382	-0,8%	-36377	-0,6%
Gross fixed capital formation	P51g	-37794	-0,8%	-30490	-0,6%	-36484	-0,7%	-32705	-0,6%
AP 7b Review of GFCF of purchased software		-33804	-0,7%	-37760	-0,7%	-35825	-0,7%	-36872	-0,6%
Kind of activity unit		5438	0,1%	6237	0,1%	6952	0,1%	6192	0,1%
<i>of which</i>									
Changed NACE		5438	0,1%	6237	0,1%	6952	0,1%	6192	0,1%
Change in purchased software		-14745	-0,3%	-18219	-0,4%	-18543	-0,4%	-19791	-0,3%
Change in own account software		14745	0,3%	18219	0,4%	18543	0,4%	19791	0,3%
Treatment of a foreign trade flow		-10081	-0,2%	-8172	-0,2%	-11304	-0,2%	-14426	-0,3%
Sum of other non-material revisions		653	0,0%	9205	0,2%	3693	0,1%	12401	0,2%
Change in balancing		-3142	-0,1%	-5978	-0,1%	-68	0,0%	-6970	-0,1%
Total		-40936	-0,8%	-36468	-0,7%	-36552	-0,7%	-39675	-0,7%
Changes in inventories	P52	-5792	-0,1%	-4345	-0,1%	-4898	-0,1%	-3672	-0,1%
Stampage value		-5792	-0,1%	-4345	-0,1%	-4898	-0,1%	-3672	-0,1%
Change in balancing		0	0,0%	0	0,0%	0	0,0%	-1553	0,0%
Total		-5792	-0,1%	-4345	-0,1%	-4898	-0,1%	-5225	-0,1%
Acquisitions less disposals of valuables	P53	0	0,0%	0	0,0%	0	0,0%	0	0,0%
Total		0	0,0%	0	0,0%	0	0,0%	0	0,0%
Exports of goods and services	P6	4659	0,1%	28458	0,5%	21825	0,4%	56200	1,0%
ITSS review		26778	0,5%	51325	1,0%	35798	0,7%	74165	1,3%
VAT		618	0,0%	-7113	-0,1%	-9910	-0,2%	-11519	-0,2%
Other company specific adjustments		-18863	-0,4%	-10254	-0,2%	0	0,0%	0	0,0%
Sum of other non-material revisions		-3874	-0,1%	-5500	-0,1%	-4063	-0,1%	-6446	-0,1%
Change in balancing		-8709	-0,2%	-12250	-0,2%	-5343	-0,1%	-21472	-0,4%
Total		-4050	-0,1%	16208	0,3%	16482	0,3%	34728	0,6%
Imports of goods and services	P7	21101	0,4%	19569	0,4%	29538	0,6%	47033	0,8%
ITSS review		35134	0,7%	31822	0,6%	38092	0,7%	49339	0,9%
VAT		-9315	-0,2%	-3256	-0,1%	-2508	0,0%	-4248	-0,1%
Sum of other non-material revisions		-4718	-0,1%	-8997	-0,2%	-6046	-0,1%	1942	0,0%
Change in balancing		8463	0,2%	12616	0,2%	3681	0,1%	19809	0,3%
Total		29564	0,6%	32185	0,6%	33219	0,6%	66842	1,2%
Revision GDP expenditure approach	B1*G	-49933	-1,0%	-27897	-0,5%	-37780	-0,7%	-57047	-1,0%

Household consumption

Several changes were made to the household consumption, raising the level of HFCE with over 16 billion SEK in year 2021. The largest impact on sources and methods came from:

- New benchmarks for HFCE/COICOP (Action point 7a) – In the benchmark revision 2024 NA has replace many old benchmark-years with annually data sources. In other words, instead of just updating the old benchmark-years and using them in several years, we will receive data each year. This is the result of an extensive project called “*The Subject Design Table for Household Consumption Expenditure*”. This project has been carried out broadly, where competences from several parts of Statistics Sweden participate. The main source for the new statistics is the Structural Business statistics (SBS). SBS has information on sales from all companies in Sweden. The statistics are divided into both products and industries. In order to split sales from SBS into household consumption and other consumption transaction data from banks and card issuers are used to split the sales. For the purpose (expenditure item) food and beverages, the new household statistics is based on data from the survey Food sales statistics. Altogether, the new household consumption statistics provide information on 100 of the 140 purposes that NA counts on and account for 70 percent of the total value of household consumption. For the remaining 40 purposes, other sources are used. Some are calculated via models, while data for other purposes is obtained from other sources. Model calculations are made for, among other things, housing costs, energy consumption, healthcare, financial services and illegal consumption. To provide more detailed breakdown on products groups for certain areas information from cash registers for large companies and chains are used. Further work on the breakdown by product is needed and work is ongoing in this area.
- Benchmark for N2 illegal economic activities (drugs, alcohol, tobacco) (Action point 7e) – A new method for the consumption of drugs has been implemented. It relies on data from wastewater analysis performed in about 50 Swedish wastewater plants stratified over 6 regions over the years 2013-2020.
- Undercoverage in the National apartment register – This change in methods and sources derives from action point AP.19 in GNI verification cycle 2016-2019. This point was to be followed up in the verification cycle 2019-2024. At the GNI visit in year 2023, it was decided that an adjustment for undercover would be implemented in the benchmark revision 2024 as the results were close to the material threshold.

NPISH final consumption expenditure

The NIPISH final consumption expenditure have had non-material revision downward the years 2018 and 2021 and upward revisions the years 2019-2021.

Government final consumption expenditure

The main part of the revision for General government final consumption expenditure derives from two issues, the changed consolidation within public administration as well as Government public and private sector classification.

- Changed consolidation within public administration – In recent years, Eurostat has clarified how accounting should take place. Partly within the working groups GFS TF and COFOG TF. Partly included guidance in the updated COFOG manual. It clarifies what should be recorded as purchases/sales and what should be recorded as transfers. The change has a large impact on intermediate consumption and sales that both are reduced, but only a minor impact on GDP (and GNI).
- Government public and private sector classification – Five corporations, three schools, one public transport corporation and one construction corporation, was reclassified into the General government. The largest impact was the reclassification of the transport corporation companies and its subsidiary to the general government. In summary, the transportation corporation, AB Storstockholms Lokaltrafik (SL AB) is 100% owned by Region Stockholm and is the collective name and brand for the procured public transport in Stockholm County. The company's purpose is to organize the local and regional public transport on land for which Region Stockholm is responsible.

The transport is operated by companies that the traffic committee procures on a free and competitive market. The traffic committee plans, orders and monitors the traffic and maintains and renews the infrastructure. The procured traffic contractors are responsible for detailed planning and operation of the traffic. The traffic is procured by the traffic committee within Region Stockholm and is transferred to SL AB. Decisions in the operation that are of a fundamental nature or of greater importance are submitted to the regional council and then made by the general meeting. Examples of decisions that are of a fundamental nature or otherwise of greater importance are the purchase and sale of shares, the formation of subsidiaries, changes in share capital, the conclusion of agreements of fundamental importance and investments and financing issues of fundamental importance. The company's net turnover consists of grants from the Stockholm Region and ticket revenue. Decisions on ticket prices are made by the regional council. Public grants account for approximately 51% of total revenue. If the company is placed in liquidation, the company's assets will accrue to the Stockholm Region. The company has no employees. The subsidiary, SL Nya Tunnelbanan AB, SL Nya Tunnelbanan AB is a subsidiary of SL AB and is 100% owned by Region Stockholm. The company was formed in 2021 at the request of the Regional Board of Directors by the Stockholm Transport Administration to manage the expansion of the metro. The Traffic Committee is procuring contracts for the expansion of the metro and immediately after the contract is concluded, the contract will be transferred to SL Nya Tunnelbanan AB. The company carries out construction activities within the framework of the expansion of the metro within the Stockholm Region by purchasing services from procured subcontractors. The company has no employees and the Stockholm Region through SL AB is the company's only customer. The company's board consists of three members and these are the same people who are on the board of SL AB. The CEO of the company is the head of administration within the Stockholm Region.

Both SL AB and SL Nya Tunnelbanan AB has been reclassified to S.13, Public administration, as public administration has a controlling influence over the companies which in turn manage agreements concluded by Region Stockholm. The companies have no employees and the CEO of both companies is employed by Region Stockholm. In addition, it is the owner, Region Stockholm, who appoints representatives on the companies' boards and makes all decisions of a principled nature. SL AB is classified as public administration from 2013 and SL Nya Tunnelbanan AB from 2021.

Gross fixed capital formation

Total Gross fixed capital formation was revised downwards with over SEK 39 billion and the main changes came from:

- Review of GFCF of purchased software (Action point 7b) – The survey *Enterprises' IT expenditure* has been thoroughly reworked to provide more details on software expenditure with a breakdown of both type of accounts as well as splits between intermediate consumption and investments. Results from the new survey have been introduced into the NA benchmark, showing a lower level of GFCF in software than the previous extrapolation model estimated.
- Statistical units, Kind of activity unit – These changes in methods and sources consists of several parts that concern company-specific measures. Due to the confidentiality NA cannot describe in detail this issue as it may be possible to identify the company. The company has been divided into four different Kind of Activity Units. In the benchmark revision 2024 the company have been merged into one Kind of Activity Units. As a result of the merger internal transaction disappear from the compilation. Due to the change, type of capital is also affected when earlier the asset was produced and sold and become a purchased gross fixed asset. Now it is an own account gross fixed capital formation which is recorded when it is produced. The method of the merger imply that it is GDP neutral except for the change of industry from M72 to other industry, i.e. R&D as intermediate consumption only in NACE 72.

- Treatment of a foreign trade flow – After thorough discussions with a large company and internal investigation, it has been clarified that a change in treatment of a foreign trade flow concerning R&D services has led to a decrease in GFCF on the expenditure. It relates to a large actor with substantial and regular flows of both imports and exports of R&D services, see also section 2.2.2.2 Production approach.

Inventories

Changes in inventories were revised downwards due to changed stumpage value i.e., value of standing timber.

- Stumpage value – The stumpage value was overvalued due to incorrect price.

Acquisitions less disposals of valuables

There were no changes to Acquisitions less disposals of valuables.

Exports and imports

Total net exports were revised downwards with 32 billion SEK. The downward revisions for net exports were primarily due to the balancing process.

- Review of the Survey on International Trade in Service Statistics – A major review has been carried out on the Survey on International Trade in Service Statistics. This resulted in substantial upward revisions of both exports and imports of services. The main reasons for this were revisions of the data for several larger enterprises.
- Value added tax in exports and imports – In Sweden credit card data is used as the main source for the estimates on non-residents' consumption in Sweden and Swedish residents' consumption abroad (travel services). One weakness in this source data is that it also covers credit card payments that should not be regarded travel services such as distance trade and electronic services. Distance trading and electronic services within the EU essentially take place by the seller charging the buyer for value-added tax in his/hers home country. This VAT transaction is not exports and imports, taxes paid by the domestic household is a domestic transaction to the Tax Authority. One previously made methodological changes, within the reservation on NA-BoP harmonization, was to exclude value added tax (VAT) for transactions in the credit card data that referred to regular exports and imports of goods and services and not travel services. Since then, ITSS has done further work on reclassifying transactions in the credit card data from travel services to exports and imports by product. Based on this a more detailed calculation on how much VAT that should be excluded from the credit card transactions have been implemented. These revisions apply to both exports and imports.
- Other company specific adjustments – Other company specific adjustments in year 2018 and 2019 for export of goods and services referees to adjustments made at the national accounts that was changed in the benchmark revision.
- The sum of other non-material revisions refers to several smaller items including, among other things:
 - A previous adjustments of transport services that have been removed for some years after further scrutinizing (export)
 - Revised data on merchanting (export).
 - Other minor company specific adjustments (export and import)

- Supplements made for exports of services through congestion income and adjustment of imports of goods by excluding congestion income that refers to the exporting country (export and import)
- A previous adjustments of transport services that have been removed for some years after further scrutinizing (import)

2.2.2.4 Income approach

The main changes to sources and methods as well as the impact of other categories of revisions for the income approach are shown in table 2.2.6 below.

Table 2.2.6 Revisions to the income approach and the impact on GNI, million SEK

Item	Code	2018		2019		2020		2021	
		Value	GNI %*	Value	GNI %	Value	GNI %	Value	GNI %
Compensation of employees	D1	25988	0,5%	27108	0,5%	26804	0,5%	29420	0,5%
AP 7d Exhaustiveness adjustments (N6) benchmark		25988	0,5%	27108	0,5%	26804	0,5%	29420	0,5%
Gross operating surplus and mixed income	B2G+B3G	-84929	-1,7%	-71225	-1,4%	-65323	-1,3%	-100205	-1,8%
AP A2 Holding gains		-8273	-0,2%	-11337	-0,2%	-3614	-0,1%	-18116	-0,3%
AP A3 on branches		-12972	-0,3%	-6956,57	-0,1%	-8127,9	-0,2%	-9675,71	-0,2%
AP 7b Review of GFCF of purchased software		-49877	-1,0%	-53685	-1,0%	-52925	-1,0%	-59236	-1,0%
AP 7c Benchmark related to the IC for owner-occupied dwellings		-4610	-0,1%	-4567	-0,1%	-5595	-0,1%	-6138	-0,1%
AP 7d Exhaustiveness adjustments (N6) benchmark		-8804	-0,2%	-9147	-0,2%	-9067	-0,2%	-4957	-0,1%
AP 7e: New benchmark for N2 illegal economic activities (N2)		2237	0,0%	2825	0,1%	1851	0,0%	1517	0,0%
Consolidation public administration		-1148	0,0%	-1161	0,0%	-1340	0,0%	-1244	0,0%
Kind of Activity Unit		5438	0,1%	6237	0,1%	6952	0,1%	6192	0,1%
Conceptual adjustment for bought R&D		-10081	-0,2%	-8172	-0,2%	-11304	-0,2%	-14426	-0,3%
Congestion income		1346	0,0%	1980	0,0%	7325	0,1%	6749	0,1%
Addition for gravel (construction industry)		-3635	-0,1%	-3788	-0,1%	-4421	-0,1%	-3370	-0,1%
Under-coverage in the National apartment register		4581	0,1%	4845	0,1%	5065	0,1%	5048	0,1%
Reclassification of units into the general government		156	0,0%	153	0,0%	154	0,0%	154	0,0%
ETS emission permits to the time adjusted cash method		248	0,0%	2	0,0%	213	0,0%	-261	0,0%
Sum of other non-material revisions		465	0,0%	11547	0,2%	9511	0,2%	-2441	0,0%
Taxes on production and imports	D2	-248	0,0%	-2	0,0%	-213	0,0%	261	0,0%
ETS emission permits to the time adjusted cash method		-248	0,0%	-2	0,0%	-213	0,0%	261	0,0%
Subsidies	D3	3714	0,1%	3680	0,1%	2119	0,0%	1911	0,0%
Consolidation public administration		53	0,0%	36	0,0%	-2	0,0%	-2	0,0%
Reclassification of units into the general government		-3767	-0,1%	-3716	-0,1%	-2117	0,0%	-1909	0,0%
Change in balancing		5542	0,1%	12542	0,2%	-1167	0,0%	11566	0,2%
Revision GDP income approach	B1*G	-49933	-1,0%	-27897	-0,5%	-37780	-0,7%	-57047	-1,0%

* Impact GNI %.

For the income approach, the revision of compensation of employees stemmed from Exhaustiveness adjustments (N6) benchmark (Action point A7d – Exhaustiveness adjustment N6, miss-reporting by the producer, has undergone a revision following a new audit study from the Swedish Tax Agency (STA). An opposite revision was made to the Gross operating surplus (GOS) since GDP from the income approach is not compiled independently and GOS for non-financial corporations is derived as a residual. Moreover, as can be seen in table 2.2.6 the revision of GOS derives from revisions described in other sections.

The revisions of taxes on production and imports stems from requirements within GFS and EDP, EDP action point no. 21. The Swedish Statistical Authorities have move from the FI-FO method calculating the ETS emission permits to the time adjusted cash method.

Major part of the revision for subsidies is due to reclassification of units into the general government. When corporations are reclassified subsidies is recorded as other current transfers between general government units instead (ESA paragraph 4.38). A Smaller part of the revision for subsidies is due to Changed consilidations within public administration.

2.2.2.5 The transition from GDP to GNI

The main changes to sources and methods to the transition from GDP to GNI are shown in table 2.2.7 below.

Table 2.2.7 Revisions from GDP to GNI and the impact on GNI

Item	Code	2018		2019		2020		2021	
		Value	GNI %*	Value	GNI %	Value	GNI %	Value	GNI %
Compensation of employees received from the rest of the world	D1	1574	0,0%	1697	0,0%	1402	0,0%	1249	0,0%
Compensation of employees paid to the rest of the world	D1	11401	-0,2%	11026	-0,2%	10213	-0,2%	11980	-0,2%
Taxes on production and imports paid to the institutions of the EU	D2		0,0%		0,0%		0,0%		0,0%
Subsidies received from the institutions of the EU	D3		0,0%		0,0%		0,0%		0,0%
Property income received from the rest of the world	D4	-9	0,0%	47	0,0%		0,0%		0,0%
Property income paid to the rest of the world	D4	2	0,0%	-1 366	0,0%		0,0%		0,0%
Revision GDP	B5*G	-9 838	-0,2%	-7 916	-0,2%	-8 811	-0,2%	-10 731	-0,2%

* Impact GNI %.

The revisions made to compensations of employees received/paid from/to the rest of the world stems from that the method for D12 has been changed. Previously, when working abroad, an assumption was made that 50 per cent of social security contributions were paid in Sweden and 50 per cent were paid in the country of employment. After revisiting ESA, NA have concluded that social security contributions should be recorded as paid in the country of employment. The same change has been done concerning social contributions for persons from the rest of the world employed in Sweden. Moreover, for compensations of employees paid to the rest of the world a new data source, monthly work declarations from the Swedish Tax Agency, has been implemented for compensation of employees paid to the rest of the world, i.e. Salaries (D.11). The revisions made to property income received/paid from/to the rest of the world stems from other changes in methods and sources in the balance of payment source statistics.

2.2.3 GNIQ and RQ 2025 (minor revision 2025)

The main reason for the minor revision 2025 was that there were three issues that were not implemented in the nationally published benchmark revision in May 2024 but implemented in the GNIQ and RQ 2024. The issues were neither implemented in the data transmitted to Eurostat. Thus, the minor revision 2025 fully aligned the data transmitted to Eurostat, nationally published data and data for GNI own purposes, i.e. GNIQ and RQ 2025.

The issues that were not implemented in the nationally published benchmark revision in May 2024, nor in the data transmitted to Eurostat, but implemented in the GNIQ and RQ 2024 is listed below.

- *Holding gains and losses.* Adjustments of trade margins are to be made to consider the fact that the valuation principles for inventories of the goods sold differ between corporate accounting (lowest value principle) and the National Accounts (replacement value).
- *Include foreign branches in Sweden and exclude Swedish branches abroad.* Identification of branches in Sweden and abroad, to align the treatment to ESA2010, i.e. to include foreign branches in Sweden and exclude Swedish branches abroad.
- *Holding gains in intermediate consumptions.* Correction was made to the holding gains in intermediate consumption in the GNIQ and RQ 2024 for years 2021 and 2022 that was not introduced in the data transmitted to Eurostat nor in the nationally published benchmark revision May 2024.

Moreover, for the sake of completeness, there were some current revisions that were implemented in the minor revision, and they are listed below.

- *Allocation of FISIM.* Allocation of FISIM was revised for the years 2021-2022 which had a causal relationship with action point A3 Treatment of branches, which was implemented in GNIQ and RQ 2024.

- *Holding gains.* Also, in year 2021 the holding gains for intermediate consumption were revised.
- *Congestion income.* For year 2022 the congestion income has been revised i.e. the congestion income that is generated in the integrated EU market for electricity.
- *Output NACE A02.* For year 2022 there was a revision of output in the source statistic SBS for NACE A02 concerning output.
- *Property income.* Property income received/paid from/to the rest of the world have been revised for years 2021-2022. The revisions follow the ordinary revision cycle.

The balancing of these issues led to revisions in other components of GDP as well.

Table 2.2.8 below shows the revision as it was disseminated in the GNI questionnaire and report on the quality of GNI data in September 2025, covering the open years at that point (including years for open reservations) and up until 2023 for which annual accounts had been carried out.

Table 2.2.8 Revisions in GNIQ 2025

GNI QUESTIONNAIRE 2025 Table R1: GDP and GNI (ESA2010) 2018-2023 As of 30/09/2025	code ESA 2010	SWEDEN million SEK					
		2018	2019	2020	2021	2022	2023
PRODUCTION APPROACH							
Output of goods and services (at basic prices)	P1	0	0	0	-1236	9007	-69405
Intermediate consumption (at purchasers' prices)	P2	0	0	0	-2730	-97	-4690
Gross value added (at basic prices)	B1G	0	0	0	1494	9104	-64715
Taxes on products	D21	0	0	0	0	0	106
Subsidies on products	D31	0	0	0	0	0	-1271
EXPENDITURE APPROACH							
Total final consumption expenditure	P3	0	0	0	214	-1525	12839
Household final consumption expenditure	P3	0	0	0	213	-1433	12494
NPISH final consumption expenditure	P3	0	0	0	0	0	2462
General government final consumption expenditure	P3	0	0	0	1	-92	-2117
Gross capital formation	P5	0	0	0	419	-896	375
Gross fixed capital formation	P51g	0	0	0	308	-511	7595
Changes in inventories	P52	0	0	0	111	-385	-7136
Acquisitions less disposals of valuables	P53	0	0	0	0	0	-84
Exports of goods and services	P6	0	0	0	361	14275	-33453
Imports of goods and services	P7	0	0	0	-500	2750	43099
INCOME APPROACH							
Compensation of employees	D1	0	0	0	0	-2335	-4799
Gross operating surplus and mixed income	B2G+B3G	0	0	0	1494	11439	-57247
Taxes on production and imports	D2	0	0	0	0	0	-1611
Subsidies	D3	0	0	0	0	0	-319
Gross domestic product (ESA2010)	B1*G	0	0	0	1494	9104	-63338
Compensation of employees received from the rest of the world	D1	0	0	0	0	0	-2013
Compensation of employees paid to the rest of the world	D1	0	0	0	0	0	125
Taxes on production and imports paid to the institutions of the EU	D2	0	0	0	0	0	0
Subsidies received from the institutions of the EU	D3	0	0	0	0	0	1297
Property income received from the rest of the world	D4	0	0	0	-4951	-1796	54824
Property income paid to the rest of the world	D4	0	0	0	14843	12850	22622
Gross national income (ESA2010)	B5*G	0	0	0	-18300	-5542	-31977

2.3 Planned actions for improvements

The next benchmark revision is planned for 2029.

2.3.1 Planned actions for improvements of base statistics

- A comprehensive register with information from digital annual reports, the DIÅR-Register, has been introduced. The implementation of DIÅR gives SBS access to a second source for corporate accounting, complementing Tax Authority standardised accounting statements. This will also, among others, improve SBS imputation methods and estimates of gross fixed capital formation. As of 2025 reporting to the DIÅR-Register is a voluntary alternative to physically sending printed annual reports to the Swedish Companies Registration Office. The Registration Office has proposed 2026 as the first year for mandatory reporting to the system for most legal forms of corporations, with a final decision pending legalisation.
- The Riksbank is developing a new database with payment transactions that are to be collected from payment providers on a weekly basis starting 2026. Statistics Sweden will have access to data from this source, which in the national accounts will probably improve above all the household's consumption estimates.
- Balance of payments Reinvested earning on foreign direct investment. Balance of payment will adjustments compilation of reinvested earnings on foreign direct investment (RIE on FDI) and align the estimates to ESA 2010. This will improve the compilation and replace the current method that was developed and approved within the framework of the transversal reservation IV reinvested earnings on foreign direct investment.
- Beginning reference year 2022 Statistics Sweden has started to use an annual frame, less prone to coverage errors, when producing SBS and other structural business statistics.

2.3.2 Planned actions for improvements of the National Accounts

Planned actions for improvements of the National Accounts in the upcoming revisions 2029 include:

- Implementing data from new or improved base statistics, see section 2.3.1.
- Implementation of the Transversal reservation I on the production of electricity by household. The implementation will result in changes of sources and methods for compilation of some parts of GNI. Implemented will take place when reporting GNIQ and RQ 2026.
- Implementation of the Transversal reservation II on the Treatment of non-resident VAT traders. The implementation will result in changes of sources and methods for compilation of some parts of GNI. Implemented will take place when reporting GNIQ and RQ 2026.
- Implementation of new ESA
- Implementation of new NACE
- Implementation of CPA version 2.2
- Review of compensation of employees received/paid from/to the rest of the world. The implementation will not result in changes of sources and methods for compilation of some parts of GNI. Implementation of any changes will take place when reporting GNIQ and RQ 2029.
- Update of some outdated benchmark such as:
 - Tenant owners' association renting of premises, see also section 3.5.2.1.
 - Output of newly produced valuables

- Mineral exploration
- Hidden economy, a new report from the Swedish tax authorities available for implementation in NA.
- Review of the calculation for construction of secondary homes (GFCF)
- Both European agricultural guarantee fund (EAGF) that should be recorded as subsidies (D.3) and European agricultural fund for rural development (EAFRD) that should be recorded capital transfers (D.7/D.9) is recorded as subsidies (D.3). This issue will be checked for the second time as a small issue, but NA will investigate the possibility of having source statistics divided to enable correct recording.
- Review of the compilation for part of other real estate management (L68B). Investigation and comparison of sources for rented dwellings including the stratification method, SBS and The Swedish tax authority's information on income of renting of dwellings in the property valuation.
- Adjustment of compilation error for NPISH. Adjustment of IC for NPISH so that purchased R&D is deducted from IC. Purchased R&D is counted for as GFCF.
- A review of the calculation for NACE A01, Crop and animal production, hunting and related service activities, NACE A02, Forestry and logging and NACE A03 Fishing and aquaculture will be carried out. The aim is to implement SBS completely i.e. the standard approach outlined in Section 3.1 with the support of the Economic Accounts for Agriculture (EAA) and other sources, depending on industry, on detailed levels. The review will be performed in cooperation with among other SBS.
- In the income approach wages and salaries paid abroad (D.1) differ from wages and salaries to the rest of the world (D.1) in the transition from GDP to GNI. The correct figure is in the compilation of transition from GDP to GNI. Since the income approach is not estimated independently the incorrect data causes error in the distribution between operating surplus and wages and salaries, thus not affecting GDP. However, this issue will be corrected no later than the next benchmark revision.

Chapter 3 The production approach

3.0 GDP according to the production approach

The production approach to GDP is identified in the production account and covers production (Output) and intermediate consumption (IC) with gross value added (GVA) as the balancing item when compiled by industry, institutional sector and type of producers in terms of market producers, producers for own final use and non-market producers. Output is valued at basic prices, i.e. the price facing producers which excludes all taxes on products but includes all subsidies on products. Intermediate consumption is valued at purchasers' prices, i.e. including all non-deducted taxes on products and excluding all subsidies on products.

Combining gross value added for all producing units of the national economy across these dimensions gives total GVA at basic prices that when taken together with taxes less subsidies on products yields Gross domestic product (GDP) as seen from the production approach.

This estimate of GDP is derived independently from the expenditure approach described in chapter 5, with the final GDP-figure resulting from reconciling the two through the compiling of a supply use system and final balancing as described in chapter 6.

Table 3.0.1: Breakdown of Output, IC and GVA by NACE-sections, SEK million, 2021

NACE Rev 2	Output	IC	GVA
A Agriculture, forestry and fishing	197 035	134 220	62 815
B Mining and quarrying	83 521	30 994	52 527
C Manufacturing	2 236 686	1 537 837	698 849
D Electricity, gas, steam,air conditioning supply	234 307	111 412	122 895
E Water supply; sewerage, waste management and remediation activities	93 069	62 098	30 971
F Construction	765 036	447 088	317 948
G Wholesale and retail trade; repair of motor vehicles and motorcycles	972 887	427 855	545 032
H Transportation and storage	614 159	382 860	231 299
I Accommodation and food service activities	151 354	90 522	60 832
J Information and communication	816 100	420 691	395 409
K Financial and insurance activities	302 002	94 415	207 587
L Real estate activities	759 905	359 383	400 522
_L Imputed rents of owner-occupied dwellings	242 850	138 166	104 684
M Professional, scientific and technical activities	696 708	321 255	375 453
N Administrative and support service activities	275 486	114 412	161 074
O Public adm,defence; compulsory social security	304 598	99 644	204 954
P Education	385 885	105 310	280 575
Q Human health and social work activities	738 237	216 497	521 740
R Arts, entertainment and recreation activities	123 634	63 966	59 668
S Other services	107 825	38 746	69 079
T Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	2 847	0	2 847
Total	9 861 281	5 059 205	4 802 076
Taxes on products			640 727
Subsidies on products			-25 043
Gross Domestic Product, GDP			5 417 760

Table 3.0.2: Output, IC and GVA by NACE and institutional sector, SEK million, 2021

NACE Rev 2		Institutional sectors					Total economy	
		S.11	S.12	S.13	S.14	S.15		
A	Agriculture, forestry and fishing	Output	115 644	0	0	80 916	475	197 035
		IC	87 655	0	0	46 182	383	134 220
		GVA	27 989	0	0	34 734	92	62 815
B	Mining and quarrying	Output	83 352	0	0	169	0	83 521
		IC	30 942	0	0	52	0	30 994
		GVA	52 410	0	0	117	0	52 527
C	Manufacturing	Output	2 227 204	0	0	9 482	0	2 236 686
		IC	1 533 518	0	0	4 319	0	1 537 837
		GVA	693 686	0	0	5 163	0	698 849
D	Electricity, gas, steam,air conditioning supply	Output	232 864	0	1 003	389	51	234 307
		IC	110 857	0	314	198	43	111 412
		GVA	122 007	0	689	191	8	122 895
E	Water supply; sewerage, waste management and remediation activities	Output	73 913	0	18 925	145	86	93 069
		IC	50 379	0	11 635	8	76	62 098
		GVA	23 534	0	7 290	137	10	30 971
F	Construction	Output	722 811	0	4 518	37 707	0	765 036
		IC	428 189	0	2 967	15 932	0	447 088
		GVA	294 622	0	1 551	21 775	0	317 948
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	Output	950 617	0	1 162	20 250	858	972 887
		IC	420 450	0	521	6 531	353	427 855
		GVA	530 167	0	641	13 719	505	545 032
H	Transportation and storage	Output	485 084	0	111 208	17 633	234	614 159
		IC	324 631	0	53 203	4 874	152	382 860
		GVA	160 453	0	58 005	12 759	82	231 299
I	Accommodation and food service activities	Output	138 422	0	0	12 577	355	151 354
		IC	84 088	0	0	6 300	134	90 522
		GVA	54 334	0	0	6 277	221	60 832
J	Information and communication	Output	798 594	0	8 613	8 637	256	816 100
		IC	414 272	0	4 755	1 575	89	420 691
		GVA	384 322	0	3 858	7 062	167	395 409
K	Financial and insurance activities	Output	0	299 422	279	1 509	792	302 002
		IC	0	93 806	112	100	397	94 415
		GVA	0	205 616	167	1 409	395	207 587
L	Real estate activities	Output	490 907	0	1 681	261 922	5 395	759 905
		IC	204 113	0	2 404	148 338	4 528	359 383
		GVA	286 794	0	-723	113 584	867	400 522
_L	<i>Imputed rents of owner-occupied dwellings</i>	Output	0	0	0	242 850	0	242 850
		IC	0	0	0	138 166	0	138 166
		GVA	0	0	0	104 684	0	104 684
M	Professional, scientific and technical activities	Output	592 889	0	85 923	16 037	1 859	696 708
		IC	300 597	0	15 586	4 383	689	321 255
		GVA	292 292	0	70 337	11 654	1 170	375 453
N	Administrative and support service activities	Output	264 400	0	864	9 980	242	275 486
		IC	111 434	0	571	2 348	59	114 412
		GVA	152 966	0	293	7 632	183	161 074
O	Public adm,defence; compulsory social security	Output	0	0	304 598	0	0	304 598
		IC	0	0	99 644	0	0	99 644
		GVA	0	0	204 954	0	0	204 954
P	Education	Output	72 276	0	298 635	3 617	11 357	385 885
		IC	24 726	0	76 809	1 089	2 686	105 310
		GVA	47 550	0	221 826	2 528	8 671	280 575
Q	Human health and social work activities	Output	175 302	0	550 451	6 118	6 366	738 237
		IC	54 440	0	158 476	1 583	1 998	216 497
		GVA	120 862	0	391 975	4 535	4 368	521 740
R	Arts, entertainment and recreation activities	Output	58 470	0	42 055	9 580	13 529	123 634
		IC	35 314	0	19 700	3 799	5 153	63 966
		GVA	23 156	0	22 355	5 781	8 376	59 668
S	Other services	Output	41 916	0	19	16 807	49 083	107 825
		IC	19 393	0	7	4 411	14 935	38 746
		GVA	22 523	0	12	12 396	34 148	69 079
T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	Output	0	0	0	2 847	0	2 847
		IC	0	0	0	0	0	0
		GVA	0	0	0	2 847	0	2 847
Total	Output	7 524 665	299 422	1 429 934	516 322	90 938	9 861 281	
	IC	4 234 998	93 806	446 704	252 022	31 675	5 059 205	
	GVA	3 289 667	205 616	983 230	264 300	59 263	4 802 076	

3.1 The reference framework

The starting point in the process of compiling output and intermediate consumption is the Statistical Business Register (SBR), described in more detail in section 3.1.1, that covers all legal entities of all forms as well as all natural persons registered as active non-incorporated producers. All entities are classified into statistical units, institutional units and kind of activity units, that are in turn grouped into institutional sectors and industries.

This population of institutional and kind of activity units allows for a consistent structuring of administrative records aligned with statistical classifications and, through the Statistics Sweden system for coordinated sampling (SAMU), the construction of sampling frames used in statistical surveys. While some administrative registers cover close to all units of the national economy most are designed to cover specific institutional sectors or groups of sectors and in most cases specific delineated spans of industries. This structure of underlying source materials together with the need to separate market and own accounts producing units from non-market producers to correctly define output shapes the structure of the national accounts production process and how units are grouped in calculations.

Processes thus largely divide by the three dimensions of type of producer, institutional sector and NACE-industry that when taken together cover all units in the national economy engaged in production:

- *Market producers* are kind of activity units that are parts of corporations in institutional sectors S11 and S12, self-employed persons in S14 or kind of activity units within general government S13, institutional units that produce products sold on markets at prices that covers at least 50 percent of all incurred costs. Further details of S13 General Government delimitation can be found in section 5.9.1.1. There are no market producing kind of activity units in institutional sector S15 Non-profit institutions serving households (NPISH).

While institutional sectors S11, S12 and S13 are handled separately from each other throughout the process of compilation the former two are handled together with non-incorporated market producers in S14 in their respective corresponding span of industries for parts of the compilation process, with the full separation between households and corporations and made in the compilation of the sector accounts. Source materials and calculations further divide by industry with the exception for general government units that are instead compiled by COFOG that is then linked to NACE-industries.

- *Producers for own final use* are kind of activity units who primarily produce output products used for gross fixed capital formation in their own institutional unit or, in the case of households, for final consumption within that institutional unit, that is in the own household. This grouping of producers is the smallest of the three with units engaged in a limited number of distinct activities: Production of housing services in owner-occupied dwellings, the production of literary and artistic originals and own account construction in local government and households. Each of these activities link to specific industries and in the case of housing services and construction to specific institutional sectors while the production of literary and artistic originals occurs in both S11 and S14.
- *Non-market producers* are kind of activity units within general government or non-profit institutions serving households (NPISH) which produce products distributed for individual or collective use for free or at economically insignificant prices. These units are compiled by subsector and activity with NPISH classified by NACE throughout and General government units compiled by COFOG that then link to NACE.

The compilation of production and intermediate consumption for these groupings of units is described in the remainder of this chapter, with a general outline of main sources used and methods for

compilation presented in section 3.1.2 concerning market producers and producers for own final use followed by a corresponding outline concerning non-market producers in section 3.1.3.

This is followed by more detailed description of each stage of compilation in remaining sections that takes it starting point in sections 3.2 and 3.3 that describe how the production boundaries and valuation principles put forward by the ESA translate into practical context of the source statistics used.

Following this, 3.4 is the first of three sections that describe in more detail each stage of estimation, starting with the basis of underlying source materials in Swedish accounting practices, how accounting information is collected in the main sources used for compilation and what conceptual adjustments are necessary to transition to ESA 2010 definitions. The following 3.5 outline the usage of indirect estimation methods, describing the use of models and, where applicable, extrapolations from benchmarks set in previous years. Lastly 3.6 describe the adjustments to output and intermediate that are made to maintain consistency with ESA production and IC boundaries where these go beyond what is captured by standard source materials and methods used.

This is followed by sections 3.7 through 3.26 that present results, process-table breakdowns and compilation procedures for each NACE section, with particular focus on industry specific issues and elements of compilation procedures not covered in the common elements outlined in 3.1.2 and 3.1.3. The last two subsections 3.27-3.28 present methods and sources for calculating the last two element in Taxes on products and Subsidies on products that are needed to transition from total GVA described preceding sections to the final figure of GDP from the production approach.

This process of compilation result in NA figures for both output and intermediate consumption for the 98 industries and 425 products listed in section 9.1 which forms the first stage of the annual national accounts production process that takes place in parallel to the calculation of expenditure components that are described in chapter 5. Figures for these together allow for the construction of the supply-use system that form the basis for further analysis and quality control, complementing industry level and time series analysis. This transition to a supply-use framework with product balances and the remaining steps of validation and the balancing procedure that yield final estimates is described in chapter 6.

The process of compiling GDP from the production approach is integrated in the overall National Accounts production process that, as described in section 1.1.3, falls under the Balance of Payments, Financial Markets and National Accounts Unit of Statistics Sweden. Within the unit responsibilities divide by institutional sector were figures for corporations and households are compiled by the Product Account and Financial and Sector Accounts Sections where the former set industry totals for transactions by product and the latter set the breakdown of industry totals by institutional sector. Output and intermediate consumption for non-profit institutions serving households is compiled by the Product Account Section while the general government sector is handled by the Public Finance Section.

While the Product Account Section and Financial and Sector Accounts Section largely work with source materials delivered from other units of the agency as well as in some cases from other government agencies the Public Finance unit handle the full range of statistics concerning government entities from national accounts, the production of various underlying surveys to receiving and compiling administrative data from other government agencies. Further information of main sources including agencies responsible for their compilation is found in chapter 10.

3.1.1 Statistical Business Register (SBR)

The Statistical Business Register is a register of all enterprises and their establishments, government units (incl. agencies and authorities) and organizations of other legal forms including non-profit institutions. The business register also includes natural persons that are engaged as own account workers. There is no cut-off threshold for small units in the register. The SBR has a central role as a sampling frame and coordination tool for statistical production within Statistics Sweden, particularly concerning economic statistics. The SBR is one of three base registers in SCB's registry system, together with the Total Population Register and the Property Register.

Each enterprise has a unique corporate identification number, and each establishment has a unique establishment number, which makes it possible to structure information and establish links between different bodies of statistical data. Secrecy provisions protect the information.

All statistics intended to provide information on the Swedish economy, whatever level they may focus on, – business establishments, enterprises, local unit or corporate groups – presuppose a common set of definitions for subjects of inquiry, industries, and measures of size, ownership categories and other recording variables. This in turn requires the existence of registers, which describe links between the units' establishments, enterprises, local units and groups and the status of the various units at different points in time. Such a register must constitute the framework for all economic statistics. These basic coordination requirements are met using Statistics Sweden's Statistical Business Register.

The content of the SBR is regulated in European Parliament and Council Regulation EC No 177/2008 establishing a common framework for business registers for statistical purposes.

The Regulation requires the SBR to include all institutional units engaged in economic activity and contributing to Gross Domestic Product (GDP). All legal entities, even those not engaged in any activities, should also be included in the register.

The SBR is a situation register in which circumstances at a particular point in time are described. From a statistical point of view, however, it is more relevant that the register should describe the circumstances during different periods, since the statistics must convey a picture for a certain timespan, for example a month, a quarter or a year. Hence, information on changes is also stored and documented in the register. As the changes are declared in relation to time, it is possible to follow enterprise and establishment populations to be studied and update the sample frames and the samples at any time for changes that have occurred and are relevant to the period to be elucidated.

An annual frame contains an annual population with classifications correct for the reference year, i.e. qualitatively good material which can be subsequently developed for a calendar year based on different registers and statistical inquiries.

The SBR comprises all "active enterprises". The term 'active enterprise' refers to an institutional unit in the form of a legal or natural person or the estate of a deceased person engaging in some form of business activity. The practical demarcations used for these units are:

- All legal persons (excluding deceased persons' estates)
- Natural persons who meet at least one of the following criteria:
 - they are registered for VAT
 - they are registered as employers
 - they are registered for business tax
 - they have registered a firm

- Estates of deceased persons that are registered for VAT and/or are registered as employers
- Foreign not resident natural persons who are engaged in business activities in Sweden

The term ‘establishment’ means each address, property or group of adjacent properties in which the enterprise pursues its activity. All active enterprises in SBR have at least one establishment. In the case of enterprises with geographically separate units, each unit is registered as a separate establishment. Enterprises which are self-contained within a particular area (e.g. enclosed by a perimeter fence or housed within adjoining buildings) and which consist of several units are normally registered as one establishment. In those cases, in which a locally delimited establishment is divided up into functionally delimited establishments, this will have taken place after agreement between Statistics Sweden and the enterprise.

In the SBR the number of employees is recorded as the single size-descriptive variable for the establishment. For certain types of establishments, however, special criteria are used for the establishment to be counted as such. Examples of this are power stations and cement works, which are of great economic significance. Special circumstances also arise for public administrations, in that several establishments may exist at the same address.

3.1.1.1 Coverage

The SBR is a register of all enterprises, authorities, organizations and their establishments. The obligation to register the activity means that the coverage problems are expected to be very small. The completeness is assessed to be very good, although at each point in time there are units which should be included in the register, but they are not (under coverage), and there are units which are included in the register, but they should not (over coverage), which leads to errors in coverage. The source of uncertainty that affects reliability to the greatest extent is the over coverage.

One source to the under coverage is that the SBR has no ability to intercept if new enterprises have more than one establishment. The undercover therefore refers to local unit object. The SBR is dependent of other surveys performed by Statistics Sweden which have direct contact with enterprises and can ask them in the case of establishments.

Another kind of under coverage consists of natural persons who pays VAT according to the VAT register of Statistics Sweden but are not formally registered for VAT in the Swedish Tax Agency. The number of such cases are few in SBR.

The over coverage in the SBR consists of enterprises that no longer are economic active but are registered in the Swedish Tax Agency to pay VAT. These companies have status as active in SBR and have a moderate impact on the statistics as they have no business. The over coverage is concentrated on legal entities without employees. There have been no resent estimates that quantify the size of these error of coverage. However, due to the obligation to register the business and make tax payments the coverage problems are expected to be very small.

3.1.1.2 Updating the register

The guiding principle in the collection of data for the register is, in the first instance, to use data that have been supplied for other purposes and to make things as simple as possible for enterprises/legal units in making their returns. The intention is that enterprises/legal units should supply one set of data once and to one place. The information in the SBR is thus largely derived from administrative records of the Swedish Tax Agency, Swedish Companies Registration Office and the address-change system, Svensk Adressändring AB.

The updating process can be described in a somewhat simplified form in two complementary stages. One consists of notifications, i.e. the data on changes, which are received every week from the

Swedish Tax Agency. These are derived from different registers, which are kept, arranged by subject registration, for different tax documents. The information from the Swedish Tax Agency updates the data on all enterprises/legal units and establishments/local units belonging to those enterprises, which only have one establishment/local unit. The data on enterprises/legal units with at least fifteen employees, or enterprises/legal units with more than one establishment/local unit are investigated before a change is made in the register.

Apart from continuous notifications, the Swedish Tax Agency also supplies monthly PAYE returns for those enterprises/legal units, which are employers (see the section 4.7 on the calculation of employee compensation.). The PAYE returns are used in the calculation of numbers of employees for both enterprises, local units, kind of activity units and business establishments. Currently, the PAYE returns are only used for updating single establishment legal units.

The other stage covers a range of different activities. The information on enterprises with several establishments/local units is updated annually with the aid of a survey carried out by Statistics Sweden. The survey is carried out in conjunction with the establishment's/local unit's number replacement undertaken in order that each PAYE return can be assigned to an establishment/local unit. The main intention of the survey is to check the establishment population. A number of verifications are carried out, which may have to do with the occurrence of conflicting information, for example in conjunction with major reorganizations.

Data are also obtained through feedback from both users within Statistics Sweden and external users and through spontaneous contacts from enterprises. The SBR database is continuously amended so that it is as up to date as possible at all times.

3.1.1.3 Non-Profit institutions

SBRs are largely based on administrative data relating to legal entities with information about, among other things NACE industry. The Swedish Tax Agency's division by legal form specifies the legal organizational forms in Sweden. The classification by type of legal entity is established and maintained by the Swedish Tax Agency. The institutional unit is classified according to legal form in connection with the unit being registered by the Swedish Tax Agency which is mandatory. The classification is used as a basis for the classification of legal units according to institutional sector and ownership control when coding legal units in the business register of Statistics Sweden. In most cases, there is a clear connection between legal form and these two standards. When this is not the case, the basis for a refined mechanical or purely manual classification is created by supplying more qualified information. A manual review of uncertain cases is thus carried out, with help from other statistical areas that have more knowledge about the respective object. In cases where formal ownership and control do not match, it is the control that is decisive for the classification.

Active register maintenance is also carried out on an ongoing basis at Statistics Sweden. Therefore, SBR is a register that is continuously updated. This involves a large element of manual review which is largely linked to all SBR's input deliveries. Moreover, the sector classifications are checked in the business register four times per year prior to the creation of the coordinated sampling (SAMU) frames.

A re-start of a working group in the area of sector and industry will be launched with focus on the quality of SBR with regard to sector and industry within primarily the financial and non-financial sector. The group shall deal with ongoing classification issues and demarcation problems. The group will also work to develop guidelines for the classification of institutes, make suggestions on how the ongoing cooperation can be improved and deal with other current issues in the area.

Specific efforts have also been made in other areas within Statistics Sweden that also concerns the register maintenance. One example is the comprehensive investigation that was conducted at Statistics Sweden within the framework of the government's mission regarding civil society. Statistics Sweden

carried out an investigation concerning the statistical frame of civil society with a focus on a transparent population that should be available outside Statistics Sweden. The work was largely about quality improvement in terms of sector codes and was finished in late 2018.

Non-profit organizations are institutional entities created for the purpose of producing or distributing goods or services, but not for the purpose of generating income or profit to the entities that control and finance them. Even so, there are some non-profit organizations that provide goods and services at economically significant prices. When they do so, these not-for-profit organizations are classified as corporations in respective corporate sector. Other non-profit organizations controlled by public administration are treated as units within public administration. Remaining non-profit organizations, that produce goods and services but do not sell them to economically significant prices and not controlled by public administration, are treated as one's own category of entities referred to as non-profit organizations that serve households and constitutes their own institutional sector.

3.1.1.4 Classification by sector

To determine the correct sector classification for different types of Non-profit institutions the legal form, ownership control, the activity code, government sector delimitation analysis as well as purpose of the organisation, its members and financing are at stake.

The private non-profit institutions that are market producers and serving businesses are classified in the sectors for corporations (S.11 or S.12). Those organisations i.e., industry associations, chambers of commerce etc, are usually financed by contributions or subscriptions/membership fees from the group they serve. The financing is seen as a payment for services performed and thus these NPI serving businesses is market producers. These units are as far as possible identified by their activity code (NACE) in combination with their legal form and ownership control status and treated as quasi-corporations. A manual review of uncertain cases is carried out on ongoing basis in cooperations between different subject matter areas within Statistic Sweden. The review concerns such issues as purpose of the organisation, type of members and financing.

Non-profit institutions serving households S.15 (NPISH) are all non-market producers. NPISH is divided into two categories. The subsector 15.1 includes non-profit organisations which are non-market producers and serving the household sector. Organisations like trade unions, political parties and sports clubs that have individuals as members are included in the NPISH sector. Their purpose is to engage households in common non-profit activities of different kinds and aims. These units are as far as possible identified by their activity code (NACE) in combination with their legal form and ownership control status. A manual review of uncertain cases is carried out on ongoing basis in cooperations between different divisions within Statistic Sweden. The review concerns such issues as purpose of the organisation, type of members and financing.

The subsector 15.2 consists of religious communities registered in accordance with the law (1998:1593) on religious communities. This category is further divided into two subsections, 1521 Church of Sweden which comprises units defined by the law (1998:1591) on the Church of Sweden and 1522 Other registered religious communities which comprises religious communities, except Church of Sweden, registered in accordance with the law (1998:1593) on religious communities. These organisations are identified by their legal form.

The private non-profit institutions that are controlled by government and is non-market, should be classified in the general government sector (S.13). The yearly government letter, Business report for companies with government ownership, is checked yearly by the SBR. In this letter, the government provides an account of the management of the state's company ownership and of the operations of the companies that the Government Office manages.

Also, the survey publicly owned enterprises are examined by SBR. The survey on publicly owned companies is a total survey. The purpose is primarily to make an account of the companies owned by the state, regions and municipalities. The report covers, among other things, scope, activity and finances. Further, Government sector delimitation analysis (and resulting reclassification, if any) are performed on a regular basis according to the criteria stated in ESA 2010 and MGDD 2019 edition in the national accounts. Corporations that are classified into or out of public administration is submitted to SBR in mid-February each year. Further reading can be done in section 5.9.

3.1.1.5 Special forms of legal entities included in the corporate sector

The Business Register includes some specific forms of legal units and in most cases, they are treated in the same way as incorporated units. This is the case for partnerships, economic associations and limited partnerships that all are included in the corporate sector.

Within the central government there are some units that mainly undertake support activities to private market producers notably the operator of airports (Swedish: Luftfartsverket) and the national electric grid operator (Swedish: Svenska Kraftnät). These units act under public law but are organized as separate units with their own economic accounts and acts independently from their “owners” in the same manner as enterprises do. These units are therefore included as quasi-corporations in the BR.

Branches of foreign corporations are included in the register and treated as quasi-corporations. The largest branches in terms of the number of employees are financial quasi-corporations.

Branches abroad belonging to resident units are not identified in the SBR itself and not excluded in main sources used in national accounts. Their exclusion is instead handled as a conceptual adjustment in NA-compilations, as described in more detail in section 3.4.

3.1.1.6 Household units

Household units contributing to GDP includes housing services by owner occupiers, own account workers and households selling agricultural and forestry products to enterprises. Of these units, only own account workers undertaking legal activities are included in the BR. In the register the own account workers are also split between those with employees and those without. Currently all own account workers with employees are included in the household sector and no quasi-corporation is created within this group of unincorporated enterprises.

The output of non-registered units is estimated using models. The most important of these units are owner occupiers of residential buildings and leisure cottages. More information on owner occupiers is found in chapter 3.18 and information on other non-registered units can be found in chapter 7.

3.1.1.7 Special purpose entities (SPE)

A specific kind of legal unit used as pass through for direct investments or as owner of IPP and mobile assets but with no or only little productive activity and few or no employees are called special purpose entities (SPE). The Business Register have currently no identification flag for these kinds of units. These units are still identified by Statistics Sweden, which has been done since 2013 based on needs of the direct investments survey in the Balance of Payments Statistics. The identification process follows the OECD recommendations and since 2020 the decision tree for identification developed by OECD. Currently about 40 legal units are listed as SPEs by the BoP.

The majority of these SPEs are holding companies with no employees and no turnover. In some of the other cases the turnover accounts for few million SEK with no or few employees. None of the SPE:s has been identified as owner of IPP or equipment used in financial leasing operations. Around 2/3 of the SPEs are included in the financial corporate sector and the remaining are undertaking ancillary

activities in the non-financial corporate sector. The recording in the NA of these units have been done in the same way as for other holding companies.

3.1.1.8 Multi-National Enterprise Groups (MNE)

The largest Multi-National Enterprise Groups are subject to intensive profiling performed by the Large Cases Unit. The remaining enterprise groups, both multi-national and national, are subject to automatic profiling. There were roughly 55,000 profiled enterprises in the annual frame for 2021 that the SBS uses. However, the profiled units were not introduced in the live register until 2022 with the implementation of the statistical unit “enterprise” rework in the SBR.

3.1.1.9 Use of statistical units and implementation of the unit “enterprise” in the SBR

As explained further in the description of the SBR found in section 10.0 the register classifies all entities into the statistical units of institutional units and kind of activity units that are to be used in NA-compilations. Here the enterprise unit used in the register and other statistics are seen as corresponding to institutional units used in national accounts. For output and intermediate consumption main sources such as the SBS are compiled by kind of activity units meaning materials delivered to national accounts align with requirements. In practice most legal units correspond to one kind of activity unit meaning surveys or use of administrative data for these can be based on the legal unit, while the relatively few complex legal units made up of several kind of activity units are surveyed on the kind of activity unit level.

The national accounts compilation concerning the year 2021 in the benchmark revision published in 2024 took place in parallel to the final phase of implementing the rework of the statistical unit “enterprise” in the statistical business register and the structural business statistics as required by Regulation 2019/2152 on European business statistics. The result of this work, which increased the number of legal and kind of activity units that were grouped into enterprise units comprised of more than one legal or kind of activity unit, was brought into the register for the year 2022 meaning that it was not incorporated across all various materials used in the compilation of national accounts for the reference year 2021.

As described in more detail in section 3.1.2 the effects of this rework were however incorporated into the national accounts by using preliminary work done for the year 2021 in the register and the SBS in order to adjust the year of 2021 and preceding years in an effort to maintain consistent time series with future years where this rework was to be implemented across the board. With NA-compilations done at the kind of activity unit level effects from this change were limited to a reallocation of units between industries as a consequence of changes in the classification of units as ancillary producers.

3.1.2 Main sources and methods - market producers and producers for own final use

The core principle for estimating output and intermediate consumption for market producers across close to all industries is the collection and compilation of accounting data, either through direct collection through statistical surveys or in accessing accounting information available in already compiled administrative registers, and then matching these business accounting variables concerning incomes and costs to corresponding NA-transactions.

For most industries this is covered by the Structural Business Statistics, SBS, that combine a set of statistical surveys with administrative data from tax reporting to construct income statements and balance sheets for market producers in sectors S11 and S14 divided by industry. Beyond requirements on the SBS that come from EU-regulations, the scope and structure of the survey has been substantially increased to make results more suitable for use in national accounts. From these materials variables can be combined to yield estimates on output and intermediate consumption. More

information on the SBS is found in section 10.1 while a description of private accounting practices and the transition from SBS variables to NA output and IC is presented in Section 3.4.

Structural business statistics figures then provide the basis for national accounts estimates for both output and IC across all industries where market producers are active with the exceptions of NACE sections B-C, K and T. The SBS is crosschecked with, among others, materials such as turnover statistics, the production value index and VAT-data.

NACE sections B (*Mining and Quarrying*) and C (*Manufacturing*) are both covered by the SBS, and it is used as in other sections as the main source concerning intermediate consumption. When calculating output however NA-estimates take their starting point in the *Production of commodities and industrial services survey* (IVP) that is complemented with components of the SBS and the quarterly *Business inventories survey* for activities or units not covered by the IVP. While SBS and IVP are closely aligned the latter have some distinct advantages that motivates this deviation from the standard approach in that the SBS lack information on the product breakdown of industrial activity that is necessary for supply and use compilation, and that the IVP as a full census survey could be expected to yield higher quality estimates on variables that are sample surveyed in the SBS. The effects of changes in inventories on production is also covered by the SBS but as explained in section 5.11.1 higher frequency materials are preferred for separating changes of inventory stocks into holding gains and changes in inventories and as such the quarterly survey is used for these two NACE-sections for which the survey covers the relevant asset categories of Work-in-progress and Finished goods.

NACE section K (*Financial and insurance activities*) and sector 12 are not covered by the SBS as it is delivered for use in national accounts and here the main source is the business account and mandatory reporting figures provided by financial institutions to the Riksbank and the Financial Supervisory Authority. Sources and methods used for NACE K and institutional sector 12 are described in full in section 3.17.

NACE section T (*Activities of households as employers*) is not covered by the SBS and cannot be based on income tax statements as it is not an activity that generates taxable income for the producing household. Instead, as described in Section 3.2 and 3.26, the main source is administrative data from the Social Insurance Agency concerning assistance benefits.

Tables 3.1.2.1 and 3.1.2.2 show SBS figures for output and intermediate consumption respectively for the NACE-sections where the source forms the basis of national accounts figures, together with other components of calculations that are common across industries with each component grouped by process-table recording category. These stages illustrate a standard compilation procedure that cover the majority of NA-final estimates for market producer output and IC as a whole and close to the entirety in most industries. This section then outlines this main methodology for calculating output and intermediate consumption for market producers and producers of goods and services for own use.

As noted in section 3.1.1 the regulation on implementing the statistical unit enterprise in the SBR, and thus SBS, was done for the year 2022 and thus the effect of this change was not incorporated across all various materials used in the compilation of national accounts for the reference year 2021. However, to allow national accounts to maintain consistent time series by incorporating the effects of this rework for earlier years the SBS produced a preliminary compilation incorporating the statistical unit enterprise rework for the year 2021.

With NA-calculations of the production account carried out on the level of kind of activity units the effect of the institutional unit changes mainly relates to an increase in the number of legal units classed as ancillary producers. This in turn effects the classification of these units to industries as ancillary units takes their industry classification from the primary producing kind of activity units they serve

rather than from their own activity as is the case for primary producers. In aggregate the increase in the number of units classified as ancillary translates into output and IC being reclassified from industries corresponding to main activities of these units now reclassified as ancillary, where the largest outflows were seen in NACE-sections L, *Real estate activities*, M, *Professional, scientific and technical activities* and H, *Transportation and storage*. The largest corresponding inflows were seen in industries heavy in the primary activities of the kind of activity units that make up the new enterprise units into which ancillary units have been grouped, where the largest increases are seen in C, *Manufacturing*, and G, *Wholesale and retail trade, repair of motor vehicles and motorcycles*. Beyond these larger movements there are in and outflows from most industries with, in total, roughly 10 000 units changing industry classification. These changes are contained to S11 non-financial corporations and only involve the industry reclassification of units, there is thus no effect on total output, IC or GVA for market producers as a whole or on any variable for the total economy.

Incorporation of these effects into the national accounts was done in somewhat different ways for output and IC respectively. With intermediate consumption based on SBS for all industries affected new IC-totals per industry could be calculated from the preliminary SBS compilation using standard procedures. For output however where compilation procedures and materials used are somewhat more diverse across industries these effects were incorporated in a second stage after standard compilations.

That is, output was first estimated for SBS and non-SBS based industries alike using materials not including these effects. To these figures a centrally compiled redistribution of output across industries was calculated entirely based on the redistribution of output in the SBS that added to stage one figures for all industries. To maintain zero effect on total S11 output by product and to adjust some implausible effects in the preliminary SBS-compilation some data validation adjustments were made by NA-compilers. In the process-table recording both the first stage calculation based on SBS and the second stage redistribution are shown as Combined Data, meaning that for SBS based industries the total SBS-figure shown correspond to total output in the SBS-compilation including the effects of the statistical units rework. Figures from these stages of estimation are shown in table 3.1.2.1 under the headers *SBS - pre statistical units* and *Statistical units from SBS* under Combined Data and *Statistical units adjustment* under Data Validation, whereas for IC table 3.1.2.2 shows a single entry for the *SBS*.

Three further Data validation items are recorded across industries. The first relates to the effects of rounding, the SBS and several other source materials are delivered to national accounts in non-rounded figures while national accounts are calculated as rounded million SEK. Calculation procedures thus produce some, very minor, rounding errors when comparing to total output and IC-variables as presented by the SBS and other sources. This is particularly the case in areas where NA-calculations are based on bottom-up summations of SBS-variables, as is done for several industries when compiling output. For purposes of transparency these are recorded as data validation in process tables and shown in tables 3.1.2.1 and 3.1.2.2 under the header *Rounding* where it can be seen that these have a total effect on GVA of -12 million SEK.

The second data validation item concerns output from change in inventories and work in progress in SBS-based industries in NACE-sections D through S. SBS-output from this variable has been excluded entirely in NACE D-E, while in NACE G-S it has been included for industries where absolute effects are larger than 75 million SEK. Here the difference between values included in national accounts and totals for the variable in the SBS are recorded as data validation and shown in table 3.1.2.1 under the header *SBS-inventories*.

Lastly, a third data validation item denotes a minor *SBS discrepancy* present in two NACE-sections between total topline SBS-output as delivered to national accounts, i.e. the figure presented in process tables under combined data, and output derived from underlying variables as is done in the NA-compilation for the relevant industries.

Beyond SBS output and IC there are additional components based on other sources that are shared across industries. As described in more detail in section 3.2 the SBS and other sources for output exclude taxes on products from the value of reported output. In cases where producers receive payments, which include these taxes, and report their earnings to the Tax Authority but then preceding actual payment of taxes face insolvency where taxes owed cannot be collected, the value of these unpaid taxes are added to output as these producers have in fact received the full purchase price paid by users. This component of output is, as explained in more detail in section 7.1.3.4, compiled based on data from the Swedish Tax Authority on the difference between taxes owed based on reported activity and actual amounts collected from insolvent entities where this addition to output is recorded in the process table as Administrative Records and shown in table 3.1.2.1 under the header *Insolvency VAT*.

A further item not covered by the SBS concerns wages and salaries in kind provided by employers in the form of access to company cars for private use which in addition to being included in wages and salaries are included in production as output of operational leasing services. The addition is based on tax materials where the provision of these benefits is recorded and as such this component is recorded in process tables under Administrative Records and shown in table 3.1.2.1 as *Car Benefits*.

With the SBS covering institutional sectors S11 and S14, market and own accounts producing KAUs in the General Government sector S13 are instead based on the Annual accounts for municipalities and regions census survey that collects income statements and balance sheets from all local and regional government authorities, as all these units are found in the local government subsector S13131. Output and intermediate consumption for these units is recorded as Surveys & Censuses in process tables and shown under the header *Municipal Annual Accounts* in tables 3.1.2.1 and 3.1.2.2.

Taking these components together gives a baseline result from main sources for output and intermediate consumption for market producing units and producers for own final use that are presented under Surveys & Censuses, Administrative Records and Combined Data in tables 3.1.2.1 and 3.1.2.2 for output and intermediate consumption respectively.

As further explained in section 3.4 these main source figures include some but not all adjustments necessary in the transition from public and private accounting principles to figures aligned with NA-definitions. This transition is achieved in full through a series of conceptual adjustments all of which are listed and explained in more detail in sections 3.4.2 and 3.4.3 where the following adjustments are made across industries (*italicization* denote respective headings in tables 3.1.2.1 and 3.1.2.2):

- Removal of some SBS-variables, including parts of *SBS residual income* and *SBS residual costs* variables not qualifying as NA-output or IC. Other *SBS variables removed* concern incomes from property sales and costs from a series of financial variables not related to transactions in products.
- Adjustments of output concerning activated costs for own account work due to differing principles for capitalisation of intellectual property products where parts of *SBS own account* output is removed and replaced with NA-estimates on *Own account software* and *Own account R&D*.
- Removal of *Holding gains* included in SBS output and intermediate consumption due to differences in valuation principles for inventories of Materials and supplies and Goods for resale.
- *Sector reclassifications* of units affecting both output and IC, with most reclassifications concerning units identified as S13 non-market entities in the SBR after SBS-frame finalisation.
- Corrections for branches of output and IC with activity in *Branches removed* for parts of Swedish corporations operating outside of Swedish economic territory and some foreign *Branches added* for units operating in Sweden that were not included in the SBS or other sources.
- Deduction of costs for *Purchased software* and *Purchased R&D* that is reclassified as GFCF.

- *Allocation of FISIM* added to intermediate consumption.
- *Allocation of Insurance* service charges to be included as IC based on the separation of current transfers among policy holders from gross *Insurance premiums* paid that are excluded.
- Adjustments of costs in IC related to leasing fees where *Financial leasing* fees are separated and deducted from NA-intermediate consumption
- *Other taxes on production* included as intermediate consumption in the SBS are deducted.
- Reclassification of parts of SBS wages and salaries as IC to adjust for an underestimation in the SBS of the variable *Other personnel costs* for non-surveyed entities compiled from standardised accounting statements.

These figures are complemented by the adjustments to output and intermediate consumption for the purpose of exhaustiveness, described in more detail in sections 3.6 and 7.1. Here the largest additions common across market producers concern N6 – misreporting by producers. This further divides into two categories. The first category consists of non-collected VAT due to fraud without complicity, i.e. VAT on transactions paid by purchasing units where the seller does not report the revenue/VAT to the tax authority and thus retain the full value as output at producer price valuation. The second category is larger and includes the only common exhaustiveness adjustment to intermediate consumption. This category concerns underreporting of output and under- or overreporting of intermediate consumption for purposes of tax evasion which is estimated based on information from Tax Authority audits. A smaller exhaustiveness adjustment applied across industries concerns N7 – statistical deficiencies in data where an adjustment is made to the values for car benefits recorded as administrative data. The exhaustiveness adjustments described are shown in tables 3.1.2.1 and 3.1.2.2 as *N6 - VAT-fraud no complicity*, *N6 – Misreporting* and *N7 - Car Benefits*.

Beyond these common components and the final shared element of balancing that is further described in chapter 6 there are industry specific calculations conducted in most NACE-sections, the contribution of which are presented in aggregate in tables 3.1.2.1 and 3.1.2.2 under the header *Industry specific*. As can be seen the share of these components vary between NACE-sections, with some fully covered by common components while others have substantial elements of industry specific sources and compilation procedures. This latter category covers both non-SBS based industries such as NACE K and output estimates in NACE B and C as well as sections with substantial adjustments to account for conceptual differences or lack of coverage in main sources, as is done in NACE L. These industry specific components are explained in detail throughout sections 3.7-3.26. No output or IC is recorded in NACE U, section 3.27 is thus omitted.

Table 3.1.2.1 Common components output, market producers & producers for own final use - SEK million 2021

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T
Surveys & Censuses	Municipal Annual Accounts	0	0	0	1 003	18 911	4 518	1 162	906	0	0	0	1 681	0	0	0	0	0	0	0
Combined Data	SBS - pre statistical units	205 724	0	0	213 237	78 118	945 642	939 740	519 538	142 439	749 630	0	430 553	609 689	272 681	74 458	176 907	61 946	47 182	0
	Statistical units from SBS	62	704	17 841	1 447	222	1 551	11 269	-8 020	1 381	1 021	67	-15 208	-8 392	-4 446	-322	636	74	112	0
Administrative Records	Insolvency VAT	131	10	561	14	25	2 517	2 443	670	1 212	451	91	372	1 267	777	173	357	231	424	0
	Car Benefits	133	16	2 608	129	99	2 352	4 062	408	183	1 067	490	422	2 151	624	107	344	105	163	0
Data validation	Statistical units adjustment	-4	-26	-157	-53	-18	7	2 145	21	-45	-2 413	-67	471	127	19	36	-24	-12	-6	0
	SBS-inventories	0	0	0	72	18	0	1	6	-48	-164	0	-17	62	4	-8	4	-22	-6	0
	Rounding	0	0	0	-2	-1	0	-6	-3	1	1	0	-2	0	-1	-1	3	2	-4	0
	SBS discrepancy	0	0	0	0	0	0	62	0	0	6	0	0	0	0	0	0	0	0	0
Conceptual	SBS residual income	0	0	0	0	-425	0	-9 862	-2 897	-735	-2 055	0	-4 811	-1 489	-1 016	-4	-68	-442	-203	0
	SBS variables removed	0	0	0	0	-161	-331	0	-18	0	0	0	-4 768	-294	0	0	0	-30	0	0
	SBS own account	0	0	0	0	-209	0	-2 604	-350	-67	-9 415	0	-876	-2 758	-559	-172	-135	-163	-33	0
	Own account software	93	47	7 624	558	102	413	5 806	709	55	57 369	7 619	432	6 872	2 027	265	295	403	167	0
	Own account R&D	68	490	61 695	610	94	192	5 790	124	4	2 805	2 290	82	3 922	462	0	277	84	3	0
	Holding gains	0	-1	-1 508	0	0	0	-16 607	0	0	0	0	0	0	0	0	0	0	0	0
	Sector reclassifications	-7	0	0	0	0	-1 024	-92	-17 258	0	0	-4	-10	-7	0	-380	0	2 348	0	0
	Branches removed	-14	-64	-864	-911	0	-164	-4 306	-620	0	-1 938	0	-215	-4 366	-2 677	-14	-62	-2	-2	0
	Branches added	0	0	0	0	2	44	41	0	26	0	0	54	15	0	0	0	0	0	0
Exhaustiveness	N6 - VAT-fraud no complicity	75	10	385	0	0	2 348	0	413	523	366	0	246	102	121	137	111	175	732	0
	N6 - Misreporting	1 680	112	6 052	0	0	35 949	28 807	14 083	6 042	9 502	1 953	4 619	1 176	6 115	1 581	2 645	2 436	9 407	0
	N7 - Car Benefits	38	4	743	42	29	679	1 130	120	56	330	149	126	652	185	31	104	32	48	0
Balancing		83	19	123	24	22	75	-454	87	16	102	67	111	158	49	6	26	30	29	1
Industry specific		-11 502	82 200	2 141 583	18 086	-4 004	-229 860	3 830	-4 355	0	540	288 276	341 302	0	0	0	0	855	710	2 846
Total output		196 560	83 521	2 236 686	234 256	92 983	765 036	972 029	503 623	150 999	807 231	300 931	754 510	608 926	274 380	75 893	181 420	68 050	58 723	2 847

Table 3.1.2.2 Common components intermediate consumption, market producers & producers for own final use - SEK million 2021

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T
Surveys & Censuses	Municipal Annual Accounts	0	0	0	314	11 635	2 967	521	700	0	0	0	2 404	0	0	0	0	0	0	0
Combined Data	SBS	145 119	30 856	1 520 001	115 607	54 135	671 795	445 897	360 389	88 181	444 380	0	199 743	325 952	123 987	28 327	56 186	37 846	23 127	0
Data validation	Rounding	0	0	-2	0	0	0	0	1	-1	-1	1	0	0	0	0	0	0	0	0
Conceptual	Allocation of FISIM	6 608	44	2 662	683	112	3 360	4 353	1 749	1 084	2 820	3 862	45 425	7 446	1 164	248	610	851	1 087	0
	Allocation of Insurance	347	184	2 789	520	626	220	2 409	1 503	213	527	7 332	4 620	1 646	557	83	183	344	81	0
	Insurance premiums	-2 304	-281	-4 494	-916	-771	-1 979	-3 943	-2 877	-384	-869	-540	-1 614	-2 782	-968	-148	-305	-445	-81	0
	SBS residual costs	0	-3	-7 574	-310	-58	-309	-1 025	-146	-12	-1 184	0	-1 109	-204	-29	-5	-140	-12	-5	0
	SBS variables removed	0	-35	-1 305	41	6	-98	-837	191	140	-1 083	0	-326	-350	-141	12	16	-39	2	0
	Purchased software	-42	-177	-9 533	-1 685	-708	-1 796	-11 275	-1 846	-458	-10 927	-7 377	-1 468	-6 124	-740	-518	-574	-321	-3	0
	Purchased R&D	-75	-21	-17 236	-103	-43	-39	-700	-44	-1	-11 294	-730	-30	-319	-28	-51	0	-6	-72	0
	Holding gains	0	628	38 611	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sector reclassifications	-3	0	0	0	0	-1 024	-90	-18 275	0	0	-2	-8	-3	0	-149	0	1 420	0	0
	Branches removed	-10	-26	-533	-436	0	-98	-1 855	-500	0	-893	0	-93	-2 158	-1 474	-5	-24	-1	-2	0
	Branches added	0	0	0	0	0	1	20	37	0	11	0	0	34	9	0	0	0	0	0
	Financial leasing	0	-58	-2 858	-320	-254	-6 443	-7 549	-3 285	-390	-981	0	-664	-3 530	-3 670	-226	-445	-213	-271	0
	Other personnel costs	0	29	2 112	121	126	1 751	2 793	866	564	1 441	0	349	933	1 057	216	587	132	0	0
	Other taxes on production	-153	-131	-1 776	-2 122	-701	-1 257	-1 062	-3 549	-130	-208	-5 780	-15 402	-341	-322	-20	-37	-100	-36	0
Exhaustiveness	N6 - Misreporting	-2 328	0	0	0	-2 049	10 883	0	0	1 619	-5 647	0	-3 208	-14 997	-5 546	-1 928	0	0	0	0
Balancing	Balancing	-167	-15	-611	-25	-34	-255	-155	-125	-37	-245	-69	648	-223	-74	-21	-34	-29	-23	0
Industry specific		-13 155	0	17 584	0	0	-230 591	0	-4 584	0	0	97 209	125 588	0	0	0	0	-314	0	0
Total intermediate consumption		133 837	30 994	1 537 837	111 369	62 022	447 088	427 502	330 205	90 388	415 847	93 906	354 855	304 980	113 782	25 815	56 023	39 113	23 804	0

3.1.3 Main sources and methods - non-market producers

As with market producers, calculations for non-market producers are largely based on accounting data and tax reporting collected either by survey or from existing administrative registers. While intermediate consumption is observable in a similar manner for non-market producers as for market producers much of output in non-market units cannot be directly observed. In line with standard ESA 2010 practices a sum of cost approach is instead used for both non-market general government units and for non-profit institutions serving households. As described in further detail in sections 5.8 and 5.9, setting net operating surplus to zero allows for output to be defined using the accounting identifies of the production and generation of income accounts as:

- + Intermediate consumption
- + Wages and salaries
- + Employers' social contributions
- + Consumption of fixed capital
- + Other taxes on production
- Other subsidies on production
- = Output

Intermediate consumption, remuneration of employees in the form of wages, salaries and social contributions as well as taxes and subsidies on production can in general be directly observed meaning calculations can be based on direct estimation. Source materials used and thus compilation processes largely divide by the subsectors:

- S1311 Central government (excluding social security funds)
- S13131 Primary municipal government
- S13132 Regional government
- S1314 Social security funds
- S1521 Church of Sweden
- S151 & S1522 Non-profit institutions serving households excluding Church of Sweden

A more detailed description and definition of the general government sector and its constituent subsectors is made in section 5.9. Calculations for these subsectors are further subdivided by industry, either directly as in the case for S15 non-profit institutions serving households where all units are classified by NACE in the statistical business register and, from that, the underlying source materials used, or indirectly in S13 general government where compilation is conducted by COFOG-classification by purpose that is then mapped to NACE.

Another variable that cannot be measured directly is consumption of fixed assets, the reduction in value that fixed assets undergoes due to use and a limited economic lifespan. Conceptual differences between national accounts consumption of capital and private and public accounting principles concerning depreciation of assets means that directly available accounting data on depreciation is not suitable for use. Instead, in line with standard ESA 2010 practices, an indirect modelling approach is used where capital stocks are created with the aid of time series on gross fixed capital formation in accordance with the so-called perpetual inventory method (PIM). These cumulative series are then written down in accordance with estimated consumption rates and lifetime limits which yields values for the consumption of fixed capital. These calculations are carried out in the same way for all

groupings of units in all sectors. See section 4.12 for more details on consumption of fixed capital and section 5.10 for details on the estimation of GFCF.

As for other producers, conceptual differences between public and NPISH accounting standards to those of national accounts necessitate some degree of conceptual adjustment of figures derived from underlying sourced materials. The number of adjustments necessary is however substantially smaller than for market producers due to the greater possibility of direct cooperation with reporting entities to directly produce figures fit for NA-compilation.

As described in section 3.4 the adjustments that are made to non-market producers concern intermediate consumption of FISIM and insurance service charges as well as deduction of purchases of software and R&D from reported IC-figures.

There are no exhaustiveness or balancing items included for non-market producers.

3.1.3.1 General government non-market producers

3.1.3.1.1 Treatment of VAT in the government sector

The Swedish National Financial Management Authority (ESV) provides NA with information from the Swedish Tax Agency on VAT repayments to government units. These amounts correspond to the non-deductible VAT for the government sector. These total amounts of non-deductible VAT are in the NA-system distributed on intermediate consumption, gross fixed capital formation and social transfers in kind (which is not a part of output but is a consumption expenditure). This is done in the following way:

For each unit of the General government (i.e. Central government, Social security funds, Municipalities and Regions), intermediate consumption, gross fixed capital formation and social transfers in kind is compiled divided up in products (CPA) and functions (COFOG) excluding VAT.

To every product, a theoretical tax rate is applied, based on Swedish tax legislation. The different VAT rates in Sweden are 25%, 12% and 6%, depending on which product. Also, according to this legislation, certain products are duty-free. Additionally, at the level Swedish NA is calculated, some CPA products contain goods and services that uses different VAT rates, and thus these products uses a calculated VAT rate between the existing rates for individual goods and services. Finally, a 'pro-rata of non-deductibility' is used on the values excluding VAT before applying the VAT rate.

The theoretical tax amount for each unit of the General government is then adjusted in accordance with the real amounts from the Swedish National Tax Agency. The adjustment is made on intermediate consumption. Hence, in the Swedish NA, the total amounts of VAT repayments to government according to the Swedish National Tax Agency are available, divided by unit, transaction, product and function. The VAT payments for some government owned enterprises that are non-market producers and thus classified in the public sector are not included in the material from ESV. For these units the calculated theoretical tax is left unadjusted.

3.1.3.1.2 Intermediate consumption of central government

Data is obtained from the Financial Management Authority's total activity. The intermediate consumption calculations are broken down by the following cost types.

- *Rental expenditure* consists of external rentals (rental paid to any person other than a central government authority) Amounts for external rentals are recorded in total activity. Internal rental expenditures are also included in the primary data source but is excluded from the National Accounts.

- *Building repairs.* The item consists of purchased repairs and is derived from total activity. It is simply calculated as an estimated percentage of total intermediate consumption excluding rental expenditures and FISIM.
- *Other intermediate consumption.* Internal central government items, i.e. purchases and sales between departments and agencies of central government, are excluded in both intermediate consumption and sales (with an exception affecting sales but not intermediate consumption). Consumption in accordance with total activity is reduced in the national accounts by the motor vehicle tax and property tax arising. These taxes are classified as other taxes on production in the NA system. In the data from the primary source the amounts recorded for Swedish public broadcasters are with VAT included, these amounts are adjusted for that since VAT is calculated separately (see 3.1.3.1.1). In 2021 there was a special adjustment made for Covid vaccines bought by Sweden in the shared procurement by the European Union and immediately resold to other countries without crossing Swedish borders. These amounts have been deducted from both intermediate consumption and sales.
- *Purchased software and Purchased R&D* is deducted from intermediate consumption. Purchased software and purchased R&D is recorded as investment and is described in more detail in section 5.10. As parts of software expenditures is recorded separately in the primary source, only parts of the total amount of purchased software is deducted.
- *FISIM* intermediate consumption is calculated in a model for every sector. Expenditures for FISIM is not included the primary data source and is thus not deducted from other intermediate consumption.

3.1.3.1.3 Intermediate consumption of the primary municipalities

A central activity unit in the municipality often handles both the management of the municipality's own premises and negotiations and contracts with external real estate managers. The unit is recorded under general administration. In the Annual accounts of municipalities (Räkenskapsammandraget, RS), an internal rent is charged to other activities and an internal income item is entered for public administration. Sales/purchase between government units are eliminated. This is the case for central government, regions and primary municipalities. Apart from premises, this also arises for common activities such as central telephone exchanges etc.

For municipalities COFOG 0133 has been reviewed. Where we have previously reported costs for shared premises and municipally shared activities is now distributed to other COFOG in the group they belong. There is also a redistribution between market and non-market, which leads to a certain effect on consumption for the primary municipalities.

The annual accounts (RS) are used as a source for most data in the calculation of the intermediate consumption of the primary municipalities. It starts with purchases of external goods, services and rentals specified by area of activity in the RS operating accounts. Items of expenditure which in accordance with the ESA are not classified as intermediate consumption or which involve the intermediate consumption of producers for their own final use is deducted from purchases. These are:

- *Intermediate consumption for construction for own account*, which appears in the operating accounts. The cost of this intermediate consumption, as also other costs for construction for own account, arises in units, which are producers for their own final use. These units are included in industry as construction industry units.
- *Machinery with an economic life of 1-2 years.* Purchases of machinery and equipment are recorded in both operating and investment accounts. In RS, machines with an economic life of less than three years are reported under an operating account. Therefore, machinery with an economic life of 1-2 years must be reclassified as recorded as an investment. To calculate machines with an

economic life of 1–2 years, a model is used in which the growth rate for consumable equipment from the operating account in RS is applied to the previous year's value.

- *Financial leasing charges.* The capital item leased is recorded in accordance with the ESA as gross fixed capital formation in the leasing activity. See section 5.10. The leasing charges are consequently entered in the national accounts with a breakdown as to interest and amortisation costs.
- *Levies and restitutions for regional bodies* are classified as transfers. All primary municipalities pay a membership fee to the Swedish Association of Local Authorities and Regions. In addition, several local authorities finance municipal associations by means of levies.
- *Purchases and sales between primary municipalities.* The primary municipalities purchase and sell services from and to one another. Sales/purchase between government units are eliminated. Purchases from other municipalities and municipal associations are recorded together in one column of the specification in the annual accounts. Sales incomes from municipalities are recorded in the accounts of the municipal associations. Purchases from other municipalities are thus obtained as a residual amount.
- *Motor vehicle tax.* Local authorities pay tax on their vehicles. The tax is classified as other taxes on production.
- *Social benefits in kind.* Social benefits in kind are generated by a market producer in the form of a good or service, which is supplied directly to households. The local authority pays for the good or service but is not involved in any further processing of it. The item is described in more detail in the section on social benefits in kind, section 5.9.7.3.
- *Purchased software and Purchased R&D* are recorded as investment and this is described in more detail in section 5.10.
- *Purchases from NPISHs.* The primary municipalities pay for child-care in parents' cooperatives (classified as non-profit institutions serving households, NPISH). These purchases from NPISHs are classified as transfers. The way the item is calculated is described in more detail in the section on social benefits in kind.
- *Insurance charges.* Premiums paid by the local authorities to insurance companies are reclassified partly as transfers and partly as purchased services. A survey stated that 74 per cent of the total insurance amount should be treated as a transfer which means that the intermediate consumption is reduced with the corresponding amount. The insurance charge is specified in the external expenditure section of the annual accounts.
- *Purchases from private individuals.* The purchases a local authority makes from private individuals are treated by definition as transfers. They may involve restitution for the care of family members in the home. Purchases from individuals are broken down by activity in the annual accounts.
- *Goods in commercial activity.* Goods, which the commercial activity area purchases for resale, are deducted both from intermediate consumption and the output value.

The above calculation is carried out for each individual activity area, about 65 areas which all have bridges to COFOG, and results in an estimate for intermediate consumption per purpose at current prices for other non-market output and intermediate consumption per industry for market output.

3.1.3.1.4 Intermediate consumption of the regions

The annual accounts (RS) are used as a source for most data in the calculation of the intermediate consumption of the regions. The starting point is purchases of external goods, services and rentals

specified by activity area in the RS operating accounts. Expenditure items, which are not classified as intermediate consumption according to the ESA, are deducted from purchases. They are:

- *Purchases and sales between regions.* The regions purchase and sell services from and to one another. Information regarding the size of purchases and sales between regions is available in the annual accounts.
- *Social benefits in kind.* Social benefits in kind are generated by a market producer in the form of a good or service, which is supplied directly to households. The local authority pays for the good or service but is not involved in any further processing of it. The item is described in more detail in the section on social benefits in kind, section 5.9.8.3.
- *Purchased software and purchased R&D.* Purchased software and purchased R&D are recorded as investment and this is described in more detail in section 5.10.

The annual accounts are being used to identify and calculate different subgroups of intermediate consumption. The residual of what cannot be identified as a specific subgroup is referred to as other goods and services. These are the subgroups of intermediate consumptions:

- Medicines
- External accommodation rentals
- Building repairs
- FISIM
- Insurance charges
- Other goods and services (residual)

3.1.3.1.5 Intermediate consumption of other types of local units

Data on intermediate consumption for other types of local units are obtained from the annual accounts (RS) for municipal associations, the quarterly survey for the local government corporations (KOREBA) and statistics on the contributions paid to non-profit institutions belonging to local authorities. There are two main sources used for the calculation of the intermediate consumption for the region owned corporations: Structural business statistics (SBS) and the annual reports. The data used from the SBS to calculate the intermediate consumption are the operating costs and other external costs.

3.1.3.1.6 Intermediate consumption of social security funds

A major part of the production costs refers to intermediate consumption which contain pure administration costs, cost for provisions and costs relating to performance of investments for the AP-funds (together 1418 million SEK year 2021), administration costs at the Swedish Pension Agency (337), FISIM (406) and the rest referring to value added tax (434).

3.1.3.1.7 Wages and salaries

Compensation of employees is collected from the same comprehensive source as other data for government compilations. Compensation of employees is defined as the total remuneration, in cash or in kind, which is paid by an employer to an employee for work done by the latter. This definition coincides with the definition in the sources, which are used for the calculation of the different sectors, and wage and salary totals broken down by different activity areas are obtained directly from the relevant source. The totals for wages and salaries are shown broken down by non-market output and market output.

Expenditure for military catering in accordance with a separate calculation carried out in the national accounts is added to the wages and salaries total for central government in accordance with total activity. Corresponding amounts (which are very small) are shown as part of sales income.

3.1.3.1.8 Social contributions

Employers' social contributions are charges that the employer pays in the form of a percentage deducted by law or under a contractual requirement from an employee's pay. In the national accounts employers' charges are grouped into two categories. One is termed social contributions and covers that part which benefits the employee in some way under a social security scheme. This payment should be aimed to benefit the employees in that specific social security scheme. In Sweden this principle is, at present, restricted to future pension provisions. The other category is recorded as other taxes on production and is described in 3.1.3.1.9.

The social contribution is the total sum of social fees obtained from ESV for central government and RS for local government minus calculated other taxes on production (described in 3.1.3.1.9).

3.1.3.1.9 Other taxes on production

The other category of employers' charges is recorded as other taxes on production and consists of social contributions, which do not benefit the employee directly but are in reality a tax on labour, for example the general employment tax (allmänna löneavgiften), health insurance and unemployment insurance.

The charges are calculated as a percentage of wages. The percentage rates are obtained from the employers' organisations, specifically for central and local government respectively.

In addition to the employment tax, motor vehicle tax is included in other taxes on production. Another category covers special employment taxes, which the employer pays on the earnings of employees aged 65 and over and on pension costs. It is calculated at current prices with the aid of a fixed percentage of pensions paid. Data on pensions are available in the sources.

Compulsory military service pay is excluded from the wages and salaries total in this percentage calculation, since it does not generate social contributions.

The percentages used to calculate "other taxes on production" applicable to general government in 2021, which are used in the calculation of social contributions and other taxes on production, are given below.

General employment tax	11.62
Supplementary pension contribution	1.09
Health insurance contribution	3.55
Parental insurance contribution	2.60
Surviving pension contribution	0.60
Labour market contribution	2.64
Industrial injury contribution	0.20
Total other taxes on production	22.30

3.1.3.1.10 Other subsidies on production

Subsidies of central government on production are recorded in the ESV material. It refers to payments by the Swedish Public Employment Service and the Swedish Tax Agency to other central government units. Subsidies of local government on production are obtained from central government and consist of the wage support contributions the local authorities receive from the Swedish Public Employment Service. The sources for these data are the central government accounts.

3.1.3.1.11 Process table recording of General government non-market producers' output and intermediate consumption

As illustrated above components are largely derived from either sector specific source materials based on accounting data or on centrally compiled components in models or adjustments applied across all sectors. The former category cover:

- Financial Management Authority's total activity used as the main source material for central government figures is a compilation of accounting information from all central government units and recorded in process tables as Administrative Records.
- The Annual accounts for municipalities, municipal associations and regions (RS) is a Statistics Sweden census survey that collect and compile the annual accounts of all municipalities and regional government units as well as municipal associations which makes its process table recoding fall under Surveys and Censuses.
- The Quarterly Survey for the Local Government Corporations (KOREBA) covering parts of other types of local units fall under Surveys and Censuses.
- Contributions from other types of local units paid to non-profit institutions belonging to local authorities is collected by Swedish Association of Local Authorities and Regions and provided to Statistics Sweden by the Association, meaning these figures are recorded under Administrative Records.
- Corporations owned by regions are compiled based on Structural business statistics (SBS) and annual reports, both recorded as Combined Data in process tables.
- Figures for Social security funds figures based on data from AP-fund and the Swedish Pension Agency is recorded as Combined Data.

Financial Management Authority figures follow the same recording of Administrative Records when used across all sectors for other subsidies on production. VAT-adjustments however, whilst again based on Financial Management Authority figures, are recorded under Extrapolations and Models - Other Extrapolations and Models due to the allocation of total VAT-repayments per sector to specific transactions being done through the National Accounts supply-use system.

As noted above conceptual adjustments are made for FISIM, insurance, software and R&D, with the former two recorded under Allocation of FISIM and Allocation of Insurance respectively, and the latter two under Other Conceptual.

The final component of consumption of fixed capital is as noted above compiled in the same way for all sectors using the perpetual inventory method (PIM), which is recorded under Extrapolations and Models - CFC(PIM).

Taken together these components cover all elements General government non-market producer output and IC that when compiled and mapped to NACE-section results in figures seen in Tables 3.1.3.1 and 3.1.3.2. These common and sectoral components cover all elements of non-market output and intermediate consumption for general government units meaning that there are no industry specific additions or adjustments made for these units.

Table 3.1.3.1: General government non-market producers by NACE, Output – SEK million 2021

		Output										
		H	J	K	M	N	O	P	Q	R	S	
Basis for NA Figures	Surveys & Censuses	33 873	0	0	6 030	614	55 721	232 085	491 346	30 059	0	
	Administrative Records	27 388	7 710	254	38 856	163	182 193	41 574	15 577	4 778	17	
	Combined Data	0	0	0	0	0	4 596	0	0	0	0	
	Extrapolation and Models	Benchmark extrapolations	0	0	0	0	0	0	0	0	0	0
		Commodity Flow Model	0	0	0	0	0	0	0	0	0	0
		CFC(PIM)	44 489	140	0	38 649	0	49 981	16 270	20 191	4 103	0
		Dwellings - stratification method	0	0	0	0	0	0	0	0	0	0
		FISIM	0	0	0	0	0	0	0	0	0	0
		Incurrence	0	0	0	0	0	0	0	0	0	0
		Other E&M	6 017	862	25	2 666	87	17 879	14 088	25 262	3 741	2
	Total Extrap+Models	50 506	1 002	25	41 315	87	67 860	30 358	45 453	7 844	2	
	Other	0	0	0	0	0	0	0	0	0	0	
Total (sources)	111 767	8 712	279	86 201	864	310 370	304 017	552 376	42 681	19		
Adjustments	Data validation	0	0	0	0	0	0	0	0	0	0	
	Conceptual	Allocation of FISIM	0	0	0	0	0	4 192	0	0	0	
		Allocation of incurrence	10	9	0	0	0	532	141	57	29	
		Other conceptual	-1 475	-108	0	-278	0	-10 496	-5 523	-1 982	-655	
		Total conceptual	-1 465	-99	0	-278	0	-5 772	-5 382	-1 925	-626	
	Total (adjustments)	-1 465	-99	0	-278	0	-5 772	-5 382	-1 925	-626	0	
Final estimate	110 302	8 613	279	85 923	864	304 598	298 635	550 451	42 055	19		

Table 3.1.3.2: General government non-market producers by NACE, IC – SEK million 2021

		IC										
		H	J	K	M	N	O	P	Q	R	S	
Basis for NA Figures	Surveys & Censuses	10 673	0	0	2 019	362	18 231	53 984	124 570	14 493	0	
	Administrative Records	17 818	3 992	87	11 065	122	67 372	14 082	6 928	2 092	5	
	Combined Data	19 460	0	0	114	0	2 978	37	3 641	0	0	
	Extrapolation and Models	Benchmark extrapolations	0	0	0	0	0	0	0	0	0	0
		Commodity Flow Model	0	0	0	0	0	0	0	0	0	0
		CFC(PIM)	0	0	0	0	0	0	0	0	0	0
		Dwellings - stratification method	0	0	0	0	0	0	0	0	0	0
		FISIM	0	0	0	0	0	0	0	0	0	0
		Incurrence	0	0	0	0	0	0	0	0	0	0
		Other E&M	6 017	862	25	2 666	87	16 835	14 088	25 262	3 741	2
	Total Extrap+Models	6 017	862	25	2 666	87	16 835	14 088	25 262	3 741	2	
	Other	0	0	0	0	0	0	0	0	0	0	
Total (sources)	53 968	4 854	112	15 864	571	105 416	82 191	160 401	20 326	7		
Adjustments	Data validation	0	0	0	0	0	0	0	0	0	0	
	Conceptual	Allocation of FISIM	0	0	0	0	0	4 192	0	0	0	
		Allocation of incurrence	10	9	0	0	0	532	141	57	29	
		Other conceptual	-1 475	-108	0	-278	0	-10 496	-5 523	-1 982	-655	
		Total conceptual	-1 465	-99	0	-278	0	-5 772	-5 382	-1 925	-626	
	Total (adjustments)	-1 465	-99	0	-278	0	-5 772	-5 382	-1 925	-626	0	
Final estimate	52 503	4 755	112	15 586	571	99 644	76 809	158 476	19 700	7		

3.1.3.2 Non-profit institutions serving households

Non-profit institutions serving households (NPISH) consist of non-profit institutions which are separate legal entities, serve households and are private non-market producers. Their principal resources are voluntary contributions in cash or in kind from households not acting in their capacity as producers, from payments made by general government and from property income. They are not predominantly financed and controlled by government, and they provide goods or services to households free of charge or at prices that are not economically significant. How these units are identified and classified into the non-profit institutions serving households sector is described in more detail in section 3.1.1.

NPISH include units such as trade unions, political parties, social, cultural and recreational clubs, amateur sports clubs, charities and religious organisations. Calculations are made by NACE-industry with no breakdown by purpose in terms of the classification of the purposes of non-profit institutions serving households (COPNI). The single largest unit in the sector, the Church of Sweden, is included in NACE S94.

The sum of cost approach used for output, explained in more detail in section 5.8, mirror that used for non-market general government units with sectoral surveys for the two subsectors compiled in the national accounts providing baseline figures for intermediate consumption:

- The Church of Sweden is covered in its own annual comprehensive survey in the Economic report Church of Sweden. This survey was constructed before the Church of Sweden ceased to be a part of the government sector and instead became NPISH, a change that took place on 1 January 2000. It contains information from all parishes, dioceses and asset funds.
- Remaining units are covered by the annual Non-Profit Institutions Serving Households survey.

Beyond these two surveys, both described in more detail in section 10.3, compilations are based on data from LSUM regarding wages and salaries and administrative data on employers' social contributions as well as other taxes and subsidies on production.

Concerning process table recording both the NPISH-survey and Economic report Church of Sweden are Statistics Sweden Surveys and thus recorded under Surveys and Censuses. The gross pay based on administrative sources (LSUM) is based on Tax Authority income tax statements and thus recorded as Administrative Records.

The only conceptual adjustments made for the sector concerns Allocation of FISIM and Insurance and in the same way as for General government non-market producers, consumption of fixed capital is recorded under CFC(PIM).

As for general government units there are no industry specific element in the compilation procedure meaning that these five components yield total output and IC figures for Non-profit institutions serving households which are presented broken down by NACE-section in Tables 3.1.3.3 and 3.1.3.4.

Table 3.1.3.3: Non-profit institutions serving households by NACE, Output – SEK million 2021

		Output															
		A	D	E	G	H	I	J	K	L	M	N	P	Q	R	S	
Basis for NA Figures	Surveys & Censuses	380	43	75	347	150	131	87	391	4 487	669	57	2 604	1 952	5 050	14 690	
	Administrative Records	90	6	10	487	48	197	151	308	523	1 117	151	8 267	4 185	7 686	31 427	
	Combined Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Extrapolation and Models	Benchmark extrapolations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Commodity Flow Model	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CFC(PIM)	2	2	0	18	34	24	16	87	344	53	32	404	183	690	2 721
		Dwellings - stratification method	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		FISIM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other E&M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Extrap+Models	2	2	0	18	34	24	16	87	344	53	32	404	183	690	2 721	
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total (sources)	472	51	85	852	232	352	254	786	5 354	1 839	240	11 275	6 320	13 426	48 838	
	Adjustments	Data validation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conceptual		Allocation of FISIM	3	0	1	6	2	3	2	6	38	13	2	79	44	94	218
		Allocation of insurance	0	0	0	0	0	0	0	0	3	7	0	3	2	9	27
		Other conceptual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total conceptual		3	0	1	6	2	3	2	6	41	20	2	82	46	103	245	
Total (adjustments)	3	0	1	6	2	3	2	6	41	20	2	82	46	103	245		
Final estimate	475	51	86	858	234	355	256	792	5 395	1 859	242	11 357	6 366	13 529	49 083		

Table 3.1.3.4: Non-profit institutions serving households by NACE, IC – SEK million 2021

		IC															
		A	D	E	G	H	I	J	K	L	M	N	P	Q	R	S	
Basis for NA Figures	Surveys & Censuses	380	43	75	347	150	131	87	391	4 487	669	57	2 604	1 952	5 050	14 690	
	Administrative Records	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Combined Data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Extrapolation and Models	Benchmark extrapolations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Commodity Flow Model	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CFC(PIM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Dwellings - stratification method	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		FISIM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other E&M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Extrap+Models	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total (sources)	380	43	75	347	150	131	87	391	4 487	669	57	2 604	1 952	5 050	14 690	
	Adjustments	Data validation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conceptual		Allocation of FISIM	3	0	1	6	2	3	2	6	38	13	2	79	44	94	218
		Allocation of insurance	0	0	0	0	0	0	0	0	3	7	0	3	2	9	27
		Other conceptual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total conceptual		3	0	1	6	2	3	2	6	41	20	2	82	46	103	245	
Total (adjustments)	3	0	1	6	2	3	2	6	41	20	2	82	46	103	245		
Final estimate	383	43	76	353	152	134	89	397	4 528	689	59	2 686	1 998	5 153	14 935		

3.2 Borderline cases

3.2.1 Borderline cases included in production

3.2.1.1 Borderline cases included in output produced for own final use (P.12)

Output produced for own final use are produced and retained within the same institutional unit.

Mineral explorations are calculated and included in GFCF using data received from the Geological Survey of Sweden (SGU), see further Section 5.2.2. SGU collects and compiles data on the costs for mineral exploration. A mark-up of 16 percent is added to the costs. They are added to the production as P12 for NACE section B.

Machine tools produced by engineering enterprises. There are no records of these kinds of activities in Sweden¹¹.

Construction and extensions to dwellings by households are calculated and included in GFCF, see further Section 5.10.3. They are added to the production as P.12 under NACE section F. Intermediate consumption for the household own production is estimated and added to the intermediate consumption for NACE F since this information is not captured in the SBS.

Construction of roads, dwellings and buildings by municipalities are calculated and included in their GFCF, see further Section 5.10.3. They are added to the production as P.12 in NACE section F.

Communal construction undertaken by groups of households. There are no records of these kinds of activities in Sweden.

Entertainment, literary and artistic originals are calculated and included in production and GFCF, see further Section 5.2.2. They are added to the production as P.12 under NACE sections J and R.

Own-account software and own account R&D are calculated and included in production and GFCF, see further Section 5.10.3. They are added to the production as P.12 in all NACE sections.

Agricultural products and firewood produced for own account by households are calculated as production P.12 in NACE section A, see further section 3.7. They are added as HFCE under COICOP 01 and 04 respectively, described in more detail in section 5.7.

Dwelling services produced by owner-occupiers are calculated according to the stratified method and included in HFCE under COICOP 04, see further Section 5.7. They are added to the production as P.12 under NACE section L.

Own-account production of energy by households is currently not included in the production. Nonetheless, work is ongoing in accordance with the envisaged transversal reservation I on household electricity production. The incorporation of household electricity production into the compilation is scheduled to be implemented by September 2026 at the latest.

3.2.1.2 Borderline cases included in market production (P.11)

Household services produced by employing paid domestic staff are calculated and included in HFCE under COICOP 05, see further section 5.7. They are added as market production (P.11) under NACE section T as explained in more detail in section 3.26.

¹¹ This was investigated as a small issue and found to be non-material in verification cycles 2016-2019 and 2020-2024.

Products used for payments in kind are part of D.11, see further Section 4.7.1. Car benefits are classified as market production (P.11) across NACE sections, whereas all other benefits are already included in the sources for production as they are purchased directly from the producer of the respective item and provided to employees by the supplier.

Volunteer activities that result in goods. There are no records of these kinds of activities in Sweden.

Products bartered. There are no records of these kinds of activities in Sweden.

Products supplied by one local kind-of-activity unit, L-KAU, to another within the same institutional unit to be used as intermediate inputs or for final use are included in the source for NACE sections B and C. For 2021 there were no intra-KAU deliveries in NACE B. NACE-C figures are outlined in section 3.9.2.

Products added to inventories of finished goods and work-in-progress, including natural growth of animal and vegetable products, standing timber and uncompleted structures for which the buyer is unknown. Inventories of finished goods and work-in-progress are calculated and included in changes in inventories (P.52), see further Section 5.11. Changes in inventories of finished goods and work-in-progress are added to the production in NACE sections B and C, as production in the source IVP is measured as deliveries. In the production of NACE section A, natural growth of animal and vegetable products and standing timber are included, see further Section 3.7. Uncompleted structures for which the buyer is unknown are not prevalent. There is a constant lack of dwellings and no buildings in usable condition are unused.

3.2.2 Borderline cases included in intermediate consumption

As outlined in section 3.1 the SBS is the dominating source regarding intermediate consumption (P2) for the business sector. SBS is based on the Swedish Chart of Accounts (BAS-kontoplanen) which is the basis for enterprises accounting.

Costs of using rented fixed assets are included in intermediate consumption in SBS. According to Generally Accepted Accounting Principles (GAAP), the costs of using rented fixed assets shall be included in other operating expenses.

Inexpensive tools are included in intermediate consumption in SBS. According to private accounting, the costs of inexpensive tools shall be included in consumable equipment, which is a part of other operating expenses. If they have a life span of over one year, they are moved from intermediate consumption to GFCF. See also Section 5.4.

Subscriptions, contributions or dues paid to non-profit business associations are included in intermediate consumption in SBS. According to GAAP, costs of subscriptions, contributions or dues paid to non-profit business associations shall be included in other operating expenses.

Goods and services received from another local kind-of-activity unit, KAU, of the same institutional unit that comply with the definition of intermediate consumption are included in the source for NACE sections B and C. For 2021 there were no intra-KAU deliveries in NACE B. NACE-C figures are outlined in section 3.9.2.

Non-life insurance service charges. The total amounts of non-life insurance costs are included in intermediate consumption in SBS. According to GAAP, business insurance costs shall be included in other operating expenses. As explained in more detail in section 3.4, a correction is made in national accounts for the insurance premiums which are treated as current transfers. What remains are the service charges included in intermediate consumption.

FISIM purchased by resident producers. FISIM are calculated in a special model and added to intermediate consumption. See sections 3.4 and 3.17 for further information.

Research and development acquired to be used solely in the creation of further products of research and development. The intermediate consumption in the R&D industry, i.e. R&D service subcontracted by one R&D institutional unit to another R&D institutional unit. Extramural purchases of R&D, which should be recorded as intermediate consumption, are added using R&D survey data of units in NACE72, i.e. their information on outsourced R&D. The R&D survey is done every other year and the year without a survey, data is extrapolated based on the production in NACE72.

Goods and services used as inputs into ancillary activities are included in intermediate consumption in SBS.

Expenditure by employees, reimbursed by the employer, on items necessary for the employers' production. Since year 2007, such expenditures in SBS are included in wages and salaries. A conceptual correction is made in NA to distinguish these kinds of reimbursements. The model is based on a comparison of wages and salaries between the LSUM (Gross pay based on administrative sources) and wages and salaries in SBS. Where wages and salaries in the SBS include expenditure by employees reimbursed by the employer, these are categorized accordingly. In the LSUM wages and salaries are correctly defined (LSUM is the source that sets the wages and salaries for the total economy). The difference between LSUM and SBS are allocated to IC based on the shares of personnel costs that are not part of wages and salaries but separately recorded in the SBS (costs of education, health and other personnel costs). The adjustment is based on data for each reference year. See section 3.4 for further details.

Expenditure by households on goods and services used as intermediate inputs into own-account production of energy is currently not included in the intermediate consumption, similar to "own-account production of energy by households" mentioned earlier in the previous section 3.2.1.1. However, in alignment with the production schedule, this expenditure will be incorporated in intermediate consumption by September 2026.

3.2.3 Borderline cases excluded from intermediate consumption

Items to be treated as gross fixed capital formation. Valuables: In private accounting valuables are recorded in an asset account and are therefore not part of intermediate consumption in Structural Business Statistics, SBS. Mineral exploration activities are separately collected and included in gross fixed capital formation and not subject to intermediate consumption. Major repairs and improvements: In private accounting, capital improvements are recorded in an asset account and are therefore not part of intermediate consumption in SBS. Purchased Software and R&D are included in the intermediate consumption in SBS, but a correction is made and they are moved to GFCF. Own-account software and R&D are calculated in a special model according to the international guidelines and recorded as GFCF and deleted from IC where appropriate. Military weapons: In the records of central government, net lending the military weapons are treated as gross fixed capital formation and are not included in the intermediate consumption.

Expenditure to be treated as the purchase of non-produced assets. Contracts, leases and licenses: In private accounting contracts, leases and licenses are recorded in an asset account and are therefore not part of intermediate consumption in SBS.

Expenditure by employers to be treated as wages and salaries in kind. These kinds of expenditures are not a part of intermediate consumption in SBS. They shall be recorded as benefits to employees according to GAAP.

Use by market or own-account producer units of collective services provided by government. Collective services are free or offered at prices that are not economically significant. If a fee is charged, it is part of intermediate consumption in SBS.

Goods and services produced and consumed within the same accounting period and within the same local kind-of-activity unit, KAU. No values for these are collected in SBS since they are not sold on a market.

Payments for government licenses and fees that are to be treated as other taxes on production are included in intermediate consumption in SBS but are corrected for in NA.

Payments for licenses for using natural resources that are to be treated as rents are included in intermediate consumption in SBS but are corrected for in NA.

Decommissioning for large capital assets.

The assets of the Nuclear Waste Fund have been classified outside public administration, and the nuclear power capacity tax (D.29B3) ended in 2018 and has reclassified back in time. The holder of a licence to own or operate a nuclear facility pays a special fee every year. The paid-in fee funds are set aside for each fee-payer and may only be used to cover the costs attributable to that particular payer. The allocated funds are paid out, for example, to cover costs related to the decommissioning of a reactor. The Nuclear Waste Fund is administrated by the Legal, Financial and Administrative Services Agency (Kammarkollegiet). The Swedish National Debt Office (Riksgälden) examines and decides how allocated funds may be utilized. The fund pays out funds as costs arise. Decommissioning costs should be recorded as GFCF, in line with ESA 3.139. The issue of decommissioning large capital assets has been investigated and has been deemed non-material, i.e. it has no significant impact on GNI¹².

3.2.4 Daily allowances received by employees on business trips

Recording of daily allowances is not in line with the Eurostat's guidance, i.e. Annex 1 of the document GNIG/119. The tax-free daily allowances are not included in wages across all institutional sectors in the Swedish national accounts but in intermediate consumption which is not in line with the Guidance. According to the clarification laid out in Annex 1 of the document GNIG/119 per diem allowances for meals and accommodation should be included in wages and salaries. Since data on the actual amounts are not collected by the Swedish Tax Agency and are not separately recorded in the accounts of every enterprise, government agency and organisation, the total amount needs to be estimated. The estimate demonstrates that the maximum amount of daily allowances that should be reclassified from intermediate consumption to compensation of employees is below the materiality threshold of 0.1% of GNI. This issue will be followed up in the verification cycle 2025-2029 as a non-material issue and is linked with Transversal reservation V: Recording of daily allowances.

3.2.5 Borderline cases concerning taxes and subsidies on products

See Section 3.28 where the borderline cases between a tax and a purchase of a service are described. The distinction between taxes and sales of services is based on information about compulsory payments to the government without any link between the value of the fee and the cost of administration or the performed service. If the payment is disproportionate to the cost of providing the service, it is recorded as a tax.

¹² This issue will be followed up in the verification cycle 2025-2029 as a non-material issue.

3.3 Valuation

3.3.1 Output at basic prices

3.3.1.1 Basic prices for market output

Output shall be valued at basic price, i.e. the price received by the producer excluding all product taxes and including product subsidies.

Agriculture. Output of the large majority of products within agriculture is compiled by the “quantity*price” formula. The evaluation of crop production is based on estimates of quantities produced, estimates of purchases by the user branches of agricultural products. Statistics on slaughtering and the size of herds are the main sources of data for measuring animal production. The output of milk is estimated by sales to user branches. Producer prices are collected in these lines of transactions. All these data are collected by the Swedish Board of Agriculture. The following tableau shows the conversion to basic prices.

Table 3.3.1 Agricultural goods output (NewCronos 14000), EAA 2021, current prices, SEK million

Item	Value
Value at producer prices	70 254
Subsidies on products	1 279
Taxes on products	0
Value at basic prices	71 533

Forestry and logging. In forestry and logging prices produced by the Swedish Forest Agency are used. The pulpwood prices are by “delivery purchase”; the forest owner themselves, with or without the help of employees or contractors, deliver their wood to the roadside. The prices are distributed by geographical area.

To measure the output of NACE A02 forestry and logging, the value of the timber felled during the reference period is measured at “price delivered to roadside” for timber ready to be removed minus the value of taxes on products and plus the value of subsidies on products. However, in Sweden there are no product subsidies in forestry and logging.

Fishing statistics and Fishing in Marine Waters by Commercial Fishermen. From Swedish Agency for Marine and Water Authority the following information is obtained: Catch-receivers supply copies of the statements made by fishing associations and individual fishermen associated with the first-hand sale of catches to the Marine and Water Authority. The documents show the quantity supplied, unit price, sales, processing, sorting and freshness of a fish species. The sales-notes are recorded. The annual report on catches, states that the values of catches are based on sales prices excluding VAT in the first-hand line of sales.

Production of commodities and industrial services, IVP. Generally Accepted Accounting Principles, GAAP, is the basis for enterprises accounting. According to these, the product taxes should not be included in net sales and product subsidies shall be included. In the Production of commodities and industrial services (Industrins Varuproduktion, IVP), production is based on data from the enterprises accounting where the product taxes are removed. Valuation of production is therefore at basic prices.

Structural Business Statistics, SBS. See IVP above. SBS is also based on data from the private accounting and company annual reports. Valuation of production in SBS is therefore at basic prices.

Financial and insurance activities. The data on commission charges is collected from the profit and loss accounts and therefore valued at basic prices. The data on FISIM is valued at basic prices as VAT is not applicable on financial data.

Sweden's central bank, Riksbanken. The data is collected from the profit and loss account and valued at basic prices.

Basis of central government net lending. Basis of central government net lending is derived from the central government accounting system and is valued at basic prices.

Annual accounts of municipalities, regions and municipal associations. The annual accounts are based on data from annual reports. Valuation of production is at basic prices. Market output produced by a non-market producer and sold at economically significant prices is valued as basic prices. It is only in the local government sector where market producer and producer for own final use KAUs are found in the general government sector, as explained in more detail in section 3.1.2.

NPISH including the Church of Sweden. Non-market production is valued at basic prices in accounts and in surveys.

The income and costs of the SAS consortia. Data are obtained by a quarterly survey which has the consortiums accounts as basis. Final data are valued at basic prices.

NACE F41-43, Construction. For the construction industry the total output value for NACE F41-43 is obtained from the SBS. However, there are adjustments made from the SBS total, see further in section 3.12.

Energy produced by households. Production of energy by households is not included in the compilation. However, work is ongoing on this issue according to the envisaged transversal reservation I on the production of electricity by households. Production of electricity by households will be implemented in the compilation no later than September 2026.

NACE T, Households as employers. Production values are based on the "price*quantity" formula. Hours worked and hourly pay constitutes the source data. An addition for hidden activities is also included and this is also based on hourly pay.

3.3.1.2 Output for own final use

Output for own final use is valued at basic prices of similar products that are sold on the market or valued at the costs of production plus a mark-up (except for non-market producers) for net operating surplus or mixed income.

NACE A.01, Agriculture. Output for own final use within NACE A.01 is valued at the basic prices of similar products sold on the market. This includes output of potatoes, milk, eggs, meat, reindeers and hunting activities.

NACE A.02, Forestry and logging. Output for own final use within A02 for firewood is valued at basic prices for similar products.

NACE B.07, Mining of metal ores. The calculation is based on costs incurred for mineral exploration in current prices. The data emanate from the Geological Survey of Sweden. The output for own final use is valued at the cost of production plus a mark-up.

NACE B.08-09, Other mining and quarrying and mining support service activities. The calculation is based on costs incurred for mineral exploration in current prices. The data emanate from the Geological Survey of Sweden. The output for own final use is valued at the cost of production plus a mark-up.

NACE F.41-43, Construction. For own account construction purchase of materials, also for own account, is accounted for in the Survey housing cost, BUT. The valuation of own account labour/time is done by means of a model. In the Statistics Sweden time use study (TID) survey, respondents are

asked how much time on average is spent maintaining their homes. The total number of hours per year that is used to maintain the home is applied on half of a building and construction workers average salary per hour¹³. The total sum of own account labour/time is distributed to the respective type of asset using the respective category's GFCF excl. own account. The allocation is to NACE L68, real estate activities, where the major part is to owner-occupied dwellings.

Research and Development. For market producers a mark-up is added that reflect the need to generate enough operating surplus. The net-operating surplus of market producers of own-account R&D is derived with a mark-up including unsuccessful R&D. No adjustment is done to the sum of cost derived from the Frascati survey which entails that the unsuccessful R&D is included in the calculation of the mark-up. The mark-up is a single mark-up for all industries and is calculated as an average of several years' net operating surplus for all industries, except the pharmaceutical industry and the industry for real estate activities. Further reading is available in section 5.10.

Software. For in-house production values are calculated according to production costs plus mark-up for market producers and production costs for non-market producers.

Originals. Entertainment, literary and artistic originals are in principle valued according to the discounted value of expected receipts. As there are no statistical sources providing information on the value of original works produced in any given year a model compilation is necessary. It is assumed that the value of the originals in question is equal to the discounted value of future royalty incomes.

The problem is that the future royalties are not known. However, information on current income from royalties from culture and entertainment is available in annual statistics. In the national accounts the simple assumption is chosen, to use the value of royalties received by the artists in question in year t as a proxy for the value of originals created in year t . The reasoning behind this simple convention is as follows: Since there is no information on future royalty earnings, it is assumed that in the long-term royalties actually increases somewhat faster than the economy as a whole, since leisure activities have income elasticity greater than one. More specifically, the future real growth rate is taken to be equal to the real rate of interest, which likewise is normally greater than the growth rate of the economy. With these assumptions, the equilibrium value of the originals created in any given year may be estimated as the income from royalties in the same year.

In the absence of a better methodology, the value of production of new original musical works is taken to be equivalent to the value of royalties earned on existing originals,

Owner-occupied housing. In accordance with international recommendations, a utility value is estimated for the residence of a person in his own home. In Sweden it is not usual for individual houses to be let, hence there is no basis for estimating the utility value with the aid of actual rental costs for single-family houses. Instead, the level is ascertained with the aid of rental costs per square meter in multiple-occupancy buildings of a corresponding standard, i.e. similar apartment size, region and age. Further reading is available in section 3.18.

Secondary residences. For secondary residences the utility value is calculated by the help of rents per week and regions according to the stratification method. Further reading is available in section 3.18.

Own-account production of energy by households. Own-account production of energy by households is not included in the compilation. However, work is ongoing on this issue according to the envisaged transversal reservation I on the production of electricity by households. Production of electricity by households will be implemented in the compilation no later than September 2026.

¹³ Half the hourly wage is used as self-builders are assumed to not be as productive as employed construction workers.

Municipalities, NACE F41-43, Construction. Costs for construction for own account arises in units, which are producers for their own final use. These units are included in industry NACE F41-43 as construction industry units. The output for own account construction is valued by the help of the cost of production.

3.3.1.3 Additions to work-in-progress

Additions to work-in-progress are valued at the current basic price of the finished product.

NACE A.02, Forestry and logging. Gross increment less Gross-fellings give Net increment or Net growth. All is valued with the same prices as for production.

Mining and manufacturing. The industrial inventory survey is the source used for work-in-progress in mining and manufacturing industries. In the survey, the valuation of work-in-progress by the enterprises should be the net sales value of the measurement day, but enterprises not able to do this can use manufacturing cost plus a mark-up.

Other SBS-industries. The source for inventories in service industries are the SBS. SBS is based on data from the enterprises accounting and their annual reports. Valuation of work-in-progress in SBS is therefore at basic prices. The treatment of SBS-inventories in NA-output is further described in section 3.4.

3.3.1.4 Non-market output

Non-market output for NPISH is valued at basic prices in accounts and in surveys. Non-market output for general and local government is calculated as the sum of the costs needed for producing the goods and, mainly, services. Market output produced by a non-market producer and sold at economically significant prices is valued as sales (market price). It is only local government sector where non-market producer institutional units contain market producing KAU:s.

3.3.2 Accrual principle in the valuation of output

Output is recorded and valued when it is generated by the production process.

Products of agriculture, forestry and fishing. Output of agricultural products is recorded as being produced continuously over the entire period of production, not just when the crops are harvested or animals slaughtered. Hence, growing crops, standing timber and stocks of fish are treated as inventories of work-in-progress. They are then turned into inventories of finished products when the process is completed.

National Forest Survey and loggings. The volume for gross increment in forest land is coming from spot-sampling inventory on temporary and permanent tracts that is systematically distributed all over the country. Around 6 000 plots are used every year. The national account uses the mean value of five year gross increment. Felling volumes are registered when they are produced. Timber must not be left in the forest for a long time as it may be attacked by harmful insects.

Fishing statistics and Fishing in Marine Waters by Commercial Fishermen. The fishing catches are normally registered the same day as they are landed i.e. the quantities and the sales values are accrual.

Production of commodities and industrial services, IVP. In IVP output is registered as deliveries. To get the right valuation a correction for inventories of work-in-progress and finished goods are made. If manufacturing is made for other NACEs as secondary production, correction for inventories of work-in-progress and finished goods are done in a similar way for other NACEs based on inventories in SBS.

Structural Business Statistics, SBS. The output in SBS is registered as income and not as revenue, i.e. they are accrual. That means that all output where SBS is the source is accrual. See also description in sections 3.1.2 and 3.4 on the transition from income variables in SBS to output in NA.

NACE F41-43, Construction. The main sources for investments are the SBS and the special compilations of dwellings. The SBS data is collected from company book-keeping and they have certain rule to follow, called successive profit reduction, which means that the degree of compilation in each period is invoiced to the client. For Dwellings the construction cost is distributed with the aid of a construction cost profile, based on data supplied on beginning and end of the project, so that the cost incurred each quarter can be calculated. The investment calculations are described in more detail in section 5.10 on acquisition less disposals of fixed assets.

Financial enterprises, Financial institutions, assets and liabilities and Insurance enterprises. The output of financial enterprises, financial institutions and insurance enterprises are accrual, since the data sources are annual economic reports. **Sweden's central bank's Financial Market Statistics.** The output of Sweden's central bank is accrual, since the data source is annual economic reports on costs.

Basis activity of central government. In the basis of central government net lending output is recorded and valued when it is generated in the production process.

Annual accounts of municipalities, regions and municipal associations. The annual accounts are recorded and valued when generated in the production process, i.e. on accrual basis. Market output produced by a non-market producer and sold at economically significant prices is valued as basic prices. It is only in the local government subsector where market producer and producer for own final use KAUs are found in the general government sector, as explained in more detail in section 3.1.2.

NPISH and The Church of Sweden. The business accounts that are the basis for data in both surveys are on accrual basis.

NACE T, Households as employers. The Swedish Social Insurance Agency delivers records on monthly data of hourly pay.

3.3.3 Intermediate consumption at purchasers' prices

Intermediate consumption shall be valued at purchasers' prices, i.e. the price paid for the products by the enterprise excluding deductible VAT. The intermediate consumption by industry is based on the SBS and the business accounting data collected in the SBS is valued including:

- Tax less subsidies on the products but excluding deductible taxes like VAT on the products (ESA 2010 §3.06 point (a)).
- Transport charges paid separately by the purchaser to make delivery at the required time and place (ESA 2010 §3.06 point (b)).
- Deduction for any discount for bulk or off-peak purchases from standard prices or charges (ESA 2010 §3.06 point (c)).

While NA may have difficulties to allocate transport margins to the right product group in the supply-use system, they are covered in total IC.

The purchasers' prices exclude the following:

- Interests and charges added under credit arrangement, that shall be excluded from IC, are items that are recorded on separate accounts in the business accounting and these values are not included when in the summation of IC is done in SBS and NA (ESA 2010 §3.06 point (a))

- The same is true for, charges incurred because of late payment. These are as well recorded on accounts that are not included as IC in SBS or NA (ESA 2010 §3.06 point (b))

These requirements align with valuations in sources used:

Structural Business Statistics, SBS. Generally Accepted Accounting Principles, GAAP, is the basis for enterprises accounting. According to these, the expenses of enterprises shall be transformed to costs via inventory investments. SBS is based on GAAP. Valuation of intermediate consumption in SBS is therefore valued at purchasers' prices.

Financial and insurance services and Riksbanken. Intermediate consumption is collected from the profit and loss accounts and valued at purchasers' prices. i.e. the price paid for the financial services excluding deductible VAT.

Basis activity of central government. In the basis of central government, the intermediate consumption is excluding the non-deductible VAT. The VAT is calculated separately and added to the intermediate consumption. See section 3.1.3.1.1.

Annual accounts of municipalities, regions and municipal associations. The annual accounts are excluding the non-deductible VAT and the VAT is added as explained in section 3.1.3.1.1. Market intermediate consumption from municipalities is included in NACE D, E, G, H and L and this intermediate consumption is valued excluding deductible VAT. NPISH and The Church of Sweden, IC is valued at purchasers' prices.

3.3.4 Changes in inventories are consistent with the valuation of output and intermediate consumption

In Structural Business Statistics, SBS, output includes changes in inventories of finished goods and work-in-progress, see 3.4 for further information. The Swedish accounting principles states that for the intermediate consumption, the enterprises should record purchases of materials used in the production less the change of goods held in inventories. Thus, the intermediate consumption figures from SBS only include products used in the production in the accounting period.

In IVP output is registered as deliveries. To get the right valuation on production a correction for inventories of work-in-progress and finished goods are made.

3.3.5 Valuation of intra-group transactions within MNEs

Adjustments are made for intra-group transactions within MNEs in the case that these may not reflect market prices, i.e. transfer prices for import and export, see section 5.3. In the source statistics SBS both production and intermediate consumption is valued at market prices and therefore no adjustment is necessary due to transfer pricing. The arm's length principle is an internationally accepted principle that is regulated in Swedish domestic law in Chapter 14, Section 19 of the Tax Code. The arm's length principle is also regulated in all of Sweden's tax treaties, which in turn are based on Article 9 of the OECD Model Tax Convention. To achieve an internationally uniform application of Article 9 and the arm's length principle, the OECD has published Transfer Pricing Guidelines. The Swedish Tax Agency draws guidance from the guidelines in its work on transfer pricing issues. Under certain conditions, companies that have cross-border transactions with other related companies must document these. A company that has transactions with other related companies must, under certain conditions, prepare transfer pricing documentation. The purpose is to make it possible to assess whether prices and other conditions between the companies are at arm's length.

3.3.6 Accrual principle to the estimates of taxes and subsidies on products

See section 3.28 where the steps taken to ensure the application of the accrual time of recording principle to the estimates of taxes on products are described.

3.4 Transition from private accounting and administrative concepts to ESA 2010 national accounting concepts

3.4.1 Private and public accounting principles compared to NA concepts

Swedish accounting standards are governed by the Annual Accounts Act of 1995 and the Book-keeping Act of 1999, which provide general frameworks and emphasize “Generally Accepted Accounting Principles”. The Annual Accounts Act is influenced by the EC Fourth, Seventh and Eleventh Directives.

Specific accounting acts apply to credit institutions, brokers, dealers in securities, and insurance companies. The Swedish Accounting Standards Board is the government agency responsible for the promotion and development of these principles through the issuance of general advice and informational materials on accounting practices. Additionally, the Swedish Financial Supervisory Authority is responsible for issuing standards required for financial corporations.

To advance practical accounting principles, the Standards Board forms a joint body with Statistics Sweden and the Swedish Tax Agency together with private industry associations and other interest groups which publish and maintain the BAS chart of accounts, which, although not mandatory, is used by approximately 95 percent of Swedish companies for internal bookkeeping. The structure of these charts of accounts thus becomes a major reference for the design of economic statistics, as it affects the structure of data available in key administrative registers and guides how questions are structured in surveys.

As a compilation of business accounting, SBS largely follows accounting practices in terms of definitions and valuations. It also takes its overall structure from the BAS chart of accounts. As this is not fully conceptually aligned with ESA 2010 definitions, there is a need for adjustments. In several cases, this is carried out by adding questions to the survey component of SBS, which allows for the separation of variables from the administrative components.

Identifying the necessary steps for transition has been the focus of intensive work that continues to adapt to the changes over time, whether due to statistical requirements set forth by EBS and ESA regulations or the evolution of accounting practices and the chart of accounts. The process can be broken down into series of stages.

Initially, together with structural business statistics personnel, national accountants identify the groupings of variables in SBS that form aggregates closest to NA definitions. They also determine which possible changes to SBS could be considered to further accommodate transition. This leads to baseline SBS figures for output and intermediate consumption that largely conform to NA requirements. These SBS output and intermediate consumption figures are recorded in the process table as SBS totals under combined data for those industries that apply the standard SBS-based approach outlined in Section 3.1.2.

The derivation of this baseline SBS output figure is illustrated in Table 3.4.1. Variables shown in bold are included in standardized accounting statements reported to the Swedish Tax Authority by most active units as a mandatory component of income tax reporting. This means that figures for these variables are available for nearly all market-producing units in sectors S11 and S14. The rest of the variables are collected through the survey components of SBS. The table shows that SBS output figures include changes in stocks, own account work, and other operating income added to net turnover. However, capital gains, contributions or grants, lease income, and insurance compensation are not included in the output.

Table 3.4.1 Breakdown of SBS output, NACE A-S, SEK million 2021

<i>Variables</i>	<i>Sign</i>	<i>Million SEK</i>
Total net turnover	+	10 633 792
Lease income	-	238
Received grants	-	1 255
Exchange rate profits from receivables and liabilities of operational character	-	16
Capital gain on sale of tangible and intangible assets	-	101
Bad debt loss recovered	-	2
Insurance compensation	-	205
Strike pay	-	21
Other net turnover not included in production	-	608
Trading in securities on own account	-	151
Change in inventories and work in progress	+	4 407
Activated work for own account	+	31 556
Other operating income	+	289 680
Shareholder's contribution received/returned	-	85
Group contributions received	-	2 125
Profit from participation in Partnership companies and Limited partnership companies	-	515
Capital gain on sale of shares	-	6 821
Bad debt loss recovered	-	480
Lease income	-	31
Insurance compensation	-	7 165
Strike pay	-	2 660
Lease income	-	0
Exchange rate profits from receivables and liabilities of operational character	-	33 300
Capital gain on sale of tangible and intangible assets	-	28 838
Other received grants	-	54 348
Corona-related government grants received	-	27 542
Payment from group sickness insurance	-	8 093
Other operating income not included in production	-	3 368
Trading goods	+	-2 646 738
Costs for reservation services regarding travel and accommodation	+	-3 550
Costs for production abroad on behalf of the company (the company owns the input goods) where the sales of the manufactured / processed goods take place abroad, without the goods passing Swedish borders.	+	-154 301
Costs for goods for resale that have been both purchased and sold abroad without passing Swedish borders (merchanted goods)	+	-290 414
<i>Total SBS output</i>		<i>7 686 465</i>

Table 3.4.2 presents the derivation of the baseline SBS intermediate consumption in the same manner. Intermediate consumption covers costs of raw materials, other external costs, social security and other staff costs and other operating costs. It can be noted that several variables covering losses on financial assets are excluded. Leasehold fees on land and costs for consumable equipment with an economic life longer than one year are instead recorded as GFCF. On the other hand, parts of personnel costs such as staff training expenses and occupational health services are included in intermediate consumption.

Figures in both tables, included to illustrate the relative size of the included variables, reflect SBS-totals for all industries as delivered to NA; including those where the SBS is not used in full. It should also be noted that the SBS records income variables as positive and cost variables as negative.

Table 3.4.2 Breakdown of SBS intermediate consumption, NACE A-S. SEK million 2021

<i>Variables</i>	<i>Tecken</i>	<i>Million SEK</i>
Raw materials	+	-2 495 270
Other external costs	+	-2 141 875
Losses of current receivables	-	-6 594
Consumable equipment with an economic life longer than one year	-	-19 213
Costs for reservation services regarding travel and accommodation	-	-3 550
Site leasehold fee and lease fees	-	-2 423
Other external costs not included in intermediate consumption	-	-1 056
Social security costs and other staff costs	+	-596 802
Social security contributions as required by law	-	-397 687
Special employer's contribution	-	-26 147
Other fees	-	-11 515
Pension insurance premiums ²	-	-91 509
Costs for pensions excl insurance premiums	-	-20 311
Other operating costs	+	-98 477
Other operating costs not included in intermediate consumption	-	-7 214
Received grants booked as cost reduction	-	-34
Exchange rate losses from receivables and liabilities of operational character	-	-45 736
Capital loss on sale of tangible and intangible assets	-	-26 582
Shareholder's contribution paid/returned	-	3
Group contributions paid	-	-874
Loss from participation in Partnership companies and Limited partnership companies	-	0
Capital loss on sale of shares	-	-402
<i>Total SBS intermediate consumption</i>		<i>-4 671 579</i>

Among the industries not compiled based on SBS, those classified under NACE B and C most closely follow the standard procedure. In these cases, the IVP covers net sales. As detailed in sections 3.8 and 3.9, this is complemented by changes in stocks and ongoing work, taken from the business inventory survey and SBS variables under “other operating income” classified as output. This approach results in an output estimation that is largely similar to SBS method. However, there are some notable differences. Own-account work and certain components of other operating income classified as output are excluded at this baseline stage. In other industries, these are corrected through conceptual adjustments. The estimated output from changes in stocks and ongoing work is aligned with NA valuations. See Section 5.11 for more details.

Sector 12 and NACE K, on the other hand, differ not only in terms of private accounting standards but also in the source materials and methods used, as partly in more detail in section 3.17,

NACE section T also differ from the standard approach as it is compiled without direct accounting data from the producing units, as explained in Section 3.26.

Accounting standards for general government units in S13 vary across subsectors and legal forms where legal foundations for accounting in government agencies are set by the Ordinance on Government Accounting of 2000, amended in 2018, and the law on Municipal Accounting and Reporting of 2018.

The Swedish Economic Management Authority has the central role of issuing guidelines on accounting principles to other central government units. They are also responsible for the compilation of comprehensive accounts for the sector as a whole based on mandatory reporting from all constituent units. This reporting and the subsequent compiled accounts follow an adjusted version of the BAS chart off accounts developed by the Economic Management Authority specifically for internal central government use. Materials delivered from the Economic Management Authority to Statistics Sweden is based on this central accounting. Whilst not entirely designed for the purposes of national accounting there has been substantial work between the Economic Management Authority and Statistics Sweden over a long period to identify which variables corresponds to ESA 2010 transactions and to construct a compilation procedure for the data transmitted to Statistics Sweden that aligns with

NA needs. As a result, the need for conceptual adjustments in the process of NA-compilation is limited.

For local and regional governments, practical accounting guidelines are issued by the Council for Municipal Bookkeeping, a non-profit institution with a membership made up of the Swedish State as well as regional and municipal governments. The Swedish Association of Local Authorities and Regions also publishes versions of the BAS chart of accounts for regions and municipalities which, although voluntary, are used by most units. As with the central government, there has been substantial work over a long time between Statistics Sweden and The Swedish Association of Local Authorities and Regions to ensure that variables needed for NA-compilation can be identified from these charts of accounts. This, in turn, means that the main source used for local and regional government units, the census survey Annual accounts for municipalities, municipal associations and regions can be based on these BAS-variants and that NA figures can be compiled from the survey with limited need for further conceptual adjustments.

This cooperation with SBS-compilers, the Economic Management Authority and others means that many of the adjustments needed to transition from accounts structured in line with private and public accounting standards to ones suitable for use in national accounts can be made in this first stage of compiling underlying source materials or initial NA-calculations. This first stage of transition does however not fully arrive at figures in line with ESA definitions. A second stage of adjustments are thus needed at the stage of NA-compilation to fully complete transition to ESA definitions.

Adjustments made in this second stage are recorded in Annex A process tables as conceptual adjustments. In total, these adjustments amount to -299,200 million SEK for output and -420,334 million SEK for intermediate consumption across all units in the national economy. A breakdown by producer type and industry presented in Table 3.4.3.

For non-market units, the total adjustment of -14,985 million SEK is made to IC. Through the sum-of-cost approach which defines output, this adjustment is recorded in the same way for both transactions. These are described below together with other conceptual adjustments to IC.

Table 3.4.3 Conceptual adjustments, by producer and NACE section – SEK million 2021

NACE	Output				Intermediate consumption				GVA
	Market producer & own final use	Non market NPISH	Non market General government	Total	Market producer & own final use	Non market NPISH	Non market General government	Total	
A	140	3	0	143	4 368	3	0	4 371	-4 228
B	946	0	0	946	153	0	0	153	793
C	66 947	0	0	66 947	865	0	0	865	66 082
D	18 203	0	0	18 203	-4 527	0	0	-4 527	22 730
E	-3 855	1	0	-3 854	-1 665	1	0	-1 664	-2 190
F	-234 197	0	0	-234 197	-324 035	0	0	-324 035	89 838
G	-22 162	6	0	-22 156	-18 761	6	0	-18 755	-3 401
H	-24 835	2	-1 465	-26 298	-30 760	2	-1 465	-32 223	5 925
I	-761	3	0	-758	626	3	0	629	-1 387
J	46 792	2	-99	46 695	-22 640	2	-99	-22 737	69 432
K	9 905	6	0	9 911	-3 235	6	0	-3 229	13 140
L	-140 442	41	0	-140 401	3 296	41	0	3 337	-143 738
_L	0	0	0	0	29 862	0	0	29 862	-29 862
M	1 934	20	-278	1 676	-5 752	20	-278	-6 010	7 686
N	-1 748	2	0	-1 746	-4 585	2	0	-4 583	2 837
O	0	0	-5 772	-5 772	0	0	-5 772	-5 772	0
P	-305	82	-5 382	-5 605	-563	82	-5 382	-5 863	258
Q	307	46	-1 925	-1 572	-129	46	-1 925	-2 008	436
R	-1 016	103	-626	-1 539	1 296	103	-626	773	-2 312
S	-68	245	0	177	700	245	0	945	-768
T	0	0	0	0	0	0	0	0	0
Total	-284 215	562	-15 547	-299 200	-405 349	562	-15 547	-420 334	121 134

3.4.2 Conceptual adjustments of output for market producers and producers for own final use

Adjustments to market producers and producers for own final use output further subdivide into seventeen specific components that are shown in table 3.4.4 and further described in the following section.

Table 3.4.4 Conceptual adjustments on output for market producers and producers for own final use, by type and NACE section, SEK million 2021

	Other operating income	Profit from property sales	Work performed for own use	R&D	Software	Mineral exploration	Holding gains	Sectoral reclassification	Branches	Congestion charges	Economic territory	Recycling	Subcontractor services	Taxi operation services	Dwellings	Fiscal monopoly profits	Winnings	Total
A	0	0	0	68	93	0	0	-7	-14	0	0	0	0	0	0	0	0	140
B	0	0	0	490	47	474	-1	0	-64	0	0	0	0	0	0	0	0	946
C	0	0	0	61 695	7 624	0	-1 508	0	-864	0	0	0	0	0	0	0	0	66 947
D	0	0	0	610	558	0	0	0	-911	18 996	-1 050	0	0	0	0	0	0	18 203
E	-425	0	-209	94	102	0	0	0	0	0	0	-3 417	0	0	0	0	0	-3 855
F	0	-161	0	192	413	0	0	-1 024	-162	0	0	0	-233 455	0	0	0	0	-234 197
G	-9 862	-331	-2 604	5 790	5 806	0	-16 607	-92	-4 262	0	0	0	0	0	0	0	0	-22 162
H	-2 897	0	-350	124	709	0	0	-17 258	-579	0	0	0	0	-4 584	0	0	0	-24 835
I	-735	-18	-67	4	55	0	0	0	0	0	0	0	0	0	0	0	0	-761
J	-2 055	0	-9 415	2 805	57 369	0	0	0	-1 912	0	0	0	0	0	0	0	0	46 792
K	0	0	0	2 290	7 619	0	0	-4	0	0	0	0	0	0	0	0	0	9 905
L	-4 811	-4 768	-876	82	432	0	0	-10	-215	0	0	0	0	0	-130 276	0	0	-140 442
_L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	-1 489	-294	-2 758	3 922	6 872	0	0	-7	-4 312	0	0	0	0	0	0	0	0	1 934
N	-1 016	0	-559	462	2 027	0	0	0	-2 662	0	0	0	0	0	0	0	-2	-1 748
P	-4	0	-172	0	265	0	0	-380	-14	0	0	0	0	0	0	0	0	-305
Q	-68	0	-135	277	295	0	0	0	-62	0	0	0	0	0	0	0	0	307
R	-442	-30	-163	84	403	0	0	2 348	-2	0	0	0	0	0	0	-2 900	-314	-1 016
S	-203	0	-33	3	167	0	0	0	-2	0	0	0	0	0	0	0	0	-68
T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	-24 007	-5 602	-17 341	78 992	90 856	474	-18 116	-16 434	-16 037	18 996	-1 050	-3 417	-233 455	-4 584	-130 276	-2 900	-314	-284 215

- *Other operating income* is the residual income variable in SBS. It is first reviewed in the compilation of SBS based on comments left by reporting entities. If any transactions within this category can be classified, they are either reassigned to a more appropriate variable or, if they are determined not to qualify as output, they are moved to the category called “*Remaining other operating income that is not production.*” As shown in Table 3.4.1, this is then excluded from baseline SBS-output as delivered to NA. This review process continues as part of the NA’s production process, where NA makes a final decision regarding which transactions should be retained. Any amounts removed by NA personnel are recorded as conceptual adjustments. The corresponding IC-item is treated by the same method.
- *Profit from property sales (only property held for resale)* are excluded due to two main reasons with a first one being quality issues related to the SBS variable for profit from property sales, and the other being issues concerning the separation of trade margins and holding gains. Previous NA-investigations have concluded that these incomes should largely be classified as holding gains and thus excluded from output. This conclusion will be revisited in the future.
- *Work performed by the enterprise for its own use and capitalised* in SBS is adjusted to account for differences in rules for capitalisation in private accounting and NA. The key difference in the classification of intellectual property products lies in where NA have a broader scope for asset boundary related to R&D and Software, whereas private accounting allows some capitalisation beyond the NA boundary. Specifically, private accounting permits the capitalisation of produced assets in areas such as marketing assets or goodwill in some cases. Since SBS does not provide a detailed breakdown of the types of assets capitalised, these values are removed for most industries. Exceptions for removal are A01-03, D35 and E37-F43, as further investigation has shown that these branches mainly represent own-account construction, making them exceptions to the general exclusion.

- Own account output concerning intellectual property products based on NA definitions are included in GFCF and added to output with *R&D* and *Computer software and databases* are added across all industries where relevant while *Mineral exploration* is added to NACE section B. Calculations for these components are described in more detail in section 5.10.
- Due to the differences in inventory valuation principles between private accounting standards and ESA-definitions, detailed in Section 5.11, the SBS variable for costs of trading goods, which forms part of trade margins and thus output, includes *holding gains* during periods of rising prices. This is corrected by calculating holding gains for goods for resale from the quarterly Business Inventories Survey. Positive holding gains are deducted from SBS trade margins and consequently from output for the NACE sections covered by the survey- B, C and G- which correspond to the sections with the largest inventories.
- While NA largely align with SBS on sectoral boundaries, *sectoral reclassifications* of units occur in most years, with the majority of these movements are happening from S11 to S13. As explained in Section 5.9.2.1, these changes are determined by the government sector delimitation analysis. Since this work is not fully finalized by the time the SBA frame is completed, changes in the latest year are managed in the NA compilation. Reclassified units are usually relatively small, the year 2021 was however an exception. In 2021, two larger entities linked to the Stockholm Regional Government were moved within NACE sections F and H (see Section 2.2.2.3). In addition to these changes, one unit in NACE R was reclassified from S15 to S11 while a non-domestic unit in NACE G was removed.
- Reporting from S11 KAUs to SBS, IVP and most other source materials covers the entire respective legal units. Therefore, figures also include output from *branches* operating outside Swedish economic territory. These are identified by using the European Group Register (EGR) for branches operating in EU countries and country-by-country BEPS information from the Swedish Tax Authority for branches outside the EU. Output for these is estimated based on models and then removed, see model below. For S12, the source data align with NA definitions and thus require no adjustment. Output was added for a few branches that appear in the European Group Register and are not included in SBS and other source materials, see model below¹⁴.

Due to the lack of economic data for the branches abroad belonging to Swedish enterprises, an estimation is made based on output per employee by NACE section using Swedish data.

(I) *Output per employee in NACE (i) (Swedish data) multiplied by number of employees in NACE (i) EGR data.*

Concerning the branches abroad belonging to Swedish enterprises outside the EU, no records are available. However, based on the country-by-country statistics¹⁵, the MNE Group's business activities in a particular tax jurisdiction are reported, and information about number of branches is available. Unfortunately, no economic or employment data is available for the branches. Nevertheless, an estimation is made using the information at hand. Specifically, the estimation is based on the output and number of branches abroad belonging to the Swedish enterprises within EU and number of branches outside EU.

(II) *(Output S.11 Swedish data within EU divided by number of branches within EU) multiplied by number of branches outside EU*

Output is added for those branches in Sweden not covered in the SBS but are covered by the EGR.

¹⁴ The adjustment of branches follows the reported and approved action point SE.A3 Branches.

¹⁵ Tax/BEPS/country-by-country reporting

For those branches that report NACE activity as well as number of employees in EGR the output is estimated with the aid of Swedish data.

(III) *Output per employee in NACE (i) (Swedish data) multiplied by number of employees in NACE (i) EGR data.*

For those branches that do not report NACE activity, the average output per employee in all NACE activity is used.

(IV) *Average output per employee S.11 (Swedish data) multiplied by number of employees in NACE (i) EGR data.*

- The Swedish National Grid Operator (Svenska Kraftnät) is classified as a central government non-financial quasi-corporation and is therefore included in S11 and covered by the SBS. Its SBS-reporting has been adjusted to account for the incomplete recording of income from *congestion charges*. Figures for these charges have been obtained from Svenska Kraftnät and subsequently added to output in NACE D.
- Another private grid operator has recorded the complete value of its income from operating under-sea transnational transmission and distribution services of electricity in its SBS-reporting. However, the share of output related to operations outside of Swedish *economic territory* has been removed from NACE D.
- An adjustment is made to NACE E regarding an S11 KAU responsible for *recycling* metal cans and PET bottles in Sweden. The revenues reported by this company in SBS consist mainly of fees that are refunded when cans and bottles are returned. Consequently, these revenues are excluded from the NA output.
- *Subcontractor services* concerning construction in Sweden are included in SBS for both output and IC. NA records these transactions in net by deducting the figures from both transactions in NACE F. From the output side, the SBS is corrected for income invoiced to other *construction companies in Sweden*. From the intermediate side, the SBS collects costs of subcontracts carried out by *another company in Sweden*. This difference in the survey means that the cost side of subcontracts is always greater in absolute terms than the income side. Therefore, on the intermediate side, the subcontracting is adjusted downward by the difference between the cost side and the income side. Accordingly, the cost for subcontracting is as large as the income from subcontracts. This implies that if the subcontractor is in another NACE activity, this still counts as a cost for the companies classified under NACE F. In the SBS, there is information about costs for subcontracts carried out by another company abroad and is accounted for as a cost for the main constructor.
- *Taxi operation services* are included in SBS for both output and IC. NA records these in net by deducting figures from both transactions in NACE H.
- Output of rental and operating services of *dwelling*s for all industries in SBS is deducted from NACE L. SBS figures are replaced with figures from the dwellings stratification model.
- *Fiscal monopoly profits* from the state-owned lottery corporation Svenska Spel AB are included in SBS output. Such profits are classified as taxes on products in NA, and thus removed from output in NACE R.
- Costs for *winnings* to gamblers are deducted from both output and intermediate consumption in SBS, since NA define the service provided by gambling operators as the margin between gross sales and paid-out winnings. Over time, this adjustment has become substantially smaller, as most units now report net figures directly to SBS.

3.4.3 Conceptual adjustments of intermediate consumption

Adjustments to market producers' and producers for own final use's intermediate consumption subdivide into seventeen specific components that are shown in table 3.4.4 and further described in the following section. Four of these are adjustments are also made to non-market producing units, figures for these are shown in table 3.4.6.

Table 3.4.5 Conceptual adjustments on intermediate consumption for market producers and producers for own final use, by type and NACE section, SEK million 2021

	Allocation of FISIM	Allocation of Insurance	Other conceptual														Total conceptual			
			Insurance premiums	Other operating cost	Distributive transactions	Purchased software	Purchased R&D	Holding gains	Sectoral reclassification	Branches	Financial leasing	Other taxes on production	Correction on reimbursements	Subcontractor services	Taxi operation services	Heating costs		Winnings		
A	6 608	347	-2 304	0	0	-42	-75	0	-3	-10	0	-153	0	0	0	0	0	0	0	4 368
B	44	184	-281	-3	-35	-177	-21	628	0	-26	-58	-131	29	0	0	0	0	0	0	153
C	2 662	2 789	-4 494	-7 574	-1 305	-9 533	-17 236	38 611	0	-533	-2 858	-1 776	2 112	0	0	0	0	0	0	865
D	683	520	-916	-310	41	-1 685	-103	0	0	-436	-320	-2 122	121	0	0	0	0	0	0	-4 527
E	112	626	-771	-58	6	-708	-43	0	0	0	-254	-701	126	0	0	0	0	0	0	-1 665
F	3 360	220	-1 979	-309	-98	-1 796	-39	0	-1 024	-97	-6 443	-1 257	1 751	-316 324	0	0	0	0	0	-324 035
G	4 353	2 409	-3 943	-1 025	-837	-11 275	-700	0	-90	-1 835	-7 549	-1 062	2 793	0	0	0	0	0	0	-18 761
H	1 749	1 503	-2 877	-146	191	-1 846	-44	0	-18 275	-463	-3 285	-3 549	866	0	-4 584	0	0	0	0	-30 760
I	1 084	213	-384	-12	140	-458	-1	0	0	0	-390	-130	564	0	0	0	0	0	0	626
J	2 820	527	-869	-1 184	-1 083	-10 927	-11 294	0	0	-882	-981	-208	1 441	0	0	0	0	0	0	-22 640
K	3 862	7 332	-540	0	0	-7 377	-730	0	-2	0	0	-5 780	0	0	0	0	0	0	0	-3 235
L	45 425	4 620	-1 614	-1 109	-326	-1 468	-30	0	-8	-93	-664	-15 402	349	0	0	0	-26 384	0	0	3 296
L	26 230	3 632	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29 862
M	7 446	1 646	-2 782	-204	-350	-6 124	-319	0	-3	-2 124	-3 530	-341	933	0	0	0	0	0	0	-5 752
N	1 164	557	-968	-29	-141	-740	-28	0	0	-1 465	-3 670	-322	1 057	0	0	0	0	0	0	-4 585
P	248	83	-148	-5	12	-518	-51	0	-149	-5	-226	-20	216	0	0	0	0	0	0	-563
Q	610	183	-305	-140	16	-574	0	0	0	-24	-445	-37	587	0	0	0	0	0	0	-129
R	851	344	-445	-12	-39	-321	-6	0	1 420	-1	-213	-100	132	0	0	0	0	0	-314	1 296
S	1 087	81	-81	-5	2	-3	-72	0	0	-2	-271	-36	0	0	0	0	0	0	0	700
Total	84 168	24 184	-25 702	-12 125	-3 806	-55 572	-30 792	39 239	-18 134	-7 996	-31 157	-33 127	13 077	-316 324	-4 584	-26 384	-314	-405 349		

Table 3.4.6 Conceptual adjustments on intermediate consumption for non-market producers, by type, institutional sector and NACE section, SEK million 2021

NACE-section	Non market NPISH		Non market General government				Total
	Allocation of FISIM	Allocation of insurance	Allocation of FISIM	Allocation of insurance	Software	R&D	
A	3	0	0	0	0	0	3
B	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0
E	1	0	0	0	0	0	1
F	0	0	0	0	0	0	0
G	6	0	0	0	0	0	6
H	2	0	0	10	-1 185	-290	-1 463
I	3	0	0	0	0	0	3
J	2	0	0	9	-108	0	-97
K	6	0	0	0	0	0	6
L	38	3	0	0	0	0	41
M	13	7	0	0	-55	-223	-258
N	2	0	0	0	0	0	2
O	0	0	4 192	532	-6 856	-3 640	-5 772
P	79	3	0	141	-4 915	-608	-5 300
Q	44	2	0	57	-1 956	-26	-1 879
R	94	9	0	29	-654	-1	-523
S	218	27	0	0	0	0	245
T	0	0	0	0	0	0	0
Total	511	51	4 192	778	-15 729	-4 788	-14 985

- Expenditure on FISIM, or financial intermediation services indirectly measured, is not included as intermediate consumption in the underlying source materials for either market or non-market producers. Instead, it is added to intermediate consumption for units across all sectors and industries and recorded as *Allocation of FISIM* in the process tables. The methods of calculation and allocation are described in more detail in Section 3.17.
- Non-life insurance premiums are included in SBS intermediate consumption. NA separate these into current transfers among policy holders that cover paid out insurance compensation claims and insurance service charges. Only the insurance service charges are included in intermediate consumption. Service charges are calculated using insurance statistics based on total premium payments and compensation payouts per insurance type, as explained in more detail in Section

3.17. These adjustments are made for units across all industries and sectors and recorded in process tables as two conceptual adjustments. The first *Allocation of Insurance* represents the service charges included as intermediate consumption. The second, *Insurance premiums* recorded under other conceptual adjustments for market producers in all industries, captures removed gross premium payments.

For industry K65, Insurance, reinsurance and pension funding, except compulsory social security, deducted insurance premiums specifically concern non-life insurance excluding reinsurance, while the insurance service charges added as Allocation of Insurance cover non-life insurance including reinsurance. Insurance premiums for reinsurance can be identified directly in the source statistics used for the industry meaning these are deducted in the stage of initial compilation. This component does thus not need to be deducted as a conceptual adjustment.

Similarly for industry L68A, shown in 3.4.5 under *L Imputed rents for owner occupied dwellings*, initial compilation exclude insurance premiums meaning these are not deducted as a conceptual adjustment.

- The residual *other operating cost* variable in SBS is derived from other expenses under other operating costs and it is processed in the same manner as its corresponding residual income variable. During the compilation of SBS, transactions are initially reviewed based on comments from reporting entities. Categorized transactions are reallocated to a different variable, while those deemed not to qualify as intermediate consumption are transferred to the “Other expenses in other operating costs (non-intermediate consumption)” variable, as detailed in Table 3.4.2. This variable is then excluded from the baseline SBS output delivered to the NA. This review process continues in the NA production process where a final decision on what transactions to retain is made. Any amount removed by NA personnel are recorded as conceptual adjustments.
- SBS intermediate consumption retains certain variables related to *distributive transactions* and losses on financial assets, whereas NA intermediate consumption excludes these by deducting exchange rate differences relating to operations, reorganizational costs not connected to current operations, and received grants booked as cost reductions.
- Parts of purchased computer *software* and databases and all costs concerning purchased *R&D* are included in intermediate consumption in underlying source materials for both market producers and non-market producers. NA records them as GFCF. These costs, calculated in the compilation of GFCF as explained in more detail in Section 5.10.3, are deducted from intermediate consumption for units across all sectors and industries.
- As for output, intermediate consumption is adjusted for *holding gains* arising from differing principles for valuation of inventories between private accounting standards and ESA-definitions. In times of falling prices the lowest value principle will imply that the intermediate consumption that comes from inventories is valued at market prices (replacement cost), in line with the valuation in National Accounts. In times of increasing prices, however, the intermediate consumption will not be valued at market prices (replacement cost), since the inventories are to be valued at acquisition cost in business accounting. The SBS variable for costs of raw materials that form part intermediate consumption includes holding gains in periods of rising prices. This is corrected for by calculating holding gains for materials and supplies from the quarterly Private Sector Inventories Survey where positive holding gains are deducted from SBS intermediate consumption in NACE the sections B and C. Similar “small-issue” reviews have been extended to other NACE sections and has been proved to be non-material, for more details see section 5.11.3.
- *Sectoral reclassification* is carried out for intermediate consumption in the same way as for output as explained in 3.4.2

- Corrections for *branches* of Swedish legal units operating outside of Sweden's economic territory is adjusted for intermediate consumption in the same manner as for output as explained in Section 3.4.2. As for output, intermediate consumption for a small number of branches found in the European Group Register that were not included in SBS and other source materials was added to NA figures.
- Costs for leasing fees in SBS intermediate consumption include both operational and *financial leasing* while NA intermediate consumption includes only operational leasing. Financially leased assets instead are recorded as owned by the operating entity. In addition, payment flows to the legal owner are recorded as property income flows. The payment flows to be deducted are calculated based on data from financial leasing providers, as detailed Section 5.10.3.
- *Other taxes on production*, for example real estate tax and vehicle tax, are registered as costs in private accounting but not included in NA intermediate consumption. These are compiled from general government data and deducted across all industries.
- *Correction on reimbursements*: From 2007 and onwards the Swedish Tax Agency reduced the number of detailed reporting items on personnel costs in the compulsory form SRU, which is a part of the sources for SBS. Prior to 2007, this data was divided into wages and other reimbursements, other social fees, pension expenditures, and other personnel costs. The larger companies also had to provide details of the last item in order to separate intermediate consumption. From 2007 and onwards, the SRU-form contained information about all four above items. But the larger companies still had to provide the same breakdown as earlier. The resulting detailed data, however, differed significantly from previous years. Particularly, it was evident that items classified as intermediate consumption received smaller share. It was concluded therefore that the new SRU underestimated intermediate consumption. Therefore, from 2007 and onwards, the 2006 structure of the components are maintained for each NACE category. Each year, the difference between the original SRU data about reimbursements and the estimation based on the 2006 structures, is treated as an underestimation of intermediate consumption in the SRU data.
- *Subcontractor services* in Sweden concerning construction are included in SBS for both output and intermediate consumption. These are recorded in net in NA by deducting figures from both transactions in NACE section F, see also Section 3.4.2
- *Taxi operation services* are included in SBS for both output and intermediate consumption. These are recorded net in NA by deducting figures from both transactions in NACE section H.
- SBS output of rental and operating services of dwellings is recorded including *heating costs*, with the corresponding expenditure for heating included in SBS intermediate consumption. In NA, these are recorded net, following the stratification model for dwellings, which excludes heating from calculated rents. This same figure deducted from NACE section L intermediate consumption.
- Costs for *winnings* to gamblers are deducted from both output and intermediate consumption in SBS, since NA define the service provided by gambling operators as the margin between gross sales and paid-out winnings. Over time, this adjustment has become substantially smaller, as most units now report net figures directly to SBS.

3.4.4 Notes on specific issues in accounting practices and necessary adjustments

Some notes on treatments of specific issues in accounting practices and measures taken to ensure correct coverage and valuation:

- a) *Durable goods of small value*. These goods are not included in GFCF, but in intermediate consumption, for further information see Section 4.4.2.

- b) *Minor repairs and maintenance.* Repairs and maintenance (not improvements) are part of property costs in private accounting and therefore a part of intermediate consumption in SBS and in NA. Maintenance and repairs are activities that owners or users of fixed assets must perform at regular intervals in order to be able to use such assets during their expected life. These are ongoing costs that cannot be avoided if fixed assets are to continue to be used. For the owner or user, neglecting maintenance and repair is not an option, as the life expectancy can be drastically shortened. However, maintenance and repair do not change the object's performance, capacity or assumed life. The activities simply maintain the object in good condition. If necessary, by replacing defective parts with new parts of the same type without changing the basic function of the fixed asset. See COICOP 0431 regarding minor repairs included in HFCE.
- c) *Major repairs and renovations.* Major renovations include alterations and additions that increase the performance, standard or production capacity of existing fixed assets and/or extend the previously expected service life. Enlarging or extending an existing building or facility constitutes a major change in this sense. Similarly remodelling or restructuring the interior of a building or vessel as well as substantial expansion or improvement of an existing software system are treated as GFCF.
- d) *Valuation of inventories.* SBS is the main source for many NACE sections, so for these industries changes in stocks and ongoing work are valued with private accounting. Private accounting underlines that the inventories shall be valued with the lowest of purchase value (LVP, lowest value principle) and net sales value. Regarding NACE sections A, B, C and G, changes in stocks and ongoing work have been taken from special sources, see Section 5.11. Adjustments made to output and intermediate consumption due to differences between SBS and NA valuation of inventories are described in 3.4.2 and 3.4.3 under the header *Holding gains*.
- e) *Computer software and databases.* Purchased software and databases are included in the intermediate consumption in SBS. However, a correction is made in NA, where they are reclassified under GFCF. See Section 5.10.3 for a description of the model. Own-produced computer software and databases are calculated and included in GFCF and added to the production as P.12 in all NACE sections.
- f) *Entertainment, literary and artistic originals.* They are calculated and included in gross fixed capital formation and added to the production as P.12 in NACE sections J and R.
- g) *Research and development (R&D).* Purchased R&D are included in the intermediate consumption in SBS, but a correction is made in NA, and they are moved to GFCF. See Section 5.10.3 for a description of the model. Own produced R&D are calculated and included in GFCF and added to the production as P.12 for all NACE sections.
- h) *Insurance service charge.* The total amount of non-life insurance costs is included in intermediate consumption in SBS. With the aid of insurance statistics broken down by different types of insurance, industry by industry adjustments are estimated as the difference between premium payments and insurance services, leaving only the service charges to be included in intermediate consumption. The insurance premiums are treated as current transfers. See Section 3.17 for a description of the model.

- i) *Production and allocation of FISIM*. FISIM are calculated and added to intermediate consumption. See Section 3.17 for a description of the model.
- j) *Leasing*. Charges for financial leasing are included in intermediate consumption in SBS, but a correction is made in NA. See Section 5.10.3 for a description of the model. Companies in Sweden must report all leasing as financial (IFRS 16) in their consolidated accounts. However, legal entities, such as parent companies, can still use the previous reporting method, as permitted by the Swedish Financial Reporting Board (RFR)¹⁶, which aligns international standards with Swedish law. During expert discussions between 2018 and 2019, Statistics Sweden consulted accounting professionals who determined that IFRS 16 adoption within legal entities would be uncommon due to Sweden's strong connection between accounting and taxation, allowing exemptions under RFR 2. Since Statistics Sweden primarily collects data from legal entities rather than corporate groups, IFRS 16 has had minimal impact on national statistics. While some companies recorded right-of-use assets, this has not significantly affected overall statistical reporting. Additionally, internal reviews at Statistics Sweden have not identified any substantial effects from the IFRS 16 transition in recent years. Thus, the expert group maintains that IFRS 16 has only had a marginal impact on financial statistics, as the focus remains on legal entities rather than consolidated corporate groups.
- k) *Margins on trading financial assets*. The fact that the GNI transversal reservation II, margins on trading financial assets, were proved to be non-material, no revision on the GNI data for own resource was made by Sweden. However, margins on trading financial assets will be followed up as a non-material issue linked with SE.TR II in the verification cycle 2025-2029.
- l) *Wages and salaries in kind*: Most wages and salaries in kind (benefits) are included in SBS output, except for employer-provided cars for employees, which are added for all market producers based on tax reporting data. (see Section 3.1.2). Similarly, tax-free daily allowances are recorded under intermediate consumption rather than wages and salaries, which does not fully align with Eurostat guidance (see Section 3.2.4). In government accounting, all wages and salaries in kind are recorded as output in underlying sources. However, employer expenses classified as wages and salaries in kind are excluded from intermediate consumption in SBS and from the basis for central government net lending, as well as the annual accounts of local governments. Gratuities are relatively rare in Sweden, primarily occurring in the restaurant and taxi industries.
- m) *Activated work for one's ongoing work*: Since the definition is not completely in line with NA, activated work is removed. Instead, own-produced items are calculated and added to NA. For example, in NACE C two items are added to NA, own produced software and R&D. These adjustments are shown in table 3.4.4 and further described in Section 5.10.3. Exceptions for removal are A01-03, D35 and E37-F43, as further investigation has shown that these branches mainly represent own-account construction, making them exceptions to the general exclusion.

¹⁶ Link to RFR2, exceptions according to Swedish regulations (pages 12-14): radetforfinansiering.se

3.5 The roles of direct and indirect estimation methods and of benchmarks and extrapolations

Direct estimation methods are methods based on sources that give a direct value for the variable to be estimated. Indirect estimation methods are used in the absence of such a direct value and may comprise models, use of ratios, etc. See table 3.5.1 for an overview of estimation methods used.

Table 3.5.1 Estimation methods used – year 2021 SEK million

NACE rev 2	Surveys and Censuses	Administrative Records	Combined Data	Extrapolation and Models							Other	Total (sources)		
				Benchmark extrapolations	Commodity Flow Model	CFC (PIM)	Dwellings - stratification method	FISIM	Insurance	Other E&M			Total Extrapol+Models	
Output	A	380	-9 640	205 786	0	0	2	0	0	0	4 611	4 613	0	201 139
	B	79 613	26	2 248	0	0	0	0	0	0	0	0	0	81 887
	C	2 086 105	3 169	72 857	0	0	0	0	0	0	0	0	0	2 162 131
	D	1 046	279	214 684	0	0	2	0	0	0	0	2	0	216 011
	E	18 986	134	78 340	0	0	0	0	0	0	0	0	0	97 460
	F	4 518	4 869	947 193	0	0	0	0	0	0	0	0	0	956 580
	G	1 509	6 992	951 009	0	0	18	0	0	0	0	18	0	959 528
	H	34 929	28 715	511 518	0	0	44 523	0	0	0	6 017	50 540	0	625 702
	I	131	1 592	143 820	0	0	24	0	0	0	0	24	0	145 567
	J	87	9 379	750 651	0	0	156	0	0	0	1 402	1 558	0	761 675
	K	391	72 662	20 867	0	0	87	0	119 918	50 825	25 239	196 069	0	289 989
	L	6 168	1 317	415 345	4 450	0	344	462 101	0	0	0	466 895	0	889 725
	L	0	0	0	0	0	0	242 850	0	0	0	242 850	0	242 850
	M	6 699	43 391	601 297	0	0	38 702	0	0	0	2 666	41 368	0	692 755
	N	671	1 715	268 235	0	0	32	0	0	0	87	119	0	270 740
	O	55 721	182 193	4 596	0	0	49 981	0	0	0	17 879	67 860	0	310 370
	P	234 689	50 121	74 136	0	0	16 674	0	0	0	14 088	30 762	0	389 708
	Q	493 298	20 463	177 543	0	0	20 374	0	0	0	25 262	45 636	0	736 940
	R	35 109	12 800	62 020	169	0	4 793	0	0	0	7 064	12 026	0	121 955
	S	14 690	32 031	47 294	0	0	2 721	0	0	0	2	2 723	0	96 738
	T	0	1 655	0	0	0	0	0	0	0	0	0	0	1 655
	Total	3 074 740	463 863	5 549 439	4 619	0	178 433	462 101	119 918	50 825	104 317	920 213	0	10 008 255
IC	A	380	0	145 119	0	0	0	0	0	0	0	0	0	145 499
	B	0	0	30 856	0	0	0	0	0	0	0	0	0	30 856
	C	17 584	0	1 520 001	0	0	0	0	0	0	0	0	0	1 537 585
	D	357	0	115 607	0	0	0	0	0	0	0	0	0	115 964
	E	11 710	0	54 135	0	0	0	0	0	0	0	0	0	65 845
	F	2 967	0	671 795	0	0	0	0	0	0	0	0	0	674 762
	G	868	0	445 897	0	0	0	0	0	0	0	0	0	446 765
	H	11 523	17 818	379 849	0	0	0	0	0	0	6 017	6 017	0	415 207
	I	131	0	88 181	0	0	0	0	0	0	0	0	0	88 312
	J	87	3 992	444 380	0	0	0	0	0	0	862	862	0	449 321
	K	391	90 318	0	0	0	0	0	0	0	7 003	7 003	0	97 712
	L	6 891	0	199 743	0	0	0	0	0	0	151 857	151 857	0	358 491
	L	0	0	0	0	0	0	0	0	0	107 775	107 775	0	107 775
	M	2 688	11 065	326 066	0	0	0	0	0	0	2 666	2 666	0	342 485
	N	419	122	123 987	0	0	0	0	0	0	87	87	0	124 615
	O	18 231	67 372	2 978	0	0	0	0	0	0	16 835	16 835	0	105 416
	P	56 588	14 082	28 364	0	0	0	0	0	0	14 088	14 088	0	113 122
	Q	126 522	6 928	59 827	0	0	0	0	0	0	25 262	25 262	0	218 539
	R	19 543	2 092	37 846	0	0	0	0	0	0	3 741	3 741	0	63 222
	S	14 690	5	23 127	0	0	0	0	0	0	2	2	0	37 824
	T	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	291 570	213 794	4 697 758	0	0	0	0	0	0	228 420	228 420	0	5 431 542
GVA	Total	2 783 170	250 069	851 681	4 619	0	178 433	462 101	119 918	50 825	-124 103	691 793	0	4 576 713

3.5.1 Direct methods used

Direct information (Survey & Censuses, Administrative records and Combined data) contributes with 91 percent to the total sources for output and 96 percent for intermediate consumption. These parts are benchmarked every year. The different columns can include different kind of sources for different NACE-sections, therefore read more under section 3.1 and under each NACE sections.

3.5.2 Indirect methods used

3.5.2.1 Benchmark extrapolations

Output

For NACE L the Tenant owners' association renting of premises is based on extrapolations from a benchmark year. The non-benchmark year final estimates are based on extrapolations from a benchmark from the survey Revenues and expenditure for multi-dwelling buildings. Current benchmark year is 2012. The renting of premises is extrapolated with the growth rate for premises area from the national estate taxation register and amounts for SEK 4450 in year 2021 and thus under 0.1 percent of GNI. The indicators used in extrapolations, the growth rate for premises area from the national estate taxation register, is considered representative of the activities to which it is applied. However, after investigation, it has emerged that Tenant owners' association declares their income of renting of premises in its property valuation to the tax authorities. The property assessment is done every three years with rent level t-2, i.e. for the latest property value 2022 the amount income of renting of premises is year 2020. The next property value in 2025 will have amount income of renting of premises for year 2023. By implementing the property valuation from the tax authorities for Tenant owners' association renting of premises the benchmark year will never be older than 3 years. No later then in the next benchmark revision 2029, a new benchmark year will be set.

For NACE R the output of newly produced valuables is based on extrapolations from a benchmark year. The non-benchmark year final estimates are based on extrapolations from a benchmark 2005. The output for new valuables is extrapolated with the growth rate for turnover statistics for antiques and art trade. The output value is SEK 169 million in year 2021 and thus under 0.1 percent of GNI. No later then in the next benchmark revision 2029, a new benchmark year will be set.

3.5.2.2 Commodity Flow Models

Output and Intermediate consumption

No estimation is made using commodity flow models.

3.5.2.3 Consumption of Fixed Capital (PIM)

This column contains estimates of the consumption of fixed capital that are included in output of non-market producers. For a description of the calculation model, see section 4.12.

Consumption of fixed assets is calculated annually and is based on the information available on gross fixed capital formation. This means that the same classifications as used in the compilations of gross fixed capital formation provide the benchmark for the calculations of consumption of fixed assets. Statistics Sweden has disaggregated calculations of the consumption of fixed assets for the producers whose output is measured using the cost approach as well as for the market producers. Statistics Sweden now uses 18 different types of capital assets for non-market producers. The non-market producers in the general government sector are broken down by sub sector and functions by COFOG. The number of subsectors used is 7 and the number of functions depending on subsector with a maximum of about 60 functions.

The lifetime assumptions have been investigated and Sweden tries to monitor new phenomena but also new assumptions/information about service but due to lack of information no major changes has been made. However, in year 2014 a new weighting together was carried out, i.e. different capital consumption rates on detailed level have been weighted together to create capital consumption rates at a higher level, i.e. transport equipment, machinery and buildings and structures. This weighting will be re-done and implemented no later than the next benchmark revision 2029. Nevertheless, the Swedish average service lives correspond well with the service lives in TF FIXCAP. Further reading is available in section 4.12.

3.5.2.4 Dwellings – stratification method

This column contains estimates of output on imputed and actual dwelling services. For a description of the calculation model, see section 3.18. The stratification method is used for all dwellings and the

model is calculated annually. Regional stratification is used in the calculations, as well as stratification on year of construction and on dwelling size. Strata contain four regions, ten construction periods and six different dwelling sizes. Information regarding the region, year of construction and dwelling size stratification as well as actual rents is obtained. No assumptions are made in the dwelling stratification method.

3.5.2.5 *FISIM*

This column contains production of FISIM. For a description of the calculation model, see section 3.17.

- a) The production of FISIM calculated quarterly and the annual data is the sum of the quarters.
- b) FISIM is calculated using the method as outlined in annex A, chapter 14, to Council Regulation (EU) No 549/2013 of 21 May 2013 (ESA 2010).
- c) Interest rates are collected for user sectors non-financial corporations and households and used in the model. Assumptions on interest rates for other user sectors are made and revised on a quarterly basis.

3.5.2.6 *Insurance*

- a) Insurance is calculated on an annual basis and is therefore regularly updated. The method follows the methodology outlined in ESA 2010 chapter 3.17 and a more detailed description of the estimation methods are available in this documentation in section 3.17.
- b) There are no identified major constraints of the current model since it follows the proposed methodology closely. One of the more difficult aspects of the model is the allocation of output to the use side, since the used source statistics doesn't have detailed counterpart information. The current method relies on data from the SBS about the use of some insurance types coupled with assumptions about the division between household final consumption and intermediate consumption. At this point no major internal project is foreseen to improve this area in the short term.
- c) The underlying assumptions for insurance mainly concern the use side allocations of output. These assumptions are not regularly review as there is a lack of data in this area. Last time any review was made was in 2019 when discussions were held with one of the experts from the main Insurance industry organization, Insurance Sweden. These discussions did however not result in any conclusions that put the validity of the current assumptions into question and no change were therefore implemented.

3.5.2.7 *Other extrapolations and models*

3.5.2.7.1 NACE A

Output

Other extrapolation and models in NACE A01 refer to additions for meat from wild game using hunting statistics and amounts for SEK 1 586 million. For the most important output in NACE A02, Forestry and logging, calculations are based on SBS and on sources provided by the National Board of

Forestry on quantities and prices. The net growth is calculated as the gross increment value minus the value of actual gross felling. These parts of the calculation amount to SEK 3 025 million.

3.5.2.7.2 NACE J

Output

In NACE J other extrapolations and models refer partly to entertainment, literary and artistic originals and this amounts for SEK 540 million. Further reading can be done in section 3.16.

The other part refers to value-added tax (VAT) for the intermediate consumption of general government. See section 3.5.2.7.5 and table 3.5.2.

3.5.2.7.3 NACE K

Output and intermediate consumption for NACE K66 *Activities auxiliary to financial services* is based on a model. For a detailed description of the calculations, see section 3.17.

- a) The model is calculated annually.
- b) Output and intermediate consumption are being derived from calculations in NACE 64 and NACE 65, which are based on administrative data. Therefore, the model gives a representative picture of the component.
- c) The assumptions of the model are regularly reviewed. The weights of the product groups in NACE 64 and NACE 65 are checked for consistency annually.

A small part refers to value-added tax (VAT) for the intermediate consumption of general government. See section 3.5.2.7.5 and table 3.5.2.

3.5.2.7.4 NACE L

Intermediate consumption

The intermediate consumption for tenant-owned dwellings is recorded as a part of other E&M. Further reading can be done in section 3.18.3.7

Major parts of the intermediate consumption for owner occupied dwellings, NACE L68, is based on a model which is calculated annually. Further reading can be done in section 3.18.3.8.

3.5.2.7.2 NACE O

Output and Intermediate consumption

Municipal non-profit organisations are a model calculation where it is assumed that revenues, they get in the form of government grants, shall cover their costs i.e. intermediate consumption, wages etc. The data on government grants comes from The Swedish National Financial Management Authority.

The other part refers to value-added tax (VAT) for the intermediate consumption of general government. See section 3.5.2.7.5 and table 3.5.2.

3.5.2.7.2 NACE R

Output

In NACE R other extrapolations and models refer partly to entertainment, literary and artistic originals and amounts for SEK 3 323 million. Further reading can be done in section 3.24.

The other part refers to value-added tax (VAT) for the intermediate consumption of general government. See section 3.5.2.7.5 and table 3.5.2.

3.5.2.7.5 Value added tax of General government

Output and intermediate consumption

The column other extrapolations and models for many NACE sections relate to information about value-added tax (VAT) for the intermediate consumption of general government. See table 3.5.2 for the breakdown by section and 3.1.3.1.1 for more details. Non-market producers' production is a sum of costs and because of that their value-added tax is adjusted both on the income and the cost side. For a description of the calculation model, see section 3.1.3.

- a) The model is calculated annually in the tables for supply and use. The theoretical tax amount for each unit of the General government is then adjusted in accordance with the real amounts from the Swedish Tax Agency.
- b) The Swedish supply and use tables contain supply and use for about 400 product groups. The use side is divided to about 655 different users. The value-added tax is directly linked to the basic price value. Value-added tax is calculated separately for all product groups in the system. Because uses are distributed over many purposes the value-added tax is calculated on a very detailed level. From the linkage to each individual basic price value follows that the surcharge on the basic price is the same every year if the rate has not changed.
- c) Data on VAT repayments to government units, i.e. non-deductible VAT for the government sector, are obtained every year.

Table 3.5.2 VAT included in general government output and intermediate consumption – SEK million, 2021

NACE	Value added tax
H	6 017
J	862
K	25
M	2 666
N	87
O	16 374
P	14 088
Q	25 262
R	3 741
S	2
Total	69 124

3.6 The main approaches taken with respect to exhaustiveness

The primary method applied in the production approach to ensure exhaustiveness is the use of tax audit data. The non-exhaustiveness type *misreporting by producer*, classified as adjustment N6 in the tabular approach, affects the total value added with SEK 155 billion, constituting 89 percent of the total exhaustiveness addition. Tax audit data is mainly used for N6 and refers to both misreported output and intermediate consumption. Further reading can be done in sections 7.1.1 and 7.1.3.2.

The method Model is used for 5.9 percent of the total value added and amounts to SEK 10.2 billion. It consists both of a model for VAT evasion without complicity and for a small part of car benefits. See section 4.7.1 under *taxable benefits* for a description of the model for car benefits and 7.1.3.4 for further reading on the adjustments for non-collected VAT due to fraud. VAT evasion is used for a part of type N6 while the part of car benefits plus own production of firewood is used for type N7.

Exhaustiveness adjustments by type and NACE-section are illustrated in table 3.6.1 for output and intermediate consumption respectively. The columns group adjustments by type where the meaning of the different headings is:

- N1: Producer should have registered (underground producer)
- N2: Illegal producer that fails to register
- N3: Producer is not obliged to register
- N4: Registered legal person is not included in statistics
- N5: Registered entrepreneur is not included in statistics
- N6: Misreporting by the producer
- N7: Statistical deficiencies in the data

Table 3.6.1 Exhaustiveness adjustments by NACE industry - SEK million 2021

NACE rev 2	Exhaustiveness																Total GVA
	Output								Intermediate consumption								
	N1	N2	N3	N4	N5	N6	N7	Total exhaus tiveness s	N1	N2	N3	N4	N5	N6	N7	Total exhaus tiveness s	
A	0	0	0	0	0	1 755	567	2 322	0	0	0	0	0	-2 328	0	-2 328	4 650
B	0	0	0	0	0	122	4	126	0	0	0	0	0	0	0	0	126
C	0	145	0	0	0	6 437	743	7 325	0	0	0	0	0	0	0	0	7 325
D	0	0	0	0	0	0	42	42	0	0	0	0	0	0	0	0	42
E	0	0	0	0	0	0	29	29	0	0	0	0	0	-2 049	0	-2 049	2 078
F	0	0	4 896	0	0	38 297	679	43 872	0	0	2 864	0	0	10 883	0	13 747	30 125
G	0	3 830	0	0	0	28 807	1 130	33 767	0	0	0	0	0	0	0	0	33 767
H	0	0	0	0	0	14 496	120	14 616	0	0	0	0	0	0	0	0	14 616
I	0	0	0	0	0	6 565	56	6 621	0	0	0	0	0	1 619	0	1 619	5 002
J	0	0	0	0	0	9 868	330	10 198	0	0	0	0	0	-5 647	0	-5 647	15 845
K	0	0	0	0	0	1 953	149	2 102	0	0	0	0	0	0	0	0	2 102
L	0	0	0	0	0	4 865	126	4 991	0	0	0	0	0	-3 208	0	-3 208	8 199
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M	0	0	0	0	0	1 278	652	1 930	0	0	0	0	0	-14 997	0	-14 997	16 927
N	0	0	0	0	0	6 236	185	6 421	0	0	0	0	0	-5 546	0	-5 546	11 967
O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P	0	0	0	0	0	1 718	31	1 749	0	0	0	0	0	-1 928	0	-1 928	3 677
Q	0	0	0	0	0	2 756	104	2 860	0	0	0	0	0	0	0	0	2 860
R	0	577	0	0	0	2 611	32	3 220	0	0	0	0	0	0	0	0	3 220
S	0	710	0	0	0	10 139	48	10 897	0	0	0	0	0	0	0	0	10 897
T	1 191	0	0	0	0	0	0	1 191	0	0	0	0	0	0	0	0	1 191
Total	1 191	5 262	4 896	0	0	137 903	5 027	154 279	0	0	2 864	0	0	-23 201	0	-20 337	174 616
									Total GVA	1 191	5 262	2 032	0	0	161 104	5 027	174 616

3.7 NACE A, Agriculture, Forestry and Fishing

NACE-section A is compiled at the A*64 division level of A01 *Crop and animal production, hunting and related service activities*, A02 *Forestry and logging* and A03 *Fishing and aquaculture*. Taken together these makes up 1.6 percent of total GVA.

The section is notable for its sectoral make up that show the second highest share of GVA from non-incorporated household producers in S14 across all NACE-sections 55.3 percent, second only to NACE T, and the only other section where households make up the majority of GVA.

While compilation of both output and intermediate consumption has its basis in the standard approach outlined in Section 3.1 additions and adjustments are made based on figures from *Swedish Board of Agriculture, the National Board of Forestry and the Swedish Agency for Marine and Water Management* and by other adjustments as described below.

Table 3.7.1: NACE A – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in				
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %	
A01	Crop and animal production, hunting and related service activities	97 783	63 978	33 805	53,8	0,7	0,6	0,6
A02	Forestry and logging	96 739	68 664	28 075	44,7	0,6	0,5	0,5
A03	Fishing and aquaculture	2 513	1 578	935	1,5	0,0	0,0	0,0
A	Agriculture, forestry and fishing	170 208	108 450	61 758	100,0	1,6	1,4	1,4

Table 3.7.2: NACE A – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
A01	Crop and animal production, hunting and related service activities	Output	42 524	0	0	55 094	165	97 783
		IC	31 649	0	0	32 191	138	63 978
		GVA	10 875	0	0	22 903	27	33 805
		% of GVA	32,2	0,0	0,0	67,8	0,1	100,0
A02	Forestry and logging	Output	71 167	0	0	25 262	310	96 739
		IC	54 667	0	0	13 752	245	68 664
		GVA	16 500	0	0	11 510	65	28 075
		% of GVA	58,8	0,0	0,0	41,0	0,2	100,0
A03	Fishing and aquaculture	Output	1 953	0	0	560	0	2 513
		IC	1 338	0	0	240	0	1 578
		GVA	615	0	0	320	0	935
		% of GVA	65,8	0,0	0,0	34,2	0,0	100,0
A	Agriculture, forestry and fishing	Output	115 644	0	0	80 916	475	197 035
		IC	87 654	0	0	46 183	383	134 220
		GVA	27 990	0	0	34 733	92	62 815
		% of GVA	44,6	0,0	0,0	55,3	0,1	100,0

Table 3.7.3: NACE A – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

			Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses		380	380	0	
	Administrative Records		-9 640	0	-9 640	
	Combined Data		205 786	145 119	60 667	
	Extrapolation and Models	Benchmark extrapolations		0	0	0
		Commodity Flow Model		0	0	0
		CFC(PIM)		2	0	2
		Dwellings - stratification method		0	0	0
		FISIM		0	0	0
		Insurance		0	0	0
		Other E&M		4 611	0	4 611
Total Extrap+Models			4 613	0	4 613	
Other		0	0	0		
Total (sources)		201 139	145 499	55 640		
Adjustments	Data validation		-6 652	-13 155	6 503	
	Conceptual	Allocation of FISIM		3	6 611	-6 608
		Allocation of insurance		0	347	-347
		Other conceptual		140	-2 587	2 727
		Total conceptual		143	4 371	-4 228
	Exhaustiveness	N1		0	0	0
		N2		0	0	0
		N3		0	0	0
		N4		0	0	0
		N5		0	0	0
		N6		1 755	-2 328	4 083
		N7		567	0	567
	Total exhaustiveness		2 322	-2 328	4 650	
Balancing		83	-167	250		
Total (adjustments)		-4 104	-11 279	7 175		
Final estimate		197 035	134 220	62 815		

3.7.1 Output

Compilation of output has its basis in standard procedures laid out in Section 3.1, added to which are a number of industry specific adjustments explained in more detail in section 3.7.3. Figures for sectors S11 and 14 are described under 3.1.2 while figures for S15 are outlined in more detail in section 3.1.3.2.

Table 3.1.2.1 shows that deducting these common elements leave -11 502 million SEK of industry specific components, which in turn are made up of six elements found in four rows of table 3.7.3:

- *Administrative records:* -9 994 million SEK refer to the removal of agricultural subsidies classified as other subsidies on production that are included in SBS-output.
- *Other extrapolations and models:* 1 586 million SEK refers to production for own final use concerning wild game, compiled using a quantity times price method based on data from the Swedish hunters' association. 3 025 million SEK added to NACE A02 refer to the estimation of net growth of standing timber calculated with data from the Swedish Forest Agency. This consists of quantities in cubic meter of standing timber and prices calculating the increment value in net growth or variation in timber felling in forest land in Sweden. The value of work-in-progress of timber is estimated according to the stumpage value method (EFA §4.75). See description of changes inventories in forestry, chapter 5.11.5, for details.
- *Data Validation:* -6 208 million SEK refer to adjustments made to handle quality issues in the SBS specific for this NACE-section. These issues and the adjustments made are discussed in more detail in 3.7.3. -440 million SEK refers to an error.
- *Exhaustiveness - N7:* 529 million SEK is added in NACE A02 Output of firewood for own final use is also calculated in the model for firewood output, sources are quantities from the annual Energy statistics for one and two dwelling buildings from the Swedish Energy Agency in

combination with purchasers' price information (cubic metres of birch pulpwood) from the Swedish Forestry Data Center/Swedish Forest Agency

It can be noted that there is no exhaustiveness adjustments made in the section under the header N2 – Illegal producers concerning the cultivation of illegal drugs. While some small-scale cultivation is believed to take place, particularly concerning home cultivation of cannabis plants for own consumption, effect on total supply is considered highly marginal. There is no indication that opium, coca or other illegal narcotic plants are cultivated in Sweden. In this context, no attempt is made to calculate domestic output, as consistent data reveal this to be very marginal from random police seizures. It is assumed that all drug consumption in Sweden is supplied through imports. See section 7.1 for more details on illegal output.

Agricultural output of non-farm-based enterprises in the manufacturing industry is almost insignificant. This output is surveyed by the *Production of commodities and industrial services* (IVP) and the SBS and consists primarily of support services to crop production, with output recorded in relevant NACE sections.

3.7.2 Intermediate consumption

Compilation of intermediate consumption for NACE A01 and A03 largely aligns with the standard approach outlined Section 3.1. Compilation of intermediate consumption for NACE A02 aligns with the standard approach outlined Section 3.1

Table 3.1.2.2 shows an industry specific component of IC of -13 155 million SEK, corresponding to the row Data Validation in table 3.7.3. As for output this is an adjustment made to handle quality issues in the SBS for these specific NACE-sections as described in more detail in 3.7.3.

3.7.3 SBS and Functional Source Materials

While the SBS covers NACE-section A and is used when computing NA-figures there are three principal issues concerning the usability of SBS estimates that are relevant specifically for these three industries.

Firstly, as explained in more detail in Sections 3.4 and 10.1 the SBS is compiled by combining administrative records from standardised accounting statements that cover main accounting variables concerning income, costs and balance sheet items with a survey-based component that adds variables to cover product breakdowns and that facilitate transition from private accounting principles to NA-definitions. NACE section A in the SBS lacks this second component, meaning the figures here can largely be seen as a direct compilation of Tax Authority standardised accounting statements.

This lack of survey components means that the first stage of transition from private accounting principles described in section 3.4 is not accomplished in the same way as in other industries. For some components this can be adjusted for based on data available in other sources, with an example in the industry specific adjustment under administrative records removing other subsidies on production, but such corrections cannot be made for all missing SBS survey variables.

Secondly, SBS compilers have raised concerns about a higher-than-normal rate of incomplete standardised accounting statements among units in the section. While these are a part of mandatory tax reporting there are some number of statements left incomplete or inconsistent, which is predominantly an issue among small non-incorporated household producers, prevalent in the section, where the Tax Authority does not always pursue issues that does not affect actual final taxes due. These partially or fully missing income statements are imputed in the process of SBS compilation where this larger than normal share of model estimated output and intermediate consumption makes SBS figures more uncertain than is the case in other industries.

Specifically for non-incorporated household producers there is an additional issue in that incomes and expenditures from of agricultural and forestry properties co-owned by more than one person under certain circumstances can be included in their entirety in income statements provided by all involved owners, meaning there is a risk of double counting. This issue has mainly concerned NACE A02.

To handle these concerns the standard compilation procedure is complemented by a parallel calculation of output and IC based on a functional, product-based approach. These functional estimates by product are calculated by combining data Swedish Board of Agriculture, the National Board of Forestry and the Swedish Agency for Marine and Water Management and some components taken from the SBS.

- A01: Agricultural production by type of product is collected from The Economic Accounts of Agriculture, EAA provided by The Swedish Board of Agriculture. Besides information on other gainful activities collected in surveys by The Swedish Board of Agriculture and the Association of Swedish Farmers (LRF) is used.

The output of agricultural products is derived from the EAA while non-agricultural products produced in the industry are extrapolated from estimated benchmarks with the annual change in the industry in which the product is primarily manufactured. In order to include agricultural production and processing of agricultural products for own consumption these non-market activities has been calculated by using several sources i.e. the Swedish Food Agency, the Swedish Board of Agriculture and the Swedish University of Agricultural Sciences (SLU). These values have since been extrapolated with information from EAA.

Output is regarded as being produced continuously over the entire period of production, not just when the crops are harvested. Hence, growing crops minus supplies are treated as inventories of work-in-progress. They are then turned into inventories of finished stocks when the process is complete. The animals that provide continuous returns such as dairy cattle are investments while animals that are raised just for slaughter are stocks. The Swedish Board of Agriculture provides annual details by type of animal for the investments as well as for the changes in inventories and output. These are included in the NACE division A01. The work in progress, regarding animals raised for slaughter, can be seen in table 5.11.1a. Inventories of finished products is accounted for in the manufacturing industry from the Industrial inventories survey and the estimation method is book-keeping values.

Regarding the intermediate consumption it is difficult to distinguish the intermediate consumption that relates to agricultural production from that relating to secondary production in the EAA. Therefore, SBS is the source of intermediate consumption. However, since the output I derived from EAA, the intermediate consumption is adjusted so that the value added aligns with SBS. There is also no risk of double counting of FISIM and allocated insurance service charge. FISIM is only included once from the compilation of FISIM and insurance from SBS.

- A02: Forestry statistics from the Swedish Forest Agency, the Forestry Research Institute of Sweden, Swedish University of Agricultural Sciences are used for information regarding quantities and prices to allocate production by products. The main output are increments of standing timber and cut down timber delivered to the industry for use as input of pulp wood and saw logs. An addition is made, data validation, which over time has become obsolete. The reason for this is that the issue concerning partially or fully missing income statements that is imputed in the process of SBS compilation has decreased over time. Likewise, the problem with double counting has become less severe. SBS has worked on these areas and has addressed many of the problems.

Forests available for wood supply are generally regarded as cultivated resources in the Swedish NA. The output in NACE division A02 is therefore regarded as being produced continuously over

the entire period of timber growth, not only when the timber is felled. Growing trees are treated as inventories of work-in-progress. They are transformed into inventories of finished stocks of saw logs and pulp wood after they have been cut down. The value of work-in-progress of timber is estimated according to the stumpage value method (ESA §4.75). Data on timber prices by assortment, logging costs and costs for transports from the pick-up place in the forest to the industry is collected from The Swedish Forest Agency and The Forestry Research Institute of Sweden government.

- In NACE rev. 2 Section A, division A03, To give a full account of output in marine and inland waters as well as in aquaculture in detail (functional product-based approach) other sources are used as Fishing in marine waters by commercial fishermen and Fishing in inland waters by commercial fishermen provided by the Swedish Agency for Marine and Water Management, as well as Aquaculture in Sweden by the Swedish Board of Agriculture. Additions is made, data validation, both for output and intermediate consumption. The data validation for output is an addition to the functional, product-based approach in order to reach the same output as in SBS. The data validation concerning intermediate consumption is made to achieve the same gross value added as in SBS.

As put forward in the section 2.3.2, a review of the calculation for NACE A will be carried out.

Table 3.7.3.1: Bridge table; Economic Accounts for Agriculture and the national accounts, by different value, SEK million, 2021

Cronos	EAA		NA			Diferences EAA-NA			
	Value at producer prices	Subsidies on products	Value at basic prices	Value at producer prices	Subsidies on products	Value at basic prices	Value at producer prices	Subsidies on products	Value at basic prices
1000	11 361	0	11 361	9 224	0	9 224	-2 137	0	-2 137
2000	2 967	0	2 967	4 014	0	4 014	1 047	0	1 047
3000	10 330	0	10 330	6 993	0	6 993	-3 337	0	-3 337
4000	6 237	1	6 239	5 618	1	5 619	-619	0	-620
5000	2 263	4	2 268	2 986	4	2 990	723	0	722
6000	1 090	0	1 090	1 652	5	1 657	562	5	567
7000	0	0	0	0	0	0	0	0	0
8000	0	0	0	0	0	0	0	0	0
9000	213	0	213	213	0	213	0	0	0
10000	34 462	6	34 467	30 700	10	30 710	-3 762	4	-3 757
11000	15 297	901	16 198	17 021	901	17 922	1 724	0	1 724
12000	13 872	373	14 244	14 490	373	14 863	618	0	619
13000	29 169	1 273	30 442	31 511	1 274	32 785	2 342	1	2 343
14000	63 631	1 279	64 910	62 211	1 284	63 495	-1 420	5	-1 415
15000	3 829	0	3 829	9 653	0	9 653	5 824	0	5 824
16000	67 459	1 279	68 739	71 864	1 284	73 148	4 405	5	4 409
17000	2 795	0	2 795	24 467	0	24 467	21 672	0	21 672
18000	70 254	1 279	71 533	96 331	1 284	97 615	26 077	5	26 082

Table 3.7.3.1 illustrates supplementary information about the differences per item between the Economic accounts for agriculture and the national accounts. Forage crops produced for own use is not included in the national accounts, which explains some of the difference between the EAA and the national accounts. The differences are also due to balancing adjustments. For non-agricultural products EAA is not used, these are calculated using benchmarks, which explains the difference in variable 17000. The subsidies on products in the national accounts are obtained from the Swedish Financial Management Authority and differ slightly from the EAA-calculations.

3.8 NACE B, Mining and quarrying

The section NACE B corresponds to A*64 division B05-09 *Mining and quarrying* and makes up 1,1 percent of total GVA. Compilations are carried out for the two sub-industries B07 *Mining of metal ores* and B08-09 *Other mining and quarrying and mining support service activities*. There are no active KAUs classified in divisions B05 *Mining of coal and lignite* or B06 *Extraction of crude*. The sectoral make up is dominated by non-financial corporations with some minor contributions from non-incorporated enterprises in the household sector primarily found in A*88 divisions B08 *Other mining and quarrying* and B09 *Mining support service activities*. There are no KAUs in the section belonging to institutional units in sectors 12, 13 or 15 and all units are classified as market producers.

As in NACE C *Manufacturing*, the compilation of intermediate consumption follows the standard approach for market producers outlined in section 3.1.2. The main source for output is the census survey *Production of commodities and industrial services* (IVP), supplemented by figures from the SBS and by other adjustments as described below.

Table 3.8.1: NACE B – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2		Output	IC	GVA	Share of GVA in			
					total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
B	Mining & quarrying	83 521	30 994	52 527	100,0	1,1	1,0	0,9

Table 3.8.2: NACE B – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Output	Institutional sectors					Total economy
			\$11	\$12	\$13	\$14	\$15	
B	Mining & quarrying	83 352	0	0	169	0	83 521	
		IC	30 942	0	0	52	0	30 994
		GVA	52 410	0	0	117	0	52 527
		% of GVA	99,8	0,0	0,0	0,2	0,0	100,0

Table 3.8.3: NACE B – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	79 613	0	79 613	
	Administrative Records	26	0	26	
	Combined Data	2 248	30 856	-28 608	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	0	0	0
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Incurrence	0	0	0
		Other E&M	0	0	0
		Total Extrapolation+Models	0	0	0
	Other	0	0	0	
	Total (sources)	81 887	30 856	51 031	
Adjustments	Data validation	543	0	543	
	Conceptual	Allocation of FISIM	0	44	-44
		Allocation of incurrence	0	184	-184
		Other conceptual	946	-75	1 021
		Total conceptual	946	153	793
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	122	0	122
N7		4	0	4	
Total exhaustiveness	126	0	126		
Balancing	19	-15	34		
Total (adjustments)	1 634	138	1 496		
Final estimate		83 521	30 994	52 527	

3.8.1 Output

Estimates in row *Surveys & Censuses* in Table 3.8.3 refer to net sales from the Production of Commodities and Industrial Services survey (Industrins varuproduktion, IVP) and changes in inventories concerning work-in-progress and finished goods from the Business Inventories survey. The IVP measures deliveries that are adjusted for the changes in inventories to yield figures for production. IVP breaks down sales in the industrial production categories, including goods, repairs/maintenance for outside entities, contract processing for outside entities, assembly/installation at the premises of outside entities and other processing as well as other non-industrial activities included in net sales. Each such category, in turn, is broken down by product.

The IVP surveys all units in NACE divisions B07 and B08 with a turnover exceeding 75 million SEK or having more than 20 employees. For firms in NACE division B08 a lower employee cut-off of 10 is used. Output values for units below the survey cut-off are calculated using Tax Agency's standardized accounting statements (SRU). Total SRU-turnover is adjusted by applying industry coefficients for shares of trading activity and non-industrial activity from the SBS. With an estimate of gross trade turnover, the conversion to margins is done in the same manner as for surveyed units.

Figures from each source as well as a breakdown of IVP-figures by production categories are shown in Table 3.8.4.

Table 3.8.4: NACE B – Output, Surveys & Censuses, SEK million 2021

NACE Rev 2	Surveys & Censuses							
	Production of commodities and industrial services (IVP)						Changes in inventories	Total
	Goods	Repair/maintenance	Contract processing	Assembly/installation	Other processing	Other activities		
B Mining and quarrying	76 128	0	6	0	0	1 616	1 863	79 613

- *Production of goods* is recorded in the IVP as values and quantities broken down by products in accordance with the Combined Nomenclature (CN). Products that are manufactured in another KAU within the same institutional unit and from there sold without further processing are recorded only for the unit in which the products were manufactured. The valuation includes any profit margin for re-selling units.
- *Repairs/maintenance for outside entities* covers remuneration for all such work, apart from that done on buildings, structures and motor vehicles, which is instead included in income from other activity.
- *Contract processing for outside entities* covers remuneration received for processing and compensation for own materials, if used.
- *Assembly/installation for outside entities* represents remuneration for such work carried out by the establishment's own staff.
- *Other processing* covers all other processing, such as bleaching, dyeing, grinding, printing, gilding, etching, lacquering etc.
- *Other activities*: The output value represents income from non-industrial activities. This is recorded in the survey by product in accordance with the Swedish Standard Classification of Products of Activity (Svensk produktindelning, SPIN). Income from trade activities, recorded gross in the survey, is converted to trade margins by applying margin-ratios from the SBS in corresponding industries.
- *Changes in inventories* come from the quarterly Business Inventories survey that is described in more detail in sections 5.11.

The row *Administrative Records* in Table 3.8.3 corresponds to those in the standard approach laid out in section 3.1.2, referring to VAT not collected due to insolvency as well as wages & salaries in kind in the form of car benefits. See Table 3.8.5 for a breakdown and section 3.1.2 for more details and further references.

Table 3.8.5: NACE B – Output, Administrative Records, SEK million 2021

NACE Rev 2	Administrative Records		
	VAT not collected	Car benefits	Total
B Mining and quarrying	10	16	26

The row *Combined Data* in Table 3.8.3 refers to data from Structural Business Statistics (SBS) that can in turn be broken down into three categories. First, with the IVP measuring net sales, the SBS is used for components of other operating income included as output. Secondly, it is used for output in units not covered by the IVP, a category further subdivided into units in NACE 09 *Mining support service activities* and non-industrial ancillary units serving NACE B KAUs. Thirdly, the SBS is used for the statistical unit adjustment described in section 3.1.2. Table 3.8.6 shows the included SBS figures by category.

Table 3.8.6: NACE B – Output, Combined Data, SEK million 2021

NACE Rev 2	Combined data							
	SBS							
	Statistical units	Ancillary units	Licenses	Rental	Employment services	Commissions	Mineral exploration	Total
B Mining and quarrying	704	1 020	0	43	17	1	463	2 248

- *Ancillary units*: Ancillary units with primary activities outside NACE B or C that serve NACE B KAUs are not included in the IVP and output for these units are instead taken from the SBS.
- *Mining support*: NACE B09 *Mining support service activities* is not covered by the IVP and output for this division is instead taken from the SBS.
- *Licenses, Rental, Commissions, Employment services & Commissions*: With IVP measuring net sales, components of production that fall under other operating income are taken from the SBS.
- *Statistical units* refer to the net change in output between industries in the SBS comparing compilations with and without incorporating the statistical unit rework. All other compilations of output were carried out without incorporating this effect. See section 3.1.2 for details.

The row *Data validation* in Table 3.8.3 consists of two adjustments, a component of the statistical unit adjustment described in section 3.1.2, and a correction of implausible figures in NACE 09 *Mining support service activities*. See Table 3.8.7 for breakdown.

Table 3.8.7: NACE B – Output, Data Validation, SEK million 2021

NACE Rev 2	Data validation		
	Statistical units	Corrections	Total
B Mining and quarrying	-26	569	543

Other conceptual in Table 3.8.3 consists of own account production for final use, as well as adjustments based on conceptual differences between business accounting standards used in the IVP and SBS, and those used in national accounts concerning the effect of holding gains on trade margins and with regards to the delineation of economic territory with respect to branches. See Table 3.8.8 for breakdown.

Table 3.8.8: NACE B – Output, Other conceptual, SEK million 2021

	Conceptual					Total
	Branches abroad removed	Holding gains	Own accounts production			
NACE Rev 2			Mineral exploration	Software	R&D	
B Mining and quarrying	-64	-1	474	47	490	946

- *Software, R&D and Mineral exploration*: Own-account production for own final use. All three are treated as GFCF. Estimation methods are described in more detail in section 5.10.3.
- *Holding gains*: Trade activity in the IVP is as described in the *Other Activities* section under *Surveys & Censuses* above, based on gross trade income as measured in the IVP, adjusted by trade margin ratios from the SBS. As such, trade margins in the IVP are conceptually aligned with those in the SBS and thus require adjustments due to differences in principles for the valuation of inventories of goods for resale. This, in turn, leads to differences in valuation of costs of trading goods and trade margins.
- *Branches*: The net effect of adding output for foreign branches operating in Sweden that were not covered by the SBS or IVP and the removal of Swedish branches abroad whose output are included in IVP and SBS figures.

Conceptual adjustments align with those described in the standard approach outlined in section 3.1.2 except for the industry specific inclusion of own account production concerning mineral exploration. All are described in more detail in section 3.4.

Exhaustiveness in Table 3.8.3 covers two categories: N6 concerning misreporting regarding VAT-fraud without complicity and underreported output, and N7, an exhaustiveness adjustment concerning car benefits. Table 3.8.9 breaks down the adjustments by type and further information on exhaustiveness adjustments of output is laid out in section 7.1.

Table 3.8.9: NACE B – Output, Exhaustiveness, SEK million 2021

	Exhaustiveness			Total
	N6		N7	
NACE Rev 2	VAT miss- reporting	Under- reporting	Car benefits	
B Mining and quarrying	10	112	4	126

The row *Balancing* in Table 3.8.3 refers to adjustments the final reconciliation process between production and expenditure sides. See section 6.1.

3.8.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined section 3.1.

As outlined in 3.8.1 own accounts production concerning mineral exploration is classified as GFCF. The same is true for purchased mineral exploration, as explained in more detail in section 5.10.

3.9 NACE C, Manufacturing

Manufacturing is further divided into the 19 A*64 divisions listed in Tables 3.9.1-2, which together give the largest share of overall GVA at 14.6 percent. Compilation is carried out for 35 sub-industries, listed in section 9.1. The sectoral make up is dominated by non-financial corporations complemented by smaller contributions from non-incorporated enterprises in the household sector. There are no KAUs in the section belonging to institutional units in sectors 12, 13 or 15, and all units are classified as market producers.

As with NACE B, *Mining and quarrying* compilation of IC largely follows the standard approach for market producers outlined in section 3.1.2. The main source for output is the census survey *Production of commodities and industrial services* (IVP), complemented by figures from the SBS and by other adjustments as described below.

Table 3.9.1: NACE C – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2		Output	IC	GVA	Share of GVA in			
					total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
C10-12	Manufacture of food products, beverage and tobacco products	195 661	145 631	50 030	7,2	1,0	0,9	0,9
C13-15	Manufacture of textiles, wearing apparel and leather products	12 459	7 692	4 767	0,7	0,1	0,1	0,1
C16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	143 642	101 010	42 632	6,1	0,9	0,8	0,8
C17	Manufacture of paper and paper products	158 950	114 404	44 546	6,4	0,9	0,8	0,8
C18	Printing and reproduction of recorded media	15 131	9 041	6 090	0,9	0,1	0,1	0,1
C19	Manufacture of coke and refined petroleum products	120 053	115 059	4 994	0,7	0,1	0,1	0,1
C20	Manufacture of chemicals and chemical products	91 008	64 028	26 980	3,9	0,6	0,5	0,5
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	146 233	84 266	61 967	8,9	1,3	1,1	1,1
C22	Manufacture of rubber and plastics products	54 209	38 152	16 057	2,3	0,3	0,3	0,3
C23	Manufacture of other non-metallic mineral products	56 225	40 472	15 753	2,3	0,3	0,3	0,3
C24	Manufacture of basic metals	174 014	144 542	29 472	4,2	0,6	0,5	0,5
C25	Manufacture of fabricated metal products, except machinery and equipment	163 043	108 552	54 491	7,8	1,1	1,0	1,0
C26	Manufacture of computer, electronic and optical products	64 659	34 772	29 887	4,3	0,6	0,6	0,5
C27	Manufacture of electrical equipment	69 506	49 700	19 806	2,8	0,4	0,4	0,4
C28	Manufacture of machinery and equipment n.e.c.	261 847	155 924	105 923	15,2	2,2	2,0	1,9
C29	Manufacture of motor vehicles, trailers and semi-trailers	362 803	245 369	117 434	16,8	2,4	2,2	2,1
C30	Manufacture of other transport equipment	54 498	24 784	29 714	4,3	0,6	0,5	0,5
C31-32	Manufacture of furniture, other manufacturing	56 679	34 159	22 520	3,2	0,5	0,4	0,4
C33	Repair and installation of machinery and equipment	36 066	20 280	15 786	2,3	0,3	0,3	0,3
C	Manufacturing	2 236 686	1 537 837	698 849	100,0	14,6	12,9	12,4

Table 3.9.2: NACE C – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
C10-12	Manufacture of food products, beverage and tobacco products	Output	194 687	0	0	974	0	195 661
		IC	145 087	0	0	544	0	145 631
		GVA	49 600	0	0	430	0	50 030
		% of GVA	99,1	0,0	0,0	0,9	0,0	100,0
C13-15	Manufacture of textiles, wearing apparel and leather products	Output	11 801	0	0	658	0	12 459
		IC	7 392	0	0	300	0	7 692
		GVA	4 409	0	0	358	0	4 767
		% of GVA	92,5	0,0	0,0	7,5	0,0	100,0
C16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	Output	142 146	0	0	1 496	0	143 642
		IC	100 335	0	0	675	0	101 010
		GVA	41 811	0	0	821	0	42 632
		% of GVA	98,1	0,0	0,0	1,9	0,0	100,0
C17	Manufacture of paper and paper products	Output	158 942	0	0	8	0	158 950
		IC	114 399	0	0	5	0	114 404
		GVA	44 543	0	0	3	0	44 546
		% of GVA	100,0	0,0	0,0	0,0	0,0	100,0

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
C18	Printing and reproduction of recorded media	Output	14 870	0	0	261	0	15 131
		IC	8 917	0	0	124	0	9 041
		GVA	5 953	0	0	137	0	6 090
		% of GVA	97,8	0,0	0,0	2,2	0,0	100,0
C19	Manufacture of coke and refined petroleum products	Output	120 048	0	0	5	0	120 053
		IC	115 054	0	0	5	0	115 059
		GVA	4 994	0	0	0	0	4 994
		% of GVA	100,0	0,0	0,0	0,0	0,0	100,0
C20	Manufacture of chemicals and chemical products	Output	90 975	0	0	33	0	91 008
		IC	63 993	0	0	35	0	64 028
		GVA	26 982	0	0	-2	0	26 980
		% of GVA	100,0	0,0	0,0	0,0	0,0	100,0
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	Output	146 230	0	0	3	0	146 233
		IC	84 265	0	0	1	0	84 266
		GVA	61 965	0	0	2	0	61 967
		% of GVA	100,0	0,0	0,0	0,0	0,0	100,0
C22	Manufacture of rubber and plastics products	Output	54 041	0	0	168	0	54 209
		IC	38 106	0	0	46	0	38 152
		GVA	15 935	0	0	122	0	16 057
		% of GVA	99,2	0,0	0,0	0,8	0,0	100,0
C23	Manufacture of other non-metallic mineral products	Output	55 968	0	0	257	0	56 225
		IC	40 319	0	0	153	0	40 472
		GVA	15 649	0	0	104	0	15 753
		% of GVA	99,3	0,0	0,0	0,7	0,0	100,0
C24	Manufacture of basic metals	Output	173 996	0	0	18	0	174 014
		IC	144 526	0	0	16	0	144 542
		GVA	29 470	0	0	2	0	29 472
		% of GVA	100,0	0,0	0,0	0,0	0,0	100,0
C25	Manufacture of fabricated metal products, except machinery and equipment	Output	161 086	0	0	1 957	0	163 043
		IC	107 738	0	0	814	0	108 552
		GVA	53 348	0	0	1 143	0	54 491
		% of GVA	97,9	0,0	0,0	2,1	0,0	100,0
C26	Manufacture of computer, electronic and optical products	Output	64 525	0	0	134	0	64 659
		IC	34 722	0	0	50	0	34 772
		GVA	29 803	0	0	84	0	29 887
		% of GVA	99,7	0,0	0,0	0,3	0,0	100,0
C27	Manufacture of electrical equipment	Output	69 449	0	0	57	0	69 506
		IC	49 677	0	0	23	0	49 700
		GVA	19 772	0	0	34	0	19 806
		% of GVA	99,8	0,0	0,0	0,2	0,0	100,0
C28	Manufacture of machinery and equipment n.e.c.	Output	261 395	0	0	452	0	261 847
		IC	155 773	0	0	151	0	155 924
		GVA	105 622	0	0	301	0	105 923
		% of GVA	99,7	0,0	0,0	0,3	0,0	100,0
C29	Manufacture of motor vehicles, trailers and semi-trailers	Output	362 649	0	0	154	0	362 803
		IC	245 251	0	0	118	0	245 369
		GVA	117 398	0	0	36	0	117 434
		% of GVA	100,0	0,0	0,0	0,0	0,0	100,0
C30	Manufacture of other transport equipment	Output	54 271	0	0	227	0	54 498
		IC	24 724	0	0	60	0	24 784
		GVA	29 547	0	0	167	0	29 714
		% of GVA	99,4	0,0	0,0	0,6	0,0	100,0
C31-32	Manufacture of furniture, other manufacturing	Output	55 511	0	0	1 168	0	56 679
		IC	33 676	0	0	483	0	34 159
		GVA	21 835	0	0	685	0	22 520
		% of GVA	97,0	0,0	0,0	3,0	0,0	100,0
C33	Repair and installation of machinery and equipment	Output	34 614	0	0	1 452	0	36 066
		IC	19 564	0	0	716	0	20 280
		GVA	15 050	0	0	736	0	15 786
		% of GVA	95,3	0,0	0,0	4,7	0,0	100,0
C	Manufacturing	Output	2 227 204	0	0	9 482	0	2 236 686
		IC	1 533 518	0	0	4 319	0	1 537 837
		GVA	693 686	0	0	5 163	0	698 849
		% of GVA	99,3	0,0	0,0	0,7	0,0	100,0

Table 3.9.3: NACE C – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	2 086 105	17 584	2 068 521	
	Administrative Records	3 169	0	3 169	
	Combined Data	72 857	1 520 001	-1 447 144	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	0	0	0
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	0	0	0
Total Extrap+Models	0	0	0		
Other	0	0	0		
Total (sources)	2 162 131	1 537 585	624 546		
Adjustments	Data validation	160	-2	162	
	Conceptual	Allocation of FISIM	0	2 662	-2 662
		Allocation of insurance	0	2 789	-2 789
		Other conceptual	66 947	-4 586	71 533
		Total conceptual	66 947	865	66 082
	Exhaustiveness	N1	0	0	0
		N2	145	0	145
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	6 437	0	6 437
		N7	743	0	743
	Total exhaustiveness	7 325	0	7 325	
Balancing	123	-611	734		
Total (adjustments)	74 555	252	74 303		
Final estimate		2 236 686	1 537 837	698 849	

3.9.1 Output

Estimates in row *Surveys & Censuses* in Table 3.9.3 refer to net sales from the Production of Commodities and Industrial Services Survey (Industrins varuproduktion, IVP) and changes in inventories concerning work-in-progress and finished goods from the Business Inventories survey. The IVP measures deliveries that are adjusted for the changes in inventories to yield figures for production. IVP breaks down sales in the industrial production categories, including goods, repairs/maintenance for outside entities, contract processing for outside entities, assembly/installation at the premises of outside entities and other processing as well as other non-industrial activities included in net sales. Each such category, in turn, is broken down by product.

The IVP surveys all units in NACE C10-33 with a turnover exceeding 75 million SEK or having more than 20 employees. For firms in NACE class C2015 and groups C235-239, a lower employee cut-off of 10 is used. Output values for units below the survey cut-off are calculated using Tax Agency's standardized accounting statements (SRU). Total SRU-turnover is adjusted by applying industry coefficients for shares of trading activity and non-industrial activity from the SBS. With an estimate of gross trade turnover, the conversion to margins is done in the same manner as for surveyed units.

Figures from each source as well as a breakdown of IVP-figures by production categories are shown in Table 3.9.4.

Table 3.9.4: NACE C – Output, Surveys & Censuses, SEK million 2021

NACE Rev 2	Surveys & Censuses						Changes in inventories	Total
	Production of commodities and industrial services (IVP)							
	Goods	Repair/maintenance	Contract processing	Assembly/installation	Other processing	Other activities		
C Manufacturing	1 701 652	38 815	21 862	15 709	94 496	216 178	-2 607	2 086 105

- *Production of goods* is recorded in the IVP as values and quantities broken down by products in accordance with the Combined Nomenclature (CN). Products that are manufactured in another

KAU within the same institutional unit and from there sold without further processing are recorded only for the unit in which the products were manufactured. The valuation includes any profit margin for re-selling units.

- *Repairs/maintenance for outside entities* covers remuneration for all such work, apart from that done on buildings, structures and motor vehicles, which is instead included in income from other activity.
- *Contract processing for outside entities* covers remuneration received for processing and compensation for own materials if used.
- *Assembly/installation for outside entities* represents remuneration for such work carried out by the establishment's own staff.
- *Other processing* covers all other processing, such as bleaching, dyeing, grinding, printing, gilding, etching, lacquering etc.
- *Other activities*: The output value represents income from non-industrial activities. This is recorded in the survey by product in accordance with the Swedish Standard Classification of Products of Activity (Svensk produktindelning, SPIN). Income from trade activities, recorded gross in the survey, is converted to trade margins by applying margin-ratios from the SBS in corresponding industries.
- *Changes in inventories* come from the quarterly Business Inventories survey that is described in more detail in sections 5.11.

The row *Administrative Records* in Table 3.9.3 corresponds to the standard approach laid out in section 3.1.2, referring to VAT not collected due to insolvency as well as wages & salaries in kind in form of car benefits. See Table 3.9.5 for breakdown and section 3.1.2 for more details and further references.

Table 3.9.5: NACE C – Output, Administrative Records, SEK million 2021

	Administrative Records		
	VAT not collected	Car benefits	Total
NACE Rev 2			
C Manufacturing	561	2 608	3 169

The row *Combined Data* in Table 3.9.3 refers to data from Structural Business Statistics (SBS) that can in turn be broken down into three categories. First with the IVP measuring net sales the SBS is used for components of other operating income included as output. Secondly, it is used for output in non-industrial ancillary units serving NACE C KAUs that are not covered by the IVP. Thirdly, the SBS is used for the statistical unit adjustment described in section 3.1.2. Table 3.9.6 shows the included SBS figures by category.

Table 3.9.6: NACE C – Output, Combined Data, SEK million 2021

	Combined data						
	SBS						
	Statistical units	Ancillary units	Licenses	Rental	Employment services	Commissions	Total
NACE Rev 2							
C Manufacturing	17 841	35 833	13 556	3 173	1 502	952	72 857

- *Ancillary units*: Ancillary units with primary activities outside NACE B or C that serve NACE B KAUs units are not included in the IVP and output for these units are instead taken from the SBS.
- *Licenses, Rental, Commissions, Employment services & Commissions*: With IVP measuring net sales components of production that falls under other operating income are taken from the SBS.

- *Statistical unit* refer to the net change in output between industries in the SBS comparing compilations with and without incorporating the statistical unit rework. All other compilations of output were carried out without incorporating this effect. See section 3.1.2 for details.

The row *Data validation* in Table 3.9.3 consists of three adjustments. The first is a component of the statistical unit adjustment described in section 3.1.2. The other two consist of corrections of IVP figures: one adds SBS output for one KAU erroneously classified as non-industrial and thus excluded from the IVP, while the other removes IVP output for one KAU that had been moved out of the section in the SBR and SBS but remained included in delivered IVP figures. See Table 3.9.7 for breakdown.

Table 3.9.7: NACE C – Output, Data Validation, SEK million 2021

	Data validation		
	Statistical units	Corrections	Total
NACE Rev 2			
C Mining and quarrying	-157	317	160

Other conceptual in Table 3.9.3 consists of own account production for final use, as well as adjustments based on conceptual differences between business accounting standards used in the IVP and SBS, and those used in national accounts concerning the effect of holding gains on trade margins and with regards to the delineation of economic territory with respect to branches. See Table 3.9.8 for breakdown.

Table 3.9.8: NACE C – Output, Other conceptual, SEK million 2021

	Other conceptual					Total
	Branches abroad removed	Holding gains	Own accounts production			
			Mineral exploration	Software	R&D	
NACE Rev 2						
C Manufacturing	-864	-1 508	0	7 624	61 695	66 947

- *Software and R&D*: Own account production for own final use, both are treated as GFCF. Estimation methods are described in more detail in section 5.10.3.
- *Holding gains*: Trade activity in the IVP is as described in the *Other Activities* section under *Surveys & Censuses* above based on gross trade income as measured in the IVP, adjusted by trade margin ratios from the SBS. As such trade margins in the IVP are conceptually aligned with those in the SBS and thus require adjustments due to differences in principles for the valuation of inventories of goods for resale. This, in turn, leads to differences in valuation of costs of trading goods and trade margins.
- *Branches*: The net effect of adding output for foreign branches operating in Sweden that were not covered by the SBS or IVP and the removal of Swedish branches abroad whose output are included in IVP and SBS-figures.

Conceptual adjustments align with those described in the standard approach outlined in section 3.1.2, and all are described in more detail in section 3.4.

Exhaustiveness in Table 3.9.3 covers three categories: N2 concerning illegal manufacturing of distilled spirits, N6 concerning misreporting regarding VAT-fraud without complicity and underreported output, and N7, an exhaustiveness adjustment concerning car benefits.

There is no industrial manufacturing of illegal drugs considered to be taking place.

Table 3.9.9 breaks down the adjustments by type and further information exhaustiveness adjustments of output is laid out in section 7.1.

Table 3.9.9: NACE C – Output, Exhaustiveness, SEK million 2021

	Exhaustiveness					Total
	N2	N6		N7		
	Illegal distilling	VAT miss- reporting	Under- reporting	Car benefits		
NACE Rev 2						
C Manufacturing	145	385	6 052	743		7 325

The row *Balancing* in Table 3.9.3 refers to adjustments the final reconciliation process between production and expenditure sides. See section 6.1 for further information.

3.9.2 Intermediate consumption

Compilation of intermediate consumption largely follows the standard procedure for market producers outlined in section 3.1.

Table 3.1.2.2 shows an industry specific component of IC of 17 584 million SEK made up of one industry specific addition concerning the row *Surveys & Censuses* in Table 3.9.3 that refers to Production of Commodities and Industrial Services Survey (Industrins varuproduktion, IVP) figures on output delivered by one local unit to another in the same KAU. A number of large KAUs report output in the IVP-survey by local unit, meaning these figures include some output delivered by one local unit to another in the same KAU. Internal deliveries are recorded separately in the survey and are added to IC in the producing industry, meaning that these internal deliveries have no effect on GVA. This IC is not included in the fully KAU-based SBS.

3.10 NACE D, Electricity, Gas, Steam and Air Conditioning Supply

Compilation of NACE Section D and the corresponding A*64 division D35 *Electricity, Gas, Steam and Air Conditioning Supply* is done at the three-digit NACE-group levels of D351 *Electric power generation, transmission and distribution*, D352 *Manufacture of gas; distribution of gaseous fuels through mains* and D353 *Steam and air conditioning supply*.

Together these three make up 2,6 percent of total GVA, 81 percent of which is made up of activity in D351 followed by 18 percent in D353 and one percent from D352, see table 3.10.1. The section is predominantly made up of S.11 non-financial corporations with more minor contributions from other institutional sectors, see table 3.10.2.

Compilation of both output and IC largely follows the standard approach outlined in Section 3.1.

Table 3.10.1: NACE D – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in				
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %	
D	Electricity, gas steam and air-condition supply	234 307	111 412	122 895	100,0	2,6	2,3	2,2

Table 3.10.2: NACE D – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2	Output	Institutional sectors					Total economy
		S11	S12	S13	S14	S15	
D	Electricity, gas steam and air-condition supply	232 864	0	1 003	389	51	234 307
	IC	110 857	0	314	198	43	111 412
	GVA	122 007	0	689	191	8	122 895
	% of GVA	99,3	0,0	0,6	0,2	0,0	100,0

3.10.3: NACE D – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	1 046	357	689	
	Administrative Records	279	0	279	
	Combined Data	214 684	115 607	99 077	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	2	0	2
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	0	0	0
Total Extrap+Models		2	0	2	
Other	0	0	0		
Total (sources)	216 011	115 964	100 047		
Adjustments	Data validation	27	0	27	
	Conceptual	Allocation of FISIM	0	683	-683
		Allocation of insurance	0	520	-520
		Other conceptual	18 203	-5 730	23 933
		Total conceptual	18 203	-4 527	22 730
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	0	0	0
		N7	42	0	42
	Total exhaustiveness	42	0	42	
Balancing	24	25	49		
Total (adjustments)	18 296	-4 552	22 848		
Final estimate		234 307	111 412	122 895	

3.10.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S.11, S.13 and S.14 are described under 3.1.2 while figures for S.15 are outlined in more detail in section 3.1.3.2.

Table 3.1.2.1 shows that deducting these common elements leave 18 086 million SEK of industry specific components, which in turn are made up of four elements found in three rows of table 3.10.3:

- *Administrative records*: 130 million SEK refer to electricity certificates.
- *Data validation*: 10 million SEK refer to an error.
- *Other Conceptual*: Two industry specific adjustments, described in more detail in section 3.4.2. The first larger component of 18 996 million SEK adds output from the Swedish National Grid Operator (Svenska Kraftnät) not included in their SBS reporting while the second removes 1 050 million SEK that relate to another private grid operators' activities outside of Swedish economic territory.

3.10.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined Section 3.1.

3.10.3 Household production of energy for own final use

Own-account production of energy by households is currently not included in the production. Nonetheless, work is ongoing in accordance with the envisaged transversal reservation I on household electricity production. The incorporation of household electricity production into the compilation is scheduled to be implemented by September 2026 at the latest.

3.11 NACE E, Water supply; sewerage, waste management and remediation activities

Swedish national accounts compile NACE Section E at the A*64 division level of E36 *Water collection treatment and supply*, and E37-39 *Water sewerage, waste management and remediation*.

The section stands out in terms of sectoral composition with the highest share GVA from S13 General government seen across goods producing Sections A through F at 23.5 percent, all of which is made up of market producing KAUs found in the local government subsector. The bulk of remaining GVA is made up of S11 non-financial corporations with some close to marginal contributions from non-incorporated household producers in S14 and non-profit institutions serving households in S15.

Compilation of both output and IC largely follows the standard approach outlined in Section 3.1.

Table 3.11.1: NACE E – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
E36 Water collection, treatment and supply	14 325	8 737	5 588	18,0	0,1	0,1	0,1
E37-39 Sewerage; waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services	78 744	53 361	25 383	82,0	0,5	0,5	0,5
E Water supply; sewerage, waste management and remediation activities	93 069	62 098	30 971	100,0	0,6	0,6	0,6

Table 3.11.2: NACE E – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
E36	Water collection, treatment and supply	Output	8 593	0	5 731	1	0	14 325
		IC	5 647	0	3 089	1	0	8 737
		GVA	2 946	0	2 642	0	0	5 588
		% of GVA	52,7	0,0	47,3	0,0	0,0	100,0
E37-39	Sewerage; waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services	Output	65 320	0	13 194	144	86	78 744
		IC	44 732	0	8 546	7	76	53 361
		GVA	20 588	0	4 648	137	10	25 383
		% of GVA	81,1	0,0	18,3	0,5	0,0	100,0
E	Water supply; sewerage, waste management and remediation activities	Output	73 913	0	18 925	145	86	93 069
		IC	50 379	0	11 635	8	76	62 098
		GVA	23 534	0	7 290	137	10	30 971
		% of GVA	76,0	0,0	23,5	0,4	0,0	100,0

3.11.3: NACE E – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	18 986	11 710	7 276	
	Administrative Records	134	0	134	
	Combined Data	78 340	54 135	24 205	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	0	0	0
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	0	0	0
Total Extrap+Models	0	0	0		
Other	0	0	0		
Total (sources)	97 460	65 845	31 615		
Adjustments	Data validation	-588	0	-588	
	Conceptual	Allocation of FISIM	1	113	-112
		Allocation of insurance	0	626	-626
		Other conceptual	-3 855	-2 403	-1 452
		Total conceptual	-3 854	-1 664	-2 190
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
N6		0	-2 049	2 049	
N7		29	0	29	
Total exhaustiveness	29	-2 049	2 078		
Balancing	22	-34	56		
Total (adjustments)	-4 391	-3 747	-644		
Final estimate	93 069	62 098	30 971		

3.11.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11, 13 and 14 are described under 3.1.2 while figures for S15 are outlined in more detail in section 3.1.3.2.

Table 3.1.2.1 shows that deducting common elements leave -4 004 million SEK of industry specific components, which in turn are made up of two elements found their respective rows of table 3.11.3:

- *Data validation*: -587 million SEK refer to an error.
- *Other Conceptual*: - 3 417 million SEK refer to an adjustment made with respect to Returpack, which is a privately-owned company responsible for the recycling of metal cans and PET-bottles in Sweden. Revenues of the company, which are included in the SBS, consist largely of fees that are paid back when cans and bottles are returned and should therefore not be included in the national accounts. For more information, see section 3.4.

3.11.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined Section 3.1.

3.12 NACE F, Construction

NACE-section F is compiled at the section and A*64 division level with a GVA share of 6.6 percent that makes it the largest individual industry at the level of compilation.

The section is primarily made up of market producing units the vast majority of which are made up of non-financial corporations, with a compared to other sections relatively large contribution from non-incorporated household producers. A smaller share of activity arises from producers for own final use found both in the household sector in the form of homeownership households engaged in construction activities for own use and in the general government sector in the form of non-incorporated construction activities carried out in local governments.

Compilation of both output and IC largely follows the standard approach outlined in Section 3.1.

Table 3.12.1: NACE F – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2		Output	IC	GVA	Share of GVA in			
					total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
F	Construction	765 036	447 088	317 948	100,0	6,6	5,9	5,7

Table 3.12.2: NACE F – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
		Output	722 811	0	4 518	37 707	0	765 036
		IC	428 189	0	2 967	15 932	0	447 088
		GVA	294 622	0	1 551	21 775	0	317 948
F	Construction	% of GVA	92,7	0,0	0,5	6,8	0,0	100,0

Table 3.12.3: NACE F – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	4 518	2 967	1 551	
	Administrative Records	4 869	0	4 869	
	Combined Data	947 193	671 795	275 398	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	0	0	0
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	0	0	0
Total Extrap+Models		0	0	0	
Other	0	0	0		
Total (sources)	956 580	674 762	281 818		
Adjustments	Data validation	-1 294	82 869	-84 163	
	Conceptual	Allocation of FISIM	0	3 360	-3 360
		Allocation of insurance	0	220	-220
		Other conceptual	-234 197	-327 615	93 418
		Total conceptual	-234 197	-324 035	89 838
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	4 896	2 864	2 032
		N4	0	0	0
		N5	0	0	0
		N6	38 297	10 883	27 414
		N7	679	0	679
	Total exhaustiveness	43 872	13 747	30 125	
Balancing	75	-255	330		
Total (adjustments)	-191 544	-227 674	36 130		
Final estimate	765 036	447 088	317 948		

3.12.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11, 13 and 14 are described under 3.1.2 while figures for S15 are outlined in more detail in section 3.1.3.2.

Table 3.1.2.1 shows that deducting common elements leave -229 860 million SEK of industry specific components, which in turn are made up of three elements found in three rows of table 3.12.3

- *Data validation*: -1 301 million SEK refer to an error.
- *Other conceptual*: -233 455 million SEK refer to removing SBS output of construction subcontracting services.
- *Exhaustiveness N3*: 4 896 million SEK refer to production for own final use in owner occupied dwellings i.e. production of goods for own fixed capital formation. See section 7.1 for details.

In SBS there are specific questions on income from construction work carried out abroad as main- or subcontractor. Production which takes place abroad is derived from the SBS value of main- and subcontracting activities abroad but is set equal to the export of construction services to ensure consistency with the Balance of Payments. The residual between SBS main- and subcontracting activities abroad and export value of construction services is distributed equally among the product groups in NACE F according to size. The costs for subcontractors abroad are accounted for as a cost for the main contractor, since no value for main contractors abroad is recorded.

3.12.2 Intermediate Consumption

As for output, compilation of intermediate consumption largely aligns with the standard approach outlined Section 3.1.

Table 3.1.2.2 shows an industry specific component of IC of -230 591 million SEK, in turn made up of three elements present in three rows in table 3.12.3

- *Data validation*: 82 869 million SEK refers to an adjustment of SBS-IC to account for the fact that the survey question on subcontracting is framed differently on the output compared to the intermediate side. The adjustment, together with conceptual adjustments, make sure that if the subcontractor is in another NACE activity than NACE F this is still counted for as a cost for the companies in NACE F. See details of this concept in section 3.12.3.1.
- *Other conceptual*: -316 324 million SEK refer to removing SBS IC of subcontracting services in construction.
- *Exhaustiveness N3*: 2 864 million SEK refer to IC arising from production for own final use in owner occupied dwellings. See section 7.1 for details.

Concerning the adjustments for subcontracting services it could be noted that the data validation item is set to make the total adjustments for subcontractors the same for both output and IC, in that $-233\,455 = 82\,869 - 316\,324$. These adjustments taken together can thus be seen as a net recording of subcontracting services that has no effect on total GVA.

3.12.3 Validation of Exhaustiveness

3.12.3.1 Construction output, NACE F41_43

Statistics Sweden follow recommendation 2 of GNIG/179 Rev.1, annex 2 by collecting estimates of total revenue and expenditure for subcontracting. However, for a long time there was an unexplained discrepancy still occurring when confronting data from the production approach with the expenditure approach. This has been determined to occur because the survey design asks slightly different

questions regarding revenue, compared to expenditure, for subcontractors. From the output side the SBS is corrected for income invoiced to *other construction companies in Sweden*. From the intermediate side the SBS collects expenditure on subcontracting carried out by *another company in Sweden*. This slightly different phrasing in the survey means that the expenditure side for subcontracts is always greater in absolute terms than the income side, since it is not restricted to only construction companies but includes subcontracting in different NACE activities. Therefore, we perform the above-mentioned correction, i.e. on the intermediate side the subcontracting is adjusted downward with the difference between the expenditure and revenue for subcontracting. With that, the expenditure for subcontracting is as big as the revenue from subcontracting. This also implies that if the subcontractor is in another NACE activity, this still counts as a cost for the companies in NACE F. The share of input in relation to production is also analysed and compared to other countries.

Different level of revenue from subcontracting activities and total expenditure on subcontracting in NACE F could in theory also be an indicator of missing revenue of subcontractors. If it was an issue about missing (hidden) revenue, the revenue and expenditure for subcontractors would be expected to develop differently over the years. But, as NA have investigated this issue, the variables have very similar growth. With new knowledge about what the revenues and expenditures contain, the differences can be explained as in the former section for the major part.

3.12.3.1.1 Confronting sources

Construction activities are defined as the erection, alteration and repair of accommodation buildings and other structures, including demolition and foundation works, installations and miscellaneous ancillary activities. The output of the industry comprises both activities carried out by actual construction and building trade enterprises and construction on own account by central and local government, self-builders etc. In order to be classified as a construction activity, construction on own account must either constitute new production or as regards repair and maintenance work, be carried out by separate establishments or similar units. This means that much of the repair and maintenance work carried out by own staff must be treated as intermediate consumption of materials and not of building production services.

If the construction work extends over several accounting periods, the output produced each period should be treated as being sold to the purchaser at the end of the period i.e., accrual recording. The main sources for construction related investments are the SBS and the special compilations of dwellings. The SBS data is collected from company book-keeping, and they have certain rule to follow, called successive profit reduction which means that the degree of compilation in each period is invoiced to the client. For dwellings the construction cost is distributed with the aid of a construction cost profile, based on data supplied on beginning and end of the project, so that the cost incurred each quarter can be calculated. The investment calculations are described in more detail in chapter 5.10.

The output of NACE F41_43 is validated against the expenditure approach i.e. the sum of construction-related investments and repairs, which was the previous calculation method.

The two independent estimates of calculating GVA in the Construction industry are the production and the expenditure approach. The production approach uses SBS as its main source for output and intermediate consumption. The output of NACE F by the production approach is validated against the expenditure approach i.e. the sum of all construction-related investments and repairs. The output value by the expenditure approach is obtained as the sum of all investments and expenditures for repair and maintenance services in respect of buildings and structures. The output value for the construction industry is then obtained by deducting building production produced within other industries.

On the expenditure side calculations, NA compile the construction-related investments with the help of prices and quantities for newly constructed conventional multi-dwelling buildings, relevant quality indexes measuring average change in estimated quality as well as building permits/dwelling starts in

newly constructed buildings. These calculations are done in line with recommendations 15-18 and 21 of the GNIG/179 Rev.1. Repair and improvements to dwellings from households beyond ordinary maintenance are identified from the source Housing costs. For the owner-occupied dwellings the respondent is asked, with separate questions about their maintenance and repair (IC) and their reconstruction and extension (GFCE) of the dwelling. The statistics are based on interview responses and the respondent get information and instructions what should be accounted for as reparation and what should be accounted for as reconstruction and extension. For a detailed breakdown of these calculations, see chapter 5.10.

Repairs to buildings and structures are calculated for all sectors and industries in which they occur. The statistical material is almost entirely derived from the SBS. Repair estimates are explicitly available for agriculture and for permanent dwellings.

Output is also validated against the quarterly calculation of NACE F, which is based on Quarterly Economic Statistics, a new product covering the private sector's value added, investments, inventories and operating profit.

The largest correction for hidden activities takes place in the construction industry, both on the output and the IC side. The sources for these adjustments are the updated reports from The Swedish Tax Agency regarding undeclared work, confronted with already existing levels of hidden production and hidden intermediate consumption. In general, gross output is underreported and intermediate consumption is over-stated, in order to evade income tax or VAT. The construction industry is special in the sense that the intermediate consumption is corrected *upward*, rather than downward – which would be the standard procedure. This comes from the reasoning that in the construction industry, entrepreneurs cannot purchase material for hidden production using the company card, as it would result in too high an input coefficient, which is one variable the Swedish Tax Agency controls. So, when a subcontractor, for example, does engage in hidden activity, the material is bought, to some extent, privately and caught as household consumption in the NA. Conceptually, therefore, NACE F is believed to have more incentive to underreport intermediate consumption than to overreport it in order to avoid taxes.¹⁷

3.12.3.2 Major and special product groups

The construction product group F41_43, the commissions G46B, trade margin (G46D), other real estate letting (L682A) and architectural and technical consultancy (M7112) all use data from the SBS while concrete, cement and plaster products (C236), repairs of machinery and equipment (C331A), Installation of industrial machinery, equipment (C332) use data from the Production of commodities and industrial services (IVP). Production of sand, gravel, rock and clay (B0812) stems from confronting industrial production in SBS with the special product groups that rely on IVP, with the difference between the sources being explicitly assigned to B0812 (while holding the level of industrial production from SBS for the total). N80, surveillance services, is extrapolated from a benchmark year with the help of the growth in surveillance activities according to SBS in industry N80 and a relevant price index. For car benefits (N7710) see section 3.2 and for Software and R&D produced on own account (J62AEG, M72EG) see section 5.10.3. Construction carried out abroad for a period less than one year is recorded as domestic output. SBS include questions about construction output made abroad by general contractors as well as subcontractors. However, production which takes place abroad is set equal to the export of construction services to ensure consistency. The residual between export of the construction service, derived from International Trade in services survey (ITSS), and the SBS is distributed equally among the product groups in NACE F according to size. The source for exports of construction is the foreign trade statistic in services. For more details

¹⁷ This adjustment was discussed under direct verification of NACE F in June 2023.

on calculation methods on construction services abroad (M711A) see section 5.14 and for further reading about compliance with international recommendations, see section 7.1.3.6.

3.12.3.3 Intermediate consumption

Information on some large projects characteristic to the industry has been validated against the calculations for intermediate consumption. Information has been supplied in meetings with the Swedish Construction Federation (Sveriges Byggindustrier). A collaboration with the environmental accounts took part in preparation for the benchmark revision of 2024 to investigate the construction industry's intermediate consumption through, among other things, analyses of input-output tables. The project provided material improvements of the discrepancy between the production and expenditure side estimates.

3.13 NACE G, Wholesale and retail trade; repair of motor vehicles and motorcycles

NACE G is compiled at the A*64 division level of:

- G45 Wholesale and retail trade and repair of motor vehicles and motorcycles
- G46 Wholesale trade, except of motor vehicles and motorcycles
- G47 Retail trade, except of motor vehicles and motorcycles

What distinguishes these industries from other areas of the economy is the high share of output made up of trade margins including merchanting. This share of margins range between 47 percent in G45 to 70 and 82 percent in G46 and G47 respectively. The lower share in the first division comes from G45 also covering maintenance and repair services of motor vehicles that at 41 percent of division output make up most of the remainder.

The bulk of section activity is made up of market producers, most of which are non-financial corporations with smaller contributions from non-incorporated household producers and market producer KAU in the general government sector, all of which are found in the local government subsector. A last component of GVA comes from non-profit institutions serving households, all of which are non-market producers.

As can be noted in the derivation of SBS output shown in section 3.4 output of trade margins including merchanting is included in standard SBS-formulation of output. Consequently there is no need for any special sources or methods for estimating trade margins in this section (NACE G) and that trade carried out by units in other sections are measured in the same way as those in dedicated trade enterprises covered here without the need to adjust for any potential double counting.

Compilation of both output and IC thus largely follows the standard approach outlined in Section 3.1.

Table 3.13.1: NACE G – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
G45	142 732	62 901	79 831	14,6	1,7	1,5	1,4
G46	506 926	217 971	288 955	53,0	6,0	5,3	5,1
G47	323 229	146 983	176 246	32,3	3,7	3,3	3,1
G	972 887	427 855	545 032	100,0	11,3	10,1	9,7

Table 3.13.2: NACE G – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
G45	Wholesale and retail trade and repair of motor vehicles and motorcycles	Output	134 050	0	0	8 682	0	142 732
		IC	60 383	0	0	2 518	0	62 901
		GVA	73 667	0	0	6 164	0	79 831
		% of GVA	92,3	0,0	0,0	7,7	0,0	100,0
G46	Wholesale trade, except of motor vehicles and motorcycles	Output	504 735	0	0	2 191	0	506 926
		IC	216 759	0	0	1 212	0	217 971
		GVA	287 976	0	0	979	0	288 955
		% of GVA	99,7	0,0	0,0	0,3	0,0	100,0
G47	Retail trade, except of motor vehicles and motorcycles	Output	311 832	0	1 162	9 377	858	323 229
		IC	143 308	0	521	2 801	353	146 983
		GVA	168 524	0	641	6 576	505	176 246
		% of GVA	95,6	0,0	0,4	3,7	0,3	100,0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	Output	950 617	0	1 162	20 250	858	972 887
		IC	420 450	0	521	6 531	353	427 855
		GVA	530 167	0	641	13 719	505	545 032
		% of GVA	97,3	0,0	0,1	2,5	0,1	100,0

Table 3.13.3: NACE G – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

			Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses		1 509	868	641	
	Administrative Records		6 992	0	6 992	
	Combined Data		951 009	445 897	505 112	
	Extrapolation and Models	Benchmark extrapolations		0	0	0
		Commodity Flow Model		0	0	0
		CFC(PIM)		18	0	18
		Dwellings - stratification method		0	0	0
		FISIM		0	0	0
		Insurance		0	0	0
		Other E&M		0	0	0
Total Extrap+Models			18	0	18	
Other		0	0	0		
Total (sources)		959 528	446 765	512 763		
Adjustments	Data validation		2 202	0	2 202	
	Conceptual	Allocation of FISIM		6	4 359	-4 353
		Allocation of insurance		0	2 409	-2 409
		Other conceptual		-22 162	-25 523	3 361
		Total conceptual		-22 156	-18 755	-3 401
	Exhaustiveness	N1		0	0	0
		N2		3 830	0	3 830
		N3		0	0	0
		N4		0	0	0
		N5		0	0	0
N6			28 807	0	28 807	
N7			1 130	0	1 130	
Total exhaustiveness		33 767	0	33 767		
Balancing		-454	-155	-299		
Total (adjustments)		13 359	-18 910	32 269		
Final estimate		972 887	427 855	545 032		

3.13.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11, 13 and 14 are described under 3.1.2 while figures for S15 are outlined in more detail in section 3.1.3.2.

Table 3.1.2.1 shows that deducting these common elements leave 3 830 million SEK of industry specific components, made up of one element found under the N2 - Exhaustiveness header in table 3.13.3 that refer to trade margins from the illegal trafficking of drugs and smuggling of alcohol and tobacco products. See section 7.1 for further information.

As explained further in sections 3.1.2 and 3.4 the SBS does not on its own yield a correct valuation of output of margins that accounts for holding gains and losses.in a manner consistent with ESA2010

guidance. Instead, this is handled as a conceptual adjustment in the standard approach using information from the quarterly business inventories survey.

3.13.2 Intermediate consumption

Compilation of intermediate consumption fully aligns with the standard approach outlined in Section 3.1.

3.13.3 Validation of Exhaustiveness

Validation and consistency checks are performed for NACE G in order to obtain reliable estimates, as put forward in the GNP Committee Task Force on Distribution (CPNB 205). Estimates from the demand and the supply side are confronted with each other for validation purposes with the help of supply and use tables. Turnover statistics and Household Final Consumption Expenditure (HFCE) from both the Household consumption statistics (HCS) and Household budget survey (HBS) are compared as a part of the compilation process for HFCE.

Maintenance and repair services of motor vehicles constitute its own product group (G45A) in the Swedish National Accounts. In the balancing process of supply and use of product group G45A output and Household Final Consumption Expenditure are validated against each other in the sense that they are both more or less unaffected by the balancing process. Instead, residuals for product group G45A are dealt with almost exclusively by adjusting intermediate consumption.

The statistical source for the production side (output) of repairs of motor vehicles is the SBS. The compilation on the expenditure side (Household Final Consumption Expenditure, HFCE, of COICOP 0723) includes a breakdown of total car repairs by insurance repairs and repairs paid for directly by households. For more information on maintenance and repair of motor vehicles in Household Final Consumption Expenditure (COICOP 0723) see section 5.7.

3.13.4 Trade margins

The compilation of output of trade margins is made by industry (all industries, not just NACE G). In the benchmark revision of the Swedish National Accounts in 2019 a new method for calculating output of trade margins was introduced, a method relying more than before on the SBS. For all industries the output of trade margins is now compiled as the difference between the revenues from the sales and the costs of purchases of the goods sold according to the SBS. Or, expressed somewhat simplified, the difference between income and expenditure on trading goods. The risk for double counting when industries have trade as a secondary activity is therefore avoided.

As for non-NACE G industries, trade activities in non-market producing units are included.

One immediate result of the implementation of this new method was a large upward revision of the output of trade margins and, linked to this, a large upward revision of Household Final Consumption Expenditure (HFCE).

The total value of trade margins in the economy is thus given from the supply side, as the sum of output value of trade margins from all industries. Furthermore, the supply of trade margins is divided into four categories: motor trade margins, wholesale trade margins, retail trade margins and transport margins. Looking at the use side, this total value of trade margins is allocated to

- 1) different product groups
- 2) different uses (within every product group), e.g. intermediate consumption, household consumption, gross fixed capital formation, exports
- 3) different categories of trade margins (within every combination of product group and use) - motor trade margins, wholesale trade margins, retail trade margins, transport margins

The allocation of the total value of trade margins to different product groups and the allocation of the trade margin (of the individual product group) to different uses are both based on information from the survey on international trade in goods statistics (ITGS) and on the SBS and using some simplifying assumptions.

The division of the trade margins on the use side into motor trade margins, wholesale trade margins, retail trade margins and transport margins is made on the most detailed level, i.e. for every combination of product group and use. The shares applied in the division of a trade margin between wholesale trade margin and retail trade margin depend on which kind of use the trade margin refers to (intermediate consumption, household consumption, gross fixed capital formation, exports etc.). Motor trade margins, by assumption, only exist for certain product groups.

The total use of trade margins (i.e. the sum of all calculated trade margins by product, by use and by category) is balanced against the total supply of trade margins. In addition, the final balancing of supply and use of trade margins is made for each of the four categories mentioned above. In other words

- the total supply of motor trade margins should equal the total use of motor trade margins
- the total supply of wholesale trade margins should equal the total use of wholesale trade margins
- the total supply of retail trade margins should equal the total use of retail trade margins
- the total supply of transport margins should equal the total use of transport margins

The final balancing of the four categories is performed with the use of the RAS method, a well-established iterative procedure.

The SBS data is based on the business accounting. The general rule in Swedish business accounting is the lowest value principle, i.e. the lower of acquisition value and sales value. In times of increasing prices the trade margins calculated with SBS data will include holding gains since the inventories of the goods sold will be valued at acquisition cost in business accounting. In times of decreasing prices inventories will be valued at replacement cost, which is in agreement with the valuation according to the National Accounts. Adjustments for holding gains and losses were implemented in the GNIQ and RQ 2024 and in the nationally published data of the minor revision in May 2025. For information on the steps taken to exclude holding gains and losses from trade margins see section 5.11.3 and 3.4.2

The output of the retail trade industry (NACE G47) contains trade activities in local government. These trade activities consist of output that stems from commercial activities that the local governments directly or indirectly provide to citizens. The statistical source is the Annual accounts for municipalities and regions.

Trade margins generated by illegal activities are recorded for liquor, beer, wine, tobacco and cigarettes and drugs. In the estimation model used in the Swedish National Accounts an assumption is made that there is no intermediate consumption connected to these illegal activities. For instance, when it comes to drugs as a product, the model assumes that the sum of imports, trade margins and a minor production (total resources) equals HFCE, which is also the total expenditure. No intermediate consumption exists. For more information see chapter 7.

3.14 NACE H, Transportation and Storage

Figures for section H are calculated for nine industries, listed in section 9.1, with H49 and H52 subdivided below the two-digit NACE-division level. Non-financial corporations make up the largest share of GVA with a smaller but substantial share from general government units that all fall under H52 *Warehousing and support activities for transportation* made up by a mixture of market and non-market producing units. Smaller contributions come from households, mostly active in H4932 *Taxi operations*, and a more marginal component from non-profit institutions serving households.

A notable feature of the section is found in H51 *Air transport* and the industry's largest constituent unit, Scandinavian Airlines System. This corporation is a consortium jointly owned by the Scandinavian countries with a Swedish share of 3/7th and Danish and Norwegian shares at 2/7th respectively. By agreement between the countries, the consortium's incomes and expenditures are divided between them in proportion to ownership. Accordingly, 3/7th of output, IC and GVA are assigned to the Swedish economy. This breakdown is handled in the SBS-compilation, in part aided by a company specific survey that cover income and expenditures for the consortium as a whole as well as an estimate of sales to and from Swedish subjects. With this adjustment made in the SBS there are no company specific adjustments needed in compilation of the national accounts.

Compilation of both output and IC thus largely follow the standard approach outlined in Section 3.1.

Table 3.14.1: NACE H – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2		Output	IC	GVA	Share of GVA in			
					total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
H49	Land transport and transport via pipelines	218 075	116 836	101 239	43,8	2,1	1,9	1,8
H50	Water transport	30 435	22 149	8 286	3,6	0,2	0,2	0,1
H51	Air transport	12 760	12 167	593	0,3	0,0	0,0	0,0
H52	Warehousing and support activities for transportation	316 036	212 560	103 476	44,7	2,2	1,9	1,8
H53	Postal and courier activities	36 853	19 148	17 705	7,7	0,4	0,3	0,3
H	Transportation and storage	614 159	382 860	231 299	100,0	4,8	4,3	4,1

Table 3.14.2: NACE H – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy
		S11	S12	S13	S14	S15	
	Output	201 841	0	251	15 983	0	218 075
	IC	111 980	0	441	4 415	0	116 836
	GVA	89 861	0	-190	11 568	0	101 239
H49	Land transport and transport via pipelines	88,8	0,0	-0,2	11,4	0,0	100,0
	% of GVA						
	Output	30 198	0	88	149	0	30 435
	IC	21 971	0	110	68	0	22 149
	GVA	8 227	0	-22	81	0	8 286
H50	Water transport	99,3	0,0	-0,3	1,0	0,0	100,0
	% of GVA						
	Output	12 731	0	0	29	0	12 760
	IC	12 153	0	0	14	0	12 167
	GVA	578	0	0	15	0	593
H51	Air transport	97,5	0,0	0,0	2,5	0,0	100,0
	% of GVA						
	Output	203 874	0	110 869	1 059	234	316 036
	IC	159 472	0	52 652	284	152	212 560
	GVA	44 402	0	58 217	775	82	103 476
H52	Warehousing and support activities for transportation	42,9	0,0	56,3	0,7	0,1	100,0
	% of GVA						
	Output	36 440	0	0	413	0	36 853
	IC	19 055	0	0	93	0	19 148
	GVA	17 385	0	0	320	0	17 705
H53	Postal and courier activities	98,2	0,0	0,0	1,8	0,0	100,0
	% of GVA						
	Output	485 084	0	111 208	17 633	234	614 159
	IC	324 631	0	53 203	4 874	152	382 860
	GVA	160 453	0	58 005	12 759	82	231 299
H	Transportation and storage	69,4	0,0	25,1	5,5	0,0	100,0
	% of GVA						

Table 3.14.3: NACE H – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	34 929	11 523	23 406	
	Administrative Records	28 715	17 818	10 897	
	Combined Data	511 518	379 849	131 669	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	44 523	0	44 523
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	6 017	6 017	0
Total Extrap+Models	50 540	6 017	44 523		
Other	0	0	0		
Total (sources)	625 702	415 207	210 495		
Adjustments	Data validation	52	1	51	
	Conceptual	Allocation of FISIM	2	1 751	-1 749
		Allocation of insurance	10	1 513	-1 503
		Other conceptual	-26 310	-35 487	9 177
		Total conceptual	-26 298	-32 223	5 925
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	14 496	0	14 496
		N7	120	0	120
	Total exhaustiveness	14 616	0	14 616	
Balancing	87	-125	212		
Total (adjustments)	-11 543	-32 347	20 804		
Final estimate	614 159	382 860	231 299		

3.14.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11, 14 as well as market producing units in S13 are described under 3.1.2 while figures for remaining S13 and the entirety of S15 contributions are outlined in more detail in section 3.1.3.

Table 3.1.2.1 shows that deducting these common elements leave -4 355 million SEK of industry specific components, made up of three elements found under three header in table 3.14.3:

- *Administrative records:* 201 million SEK refer to subsidies on products in H51 not included in SBS-output with figures instead taken from general government compilations.
- *Data validation:* 28 million SEK refer to an error.
- *Other conceptual:* -4 584 million SEK refer to adjustments made to both output and IC to net SBS-figures concerning taxi operation services. With the same figure removed from both transactions there is no effect on GVA. See 3.4 for more details.

Output in the section is notable for including most of the product subsidies in the Swedish economy, most of which are found in H49B, NACE H4931+ H4939 that covers public transport and scheduled bus services.

3.14.2 Intermediate consumption

As for output, compilation of intermediate consumption largely aligns with the standard approach outlined section 3.1.

Table 3.1.2.2 shows an industry specific component of IC of -4 584 million SEK, made up of one element found under the header Other conceptual in table 3.14.3 that refer to adjustments made to both output and IC to net SBS-figures concerning taxi operation services. With the same figure removed from both transactions there is no effect on GVA. See section 3.4 for more details.

3.15 NACE I, Accommodation and food service activities

The section is compiled at the division level of I55 *Accommodation* and NACE I56, *Food and beverage service activities*. Producing units mainly consist of non-financial corporations with smaller contributions to GVA from non-incorporated household producers and non-profit institutions serving households. Both former sectors are made up of market producers and the later of non-market producers.

Compilation of both output and IC are fully aligned with the standard approach outlined in Section 3.1, meaning there are no industry specific adjustments to either output or IC.

Table 3.15.1: NACE I – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in				
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %	
I	Accommodation; food and beverage service activities	151 354	90 522	60 832	100,0	1,3	1,1	1,1

Table 3.15.2: NACE I – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2	Output	Institutional sectors					Total economy
		S11	S12	S13	S14	S15	
I	Accommodation; food and beverage service activities	138 422	0	0	12 577	355	151 354
	IC	84 088	0	0	6 300	134	90 522
	GVA	54 334	0	0	6 277	221	60 832
	% of GVA	89,3	0,0	0,0	10,3	0,4	100,0

Table 3.15.3 NACE I – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

			Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses		131	131	0	
	Administrative Records		1 592	0	1 592	
	Combined Data		143 820	88 181	55 639	
	Extrapolation and Models	Benchmark extrapolations		0	0	0
		Commodity Flow Model		0	0	0
		CFC(PIM)		24	0	24
		Dwellings - stratification method		0	0	0
		FISIM		0	0	0
		Insurance		0	0	0
		Other E&M		0	0	0
Total Extrapolation+Models			24	0	24	
Other		0	0	0		
Total (sources)		145 567	88 312	57 255		
Adjustments	Data validation		-92	-1	-91	
	Conceptual	Allocation of FISIM		3	1 087	-1 084
		Allocation of insurance		0	213	-213
		Other conceptual		-761	-671	-90
		Total conceptual		-758	629	-1 387
	Exhaustiveness	N1		0	0	0
		N2		0	0	0
		N3		0	0	0
		N4		0	0	0
		N5		0	0	0
N6			6 565	1 619	4 946	
N7			56	0	56	
Total exhaustiveness		6 621	1 619	5 002		
Balancing		16	-37	53		
Total (adjustments)		5 787	2 210	3 577		
Final estimate		151 354	90 522	60 832		

3.15.1 Output

Compilation of output follow the standard procedures laid out in Section 3.1 where figures for sectors S11, 13 and 14 are described under 3.1.2 while figures for S15 are outlined in more detail in section 3.1.3.2.

3.15.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined Section 3.1.

3.15.3 Validation of Exhaustiveness

Validation and consistency checks are performed to obtain reliable estimates, as put forward in GNIG 180 Rev.1 (Distribution). In the balancing process output is validated against VAT registers and Statistics Sweden's Restaurant index, accommodation statistics and the household consumption of hotel services and other overnight accommodation.

Accommodation services provided by households through online lodging platforms is regulated to some extent depending on the type of residence. Renting out your apartment through Airbnb can be considered a hotel business, which means that the use of the tenant-owned property is contrary to its purpose. A tenant-owned property should be used for residential purposes and not as a commercial activity. If a tenant-owned property owner sublets their apartment without permission, this constitutes grounds for forfeiture. I.e. if you rent out your tenant-owned property without permission, you risk being "evicted", meaning you will be forced to sell the home. If you refuse to sell, the bailiff will be involved and will forcefully sell your home.

Concerning rental apartments, if you are going to rent out the entire apartment, you must always apply for permission from the landlord. A permission from the landlord is very rare. If you do not obey the notice and continue to rent out your apartment, you risk the landlord terminating your lease, meaning you will be evicted¹⁸.

Concerning owner occupied dwellings, there are no regulations about short-term accommodation services except the tax rules.

In year 2022 The Swedish Tax agency carried out a tax control on the reporting of private rental income concerning the year 2020. The outcome of this control is analysed in the report *Skattekontrollens effekt på redovisningen av privata hyresintäkter, Rapportnummer 2024:5 (The effect of tax control on the reporting of private rental income, report number 2024:5)* The purpose of the report is to evaluate the effect of the Swedish Tax Agency's control of private rental income on the tax declaration behaviour of private individuals.

The underreporting of rental income is assessed as significant. However, the control has clear effects, not only directly but also in the long term, on the proportion who declare this income correctly. It is therefore recommended that the Swedish Tax Agency continue to control private rental income. With the new reporting obligation that will require platform operators to submit data to the Swedish Tax Agency from the 2023 income year (DAC7), the Swedish Tax Agency has the opportunity to monitor the market and landlords in a better way than before. This allows the Tax Agency to provide guidance and conduct spot checks or targeted checks against potential tax evasion more effectively.

Sweco¹⁹ estimates for year 2021 that the short-term accommodation revenues totalled around 1.5 billion SEK. Thus, the household's accommodation services provided by households through online lodging platforms is just a part of this. Therefore, NA assess that the accommodation services

¹⁸ So far, during the year 2025, 37 cases have been taken up by the rental board. In more than half of these cases, tenants have been forced to leave their homes due to unauthorized rental via the booking service Airbnb. Source: Sveriges Television (SVT) (Swedish public service television company).

¹⁹Sweco is one of Europe's leading architectural and engineering consultancies, planning and designing the sustainable communities and cities of the future. They offer technical consultancy services in a wide range of areas, including architecture, buildings, urban districts, water, energy, industry and transport infrastructure.

provided by households is non-material. However, as this is a growing phenomenon this issue is under investigation.

3.15.3.1 Valuation of output of the services of hotels and restaurants and cafes

The output in this industry mainly consists of hotel and accommodation services, but also food, beverages, etc. sold and consumed by costumers.

3.15.3.2 GNI estimates for export and imports of hotel and restaurant services

The exports and imports of hotel and restaurants services are measured in the Balance of payments statistics travel item. Detailed information is available in the tourist satellite accounts on product group level of the exports of hotel and restaurant services, but only on a total level of the imports of hotel and restaurant services.

3.16 NACE J, Information and communication

In the Swedish national accounts Section J is calculated at the two-digit division level of

- J58 Publishing activities
- J59 Motion picture, video and television programme production, sound recording and music publishing activities
- J60 Programming and broadcasting activities
- J61 Telecommunications
- J62 Computer programming, consultancy and related activities
- J63 Information service activities

Concerning GNI Expert Group's recommendations on Software (GNIG/026A) adjustments are made across industries in the standard approach laid out in section 3.1. Market output concerning software is calculated in the same way as other products while production for own final use is added as a conceptual adjustment, described in more detail in section 3.4. Adjustments to IC concerning purchased software is also handled in the standard approach as a conceptual adjustment and described in more detail in the same section. GFCF concerning software is described in detail in section 5.10. Given this, compilation of both output and IC can largely be made in line with the standard approach outlined in section 3.1

Table 3.16.1: NACE J – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
J58	106 600	52 545	54 055	13,7	1,1	1,0	1,0
J59-60	66 043	44 640	21 403	5,4	0,4	0,4	0,4
J61	138 905	79 802	59 103	14,9	1,2	1,1	1,1
J62-63	504 552	243 704	260 848	66,0	5,4	4,8	4,6
J	816 100	420 691	395 409	100,0	8,2	7,3	7,0

Table 3.16.2: NACE J – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
J58	Publishing activities	Output	104 600	0	0	1 968	32	106 600
		IC	52 295	0	0	223	27	52 545
		GVA	52 305	0	0	1 745	5	54 055
		% of GVA	96,8	0,0	0,0	3,2	0,0	100,0
J59-60	Motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities	Output	54 945	0	8 613	2 412	73	66 043
		IC	39 251	0	4 755	607	27	44 640
		GVA	15 694	0	3 858	1 805	46	21 403
		% of GVA	73,3	0,0	18,0	8,4	0,2	100,0
J61	Telecommunications	Output	138 885	0	0	20	0	138 905
		IC	79 794	0	0	8	0	79 802
		GVA	59 091	0	0	12	0	59 103
		% of GVA	100,0	0,0	0,0	0,0	0,0	100,0
J62-63	Computer programming, consultancy and related activities; Information service activities	Output	500 164	0	0	4 237	151	504 552
		IC	242 932	0	0	737	35	243 704
		GVA	257 232	0	0	3 500	116	260 848
		% of GVA	98,6	0,0	0,0	1,3	0,0	100,0
J	Information and communication	Output	798 594	0	8 613	8 637	256	816 100
		IC	414 272	0	4 755	1 575	89	420 691
		GVA	384 322	0	3 858	7 062	167	395 409
		% of GVA	97,2	0,0	1,0	1,8	0,0	100,0

Table 3.16.3 NACE J – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	87	87	0	
	Administrative Records	9 379	3 992	5 387	
	Combined Data	750 651	444 380	306 271	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	156	0	156
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	1 402	862	540
		Total Extrap+Models	1 558	862	696
Other	0	0	0		
	Total (sources)	761 675	449 321	312 354	
Adjustments	Data validation	-2 570	-1	-2 569	
	Conceptual	Allocation of FISIM	2	2 822	-2 820
		Allocation of insurance	9	536	-527
		Other conceptual	46 684	-26 095	72 779
		Total conceptual	46 695	-22 737	69 432
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	9 868	-5 647	15 515
N7		330	0	330	
	Total exhaustiveness	10 198	-5 647	15 845	
Balancing	102	-245	347		
	Total (adjustments)	54 425	-28 630	83 055	
Final estimate		816 100	420 691	395 409	

3.16.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11 and 14 are described under 3.1.2 while figures for S13 and 15 are outlined in more detail in section 3.1.3.

Table 3.1.2.1 shows that deducting these common elements leave 540 million SEK of industry specific components, made up of one element found under the Extrapolation and models header in table 3.16.3 that refer to output of artistic originals. See section 3.5 and 5.10 for further information.

Services provided under the Mini One-Stop-Shop (MOSS) Scheme are judged to be included in SBS in the normal fashion based on net turnover.

3.16.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined section 3.1.

3.17 NACE K, Financial and insurance activities

Financial and insurance services are mainly produced by units in the financial corporations' sector where the level of compilation in national accounts align with the A*64 division level of:

- K64 Financial activities, except insurance and insurance associations and friendly societies
- K65 Insurance and pension funding, except compulsory social security
- K66 Activities auxiliary to financial and insurance activities.

The vast majority of GVA in NACE K come from kind of activity units found in institutional sector S12, financial corporations. Some smaller contributions come from non-incorporated household producers, general government and non-profit institutions serving households (NPISH). Kind of activity units in corporations and households are made up of market producers while units in general government and NPISH are all non-market producers.

While the section shares some individual elements with the standard procedure laid out in section 3.1 the bulk of both output and intermediate consumption are calculated from industry specific source materials and compilation procedures that are explained in full in this section.

Output in NACE K is distributed by the product groups listed in table 3.17.1.

Table 3.17.1 NACE K, output per product group, SEK million 2021

NACE K64 output		
Product group		SEK million
K64A	FISIM	119 918
K64B	Other bank services	67 110
K64HPEA	Financial services exc. pension and insurance, NPISH	621
J62AEG	Software produced on own account	5 194
J62A	IT-services	418
K6411	The Riksbank	911
N7710	Car benefits	374
M72EG	R&D produced on own account	1 219
M74A	Translation, other services	44
G46B	Wholesale trade, except motor vehicles	22
L682A	Other real estate letting	53
R92	Gambling and betting services	4
Total		195 888
NACE K65 output		
Product group		SEK million
K6512	Non-life insurance	34 638
K653	Pension fund services	20 800
K6511	Life insurance	9 347
K652	Reinsurance	6 896
L682A	Other real estate letting	3 209
J62AEG	Software produced on own account	1 314
M692	Accounting, bookkeeping and auditing	665
M72EG	R&D produced on own account	159
N7710	Car benefits	104
K65OPEA	Public production for own final consumption. Insurance	-386
Total		76 746
NACE K66 output		
Product group		SEK million
K66	Activities auxiliary to financial intermed	27 178
J62AEG	The Riksbank	1 117
M72EG	R&D produced on own account	912
N7710	Car benefits	161
Total		29 368

Production, intermediate consumption and gross value added are shown by industry and institutional sector in tables 3.17.2-3.17.3.

Table 3.17.2 NACE K – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2		Output	IC	GVA	Share of GVA in			
					total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
K64	Financial service activities, except insurance and pension funding	195 888	66 636	129 252	62,3	2,7	2,4	2,3
K65	Insurance, reinsurance and pension funding, except compulsory social security	76 746	21 117	55 629	26,8	1,2	1,0	1,0
K66	Activities auxiliary to financial services and insurance activities	29 368	6 662	22 706	10,9	0,5	0,4	0,4
K	Financial and insurance activities	302 002	94 415	207 587	100,0	4,3	3,8	3,7

Table 3.17.3: NACE K – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2			Institutional sectors					Total economy
			S11	S12	S13	S14	S15	
K64	Financial service activities, except insurance and pension funding	Output	0	195 096	0	0	792	195 888
		IC	0	66 239	0	0	397	66 636
		GVA	0	128 857	0	0	395	129 252
		% of GVA	0,0	99,7	0,0	0,0	0,3	100,0
K65	Insurance, reinsurance and pension funding, except compulsory social security	Output	0	76 467	279	0	0	76 746
		IC	0	21 005	112	0	0	21 117
		GVA	0	55 462	167	0	0	55 629
		% of GVA	0,0	99,7	0,3	0,0	0,0	100,0
K66	Activities auxiliary to financial services and insurance activities	Output	0	27 859	0	1 509	0	29 368
		IC	0	6 562	0	100	0	6 662
		GVA	0	21 297	0	1 409	0	22 706
		% of GVA	0,0	93,8	0,0	6,2	0,0	100,0
K	Financial and insurance activities	Output	0	299 422	279	1 509	792	302 002
		IC	0	93 806	112	100	397	94 415
		GVA	0	205 616	167	1 409	395	207 587
		% of GVA	0,0	99,1	0,1	0,7	0,2	100,0

Table 3.17.4 provides values of output, intermediate consumption and gross value added distributed by different sources and adjustments.

Table 3.17.4 NACE K – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	391	391	0	
	Administrative Records	72 662	97 595	-24 933	
	Combined Data	20 867	0	20 867	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	87	0	87
		Dwellings - stratification method	0	0	0
		FISIM	119 918	0	119 918
		Insurance	50 825	0	50 825
		Other E&M	25 239	7 003	18 236
	Total Extrap+Models	196 069	7 003	189 066	
	Other	0	0	0	
	Total (sources)	289 989	104 989	185 000	
	Adjustments	Data validation	-67	1	-68
Conceptual		Allocation of FISIM	6	3 868	-3 862
		Allocation of insurance	0	55	-55
		Other conceptual	9 905	-14 429	24 334
		Total conceptual	9 911	-10 506	20 417
Exhaustiveness		N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	1 953	0	1 953
		N7	149	0	149
Total exhaustiveness		2 102	0	2 102	
Balancing	67	-69	-136		
Total (adjustments)	12 013	-10 574	22 587		
Final estimate	302 002	94 415	207 587		

- *Surveys and censuses* refer to the NPISH survey (described in sections 3.1.3.2 and 5.8)
- *Administrative records* mainly refer to data from financial supervisory authority and the Riksbank financial market data (output and IC). For the central government records regarding expenditure by National Export Credits Guarantee Board (output and IC, described in 3.1.3.1). In addition, it also refers to parts of car benefits and non-collected VAT due to insolvency (Output, see sections 3.2 and 7.1).
- *Extrapolations and models* refer to model estimates of FISIM, K66 and insurance, including general government value-added tax (VAT) for the intermediate consumption of general government and NPISH consumption of fixed capital, see also section 3.5.2.7.5. (CFC and other E&M, see 5.9).
- *Conceptual* refers to software, R&D, financial leasing, insurances, FISIM, other taxes on production (see 3.4 and 4.8).
- *Exhaustiveness* refers to hidden production and part of the car benefits (see 7.1).
- *Balancing* refers to the final reconciliation process between production and expenditure sides, see section 6.1.

Components from non-market producers in NPISH and general government can be seen tables 3.1.3.1 through 3.1.3.4 while components for market producers that are shared with the standard approach in other industries are described in section 3.1.2 and shown in tables 3.1.2.1 and 3.1.2.2.

3.17.1 NACE K64, Financial activities, except insurance and insurance associations and friendly societies

The industry comprises the institutional groups: banks, credit market corporations, securities corporations, mutual funds, fund corporations and investment corporations. All except investment corporations and the Riksbank are under the supervision of the Swedish Financial Supervisory Authority.

3.17.1.1 Statistical sources

Enterprises belonging to NACE 64, which are under the supervision of the Financial Supervisory Authority, respond to an annual survey submitting their profit and loss accounts and balance sheets and specifications based on final accounts statistics. The results are used by Statistics Sweden, the Riksbank and the Financial Supervisory Authority. On a yearly basis Statistics Sweden compiles the profit and loss account and balance sheet data for each institutional group (banks, credit market enterprises, securities corporations, mutual funds, fund corporations and investment corporations). The statistics are published at Statistics Sweden's webpage. Investment corporations are questionnaire-surveyed by Statistics Sweden. The balance sheet data with specifications are collected quarterly.

3.17.1.2 Output

The output of credit institutions and investment corporations consists mainly of FISIM, product group K64A, and what is referred to in the profit and loss account as commissions charges, i.e. product group K64B.

3.17.1.2.1 FISIM: Calculation, allocation and impact on GNI

Introduction

Since 2005 all member states of the European Union are obliged to allocate financial intermediation services indirectly measured (FISIM) by institutional sector. The FISIM calculations are defined in

annex A, chapter 14, to Council Regulation (EU) No 549/2013 of 21 May 2013 (ESA 2010). The chapter treats the production and allocation of FISIM as well as the breakdown into intermediate and final consumption. The council decision of 16 March 2010 (2010/196/EU, Euratom) states that FISIM shall be allocated for the establishment of the gross national income for the purposes of the European Union's budget and its own resources. Please note that the numerical examples and tables in this section refers to the year 2021.

In short FISIM relates to the services that financial intermediaries (FI) supply to borrowers and lenders of money. These services are not directly charged as a fee to the customers by these institutions. In order to cover this production in the national accounts system an indirect measure has to be used. It is based on the fact that FIs pay lower rates of interest to those who lend them money and charge higher rates of interest to those who borrow from them. This implicit margin between interest rates on lending and deposits is used to cover FIs expenses and provide an operating surplus.

FISIM is exclusively produced by financial corporations engaged in financial intermediation of loans and deposits for which they control the rate of interest. In Sweden a majority of the FISIM production takes place in banks, which account for a dominant share of loans and deposits.

Sources

The main sources for the FISIM calculations is the central bank of Sweden, the Riksbank's, compiled by Statistic Sweden, monthly balance data of monetary financial institutions, MFI and the Swedish Financial Supervisory Authority's quarterly balance and profit and loss data for financial enterprises.

Additional data is taken from the Riksbank's Financial Market Statistics (FMR) and the annual summary accounts for municipalities. The data consists of banks' deposit and lending rates, housing credit institution's lending rates, banks and housing credit institutions' lending by collateral (all FMR) and local government sub-sectors municipalities' and regions' loans in foreign currency. Imports and exports of FISIM are calculated using the Riksbank's Balance of Payment data on assets and liabilities by sector.

FISIM producers

FISIM producers in Sweden are mainly found in sub-sector 122 Deposit-taking corporations except the Riksbank for the year 2021 with some minor values for subsector 125. FISIM producers in sub-sector 122 are banks, housing credit institutions and other monetary credit market corporations. The financial institutions of subsector 125 do not act as intermediaries with respect to their stock of loans. They are outside the scope of FISIM producers. Banks and housing credit institutions' stock of loans with dwellings as collateral is used to distinguish households as owners of dwellings. The subsector S125 in the Swedish economy consists, according to the present standard of classification of institutional sectors INSEKT 2014 used by Statistics Sweden, of the following subdivisions:

- Financial vehicle corporations engaged in securitisation transactions (FVC)
- Non-monetary security and derivative dealers
- Financial corporations engaged in lending
- Investment corporations
- Financial intermediaries n.e.c., except insurance corporations and pension funds

Companies engaged in financial leasing are by law authorized and supervised by the Swedish Financial Supervisory Authority. These companies are, unless they are authorized banks, credit market corporations. All credit market corporations under supervision of the Swedish Financial Supervisory Authority are MFI (with the exception of entities classified in sector 125) according to the register of

the Riksbank. The register of MFI according to the Riksbank is consistent with subsector 122 in the business register used by Statistics Sweden. All MFI and sector 125 report monthly balance sheet data to the Riksbank or to the Swedish Financial Supervisory Authority and quarterly balance sheet and profit and loss account to the Swedish Financial Supervisory Authority. Statistic Sweden's FISIM calculation uses both these data sources and therefore includes financial leasing companies in the stocks of loans of subsector 122. Branches of Swedish companies situated abroad are not included in the FISIM calculations and these economic actors are removed from the data supplied by the Riksbank. Branches on the Swedish economic territory belonging to foreign enterprises is included in the source data NA receives.

Table 3.17.5 Supply of FISIM 2021

Sector	Description	MSEK	Percent
S.122	Other monetary financial institutions (OMFI)	119 918	94
	-Banks	71 224	56
	-Housing credit institutions	42 707	34
	-Other monetary credit market corporations	5 284	4
S.125	Other financial intermediaries, except insurance corporations and pension funds	703	1
S.2	Rest of the world	7 221	6
	Total	127 139	100

Domestic FISIM

Method

FISIM is calculated using the method as outlined in annex A, chapter 14, to Council Regulation (EU) No 549/2013 of 21 May 2013 (ESA 2010) and thus uses the following three components:

- 1) Average stocks of loans and deposits for sub-sector 122 and 125 by user sectors.
- 2) Accrued interest for sub-sector 122 and 125 by user sectors.
- 3) Internal reference rate

FISIM is calculated as the sum of each quarter's:

(deposit stocks × internal reference rate) - interest payable on deposits +
interest receivable on loans - (loan stocks × internal reference rate)

Stock data by sector

For banks and housing credit institutions the Riksbank's monthly balance data of monetary financial institutions is used for data on stocks of loans and deposits by sector. An average of the opening and closing balance of each month in the quarter is used. For other monetary credit market corporations, the Swedish Financial Supervisory Authority's quarterly data is used. This information is also available by sector. An average of opening and closing balance is used.

In the Riksbank's monthly Financial Market Statistics, data on households and non-profit institutions serving households (NPISH) total deposits is divided into NPISH, households as owners of unincorporated enterprises and households. The definition of households as owners of unincorporated enterprises used in the Financial Market Statistics is consistent with the ESA definition. Banks and housing credit institutions' stock of loans with dwellings as collateral is used to distinguish households as owners of dwellings.

Interest by sector

Interest, payable and receivable, is calculated using the Riksbank's deposit and lending rates upon stock data. There are no available data on interest flows per sector. Interest flows are only provided for

credit institutions, i.e. MFI and other financial intermediaries, except insurance corporations and pension funds, and the rest of the economy.

There are sector specific average interest rates for households and non-financial corporations. The average interest rates are weighted by the maturity of the loans/deposits. Non-profit institutions serving households are assumed to face the same interest rate as households. Financial corporations and general government are assumed to face lower interest rates on lending and higher interest rates on deposits compared to non-financial corporations. The assumption that financial corporations and general government face lower interest rates on lending and higher interest rates on deposits compared to non-financial corporations is based on data from the MIR interest rate statistics up to the year 2005. Until 2005 Statistics Sweden used interest rate data covering all other sectors than financial corporations, households and non-financial corporations to estimate the accrued interest flows for general government. According to the central bank of Sweden the “all other sectors grouping” consisted mainly of general government. In 2005 the “all other sectors grouping” interest rates on loans were 55 basis points lower than the interest rates for non-financial corporations. On deposits the corresponding difference were 35 basis points. From 2006 and onwards the interest rates for general government are estimated using data for non-financial corporations adjusted for the differences outlined above. The question was revisited for 2021, and the conclusions were in line with the assessment from 2005, namely that interest rates on loans for all other sector groupings (again, mainly consisting of general government) were significantly lower than the rates for non-financial corporations. The adjustment is manually adapted to the general interest rate level of the economy. Quarterly data from the Swedish Financial Supervisory Authority on the ratio interest income and expense to stocks of loans and deposits is used for comparison purposes. Final or chosen interest on loans and deposits for each FISIM producing sub-sector is often adjusted to match the information of the separate sources.

Interest payable on household’s total stock of loans is calculated using data on average lending rates on all types of loans. For households as owners of unincorporated enterprises (D) the average lending rate for households as a total is used. For households as owners of dwellings (C) the lending rates of housing credit institutions are applied. Interest payable on households’ stock of loans for consumer purposes (B) is calculated as the residual of total interest payable less interest payable used for intermediate consumption.

Table 3.17.6 FISIM Households

	Stocks of loans	Lending rates	Interest payable
Households	$A = B+C+D$	I	$V = A*I$
as consumers	B	$J = X/B$	$X = V-Y-Z$
as owners of dwellings	C	K	$Y = C*K$
as owners of unincorporated enterprises	D	I	$Z = D*I$

The internal reference rate

The reference rate is calculated using data from the Swedish Financial Supervisory Authority. Interest receivable and average stocks are used. The internal reference rate which is given by the ratio of interest receivable on loans to the stocks of loans between sub-sectors 122 and 125.

Table 3.17.7 shows the data used for calculating the internal reference rate and domestic FISIM by user sector year 2021. The FISIM model produces quarterly data with the reference rate being calculated for each quarter. The stocks, interest payable/receivable and FISIM is then summed over the quarter along with an average internal reference rate over the same period.

As an example, using the formula described above²⁰:

FISIM on loans for financial corporations is calculated as $2\,266 - (134\,301 * 0,0035) = 1790$.

FISIM on deposits for financial corporations is calculated as $(382\,103 * 0,0035) - 455 = 891$.

Table 3.17.7 Domestic FISIM, SEK million 2021

Domestic FISIM 2021				
		2021		
	Interest receivable on loans within and between subsectors S.122 and S.125	6 180		
	Stocks of loans within and between subsectors S.122 and S.125	1 748 645		
	Internal reference rate	0,35		
Sector		Stock of loans/Deposits	Accrued interest	FISIM
S.11	Non-financial corporations	2 472 052	38 199	29 482
S.12	Financial corporations	134 301	2 266	1 790
S.13	General government	330 099	4 454	3 288
S.14	Households	4 574 304	77 887	61 758
	as consumers	1 569 795	28 319	22 784
	as owners of dwellings	2 174 211	33 897	26 230
	as owners of unincorporated enterprises	830 297	15 671	12 744
	Non-profit institutions serving households	17 425	288	227
	Total FISIM on loans to residents	7 528 181	123 094	96 545
S.11	Non-financial corporations	1 572 981	299	5 252
S.12	Financial corporations	382 103	455	891
S.13	General government	223 761	156	633
S.14	Households	2 319 814	2 366	5 815
	as consumers	1 989 433	2 029	4 986
	as owners of dwellings	330 381	337	829
	Non-profit institutions serving households	85 127	16	284
	Total FISIM on deposits to residents	4 583 786	3 293	12 875

Imports and exports of FISIM

Reference rate

The external reference rate is calculated as defined in paragraph 10 of chapter 14 of ESA 2010. That is as the ratio of interest on loans plus interest on deposits between resident FIs and non-resident FIs, to the stock of loans plus the stock of deposits between resident FIs and non-resident FIs. The stock of loans between resident MFI and non-resident MFI and deposits between resident MFI and non-resident MFI are used as weights for calculating one external reference rate.

²⁰ Note that the reference rate shown is rounded to four decimal points. Actual calculations are done without rounding.

Table 3.17.8 External reference rate 2021

Stock of loans between resident MFI and non-resident MFI	A	523 532
Deposits between resident MFI and non-resident MFI	B	560 907
Interest payable	C	1 124
Interest receivable	D	1 604
Weight loans	$E=A/(A+B)$	0,48
Weight deposits	$F=B/(A+B)$	0,52
External reference rate loans	$G=C/A$	0,21
External reference rate deposits	$H=D/B$	0,29
External reference rate	$I=G*E+H*F$	0,25

Stock data

The Riksbank's Balance of Payment data on assets and liabilities by sector is the main source for the calculation of imports of FISIM. In the calculation of FISIM export the Balance of Payment data for monetary financial institutions is replaced with the Riksbank's monetary financial institutions data on stocks of loans between resident MFI and non-resident non-MFI to ensure that FISIM is not calculated for stocks of loans and deposits for resident MFI vis-à-vis non-resident MFI. This data includes stocks of non-performing loans (and because of the method of calculating interest flows this results in corresponding data on interest accruing on them). Regarding the calculation of imports of FISIM, the stock data does not include loans from the European Stability Mechanism or the International Monetary Fund but does include loans from the European Investment Bank as well as loans from other international banks classified in S.125 for 2021.

Interest data

Interest payable/receivable is calculated using interest rates on deposits and actual interest data for loans. Regarding deposits, the interest rates are calculated using data on the ratio of the internal reference rate to domestic interest rate on deposits for non-financial corporations as outlined in table 3.17.9. The approach uses the assumption that proportional margin used by domestic FISIM producers are the same as non-domestic producers. FISIM is then calculated by taking the stocks times the external reference rate and then subtracting the flows of interest. Interest is calculated taking the implicitly estimated interest rates times the stock of deposits. The reason for using this approach for deposits is that the balance of payment data on interest is judged to be too volatile in this area. For loans actual data on actual interest has been introduced. FISIM is then calculated as the interest minus the external reference rate multiplied by the stocks of loans.

Table 3.17.9 Interest rates on non-domestic loans and deposits 2021

External reference rate	G	0,25
Internal reference rate	H	0,35
Average interest rate on deposits to domestic S.11	J	0,02
Proportional margin deposits	$L=J/H$	0,05
Interest rate non domestic deposits	$N=L*G$	0,01

Table 3.17.9 shows assets and liabilities of loans and deposits, the corresponding interest payable and receivable and FISIM by sector. Other monetary financial institutions are FISIM-producers and therefore exporters of FISIM. All other sectors are importers of FISIM.

As an example, imported FISIM on deposits for sector general government is calculated as²¹:

$$(25\ 002 * 0,0025) - 3 = 58.$$

Exports of FISIM on loans of general government is calculated as:

²¹ Note that the interest rate shown is rounded to four decimal points. Actual calculations are done without rounding.

$$314 - (40127 * 0,0025) = 213.$$

Table 3.17.10 Imports and exports of FISIM 2021

Sector	Assets		Stock of loans/- Deposits	Interest rate	Interest	FISIM
					payable/- receivable	
S.11	Non-financial corporations	Deposits	293 387	0,01	29	732
S.122	OMFI	Loans	696 283	1,37	9 539	9 529
S.12	Financial corporations except OMFI	Deposits	84 752	0,01	8	200
S.13	General government	Deposits	25 002	0,01	3	58
	TOTAL import of FISIM on loans on non resident MFI		403 141		40	990
	TOTAL export of FISIM on deposits of nonresident non MFI		696 283		9 539	9 529
	Liabilities					
S.11	Non-financial corporations	Loans	372 695	1,44	5 358	5 077
S.122	OMFI	Deposits	413 978	0,01	41	969
S.12	Financial corporations except OMFI	Loans	115 691	1,08	1 254	941
S.13	General government	Loans	40 127	0,78	314	213
	TOTAL import of FISIM on deposits in non resident MFI		528 513		6 926	6 231
	TOTAL export of FISIM on loans to nonresident non MFI		413 978		41	969
P6	Export of FISIM		1 110 261			10 498
P7	Import of FISIM		931 654			7 221

Allocating FISIM

By allocating FISIM to user sectors, GDP is raised by 35 750 million SEK in 2021. This equals the intermediate consumption of general government and non-profit institutions serving households, household's final consumption expenditure and exports less imports. The effect on GNI is 32 473 million SEK which equals the effect on GDP and property income received from the rest of the world less the property income paid to the rest of the world.

Table 3.17.11 Total use by sector and supply of FISIM, SEK million 2021

FISIM-output and allocation by sector, Million SEK, 2021		
P1	FISIM-output	119 918
	FISIM produced in Sweden allocated to domestic units	109 420
	- Non-financial corporations	34 734
	- Financial corporations	2 681
	- General government	3 921
	- Households	
	- as consumers	27 770
	- as owners of dwellings	26 230
	- as un-incorporated enterprises	13 573
	- NPISH	511
P6	Export of FISIM	10 498
P7	Import of FISIM allocated to domestic units:	7 221
	- Non-financial corporations	5 809
	- Financial corporations incl. insurance and pension	1 141
	- General government	271
	- Households	-
	- NPISH	-
	Total use of FISIM	127 139
P2	- Non-financial corporations	40 543
P2	- Financial corporations incl. insurance and pension	3 822
P2	- General government	4 192
	- Households	
P3	- as consumers	27 770
P2	- as owners of dwellings	26 230
P2	- as un-incorporated enterprises	13 573
P2	- NPISH	511
P6	Export of FISIM	10 498
	Total supply of FISIM	127 139
P1	Domestic production	119 918
P7	Import	7 221
	FISIM effect on GDP	35 750
	Property income received from ROW	21
	Property income paid to ROW	-3 298
	FISIM effect on GNI	32 473

FISIM is allocated by industry for non-financial corporations, financial corporations and general government in accordance with Commission Regulation (EC) No 1889/2002 of 23 October 2002, using the stocks of loans and deposits on a single letter NACE level. The full breakdown to the 100 industry level in the Swedish national accounts system uses the output of the respective industries as key. Table 3.17.12 shows the intermediate consumption of FISIM by sector and industry. The data for sector S.11 and S.12 uses stocks of loans and deposits by industry to allocate FISIM. Financial corporations S.12 are assumed to be equal to NACE K. For households except NACE L data on production is used as key for allocation to industry. Households stock of loans with dwellings as collateral are used to calculate homeowners' intermediate consumption of FISIM which is allocated to NACE L. Non-profit institutions serving households uses value added as key.

Table 3.17.12 Intermediate consumption of FISIM by user sector and NACE, SEK million 2021

NACE/ Sector	S.11	S.12	S.13	S.14	S.15	Total
A	2 406			4 202	3	6 611
B	36			8		44
C	2 189			473		2 662
D	664			19		683
E	105			7	1	113
F	1 465			1 895		3 360
G	3 424			929	6	4 359
H	838			911	2	1 751
I	476			608	3	1 087
J	2 370			450	2	2 822
K		3 822		40	6	3 868
L	18 254			27 171	38	45 463
M	6 646			800	13	7 459
N	695			469	2	1 166
O			4 192			4 192
P	67			181	79	327
Q	283			327	44	654
R	380			471	94	945
S	245			842	218	1 305
T	0			0		0
P2	40 543	3 822	4 192	39 803	511	88 871

3.17.1.2.2 Other bank services

The product group K64B, “Other bank services.” in the survey consists, on the one hand, of direct commission charges, for example, for the hire of bank safe-custody boxes, overdraft fees, late payment penalties, advice commissions, management charges, currency conversion charges, and, on the other hand, of indirect charges such as fund accumulation charges. The main source of this data comes from the Supervisory Authority. It also includes commission charges for “*financial services in acquiring and disposing of financial assets and liabilities in financial markets*”, as specified in ESA 2010 §3.73.

The commissions are calculated for banks, credit market enterprises, securities corporations, mutual funds, fund corporations and investment corporations. The commissions generated from the central bank and insurance corporations are not included in these calculations.

The corporations of the financial sectors mentioned are charging commissions, depending on the type of service they provide. There are six basic categories of commission charges, remittance charges, lending charges, deposits charges, guarantee charges, financial security charges and other commission charges. As mentioned in the examples above, these charges have subcategories that include the direct and indirect charges that are specified in ESA 2010.

The calculation is built so that the foreign units of the mentioned financial sectors are excluded in the final result. This means that the commission charges from subunits of the corporations that are economically active outside Sweden are subtracted.

Table 3.17.13 Financial services for direct payments (commission charges), SEK million, 2021

	Commission charges
Banks	51258
Credit market enterprises	4100
Mutual funds	1499
Fund corporations	9851
Investment corporations	0
Total S12	66708
S15	42
S13	17
Sector reclassification	-4
VAT-insolvency	91
Balancing	273
Total	67127

The rest of the output for NACE K64 consists of production regarding own-account software and R&D. These calculations are described in detail in chapter 5.

3.17.1.2.3 Central bank services

A separate product group for the central bank is recorded. The calculation is using the sum of costs method as described in ESA 2010 §14.16. The total production value of the central bank is calculated as the sum of intermediate consumption, compensation of employees, CFC and other taxes less subsidies on production. There is no data on the consumption of fixed capital for the central bank, but an approximate allocation in line with the K64 industry as a whole would generate CFC estimates of about SEK 50 million, however because of the central bank having limited assets that could generate CFC it is assumed to be very low and has been set at zero as an approximation. There are no other taxes or subsidies on production for the output of the central bank. Data is collected from the profit and loss accounts of the central bank. The output is then part of the balancing procedure outlined in section 6.1 that reconciles the production and expenditure sides.

Table 3.17.14 Sum of cost estimation for central bank, SEK million, 2021

Intermediate consumption	515
Compensation of employees	441
Consumption of fixed capital	0
Other taxes less subsidies on production, net	0
Balancing	-45
Output (sum of costs)	911

The output of the central bank is allocated as intermediate consumption to the K64 industry and to then equilibrate the accounts of this sector the amount of the intermediate consumption of the service provided by the central bank is counterbalanced by a current transfer in accordance with ESA 2010 §14.6, classified under D759 ('other miscellaneous current transfers').

Table 3.17.15 Financial services, except insurance and pension funding, NACE K64

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	391	391	0	
	Administrative Records	68 951	77 493	-8 542	
	Combined Data	7		7	
	Extrapolation and Models	Benchmark extrapolations			
		Commodity Flow Model			
		CFC(PIM)	87		87
		Dwellings - stratification method			
		FISIM	119 918		119 918
		Insurance			
		Other E&M			
Total Extrap+Models	120 005		120 005		
Other					
Total (sources)	189 354	77 884	111 470		
Adjustments	Data validation	-7	0	-7	
	Conceptual	Allocation of FISIM	6	35	-29
		Allocation of insurance		40	-40
		Other conceptual	6 403	-11 272	17 675
		Total conceptual	6 409	-11 197	17 606
	Exhaustiveness	N1			
		N2			
		N3			
		N4			
		N5			
N6					
N7		88		88	
Total exhaustiveness	88		88		
Balancing	44	-51	95		
Total (adjustments)	6 534	-11 248	17 782		
Final estimate		195 888	66 636	129 252	

3.17.1.3 Intermediate consumption

The basis for the calculation of intermediate consumption is the operating costs stated by the corporations themselves. These operating costs include administrative costs, renting costs and other operating costs. Units located outside of Sweden are excluded. These costs are then subsequently corrected for compensation of employees, insurance, R&D, leasing and purchased software in order to arrive at total intermediate consumption in conformity with the national accounts definition.

3.17.2 NACE K 65, Insurance and insurance associations and friendly societies, except compulsory social security

Insurance services consist mainly of life insurance, product group K6511, pension funding K653, for which the employer usually pays the premiums, non-life insurance K6512, and reinsurance, K652. Insurance services are provided by traditional life insurance corporations, unit-linked enterprises, national and local non-life insurance enterprises, and insurance associations and friendly societies. They are all subject to supervision by the Financial Supervisory Authority.

Life insurance enterprises can be divided into traditional life insurance, unit-linked insurance and pension fund enterprises providing group pension arrangements. The traditional life insurance enterprises pay a guaranteed return and provide both private and group insurance solutions. The majority of group insurances, however, are concentrated in the hands of a few large enterprises.

Unit-linked enterprises manage pension insurance arrangements under which the policy-holder himself chooses the direction for the investment of the funds. Consequently, the yield is determined by the performance of the individual funds. These consist mostly of individual private pension policies.

There are also a number of group pension arrangements provided by pension fund enterprises. These provide a group pension solution for employees covered by a collective agreement, which entitles the individual concerned to invest part of the accrued pension rights himself.

Non-life insurance enterprises cover mainly property insurance such as car insurance, traffic insurance, house insurance etc. They also cover sickness and accident insurance, redundancy insurance and occupational injuries cover. Working individuals can also sign for additional cover in the event of sickness and occupational injury through group insurance policies.

Friendly societies provide occupational pension fund services and are benevolent societies.

3.17.2.1 Statistical sources

The main statistical source is the profit and loss accounts, and balance sheets collected by the Swedish Financial Supervisory Authority. The accounts are set up in accordance with “The annual accounts and consolidated accounts of insurance undertakings” Council directive 91/674/EEC.

Data on imports and exports of insurance services, are gathered and calculated by using International Trade in Services statistics compiled for the Swedish Balance of Payments. This information is also used to calculate reinsurance services and is covered in chapters 5.14 and 5.16.

The table provides values of output, intermediate consumption and gross value added distributed by different sources and adjustments.

Table 3.17.16 Insurance and pension funding, except compulsory social security, NACE K65

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses				
	Administrative Records	3 587	12 825	-9 238	
	Combined Data	20 800		20 800	
	Extrapolation and Models	Benchmark extrapolations			
		Commodity Flow Model			
		CFC(PIM)			
		Dwellings - stratification method			
		FISIM			
		Insurance	50 825		50 825
	Other E&M	25	25	0	
	Total Extrap+Models	50 850	25	50 825	
	Other				
	Total (sources)	75 237	12 850	62 387	
Adjustments	Data validation		0	0	
	Conceptual	Allocation of FISIM		3 793	-3 793
		Allocation of insurance		7 290	-7 290
		Other conceptual	1 473	-2 806	4 279
		Total conceptual	1 473	8 277	-6 804
	Exhaustiveness	N1			
		N2			
		N3			
		N4			
		N5			
		N6			
		N7	24		24
	Total exhaustiveness	24		24	
Balancing		12	-10	22	
Total (adjustments)	1 509	8 267	-6 758		
Final estimate		76 746	21 117	55 629	

Table 3.17.17 Insurance output per insurance type, K65, SEK million 2021

	Life insurance	Non-life insurance	Reinsurance	Total insurance	Pensions	Total
Output non-market		0		0		
Output market	9 347	34 137	7 341	50 825	20 800	71 625
Output balancing*	0	501	-445	56	0	56
Output balanced	9 347	34 638	6 896	50 881	20 800	71 681
IC of reinsurance ceded			7 277	7 277		7 277
IC of reinsurance ceded balancing			-211	-211		-211
IC of insurance undertakings other than reinsurance ceded		0		0		0
IC of insurance undertakings other than reinsurance ceded balancing		0		0		0
IC of market producers and unincorporated households		16 907		16 907		16 907
IC of market producers and unincorporated households balancing		-2 102		-2 102		-2 102
IC of non-market producers	0	829		829		829
IC of non-market producers balancing		0		0		0
Taxes	0	2 801		2 801		2 801
Total for GDP-P	9 347	21 805	-170	30 982	20 800	51 782
HFCE	9 248	20 891		30 139	20 800	50 939
HFCE balancing	0	-57		-57	0	-57
GG FCE		0		0		0
NPISH FCE		0		0		0
Export	176	2 325	1 496	3 997	0	3 997
Import	77	801	1 430	2 308	0	2 308
Export balancing	0	-361	-133	-494	0	-494
Import balancing	0	192	103	295	0	295
Total for GDP-E	9 347	21 805	-170	30 982	20 800	51 782
D.441 from RoW*	0	0	0	0	0	0
D.441 to RoW	0	0	0	0	0	0
D.442 from RoW	0	0	0	0	0	0
D.442 to RoW	0	0	0	0	0	0
Total for GNI	9 347	21 805	-170	30 982	20 800	51 782

* D.441 and D.442 will be followed up as a small issue in the verification cycle 2025-2029.

Insurance calculations are subject to balancing in the Swedish national accounts to account for relative quality differences between the different sources. For example, the distribution keys for household final consumption and intermediate consumption are subject to uncertainty and the balancing procedure increases the quality of the final estimates by weighing the relative statistical quality/uncertainty of the different sources. Balancing procedures are generally described in chapter 6, and in more detail in section 6.1.2.9. Balancing procedures will be reviewed with the aim to introduce restrictions that maintain allocated totals for sectors and transactions.

3.17.2.2 Output

This section only applies to domestic insurance services, i.e. production for export is calculated separately and from the use side. Domestic insurance services produced are separated from total production by separation of the risks. Domestic output of insurance services is calculated on Swedish risks.²²

²² Pension funds within non-life insurance is disability insurance and premium waiver insurance, specifically.

Table 3.17.18 Insurance output per type of insurance provider

Output per type of insurance provider		
Product	NACE	Value
Life insurance (K6511)	Life insurance	9 347
Life insurance (K6511)	Pension funds	0
Non-life insurance (K6512)	Life insurance	4 094
Non-life insurance (K6512)	Pension funds	24
Non-life insurance (K6512)	Non-life insurance	30 020
Reinsurance (K652)	Life insurance	13
Reinsurance (K652)	Non-life insurance	7 328
Total PV insurance	All	50 825

Life insurance and Insurance association & friendly societies

Statistics Sweden uses the sum of cost approach when estimating the output, i.e. the service charge of life insurance, as well for the insurance associations & friendly societies. There are three reasons for this approach. The first reason is that Swedish life insurance enterprises are often mutual enterprises. If they are not, the majority are run according to mutual principles. If they are allowed to make profits, the profits come mainly from holding gains. The output or service charge of insurance enterprises that makes no profit equals the operating expenses. Some labour market insurances, which comprise a large proportion of the total services produced in Sweden, are not exposed to competition, i.e. they are not profitable. The enterprises providing these services are mutually owned by the large employer organisations and employee organisations.

The second and most important reason for the sum of costs approach is the difficulty of excluding holding gains/losses from the output in other calculation approaches. Operating expenses are defined as:

- Commissions
- Other acquisition costs
- Change in deferred acquisition costs
- Administrative expenses
- Reinsurance commissions and profit participation

It is the cost of acquiring new or renewal of existing policies and administrative expenses that is measured in the source data. Claims management and benefits costs and investment management charges are therefore excluded. However, in the sum of costs approach, claims management costs are added to operating expenses. Investment management charges and other technical charges are not included and hence no correction for interest payable is necessary. Operating expenses are not corrected for reinsurance commissions and profit participation in ceded reinsurance in Swedish National Accounts due to the output algorithm used for reinsurance services.

By applying the sum of costs approach there is no problem with excluding holding gains/losses in the change of reserves as long as premium supplements are net of holding gains/losses.

The mark-up (equivalent to premium supplement) for life insurance is calculated as an income return on the total equity of life insurance enterprises in order to avoid underestimating the sum of cost production estimation by allowing for normal profit. The reasoning for this method is that life insurance enterprises have expectations that their equity amount is going to increase by a given percentage. If the number of insurers is radically decreasing, then they decrease the price of the premium, depending on the expectations for this percentage in the beginning of the year. This is due to the fact that the majority are mutual enterprises, as stated above. The low rate is used in order to both reflect the large prevalence of mutual enterprises as well as to avoid including holding gains. It is assumed that the rate including holding gains is substantially higher, judging by the fact that

comparable profits by other industries is on average higher. The lack of detailed data in this area makes it difficult to make more detailed estimations, but the inclusion is done to avoid underestimations while at the same time not imputing rates that are high enough to erroneously include holding gains.

The third reason is that life insurance computations based on the standard method (i.e. not cost based) has historically turned out to be very volatile. Several tests have been conducted throughout the years, with the most serious attempts for the years 2002-2008, where the aim was to introduce it as a standard method instead of the cost based one. It was however abandoned as the results again turned out to be too volatile. The data for the non-cost based model was thereafter still collected for several years parallel to the sum of cost method data, but not compiled because of remaining volatility issues.

From the sum of cost calculations, outputs is derived for each of the product groups mentioned above, and are added to the total output for insurance services as shown in the table below. It is also worth mentioning that life insurance corporations produce some non-life insurance services and reinsurance services. The sum of cost method has been used consistently over time in Swedish national accounts and has not resulted in any irrelevant results (i.e. negative output or negative value added).

Table 3.17.19 Sum of cost calculation, NACE K65

Life insurance reports (sum of costs), SEK million, 2021				
	Life insurance (K6511)	Pension funds (K653)	Non-life insurance (K6512)	Reinsurance (K653)
Operating expenses	4 100	8 539	1 662	13
Claims management costs	52	229	326	0
Investment management costs	504	1 050	205	0
Mark-up	4 691	9 770	1 901	
Total	9 347	19 588	4 094	13

Pension funds reports (sum of costs), SEK million, 2021				
	Life insurance (K6511)	Pension funds (K653)	Non-life insurance (K6512)	Reinsurance (K653)
Operating expenses	0	397	8	0
Claims management costs	0	0	0	0
Investment management costs	0	144	3	0
Mark-up	0	671	13	0
Total	0	1 212	24	0

Non-life insurance

The output, i.e. the service charge, of non-life insurance is measured in accordance to ESA 2010 §3.74. The main components: *Premiums, Premium supplements, Claims and Change in technical provisions* in the source material provided by the Swedish Financial Supervisory Authority are described below.

ESA 2010 §3.74: Output of non-life insurance services = premiums earned + premium supplements – adjusted claims incurred.

Premiums

Gross premiums written are combined with reinsurance premiums and the change in provisions for unearned premiums and unexpired risks and results in premiums earned. The latter is net of the change of reinsurer's share of unearned premiums. The change in unearned premiums is net of portfolio transfers and exchange rate fluctuations. The change in provisions for unexpired risks are entered into the accounts with a negative sign (if increase).

Provisions for unexpired risks are entered into the balance sheet together with provisions for unearned premiums. In the technical account the opening balance of unearned premiums and unexpired risks are entered with a positive sign. The closing balance of unearned premiums and unexpired risks are

displayed separately with negative signs. This explains the deviation from the recommendation of the GNI Expert Group on insurance.

Gross premiums are entered net of rebates in the source data. Premiums earned are at present not corrected for the change in provisions for bonuses and rebates, as recommended by the Task Force on Insurance Measurement. This corresponds to the change in item C.4 91/674/EEC article 6.

Premium supplements

Premium supplements are calculated as the net investment income (net operating surplus) on land and buildings, dividends and net interest income²³. Income earned by the investment of own funds are excluded by applying recommendation 2 of the Task Force on Insurance Measurement and in accordance with the GNI Expert Groups recommendations on Insurance. The calculation is made by the application of a pro-rata approach (“own funds/(own funds + technical reserves)”) in accordance with the GNI Expert Groups recommendations on Insurance. This implicitly implies that premium supplements are computed gross of reinsurance.

It should be noted that profit or loss in the financial year are included in capital and reserves according to Swedish accounting rules. The data excludes holding gains and losses as it is based on the Financial Supervisory regulation (FFFS 2015:12, paragraph 12) for insurance companies, which specifies investment income into several categories with holding gains and losses separately identified as either currency valuation gains/losses or holding gains/losses stemming from capital gains. Both of these variables are excluded from the calculation of premium supplements, in order to ensure that holding gains/losses are not included in the calculations.

Claims

Claims paid are calculated in accordance to article 38 of Council directive 91/674/EEC and in accordance with the GNI Expert Group’s recommendations on insurance. Claims incurred, net of reinsurance are gross claims paid net of reinsurers share of claims paid minus the change in provisions for claims outstanding, net of reinsurance. Claims management and related costs and change in provisions for claims management costs are excluded. Adjusted claims incurred are then adjusted for reinsurance to ensure that they are recorded gross of reinsurance in accordance with ESA paragraph 16.74. As for premiums, claims are net of the change in provisions for claims outstanding due to portfolio transfers and exchange rate fluctuations.

In motor third-party liability insurances claims paid are often annuities. Annuities are included in claims incurred and therefore change in provisions for annuities, which is a part of provisions for outstanding claims, is withdrawn from claims paid. Adjusted claims are used to correct for volatility in claims and the method used is based on accounting data using averaged actual claims incurred adjusted for the change in equalisation provisions.

Equalisation provisions are included in the output algorithm. Statistics Sweden follows the recommendations of the Task Force on insurance measurement and adding the change in equalisation provisions to claims incurred.

Reinsurance

Output of reinsurance is determined exactly as output of non-life insurance, i.e. premiums earned + premium supplements – adjusted claims incurred. Note that reinsurance commissions are deducted from reinsurance premiums in the calculation of output of reinsurance companies. Reinsurance commissions paid by the reinsurer to the policyholder are treated as a reduction in reinsurance

²³ Net in this case refers to the net of interest income and interest costs in the calculation of premium supplements.

premiums written. Profit sharing is treated as current transfer from the reinsurer to the direct insurer. Thus, both reinsurance commissions and profit sharing are treated as items decreasing the output of the reinsurers.

The vast majority of reinsurance output consists of non-life reinsurance, with a marginal output of life reinsurance. The output of non-life reinsurance as explained above similarly as non-life insurance with the exception of the marginal life reinsurance, which is compiled using the sum of cost method similarly to other life insurance output. Imports of reinsurance are compiled using the data source of resident reinsurers ceding reinsurance services from abroad.

Table 3.17.20 Calculation of direct non-life insurance

<u>Direct non-life insurance calculation, SEK million, 2021</u>		
A	+ Premiums earned	76 603
	+ Reinsurance premiums	4 910
	Net of portfolio transfers and	
	+ exchange rate fluctuations	-4 060
	Change in provisions for	
	+ unexpired risks	-346
	= Premiums earned total	77 106
B	Premium supplements	1 787
C	- Claims paid	51 236
	- Reinsurance share of claims paid	3 116
	- Claims management costs	-5 750
	Change in provisions for claims	
	- management costs	-571
	= Adjusted claims	-48 874
	Total Output (A+B+C)	30 020

Table 3.17.21 Calculation of non-life reinsurance

<u>Reinsurance calculation, SEK million, 2021</u>		
A	+ Premiums earned	4 856
	+ Reinsurance premiums	11 552
	Change in provisions for	
	+ unexpired risks	-1 181
	= Premiums earned total	15 226
B	Premium supplements	472
C	- Claims paid	3 407
	- Reinsurance share of claims paid	5 299
	- Claims management costs	-300
	Change in provisions for claims	
	- management costs	-34
	= Adjusted claims	-8 371
	Total Output (A+B+C)	7 328

3.17.2.3 Intermediate consumption

The intermediate consumption is based on operating costs from all types of insurance enterprises. To achieve the best estimate for this calculation, the costs data is first separated for life insurance, non-life insurance and insurance associations and friendly societies. The intermediate consumption is then calculated as a residual with depreciation and labour costs deducted from operating expenses and

claims management costs. Investment management charges and other technical charges are also included. Reinsurance commissions and profit participation in ceded reinsurance are not withdrawn from operating expenses.

3.17.2.4 Allocation of output by users

The output of life insurance services, unless exported, is consumed by households as final consumption. For non-life insurance output is calculated for the different insurance categories. The uses, i.e. household final consumption or intermediate consumption, of each product are then identified by analysing the insurance output by product and the corresponding users of the different products. The identification of uses is non-complicated for the majority of products. These products have a final consumption to total output ratio of 0 or 100 in the table below. For home and house insurance, motor vehicle insurance, motor third party insurance, marine insurance and animal insurance a split between final and intermediate consumption has to be made. The ratios are based on assessments from industry experts, mainly from the Swedish Insurance Association as well as insurance companies. The assessments have been revisited several times, although infrequent.

Table 3.17.22 Household final consumption of total output of non-life insurance, percent 2021

Insurance category	HFCE ratio
Health and accident insurance	100
Employers no-fault insurance	100
Home and house insurance	40
Company and real estate insurance	0
Motor vehicle insurance	70
Motor third party insurance	70
Marine insurance	30
Aviation insurance	0
Transport insurance	0
Credit insurance	0
Discharge insurance	100
Animal insurance	50

Exports and imports of insurance services and pensions is based on the Balance of payments data which is calculated by International Trade in Services statistics. Allocation of insurance by type (life, non-life, reinsurance) and pensions to non-residents and other direct insurance (this includes among others fire insurance and other property insurance, travel insurance) is done by using Balance of payments data and remaining amount added to intermediate consumption.

For the governments intermediate consumption, a method similar to exports of insurance services is used. The value of government intermediate consumption of non-life insurances is measured as a proportion, 26 percent, of the insurance premiums paid. There is no information on which insurance product local and central government are buying so the approach has to be general.

There is a lack of information regarding the allocation of imports between domestic household consumption and intermediate consumption, and the division is there done with the help of the balancing model (the SCM model). The balancing process solves the remaining residual between supply and use by first assessing the uncertainties of the statistical sources and then allocating the remaining residual.

Regarding “other non-life insurance”, the amounts in insurance groups “Employers no-fault insurance”, “Marine insurance”, “Discharge insurance” and “Animal insurance” are allocated to household final consumption, using the percentages above, and are included in COICOP 1219.

3.17.3 NACE K66 Activities auxiliary to financial services

Activities auxiliary to financial services are defined as activities, which are closely related to financial service but are not financial intermediation as such.

NACE 66 consists of several large enterprises engaging in the above-mentioned activity. It also consists of self-employed insurance brokers, insurance brokers in corporate form, securities corporations, foreign exchange businesses and fund corporations. Other enterprises included are actuarial consulting firms. Some of the enterprises are subject to supervision by the Financial Supervisory Authority.

The table provides values of output, intermediate consumption and gross value added distributed by different sources and adjustments.

Table 3.17.23 Activities auxiliary to financial intermediation, K66

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses				
	Administrative Records	124		124	
	Combined Data	60		60	
	Extrapolation and Models	Benchmark extrapolations			
		Commodity Flow Model			
		CFC(PIM)			
		Dwellings - stratification method			
		FISIM			
		Insurance			
	Other E&M	25 214	6 978	18 236	
	Total Extrap+Models	25 214	6 978	18 236	
Other					
Total (sources)	25 398	6 978	18 420		
Adjustments	Data validation	-60	0	-60	
	Conceptual	Allocation of FISIM		40	-40
		Allocation of insurance		2	-2
		Other conceptual	2 029	-350	2 379
		Total conceptual	2 029	-308	2 337
	Exhaustiveness	N1			
		N2			
		N3			
		N4			
		N5			
		N6	1 953		1 953
		N7	37		37
	Total exhaustiveness	1 990		1 990	
Balancing	11	-8	19		
Total (adjustments)	3 970	-316	4 286		
Final estimate		29 368	6 662	22 706	

3.17.3.1 Output

The output calculations for NACE 66 are model-based. The model uses the assumption that the production in NACE 66 closely follows the output of enterprises engaged in financial services as the population mainly consists of brokers and other financial actors. The output of NACE 66 is calculated as the weighted average of the development in NACE 64 (excluding FISIM) and NACE 65. The output value is calculated based on the annual growth rate of the following product groups: K6411 Central Bank, K64B Other bank services, K6511 Life Insurance, K6512 Non-life insurance, K652 Reinsurance, K653 Pension funds.

3.17.3.2 Intermediate consumption

IC is calculated following the same annual growth rate as output, i.e. the input coefficient is held constant.

3.18 NACE L, Real Estate Activities

In the Swedish national accounts NACE L compiled subdivided into two sub industries not directly aligned with the standard NACE-structures:

- L68A *Owner occupied dwellings* (part of NACE L68.2), corresponding to imputed rents in owner occupied dwellings made up of household sector producers for own final use.
- L68B *Other real estate management*, which includes apartments in multi-dwelling buildings and letting of premises (part of NACE L68.2) and buying and selling of own real estate plus real estate intermediation and real estate management on a fee or contract basis (NACE 68.1 and 68.3), i.e. all remaining components of NACE L.

While large parts of both output and intermediate consumption in the section are compiled in line with the standard procedure laid out in 3.1 NACE L is notable for substantial industry specific components that largely concern output and IC related to dwelling services of various types. These industry specific components are added both to ensure coverage of units not included in the SBS and other standard approach source materials such as owner-occupied dwellings in the household sector or housing associations in the non-financial corporation sector, as well as to adjust valuations of output and IC relating to dwellings to align with ESA 2010 recommendations.

Table 3.18.1: NACE L – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
L Real estate activities	759 905	359 383	400 522	100,0	8,3	7,4	7,1
of which: imputed rents of owner-occupied dwellings	242 850	138 166	104 684	26,1	2,2	1,9	1,9

Table 3.18.2: NACE L – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
	Output	490 907	0	1 681	261 922	5 395	759 905	
	IC	204 113	0	2 404	148 338	4 528	359 383	
	GVA	286 794	0	-723	113 584	867	400 522	
L	Real estate activities	% of GVA	71,6	0,0	-0,2	28,4	0,2	100,0
	Output	0	0	0	242 850	0	242 850	
	IC	0	0	0	138 166	0	138 166	
	GVA	0	0	0	104 684	0	104 684	
L	of which: imputed rents of owner-occupied dwellings	% of GVA	0,0	0,0	0,0	100,0	0,0	100,0

Table 3.18.3: NACE L – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	6 168	6 891	-723	
	Administrative Records	1 317	0	1 317	
	Combined Data	415 345	199 743	215 602	
	Extrapolation and Models	Benchmark extrapolations	4 450	0	4 450
		Commodity Flow Model	0	0	0
		CFC(PIM)	344	0	344
		Dwellings - stratification method	462 101	0	462 101
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	0	151 857	-151 857
	Total Extrap+Models	466 895	151 857	315 038	
Other	0	0	0		
	Total (sources)	889 725	358 491	531 234	
Adjustments	Data validation	5 479	115	5 364	
	Conceptual	Allocation of FISIM	38	45 463	-45 425
		Allocation of insurance	3	4 623	-4 620
		Other conceptual	-140 442	-46 749	-93 693
		Total conceptual	-140 401	3 337	-143 738
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	4 865	-3 208	8 073
		N7	126	0	126
		Total exhaustiveness	4 991	-3 208	8 199
Balancing	111	648	-537		
	Total (adjustments)	-129 820	892	-130 712	
Final estimate		759 905	359 383	400 522	

3.18.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11, 13 and 14 are described under 3.1.2 while figures for S15 are outlined in more detail in section 3.1.3.2.

Table 3.1.2.1 shows that deducting these common elements leave 341 302 million SEK of industry specific components, which in turn are made up of four elements found in their respective rows of table 3.18.3:

- *Benchmark extrapolations*: 4 450 million SEK refer to the commercial letting of shop premises, and offices in estates owned by BRF tenant-owners' associations that are not covered by the SBS. The benchmark value originates from the survey Revenues and expenditures of multi-dwelling buildings (IKU) year 2012, which was the last year this information was included in the survey. The value has since 2012 been extrapolated with the change in BRF tenant-owners' associations total areas of commercial lettings from the National taxation register. In 2021, the change in areas of commercial lettings was 1.42 % and in 2020, the value for commercial letting in BRF tenant-owners' associations was 4387. $4387 * 1.0142 = 4450^{24}$.
- *Dwellings stratification method*: 462 101 million SEK refer to the special calculations of dwellings, explained in more detail below under 3.18.3. 242 850 million SEK of imputed rents of owner-occupied dwellings are included in this component, corresponding to the entirety of output of this sub-industry. As the stratification model covers all types of dwellings there is overlap with output included in the standard approach. Rental income concerning dwellings included in SBS-output in NACE L is removed as a conceptual adjustment listed below, while adjustments for general government and non-profit institutions serving households as well as for households and

²⁴ After investigation, it has emerged that Tenant owners' association declares their income of renting of premises in its property valuation to the tax authorities, see section 3.5.2.1 for further reading.

corporations in other industries are categorised under the *Dwellings stratification method* header in process tables where in total 4 000 million SEK is deducted from the total stratification model figure of 466 101 million SEK.

- *Data validation*: 5 027 million SEK refer to an adjustment made to keep total output in SBS due to inconsistency between rental income from dwellings in SBS and the result from the stratification method.
- *Other conceptual*: -130 276 million SEK refers to income from the rental of dwellings in the SBS included in the standard approach estimate which in this section is replaced by the dwelling's stratification method.

Real estate intermediation, made up of land use, buying and selling of own real estate, real estate intermediation and management under contract or for a fee is covered by the standard approach laid out in 3.1. In the supply use system these intermediation services are handled as their own product group as L68C.

3.18.2 Intermediate consumption

As for output, compilation of intermediate consumption largely aligns with the standard approach outlined Section 3.1.

Table 3.1.2.2 shows an industry specific component of IC of 125 558 million SEK, in turn made up of four elements present in three rows in table 3.18.3

- *Other E&M*: Refer to two components of intermediate consumption with IC added for tenant-owners' associations at 44 082 million SEK as well as for the owner-occupied dwellings at 107 775 million SEK. The calculation of the intermediate consumption is described in sections 3.18.3.7 and 3.18.3.8. Other E&M also includes the intermediate consumption for premises in buildings owned by BRF tenant-owners' associations that are commercially let, i.e. the intermediate consumption for the output described in *benchmark extrapolations*. This intermediate consumption is calculated with the input share in SBS with the addition of heating according to the stratification method since the rent concerning commercial letting is only estimated inclusive of heating.
- *Data Validation*: 115 million SEK refer to an error.
- *Other conceptual*: -26 384 refer to the exclusion of heating costs in rented dwellings. This is not done for output since the stratification method already subtracts heating costs.

3.18.3 Dwellings

3.18.3.1 General framework

The stratification method is used for all dwellings. The calculations are stratified by region, year of construction and on dwelling size in square metres. Regional stratification is divided into five strata, with three explicitly covering the big cities Stockholm, Gothenburg and Malmö, as well as two categories including the other municipalities in aggregates defined by if there are more or less than 75 000 inhabitants in the area. The year of construction contain six construction periods²⁵ and dwelling size is stratified into four categories.²⁶

²⁵ These are: -1940; 1941-1960; 1961-190; 1981-2000; 2001-2010 and 2011-2020. Objects with missing data are also considered, see more about this in chapter 10 on the National Apartment Register in the section *Method used to impute for missing data*. Starting with the calculations of the year 2022, a seventh time period, "2021-" is added to both the National Apartment Register and the survey Rents for dwellings (HiB).

²⁶ Up to 54 m²; 55-65 m²; 66-79 m² and 80+ m².

Table 3.18.4, shown below, illustrates the total dwelling stock by number of dwellings and total square metres as well as output and intermediate consumption by tenure. Each tenure category contains a sum of all apartments in different types of buildings, i.e. one- or two-dwelling buildings, multi-dwelling buildings, other buildings or special housing, that belong to the category with respect to the form of tenure. The data is presented by tenure, rather than by type of dwelling, as this better aligns with the compilation of the stratification model, and also accounts for the objects with missing data.

Note that there is no complete explicit breakdown of intermediate consumption by tenure actually compiled in the process of producing the annual national accounts, meaning some figures in the table should be seen as an estimate rather than actual NA-figures. For owner occupied dwellings and secondary residences such explicit IC-estimates exist, with the two together corresponding to total IC in industry L68A. For the breakdown between the two, 18 percent of the intermediate consumption in industry L68A is identifiable as belonging to either owner-occupied dwellings or secondary residences. The other 82 percent of the IC, which is also estimated explicitly since L68A is not a part of the SBS, is equally divided according to output. More about the intermediate consumption in NACE L, see sections 3.18.3.7 and 3.18.3.8.

For rented dwellings, which includes apartments owned directly by municipalities, buildings owned by NPISH and dwellings rented out by non-financial corporations and non-incorporated household producers, IC is compiled for the industry of L68B as a whole. Here the precented IC-figure is derived assuming that the housing subcomponent of this industry has the same input coefficient as the industry as a whole, after adjusting for heating costs being specifically allocated to housing and excluding output and IC related to tenant owned dwellings. It can also be noted that this presentation does not take into account that output for rented dwellings is not completely confined to industry L68B but can occur in several parts of the business sector, since the stratification model covers all dwellings in the economy.

For tenant-owned dwellings an explicit NA-estimate for IC concerning dwellings exists in the accounts, although this is in turn compiled using the input coefficient in the L68B industry meaning it cannot be seen as a fully independent estimate.

Table 3.18.4: NACE L Total dwelling stock, 2021

	Number of dwellings	Square metres*	Output**	IC**
Rented dwellings	1 953 763	122 917	126 972	53 282
Tenant-owned dwellings	1 218 515	88 058	95 272	41 957
Owner-occupied dwellings	1 923 702	239 576	219 246	122 853
Secondary residences	610 372	N/A	24 611	15 313

* Thousands

** Million SEK

Information regarding region, year of construction and dwelling size stratification as well as actual rent are obtained every year, and the actual rent is available for all strata. Therefore, no benchmark year is used.

There is some under-coverage in the apartment register and the under-coverage in the register only applies to the multi dwelling buildings i.e. tenant-ownership rights and tenancies in multiple-occupancy buildings. An estimation of the loss has been calculated by using the number of persons in the Total Population Register who are registered at properties that lack apartments in the apartment register, divided by the average household size in multi-dwelling buildings in Sweden, which is 1.8 persons. This estimates an under-coverage of 1.7 percent or 86 000 apartments for the year 2021. The under-coverage in the apartment register implies that the dwelling service is underestimated. In accordance with the GNI group recommendations from the preceding verification cycles, Statistics Sweden has incorporated an adjustment to the dwelling service to match the under-coverage. The adjustment amounts to 5048 SEK million in 2021. Calculations are shown below.

Table 3.18.5: Under-coverage in the National Apartment Register 2021²⁷

Number of apartments multi-dwelling buildings	3 172 278	
Number of apartments tenancies in multi-occupancy buildings (rented dwellings)	1 953 763	
Number of apartments tenant-ownership rights (tenant-owned dwellings)	1 218 515	
Share of tenancies in multi-occupancy buildings	0.6158864387043	=(1953763/3172278)
Share of tenant-ownership rights	0.3841135612957	=(1218515/3172278)
Number of missing apartments	75 000	
Household consumption tenancies in multi-occupancy buildings SEK	120 444 000 000	
Household consumption tenant-ownership rights SEK	93 053 000 000	
Average rent tenancies in multi-occupancy buildings per year in kronor	61 647	=(120444000000/1953763)
Average rent tenant ownership rights per year in kronor	76 366	=(93053000000/1218515)
Number of missing apartments multi-occupancy buildings	46 191	=(75000*0.615886439)
Number of missing apartments tenant-ownership rights	28 809	=(75000*0.384113561)
Houshold consumption under-coverage, multi-occupancy buildings SEK million	2 848	=(46191*61647)/1000000
Houshold consumption under-coverage, tenant-ownership rights SEK million	2 200	=(28809*76366)/1000000
Effect from under-coverage on household consumption SEK million	5 048	=(2848+2200)

From the survey Rents for dwellings (HiB), the category “accommodation”, i.e. rental-free dwellings, care homes for the elderly, group homes, student housing and furnished dwellings are excluded from the survey. Therefore, the actual rent for all the dwellings surveyed is the real market prices covering the dwellings service²⁸. The cooperative dwellings are normally only charged a membership fee to cover costs. Output is therefore adjusted to market prices by reference to the rents actually paid for similar rented dwellings on the market. In cases where rents are very low (or high), as a rule, the respondent is required to comment on the deviation in order to submit the form. Comments are then reviewed and appropriate actions taken if necessary.

The rent includes all required additions such as heating, hot water and so forth. On exception is the electricity used by households for lighting or electric appliances in the dwellings. This expenditure is measured and charged directly from the distributor of the electricity for all types of dwellings. This expense is accounted for as HFCE. In apartments where heating is *not* included, or when electricity is included, HiB adjusts the figures upwards and downwards, respectively, applying a standardized amount (schablonbelopp).

Since the available information relates to rents including heating costs, the rent for heated dwellings is calculated first. Rents for dwellings exclusive of heating are obtained residually as heated-dwellings’ rents less heating expenditures.

The heating expenditures are calculated in a model based on Statistics Sweden’s annual inquiry on the supply of electricity, gas and district heating. The heating expenditures are also excluded from intermediate consumption in dwelling services to avoid double counting.

²⁷ We note that the number of missing apartments as well as the output for rented and tenant-owned dwellings in the calculations of the under-coverage were not updated since changes came in at a late point. If correct numbers, i.e. 86 000 apartments and output according to Table 3.18.4 is used, the adjustment amounts to 6025 SEK million, indicating a fault of 977 SEK million or 0.017 percent of GNI.

²⁸ The cost element of furniture is not included in the rental used for calculating output in the case of rented furnished dwellings. As showed in the verification cycle 2020-2024 in small issue 4 the inclusion of this cost has no material impact on the GNI estimates.

3.18.3.2 Rented dwellings

The output value covers income from rents in respect of tenancies in multi-dwelling buildings, exclusive of heating costs. The value is calculated by the help of the dwelling area according to the National Apartment Register and rent per square metre according to annual information on rents from the survey Rents for dwellings (HiB). The stratification of the sources is described in section 3.18.3.1 and is in line with the Commission Implementing Regulation 2021/1949 on dwelling services. The selection criteria can be considered to be fulfilled since size, location and construction year produces the necessary stratification.²⁹

The apartment register delivers its data structured by tenure, in line with the individual consumption purposes that are compiled which equal the production value attributable to income from rents. All rented dwellings in different types of building, i.e. one- or two-dwelling buildings, multi-dwelling buildings, other buildings or special housing, are included in the source and the stratification method calculation begins with summing these to a total amount of apartments and living area for each tenure; in this case rented dwellings. This process also includes adding objects with missing data. Then the total area is multiplied with rent per square metre from HiB for each stratum. The rents obtained in each region, construction period, and size stratum are then summated to obtain the value for the whole economy.

From this output value, a deduction is made for empty dwellings with the help of the survey Unlet dwellings in multi-dwelling buildings. Heating expenditure is then deducted from the output inclusive of heating in accordance with the calculations made in the comprehensive energy balances. The calculation process described above is shown below with numerical examples for the year 2021:

Step 1: Multiply each cell from the apartment register with its corresponding strata from the survey on Rents for dwellings

National apartment register*					
Region	Construction year	-54 sqm	55-65 sqm	66-79 sqm	80- sqm
Stockholm	-1940	1243	464	506	1526
Stockholm	1941-1960	1307	1551	1387	973
Stockholm	1961-1980	1259	1339	2362	4004
Stockholm	1981-2000	379	526	631	1213
Stockholm	2001-2010	289	198	285	329
Stockholm	2011-	960	397	471	626
Stockholm	Data missing	355	65	51	74

* Square metre in thousands

Rents for dwellings*					
Region	Construction year	-54 sqm	55-65 sqm	66-79 sqm	80- sqm
Stockholm	-1940	1741	1549	1434	1383
Stockholm	1940-1960	1524	1296	1262	1191
Stockholm	1961-1980	1400	1292	1157	1151
Stockholm	1981-2000	1473	1350	1327	1231
Stockholm	2001-2010	1884	1688	1700	1634
Stockholm	2011-	2227	2067	1985	1793
Stockholm	Total w avg	1640	1397	1320	1267

* Annual rent in SEK per sqm

²⁹ For the year 2021 the number of cells produced by the stratification on two variables is 28. For the year 2022 and onward it will be 32. If you add regional stratification to that it is $5 \cdot 28 = 140$ cells (160).

Output, unadjusted*						
Region	Construction year	-54 sqm	55-65 sqm	66-79 sqm	80- sqm	Total
Stockholm	-1940	2164	718	726	2110	5719
Stockholm	1940-1960	1991	2010	1751	1158	6910
Stockholm	1961-1980	1763	1730	2733	4608	10834
Stockholm	1981-2000	558	710	838	1493	3599
Stockholm	2001-2010	545	334	485	537	1901
Stockholm	2011-	2137	821	935	1123	5017
Stockholm	Data missing	582	91	68	93	833
						34813

* (Sqrm in thousands x rent in SEK) / 1000 = output in SEK million

Step 2: The calculations above are done for each regional strata, but not shown explicitly. The total output inclusive of heating in the five regions, after performing the above exercise for each region, are presented below in SEK million. The sum of the five strata is then transferred to step 3

Stockholm (shown above)	34 813
Gothenburg	16 758
Malmö	12 049
Municipalities > 75 000 inh.	37 393
Municipalities < 75 000 inh.	48 474
rounding error	-1
	149 486

Step 3: The adjustments for unlet apartments, deduction of heating expenditures and adjustment for under-coverage is made.

Total rents according to stratification method, unadjusted, SEK million	149486	
Total number of square metres, thousands (apartment register)	122915	
Average annual rent per sqm, whole economy (HiB)	1198	
Unlet apartments, share (survey on unlet dwellings in multi-dwelling buildings)	0,008	
Square metres unlet, thousands	983	=(122915*0,008)
Deduction, unlet apartments, SEK million	1178	=(983*1198)/1000
Total rents inclusive of heating, SEK million	148308	=(149486-1178)
Heating expenditures for rented dwellings from energy calculations, SEK million	26384	
Total rents exclusive of heating, SEK million	121924	=(148308-26384)
Adjustment for under-coverage in the apartment register	5048	
Final estimate, COICOP 0411*	126972	=(121924+5048)

* To be identical with output of rented dwellings in Table 3.18.4.

3.18.3.3 Tenant-owned dwellings

A holder of a tenant-ownership entitlement does not own their apartment but owns a share in a tenant-owners' association (in Swedish, abbreviated as BRF) which in turn owns the building. The task of the tenant-owners' association is to ensure the day-to-day maintenance of the property as well as other operating expenditures. For this the tenant-owner pays a monthly charge. This charge is lower than corresponding rents in the case of ordinary tenancies. Hence, imputed rent is calculated for tenant-ownership rights by using actual rent per square metre for ordinary tenancies of a corresponding standard. Otherwise, the calculation is carried out on the same principles as for rented dwellings.

3.18.3.4 Owner-occupied dwellings

In accordance with international recommendations, dwelling services is to be estimated for the residence of a person in his own home. Thus, it is not the expenditures of households living in their own home, which is calculated, but instead an alternative cost indicating how much they would have paid if they had rented the accommodation (utility value). In Sweden it is not usual for individual houses to be let, hence there is no basis for estimating the utility value with the aid of actual rent for

single-family houses. Instead, the level is ascertained with the aid of rents per square metre of multiple-occupancy buildings of a corresponding standard, i.e. similar apartment size, region and age.

The rental is defined as the private market rental due for the right to use an unfurnished dwelling, as described in the introduction and in line with ESA 2010 §3.77. In the case of cooperative dwellings, they represent a relatively uncommon form of residential living in Sweden. In year 2021 there were 11 654 cooperative dwellings. The risks and rewards with respect to the dwelling are not with the tenant. In a cooperative apartment, instead, the association bears the risk and the tenant is not personally liable for the association's debts. In the stratification model, economically significant rentals are applied for cooperative dwellings in the same manner as for other dwellings.

The number of individual houses, periods of construction, dwelling area and regional breakdown are based on information from the national apartment register. Rent per square metre are imputed by actual rents of a corresponding standard according to the survey Rents for dwellings (HiB). The calculation is stratified by region, year of construction and dwelling size, and for the most part calculations are carried out in the same manner as for rented and tenant-owned dwellings. A supplement is also included for access to a garage, this is done directly to the imputed output of the dwelling service. The calculation for garages is based on the number of individual houses from the national apartment register and data over the cost of parking area and garage from the survey Revenues and expenditure of multi-dwelling buildings (IKU). In recent years, the supplement is extrapolated by volume growth in the number of houses and CPI for garages³⁰.

The rent for unheated accommodation is obtained residually as the heated-accommodation rent minus heating expenditures. Since the dwelling service is defined as corresponding to the rents for tenanted apartments, the unheated-accommodation rent is calculated by subtracting the heating cost per square metre from the heated-accommodation rent for the rented apartment.

The owner-occupier's expenditure on decoration, maintenance and repair is treated as intermediate consumption. Information is taken from the survey Household finances (HEK).

3.18.3.5 Secondary residences

For secondary residences, the utility value is calculated with a rent and regional based stratification model. The calculation is based on the number of secondary residences from the Real estate taxation register average rent per week from accommodation statistics and the occupation time. The occupation time is seven weeks a year. The total number of secondary residences and actual rent is stratified by region, i.e. the calculation is carried out for 21 counties.³¹ The rent for unheated secondary residences is obtained residually as the heated-accommodation rent minus heating cost.

For second homes abroad owned by Swedish residents, owner occupation leads to household final consumption expenditure in Sweden by the Swedish household and the import of housing services. For second homes in Sweden, owned by foreign residents, owner occupation leads to the recording of

30 The old benchmarks that are currently used in the estimates on garages should be replaced by revised estimates. Calculations have been made and submitted in action point A18/small issue 5 for the year 2021, but these were not integrated in the accounts. The new calculations show a difference of 190 SEK million for the year 2021. The new benchmark for garages will be implemented at the earliest possible moment.

31 The rents used in the new estimation model for secondary residences, implemented in the benchmark revision of 2019, has found the cost element of furniture substantially below the materiality threshold in two consecutive verifications. It is our intention to include the cost element of furniture in subleased dwellings in upcoming revisions, after considering what is an appropriate number to scale up. Other reviews regarding secondary residences, such as occupation time, are also under investigation.

production and operating surplus in Sweden and the export of housing services. Further reading about the treatment of owner-occupied dwellings abroad is available in section 8.4.2.2.

3.18.3.6 Other real estate management

Other real estate management consists, on the one hand, of the premises and garage spaces belonging to apartments classed as rented residential accommodation and, on the other hand, of the commercial letting of shop premises, offices and industrial premises.

Compilation of output of other real estate management largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11, 13 and 14 are described under 3.1.2 while figures for S15 are outlined in more detail in section 3.1.3.2. An exception to this which is explicitly added is the value for commercial letting of retail premises located within buildings where the majority of residential units are owned by members of a tenant-owner association (BRF), see more under 3.18.1 and *Benchmark extrapolations*.

3.18.3.7 Intermediate consumption multi-dwelling buildings, other real estate management and real estate intermediation

Intermediate consumption is based on the SBS with some alterations with help of confronting sources and is therefore recorded as both combined data, survey & censuses and other E&M. The intermediate consumption for tenant-owned dwellings is recorded as a part of other E&M and is based on the ratio from SBS. Apartments owned directly by the municipalities and the buildings owned by the NPISH have their intermediate consumption recorded as surveys & censuses, referring to the NPISH survey and annual accounts of local government.

However, there is no explicit breakdown of intermediate consumption as to identify intermediate consumption relating to different parts, i.e. for rented dwellings, rental and operating services concerning industrial, commercial and other non-residential buildings as well as real estate intermediation services, on product group level. This is because information is not available to divide the cost structure from SBS between the different activities.

In table 3.18.6, an explicit list of the items included in the intermediate consumption for NACE L68B is provided. Fuel is not included for multi-dwelling buildings since output is calculated exclusive of fuel. FISIM as well as insurance is treated as intermediate consumption. The main source for the FISIM calculations is the monthly balance data of monetary financial institutes, MFI, and the quarterly balance of profit and loss data for financial enterprises and for insurance. Further reading about FISIM and insurance is available in section 3.17.

Table 3.18.6: NACE L – Intermediate consumption for L68B Other real estate management, Product Groups, 2021

Product groups	Product description	SEK Million	Product groups	Product description	SEK Million
A012A	Processed and preserved fruit and nuts	4	E381A	Waste collection services	2269
B0812	Gravel, sand, clays and kaolin	21	E382	Services treatment and disposal services	2704
C107	Bakery and farinaceous products	4	F41.43	Constructions and construction works	62755
C1082	Cocoa, chocolate and sugar confectionery	5	G4E3	Maintenance and repair services of motor vehicles incl. motorcycles	145
C1083	Processed tea and coffee	5	G4E6	Wholesale trade services on a fee or contract basis of Swedish products	487
C1101	Distilled, rectified and blended spirits	3	G4E6	Wholesale trade services on a fee or contract basis of imported products	91
C1105	Beer and brewing dregs	3	H491A	Passenger rail transport services	11
C110A	Wine from grape and other fermented beverages	3	H492	Freight rail transport services	5
C14	Wearing apparel	377	H4932	Taxi operation services	12
C152	Footwear	27	H511	Passenger air transport services	37
C161	Sawn or planed wood and impregnated wood products and services	13	H5221906	Parking lot services	7
C16231	Prefabricated wooden buildings	66	H52219A	Services incidental to land transportation, fees for roads, bridges	6
C1623A	Builders' carpentry and joinery	44	H5229	Other transportation support services	12
C1624	Wooden containers	1	H53	Other transportation support services n.e.c.	297
C1629A	Prefabricated wooden buildings	3	H551	Hotel and similar accommodation services	136
C162A	Veneer sheets and wood-based panels, assembled parquet flooring	28	H55A	Camping grounds and recreational vehicle parks services	5
C17122	Toilet or facial tissue stock, towel or napkin stock, cellulose wadding and webs of cellulose fibres	41	H562A	Event catering services and other food serving services excl. canteen services	26
C17129	Other paper and paperboard	52	H56A	Restaurant and mobile food serving services; canteen services; beverage serving services	56
C1721	Corrugated paper and paperboard and containers of paper and paperboard	2	H582	Software publishing services	1022
C1722	Household and sanitary goods and toilet requisites	85	H591	Motion picture, video and television program services	61
C172A	Other articles of paper or paperboard incl. paper stationery	41	H592	Sound recording and music publishing services	93
C181	Printing services and services related to printing	190	H611	Wired telecommunications services	1024
C192000B	Motor gasoline excluding aviation gasoline	53	H612	Wireless telecommunications services	426
C192000E	Diesel oil	480	H61A	Services of satellite and other telecommunications	10
C192000F	Light fuel oil	96	H62A	Computer programming services; IT design and development services	2219
C1920016	Petroleum coke, petroleum bitumen and other residues of petroleum oils	2	H62B	IT technical support services; Computer facilities management services, etcetera	1915
C2014B	Ethanol and other spirits denatured	10	H631	Data processing, hosting and related services; web portals	29
C203	Paints, varnishes and similar coatings, printing ink and mastics	90	H648	Financial services, except insurance and pension funding	2769
C204	Soap and detergents, cleaning and polishing preparations, etcetera	30	H6512	Non-life insurance services	931
C205	Other chemical products	30	L82A	Other real estate letting	9682
C211	Rubber tyres and tubes; retreading and rebuilding of rubber tyres	10	L8C	Buying and selling services of own real estate; Real estate services on a fee or contract basis	27225
C219	Other rubber products	3	M691	Legal services	866
C222	Plastic packing goods	4	M692	Accounting, bookkeeping and auditing services; tax consulting services	4814
C223	Builders' ware of plastic	10	M701	Services of head offices	6296
C22A	Other plastic products	79	M702	Management consulting services	8098
C2314	Glass fibres	2	M711	Architectural services	1189
C231A	Flat glass, including shaped and processed flat glass	1	M712	Engineering services and related technical consulting services	3962
C23A	Other porcelain and ceramic products	2	M712	Technical testing and analysis services	314
C235	Cement, lime and plaster	1	M7312	Advertising services	703
C246	Articles of concrete, cement and plaster	105	M73A	Other advertising and market research services	857
C27	Cut, shaped and finished stone	8	M741	Specialized design services	271
C27	Cut, shaped and finished stone	8	M742	Photographic services	85
C29	Other non-metallic mineral products	14	M74A	Translation and interpretation services, etcetera	4562
C29A	Refractory products, clay building material	11	N711	Rental and leasing services of cars and light motor vehicles	4
C241	Basic iron and steel and ferroalloys	9	N712	Rental and leasing services of trucks	138
C242	Tubes, pipes, hollow profiles and related fittings, of steel	6	N73	Rental and leasing services of other machinery, equipment and tangible goods	600
C243	Other products of first processing of steel	19	N74	Licensing services for the right to use intellectual property and similar products, except copyrighted works	151
C2441	Precious metals	1	N78	Employment services	2727
C2442	Aluminium	1	N79A	Travel agency services and other reservation services and related services	5
C2444	Copper	3	N80	Security and investigation services	592
C251	Structural metal products	44	N811	Combinal services, support services	5910
C252	Tanks, reservoirs and containers of metal	1	N812	Cleaning services	9800
C256	Treatment and coating services of metals; machining	38	N813	Landscape services	3338
C257	Cutlery, tools and general hardware	2	N82	Office administrative and support services	2561
C259	Other fabricated metal products	2	O84A	General public administration and foreign affair services	12
C263	Communication equipment	2	O84B	Administration services of the State and the economic and social policy of the community	64
C264	Consumer electronics	1	O84C	Provision of services to the community as a whole excl. foreign affair services	6
C2651	Measuring, testing and navigating equipment	3	P852	Primary education services	4
C268	Magnetic and optical media, not recorded	30	P853	General upper, and vocational secondary education services	106
C2712	Electricity distribution and control apparatus	1	P854	Higher education services	126
C273	Wiring and wiring devices	7	P855A	Sports and recreation education services; cultural education services; other education services	98
C274	Electric lighting equipment	4	P861	Hospital services	3
C2751A	Refrigeration and freezers, washing machines, etcetera	1	O8621201	Occupational health services	90
C2751B	Electric domestic appliances n.e.c.	85	O86221	Medical specialists services	4
C279	Other electrical equipment	2	O862A	General medical practice services	13
C281	General purpose machinery	6	O86901	Medical laboratory services	18
C282	Lifting and handling equipment	4	O86B	Other human health services	1
C2823	Office machinery and equipment	47	O87D	Residential care services of adults living with or having a diagnosis of a mental illness or substance abuse	1
C282A	Other general purpose machinery n.e.c.	3	R90	Creative, arts and entertainment services	26
C2892	Machinery for mining, quarrying and construction	2	R91	Libraries, archives, museums and other cultural services	4
C2931	Electrical and electronic equipment for motor vehicles	12	R931	Sporting services	29
C2932	Other parts and accessories for motor vehicles	11	R932	Amusement and recreation services	6
C32501	Medical, surgical and dental instruments and appliances	79	S941	Services furnished by business, employers and professional membership organizations	865
C329	Manufactured goods n.e.c.	184	S949A	Services furnished by political and other membership organizations	107
C311	Repair services of fabricated metal products	13	S952	Repair services of personal and household goods	1139
C314	Repair services of electrical equipment	294	S9602	Hairdressing, beauty treatment, day spa and similar services	6
C31A	Repair services of machinery and of other equipment	478	S9604	Funeral and related services	4
D351	Electricity, transmission and distribution services	8960	S9609	Intermediation services of personal services	6
D352	Manufactured gas, distribution services of gaseous fuels through mains	150	X9609	Other personal services	11
D353	Steam and air conditioning supply services	485	X9901	Consumption by Swedes abroad*	70
E36	Natural water, water treatment and supply services	3064			
E37	Sewerage services; sewage sludge	4134			

3.18.3.8 Intermediate consumption owner-occupied dwellings and secondary residences

Intermediate consumption includes among other things costs for refuse disposal, repairs, insurance, ancillary financial services and public services, see table 3.18.7 for an explicit list of the items included in intermediate consumption. Fuel for heating is not included since the output value is calculated exclusive of fuels.

A new model for the intermediate consumption has been implemented.³² After the review of the intermediate consumption for the owner-occupied dwellings, approximately 7 percent of the IC expenditures is extrapolated with an old benchmark year in the calculation of 2021, whereas 93 percent of the IC calculation can be achieved every year.

3.18.3.8.1 Water and sewerage

Data for natural water; water treatment and supply services; sewerage services and sewage sludge comes from The Swedish Water & Wastewater Association. For these items, a monthly fee is obtained per municipality. The monthly fee for these items is determined by each municipality and therefore differ between them. The municipalities can change the fee from year to year. The monthly fee is summed up to an annual fee per municipality. The number of owner-occupied dwellings per municipality from the national apartment register times the annual fee per municipality gives the total amount for owner occupied dwellings, secondary homes not included.

Example for one municipality, owner-occupied dwellings in 2021

Monthly fee for the municipality Kiruna	833	
Annual fee in SEK	9 997	=(833*12)
Number of owner-occupied dwellings in Kiruna	4842	
Total fee in the municipality Kiruna SEK million	48	=(9997*4842)/1000000

When the calculation is done for all the municipalities in Sweden they sum up to 14 705 million SEK in 2021.

For the secondary homes the fee is adjusted due to that secondary homes are occupied on average seven weeks per year. On average, the fixed fee accounts for 50 percent of the total fee. The secondary homes pay the same fixed fee as the permanent owner occupiers. Therefore, the secondary homes consume the fixed fee plus 7/52 of the variable fee on average. In year 2021, the intermediate consumption of water- and sewerage for the secondary homes is as follow:

The calculation for secondary residences in 2021

Average total annual fee in Sweden	7 645	
50 percent is fixed	3822.5	=(7645*0,5)
Variable fee per week	73.5	=(3822.5/52)
Variable fee per year (7 weeks occupancy)	515	=(73.5*7)
Total number of secondary homes	610 372	
Total fixed fee, SEK million	2 333	=(3822.5*610372)/1000000
Total variable fee, SEK million	314	=(515*610372)/1000000
Total fee, SEK million	2 647	

The IC regarding water and sewage for owner-occupied dwellings and for secondary residences is $14\ 705 + 2\ 647 = 17\ 352$ million SEK in 2021.³³

3.18.3.8.2 Waste collection service

From the Swedish Waste Management and Recycling association an average annual fee for owner occupied dwellings as well as for secondary homes regarding waste collection services, services treatment and disposal services collection is obtained. The average fee, 2 431 SEK, times the number of owner occupied dwellings from the national apartment register amounts to 4 676 million SEK in

³² In the verification cycle 2016-2019 (AP 18b) we stated our intention to implement the new calculations and in the verification cycle 2020-2024 (minor issue 6) we performed a subsequent analysis.

³³ Note that these items, as most of the items, may be part of the automatic balancing process even if they are obtained annually from the source. The actual values calculated in this text section does therefore differ to the intermediate consumption for the same items in table 3.18.7, which include the balancing.

year 2021. The same calculation is done for secondary homes who have an average fee of 1 452 SEK in year 2021 times the number of secondary homes amount for 671 million SEK. That gives a total of $4\,676 + 886 = 5\,562$ million SEK.

3.18.3.8.3 Sweeping and fire protection

According to law, Sweeping and fire protection controls shall be carried out in owner-occupied houses. The interval for Sweeping and fire protection control depend on of what type of fireplace or other equipment that is in use and how often it is in use. According to SBS, on average 64 percent of the income from sweeping and fire protection control comes from the households. This amounts to 689 million SEK in year 2021.

3.18.3.8.4 Other items that can be calculated annually

The expenditure for maintenance and repair, product group F41_43, is obtained from the Survey of Housing costs (Hushållens Boendutgifter, BUT). The survey cover both purchased services as well as material for own maintenances and repair. The statistics are based on interview responses, and the respondent gets instructions on what should be accounted for as maintenances and repair and what should be accounted for as reconstruction and extension. Estimates are still that many repairs might be classified as investments in reconstruction, and therefore a part of the investments in reconstruction of one and two family houses is moved to and considered as IC in owner-occupied dwellings instead. In year 2021, expenditure for maintenance and repair amounted to 67 683 million SEK.³⁴

FISIM and insurances amounts to 26 230 and 3 290 million SEK, respectively. The Calculations of FISIM and other bank services is based on data provided by the *Swedish Financial Supervisory Authority* as well as the *Riksbank*. Calculations of non-life insurance is based on data provided by the *Swedish Financial Supervisory Authority*.

Stamp duty is the tax you must pay when you acquire a property in connection with applying for title registration, as well as when you take out a mortgage on the property. Contrary to the commission fees these are not double-entered as both investments and taxes on products, but entered as intermediate consumption in industry L68A. The calculations for taxes on products are based mainly on the recording by The Swedish National Financial Management Authority (ESV) records, see more in chapter 3.28. The part attributable to owner-occupied houses amount to 5 026 million SEK in year 2021.

Other minor IC items amount to 9610 million SEK, which is 7 percent of the total IC. An explicit list of all the items included is shown below.³⁵

³⁴ This value will also differ from table 3.18.7 because of balancing. As can be inferred from the table, balancing on this product group in 2021 amounted to -1 454 million SEK

³⁵ Some product groups have data from multiple sources, in those cases the rows are results of a summation.

Table 3.18.7: NACE L –Intermediate consumption for L68A, Owner-occupied dwellings and Secondary residences, Product Groups, 2021

Product groups	Product description	SEK Million	Product groups	Product description	SEK Million
A0119	Other non-perennial crops	17	C2712	Electricity distribution and control apparatus	4
B0811	Ornamental and building stone, limestone, gypsum, chalk and slate	2	C273	Wiring and wiring devices	10
B0812	Gravel, sand, clays and kaolin	124	C2751A	Refrigeration and freezers, washing machines and other white goods	36
C161	Sawn or planed wood and impregnated wood products and services	644	C2751B	Electric domestic appliances n.e.c.	101
C1623A	Builders' carpentry and joinery	555	C3311	Repair services of fabricated metal products	3
C16291	Wood fuels	13	E36	Natural water; water treatment and supply services;	9129
C162A	Veneer sheets and wood-based panels, assembled parquet flooring	807	E37	Sewerage services; sewage sludge	8437
C1724	Wallpaper	273	E381A	Waste collection services	3898
C2015	Fertilizers and nitrogen compounds	4	E382	Services treatment and disposal services	4005
C205	Other chemical products	12	E3831	Dismantling services of wrecks	47
C2222	Plastic packing goods	14	E38320A	Sorted metal materials recovery services; Secondary raw material of metals	614
C2223	Builders' ware of plastic	28	E38320B	Sorted non-metal materials recovery services; Secondary raw material of non-metal	295
C222A	Other plastic products	695	E39	Remediation services and other waste management services	584
C2314	Glass fibres	25	F41_43	Constructions and construction works	66229
C2319	Other processed glass, including technical glassware	14	K64A	FISIM	26230
C234	Other porcelain and ceramic products	7	K64B	Financial services, except insurance and pension funding	7413
C235	Cement, lime and plaster	33	K6512	Non-life insurance services	3290
C236	Articles of concrete, cement and plaster	387	K66	Services auxiliary to financial services and insurance services	147
C239	Other non-metallic mineral products	886	N80	Investigation and security services	1652
C23A	Refractory products, clay building material	92	N811	Combined facilities support services	271
C242	Tubes, pipes, hollow profiles and related fittings, of steel	15	N812	Cleaning services	660
C243	Other products of first processing of steel	116	N813	Landscape services	126
C251	Structural metal products	89	O84A	General public administration and foreign affair services	17
C257	Cutlery, tools and general hardware	42	O84B	Administration services of the State and the economic and social policy of the community	24
C259	Other fabricated metal products	23	O84C	Provision of services to the community as a whole excl. foreign affair services	27

3.19 NACE M, Professional, Scientific and Technical Activities

In the Swedish national accounts section M is calculated divided into seven sub-industries

- NACE M 69 Legal and accounting activities
- NACE M 70 Activities of head offices, management consultancy activities
- NACE M 71 Architectural and engineering services technical testing and analysis services
- NACE M 72 Scientific research and development services
- NACE M 73 Advertising and market research services
- NACE M 74 Other professional, scientific and technical activities
- NACE M 75 Veterinary activities

Compilation of both output and IC are fully aligned with the standard approach outlined in Section 3.1, meaning there are no industry specific adjustments to either output or IC.

Table 3.19.1: NACE M – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in				
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %	
M69-70	Legal and accounting activities; activities of head offices; management consultancy activities	229 935	90 102	139 833	37,2	2,9	2,6	2,5
M71	analysis	202 445	103 492	98 953	26,4	2,1	1,8	1,8
M72	Scientific research and development	130 831	46 492	84 339	22,5	1,8	1,6	1,5
M73	Advertising and market research	59 996	41 450	18 546	4,9	0,4	0,3	0,3
M74-75	Other professional, scientific and technical activities; veterinary activities	73 501	39 719	33 782	9,0	0,7	0,6	0,6
M	Professional, scientific and technical activities	696 708	321 255	375 453	100,0	7,8	6,9	6,7

Table 3.19.2: NACE M – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
M69-70	Legal and accounting activities; activities of head offices; management consultancy activities	Output	223 157	0	0	6 414	364	229 935
		IC	88 170	0	0	1 772	160	90 102
		GVA	134 987	0	0	4 642	204	139 833
		% of GVA	96,5	0,0	0,0	3,3	0,1	100,0
M71	Architectural and engineering services; technical testing and analysis	Output	198 921	0	0	2 954	570	202 445
		IC	101 805	0	0	1 392	295	103 492
		GVA	97 116	0	0	1 562	275	98 953
		% of GVA	98,1	0,0	0,0	1,6	0,3	100,0
M72	Scientific research and development	Output	43 942	0	85 923	163	803	130 831
		IC	30 667	0	15 586	47	192	46 492
		GVA	13 275	0	70 337	116	611	84 339
		% of GVA	15,7	0,0	83,4	0,1	0,7	100,0
M73	Advertising and market research	Output	58 866	0	0	1 113	17	59 996
		IC	41 028	0	0	417	5	41 450
		GVA	17 838	0	0	696	12	18 546
		% of GVA	96,2	0,0	0,0	3,8	0,1	100,0
M74-75	Other professional, scientific and technical activities; veterinary activities	Output	68 003	0	0	5 393	105	73 501
		IC	38 927	0	0	755	37	39 719
		GVA	29 076	0	0	4 638	68	33 782
		% of GVA	86,1	0,0	0,0	13,7	0,2	100,0
M	Professional, scientific and technical activities	Output	592 889	0	85 923	16 037	1 859	696 708
		IC	300 597	0	15 586	4 383	689	321 255
		GVA	292 292	0	70 337	11 654	1 170	375 453
		% of GVA	77,9	0,0	18,7	3,1	0,3	100,0

Table 3.19.3: NACE M – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	6 699	2 688	4 011	
	Administrative Records	43 391	11 065	32 326	
	Combined Data	601 297	326 066	275 231	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	38 702	0	38 702
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	2 666	2 666	0
	Total Extrap+Models	41 368	2 666	38 702	
Other	0	0	0		
Total (sources)	692 755	342 485	350 270		
Adjustments	Data validation	189	0	189	
	Conceptual	Allocation of FISIM	13	7 459	-7 446
		Allocation of insurance	7	1 653	-1 646
		Other conceptual	1 656	-15 122	16 778
		Total conceptual	1 676	-6 010	7 686
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	1 278	-14 997	16 275
		N7	652	0	652
	Total exhaustiveness	1 930	-14 997	16 927	
Balancing	158	-223	381		
Total (adjustments)	3 953	-21 230	25 183		
Final estimate		696 708	321 255	375 453	

3.19.1 Output

Compilation of output follow the standard procedures laid out in Section 3.1 where figures for sectors S11 and 14 are described under 3.1.2 while figures for S13 and 15 are outlined in more detail in section 3.1.3.

3.19.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined Section 3.1.

3.19.3 Specific notes on Research and Development

There is no local KAUs set up for research and development expenditure in major organizations involved in R&D activities.

The source for R&D produced by specialized commercial research laboratories and institutes is the SBS. Production is therefore valued at market price according to standard accounting rules.

R&D for use within the same enterprise is valued at total production costs plus a mark-up – except for non-market producer. See section 5.10 for a description over the approach used to measure R&D.

R&D by government units and non-profit research institutes is valued as the sum of costs of production including capital consumption for assets held, but no mark-up is imputed. Otherwise, the calculation of the output for non-market producers is carried out with the same principles as for market producers. The Frascati survey on R&D is the source for the calculations. The revenues from sale of R&D by non-market producers of R&D are recorded as revenues from secondary market output. The source for the revenues from sale of R&D by non-market producers of R&D is for the central government the Swedish national financial management authority (ESV) and the annual accounts for regions. The R&D production calculated with data from the Frascati survey is adjusted with the secondary market output to avoid double counting.

See section 5.10 for numerical evidence that the templates are used as well according to the Manual on Measuring Research and Development in ESA 2010 as how the own-account production of software is excluded from the estimates of own-account R&D. Statistics Sweden makes use of the compulsory tables that form a bridge between data sources and national accounts. Full consistency exists between the R&D tables and the National Accounts. The Tables are presented in section 5.10.

A geometric depreciation function is used when calculating the consumption of fixed capital for R&D. A single average service life of 10 years is used with a declining balance rate of 1.65, see section 4.12 for further reading.

The R&D service subcontracted by one R&D institutional unit to another R&D institutional is recorded as intermediate consumption by means of a model.

All expenditure by government, including freely available R&D, is recorded as GFCF. The Frascati survey on R&D is the source for the calculations which means that all R&D is included, independent if it is freely available or not.

For market producers an extra item is added in the form of a mark-up reflecting the need to generate enough operating surplus. The net-operating surplus of market producers of own-account R&D is derived with a mark-up including unsuccessful R&D. No adjustment is done to the sum of cost derived from the Frascati survey which entails that the unsuccessful R&D is included in the calculation of the mark-up.

A contribution of capital services from other traditional capital assets such as buildings, machinery etc. is added. The capital services are measured through the value of capital consumption of these assets. However, an extension should be made were the capital consumption of existing R&D assets used to produce new R&D asset is included in the estimates of the R&D output. But as for today this should not be taken into account according to the recommendations in the manual on measuring Research and Development in ESA 2010. Further reading about the R&D calculations is available in section 5.10.

3.20 NACE N, Administrative and Support Service Activities

In the Swedish national accounts NACE rev.2 Section N consists of four sub-industries

- NACE 77 Rental and leasing activities
- NACE 78 Employment activities
- NACE 79 Travel agency, tour operator and other reservation service and related activities
- NACE 80-82 Security and investigation services, services to buildings and landscape; office administrative, office support and other business support services

Table 3.20.1: NACE N – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
N77 Rental and leasing activities	58 956	28 488	30 468	18,9	0,6	0,6	0,5
N78 Employment activities	77 559	26 076	51 483	32,0	1,1	1,0	0,9
N79 Travel agency, tour operator reservation service and related activities	12 924	11 762	1 162	0,7	0,0	0,0	0,0
N80-N82 Security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support	126 047	48 086	77 961	48,4	1,6	1,4	1,4
N Administrative and support service activities	275 486	114 412	161 074	100,0	3,4	3,0	2,9

Table 3.20.2: NACE N – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
N77	Rental and leasing activities	Output	57 099	0	0	1 857	0	58 956
		IC	28 197	0	0	291	0	28 488
		GVA	28 902	0	0	1 566	0	30 468
		% of GVA	94,9	0,0	0,0	5,1	0,0	100,0
N78	Employment activities	Output	77 099	0	0	429	31	77 559
		IC	25 889	0	0	187	0	26 076
		GVA	51 210	0	0	242	31	51 483
		% of GVA	99,5	0,0	0,0	0,5	0,1	100,0
N79	Travel agency, tour operator reservation service and related activities	Output	11 630	0	864	335	95	12 924
		IC	10 930	0	571	230	31	11 762
		GVA	700	0	293	105	64	1 162
		% of GVA	60,2	0,0	25,2	9,0	5,5	100,0
N80-N82	Security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support	Output	118 572	0	0	7 359	116	126 047
		IC	46 418	0	0	1 640	28	48 086
		GVA	72 154	0	0	5 719	88	77 961
		% of GVA	92,6	0,0	0,0	7,3	0,1	100,0
N	Administrative and support service activities	Output	264 400	0	864	9 980	242	275 486
		IC	111 434	0	571	2 348	59	114 412
		GVA	152 966	0	293	7 632	183	161 074
		% of GVA	95,0	0,0	0,2	4,7	0,1	100,0

Table 3.20.3: NACE N – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	671	419	252	
	Administrative Records	1 715	122	1 593	
	Combined Data	268 235	123 987	144 248	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	32	0	32
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	87	87	0
	Total Extrap+Models	119	87	32	
Other		0	0	0	
	Total (sources)	270 740	124 615	146 125	
Adjustments	Data validation	22	0	22	
	Conceptual	Allocation of FISIM	2	1 166	-1 164
		Allocation of insurance	0	557	-557
		Other conceptual	-1 748	-6 306	4 558
		Total conceptual	-1 746	-4 583	2 837
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	6 236	-5 546	11 782
		N7	185	0	185
		Total exhaustiveness	6 421	-5 546	11 967
Balancing		49	-74	123	
	Total (adjustments)	4 746	-10 203	14 949	
Final estimate		275 486	114 412	161 074	

3.20.1 Output

Compilation of output follow the standard procedures laid out in Section 3.1 where figures for sectors S11 and 14 are described under 3.1.2 while figures for S13 and 15 are outlined in more detail in section 3.1.3.

3.20.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined section 3.1.

3.20.3 Notes on specific support service activities

Operational leasing is identified as a service in both output and IC in the standard compilation approach outlined in section 3.1. Operational and financial leasing services are not differentiated from each other in the SBS but instead measures together in survey variables in both output and IC. The removal of financial leasing from intermediate consumption is handled as a conceptual adjustment in the standard procedure as explained in further detail in sections 3.1 and 3.4.

Temporary employment agencies are handled in line with NA-definitions already in main sources used in the standard compilation approach meaning no further conceptual adjustments are necessary in NA-compilation. That is persons working via temporary agencies are recorded as being employed in the industry of employment agencies and not in the industries in which they actually work. Fees paid to the agencies for the supply of labour is recorded as intermediate consumption and not as compensation of employees and contracted labour is treated as services.

As can be seen in tables 3.4.1 and 3.4.2 costs for reservation services regarding travel and accommodation, a survey variable in the SBS, is deducted in the SBS derivation of both output and IC, meaning that output of travel agencies are recorded net in the standard approach outlined Section 3.1. No comparable netting is done for output of tour operators meaning these activities are recorded gross in the same way as most other output and IC.

3.21 NACE O, Public Administration and Defence; Compulsory Social Security

In the Swedish national accounts NACE Section O is compiled at the section and A*64 level and is entirely made up of non-market producer units in institutional sector S13 General government.

Compilation of both output and intermediate consumption fully align with the standard approach outlined in section 3.1, with more specific descriptions of sources and methods used for non-market producer found in section 3.1.3.

Table 3.21.1: NACE O – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in				
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %	
O	Public administration and defence; compulsory social security	304 598	99 644	204 954	100,0	4,3	3,8	3,6

Table 3.21.2: NACE O – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Institutional sectors					Total economy	
				S11	S12	S13	S14	S15		
O	Public administration and defence; compulsory social security	0	0	304 598	0	0	0	0	0	304 598
		0	0	99 644	0	0	0	0	0	99 644
		0	0	204 954	0	0	0	0	0	204 954
	% of GVA	0,0	0,0	100,0	0,0	0,0	0,0	0,0	0,0	100,0

Table 3.21.3: NACE O – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	55 721	18 231	37 490	
	Administrative Records	182 193	67 372	114 821	
	Combined Data	4 596	2 978	1 618	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	49 981	0	49 981
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	17 879	16 835	1 044
	Total Extrap+Models	67 860	16 835	51 025	
	Other	0	0	0	
	Total (sources)	310 370	105 416	204 954	
Adjustments	Data validation	0	0	0	
	Conceptual	Allocation of FISIM	4 192	4 192	0
		Allocation of insurance	532	532	0
		Other conceptual	-10 496	-10 496	0
		Total conceptual	-5 772	-5 772	0
	Exhaustiveness	N1	0	0	0
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
N6		0	0	0	
N7		0	0	0	
Total exhaustiveness	0	0	0		
Balancing	0	0	0		
Total (adjustments)	-5 772	-5 772	0		
Final estimate		304 598	99 644	204 954	

3.21.1 Output

Compilation of output follow the standard procedures laid out in Section 3.1.3.

3.21.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined Section 3.1.3.

3.22 NACE P, Education

NACE Section P is compiled at the section and A*64 level with the bulk of GVA found in the general government sector with a smaller but substantial share made up of non-financial corporations and more marginal contributions from non-incorporated household producers and non-profit institutions serving households (NPISH).

Local governments are mostly producing preschool (P851), primary (P852) and secondary (P853) education services. Households pay capped custom fees for preschool services, but these are low enough compared to costs for output to be classified as non-market production. Central government mostly produces higher education (P854), employment training (P8559A) but also Other education (P855A).

The NPISH sector is producing education classified as Other education (P855A) while market producers in non-financial corporations and households primarily engage in preschool (P851), primary (P852), secondary (P853) education services as well as other Other education (P855A).

The delineation between market and non-market producers in this section align with the sectoral boundary as there are no market producing kind of activity units in general government classified in P85 Education. The distinction of market and non-market units is thus determined by the general government sector delineation described in more detail in section 5.9.2.1.

Market output in education includes all revenue accruing to the industry. I.e. both fees, paid by households themselves as well as purchases by government agencies of educational services form part of the output value. This aligns with the definition of output used in the SBS meaning there are no need for industry-specific conceptual adjustments.

Compilation of both output and IC are thus fully aligned with the standard approach outlined in section 3.1, meaning there are no industry specific adjustments to either output or IC.

Table 3.22.1: NACE P – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
P Education	385 885	105 310	280 575	100,0	5,8	5,2	5,0

Table 3.22.2: NACE P – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy
		S11	S12	S13	S14	S15	
P	Output	72 276	0	298 635	3 617	11 357	385 885
	IC	24 726	0	76 809	1 089	2 686	105 310
	GVA	47 550	0	221 826	2 528	8 671	280 575
	% of GVA	16,9	0,0	79,1	0,9	3,1	100,0

Table 3.22.3: NACE P – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

			Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses		234 689	56 588	178 101	
	Administrative Records		50 121	14 082	36 039	
	Combined Data		74 136	28 364	45 772	
	Extrapolation and Models	Benchmark extrapolations		0	0	0
		Commodity Flow Model		0	0	0
		CFC(PIM)		16 674	0	16 674
		Dwellings - stratification method		0	0	0
		FISIM		0	0	0
		Insurance		0	0	0
		Other E&M		14 088	14 088	0
		Total Extrap+Models		30 762	14 088	16 674
Other		0	0	0		
	Total (sources)		389 708	113 122	276 586	
Adjustments	Data validation		27	0	27	
	Conceptual	Allocation of FISIM		79	327	-248
		Allocation of insurance		144	227	-83
		Other conceptual		-5 828	-6 417	589
		Total conceptual		-5 605	-5 863	258
	Exhaustiveness	N1		0	0	0
		N2		0	0	0
		N3		0	0	0
		N4		0	0	0
		N5		0	0	0
		N6		1 718	-1 928	3 646
		N7		31	0	31
		Total exhaustiveness		1 749	-1 928	3 677
Balancing		6	-21	27		
	Total (adjustments)		-3 823	-7 812	3 989	
Final estimate			385 885	105 310	280 575	

3.22.1 Output

Compilation of output follow the standard procedures laid out in Section 3.1 where figures for sectors S11 and 14 are described under 3.1.2 while figures for S13 and 15 are outlined in more detail in section 3.1.3.

3.22.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined Section 3.1.

3.23 NACE Q, Human Health and Social Work

NACE Section Q is compiled at the two-digit NACE-division level with the bulk of GVA found in the general government sector with a smaller but substantial share made up of non-financial corporations and more marginal contributions from non-incorporated household producers and non-profit institutions serving households (NPISH).

The delineation between market and non-market producers in this section align with the sectoral boundary as there are no market producing kind of activity units in the general government units present. The distinction of market and non-market units is thus determined by the general government sector delineation described in more detail in section 5.9.2.1.

Market output in human health activities includes all revenue accruing to the industry. I.e. both patient's fee, paid by households themselves as well as purchases by government agencies of health and medical care form part of the output value. This aligns with the definition of output used in the SBS meaning there are no need for industry-specific conceptual adjustments.

Compilation of both output and IC are thus fully aligned with the standard approach outlined in section 3.1, meaning there are no industry specific adjustments to either output or IC.

Table 3.23.1: NACE Q – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2		Output	IC	GVA	Share of GVA in			
					total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
Q86	Human health activities	412 950	146 234	266 716	51,1	5,6	4,9	4,7
Q87-88	Social work activities	325 287	70 263	255 024	48,9	5,3	4,7	4,5
Q	Human health and social work activities	738 237	216 497	521 740	100,0	10,9	9,6	9,3

Table 3.23.2: NACE Q – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2			Institutional sectors					Total economy
			S11	S12	S13	S14	S15	
Q86	Human health activities	Output	101 059	0	306 462	4 560	869	412 950
		IC	39 191	0	105 733	1 236	74	146 234
		GVA	61 868	0	200 729	3 324	795	266 716
		% of GVA	23,2	0,0	75,3	1,2	0,3	100,0
Q87-88	Social work activities	Output	74 243	0	243 989	1 558	5 497	325 287
		IC	15 249	0	52 743	347	1 924	70 263
		GVA	58 994	0	191 246	1 211	3 573	255 024
		% of GVA	23,1	0,0	75,0	0,5	1,4	100,0
Q	Human health and social work activities	Output	175 302	0	550 451	6 118	6 366	738 237
		IC	54 440	0	158 476	1 583	1 998	216 497
		GVA	120 862	0	391 975	4 535	4 368	521 740
		% of GVA	23,2	0,0	75,1	0,9	0,8	100,0

Table 3.23.3: NACE Q – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

			Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses		493 298	126 522	366 776	
	Administrative Records		20 463	6 928	13 535	
	Combined Data		177 543	59 827	117 716	
	Extrapolation and Models	Benchmark extrapolations		0	0	0
		Commodity Flow Model		0	0	0
		CFC(PIM)		20 374	0	20 374
		Dwellings - stratification method		0	0	0
		FISIM		0	0	0
		Insurance		0	0	0
		Other E&M		25 262	25 262	0
		Total Extrap+Models		45 636	25 262	20 374
Other		0	0	0		
	Total (sources)		736 940	218 539	518 401	
Adjustments	Data validation		-17	0	-17	
	Conceptual	Allocation of FISIM		44	654	-610
		Allocation of insurance		59	242	-183
		Other conceptual		-1 675	-2 904	1 229
		Total conceptual		-1 572	-2 008	436
	Exhaustiveness	N1		0	0	0
		N2		0	0	0
		N3		0	0	0
		N4		0	0	0
		N5		0	0	0
		N6		2 756	0	2 756
		N7		104	0	104
		Total exhaustiveness		2 860	0	2 860
Balancing		26	-34	60		
	Total (adjustments)		1 297	-2 042	3 339	
Final estimate			738 237	216 497	521 740	

3.23.1 Output

Compilation of output follow the standard procedures laid out in Section 3.1 where figures for sectors S11 and 14 are described under 3.1.2 while figures for S13 and 15 are outlined in more detail in section 3.1.3.

3.23.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined Section 3.1.

3.24 NACE R, Arts, Entertainment and Recreation

In the Swedish national accounts industries NACE R is divided into four sub-industries:

- *NACE R 90*: Creative, arts and entertainment activities. Division R 90 contains production of artistic, cultural and entertainment activities. This includes also support activities to performing arts artistic creation and operation of arts facilities e.g. theatres and concert halls, etc.
- *NACE R 91*: Libraries, archives, museums and other cultural activities. Within NACE 91 is included production of libraries, museums and archives activities Included are also caretaking of historical monuments and buildings and running of botanical and zoological gardens and nature reserves activities.
- *NACE R 92*: Gambling and betting activities. The output value for gambling and betting activities includes operation of the installations designed for games such as casinos, bingo halls and terminals for video games as well as the provision of gaming services such as lotteries and gambling off the track. The output value for gambling activities is calculated net of winnings paid out by deducting winnings paid out. A supplement is included for hidden and illegal gambling output.
- *NACE R 93*: Sports activities and amusement and recreation activities. This industry comprises the provision of recreational, leisure and sports activities. This includes Operation of sports facilities for indoor or outdoor activities for professionals or amateurs of organizations with private facilities such as golf courses, horse racing and horse racing tracks, gymnasiums, sports fields and other sports facilities. Also included are activities of sports clubs and sports associations, business and leisure and entertainment activities involving the operation of various attractions such as carousel, car, train and water slides, games, shows, thematic exhibits and picnic areas.

Compilation of both output and IC thus largely follows the standard approach outlined in section 3.1.

Table 3.24.1: NACE R – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2		Output	IC	GVA	Share of GVA in			
					total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
R90-92	Creative, arts and entertainment activities; libraries, archives, museums and other cultural activities; gambling and betting activities	57 112	25 261	31 851	53,4	0,7	0,6	0,6
R93	Sports activities and amusement and recreation activities	66 522	38 705	27 817	46,6	0,6	0,5	0,5
R	Arts, entertainment and recreation activities	123 634	63 966	59 668	100,0	1,2	1,1	1,1

Table 3.24.2: NACE R – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2			Institutional sectors					Total economy
			S11	S12	S13	S14	S15	
R90-92	Creative, arts and entertainment activities; libraries, archives, museums and other cultural activities; gambling and betting activities	Output	27 540	0	21 136	7 008	1 428	57 112
		IC	14 510	0	7 927	2 404	420	25 261
		GVA	13 030	0	13 209	4 604	1 008	31 851
		% of GVA	40,9	0,0	41,5	14,5	3,2	100,0
R93	Sports activities and amusement and recreation activities	Output	30 930	0	20 919	2 572	12 101	66 522
		IC	20 804	0	11 773	1 395	4 733	38 705
		GVA	10 126	0	9 146	1 177	7 368	27 817
		% of GVA	36,4	0,0	32,9	4,2	26,5	100,0
R	Arts, entertainment and recreation activities	Output	58 470	0	42 055	9 580	13 529	123 634
		IC	35 314	0	19 700	3 799	5 153	63 966
		GVA	23 156	0	22 355	5 781	8 376	59 668
		% of GVA	38,8	0,0	37,5	9,7	14,0	100,0

Table 3.24.3: NACE R – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	35 109	19 543	15 566	
	Administrative Records	12 800	2 092	10 708	
	Combined Data	62 020	37 846	24 174	
	Extrapolation and Models	Benchmark extrapolations	169	0	169
		Commodity Flow Model	0	0	0
		CFC(PIM)	4 793	0	4 793
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	7 064	3 741	3 323
	Total Extrap+Models	12 026	3 741	8 285	
	Other	0	0	0	
	Total (sources)	121 955	63 222	58 733	
Adjustments	Data validation	-32	0	-32	
	Conceptual	Allocation of FISIM	94	945	-851
		Allocation of insurance	38	382	-344
		Other conceptual	-1 671	-554	-1 117
		Total conceptual	-1 539	773	-2 312
	Exhaustiveness	N1	0	0	0
		N2	577	0	577
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	2 611	0	2 611
		N7	32	0	32
		Total exhaustiveness	3 220	0	3 220
	Balancing	30	-29	59	
	Total (adjustments)	1 679	744	935	
Final estimate		123 634	63 966	59 668	

3.24.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11 and 14 are described in section 3.1.2 and figures for S13 and 15 in section 3.1.3.

Table 3.1.2.1 shows that deducting these common elements leave 855 million SEK of industry specific components, made up of five elements found in four rows in table 3.24.3:

- *Benchmark extrapolation*: 169 million SEK refer to output of valuables, explained in more detail in section 5.12
- *Other E&M*: 3 323 million SEK refer to production for own final use concerning artistic originals, explained in more detail in section 5.10.
- *Other conceptual*: two components both related to lotteries in R92, a first concerning -2900 million SEK refer to the deduction of fiscal monopoly profits that are classified as other taxes on production in national accounts that are included in SBS-output. The second, concerning -314 million SEK refer to the deduction of lottery winnings from both SBS output and IC as these are recorded net in national accounts. Both adjustments are described in more detail in section 3.4.
- *Exhaustiveness N2*: 577 million SEK refer to illegal production related to gambling and betting activities, explained in more detail in section 7.1.

The two components of output of artistic originals and the baseline output figure derived in the standard procedure together cover the two-stage process of production described in ESA 2010 §3.86.

3.24.2 Intermediate consumption

Compilation of intermediate consumption largely aligns with the standard approach outlined section 3.1. Table 3.1.2.2 shows an industry specific component of IC of -314 million SEK, made up of one component under *Other conceptual* in table 3.24.3. This refers to the deduction of lottery winnings from both SBS output and IC as these are recorded net in NA, see section 3.4 for more details.

3.25 NACE S, Other service activities

NACE S is compiled at the A*64 division level of:

- S94 Activities of membership organizations
- S95 Repair of computers and personal and household goods
- S96 Other personal service activities

GVA of NACE S represents only 1.4 per cent of total GVA, 1.3 per cent of GDP and 1.2 per cent of GNI. S95 is much smaller than S94 and S96 in terms of output, intermediate consumption and gross value added. In fact, S95 is one of the smallest of the 64 NACE divisions.

The section is notable as the only one with a plurality of GVA found in non-profit institutions serving households (NPISH), followed by non-financial corporations and a substantial share from non-incorporated household producers, where NPISH-units are particularly dominant in S94 *Activities of membership organisations* and households largely active in S96 *Other personal service activities*.

Compilation of both output and IC largely follows the standard approach outlined in Section 3.1.

Table 3.25.1: NACE S – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
S94	58 835	21 990	36 845	53,3	0,8	0,7	0,7
S95	5 397	2 362	3 035	4,4	0,1	0,1	0,1
S96	43 593	14 394	29 199	42,3	0,6	0,5	0,5
S	107 825	38 746	69 079	100,0	1,4	1,3	1,2

Table 3.25.2: NACE S – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy
		S11	S12	S13	S14	S15	
S94	Output	9 755	0	19	11	49 050	58 835
	IC	7 052	0	7	5	14 926	21 990
	GVA	2 703	0	12	6	34 124	36 845
	% of GVA	7,3	0,0	0,0	0,0	92,6	100,0
S95	Output	4 097	0	0	1 300	0	5 397
	IC	1 978	0	0	384	0	2 362
	GVA	2 119	0	0	916	0	3 035
	% of GVA	69,8	0,0	0,0	30,2	0,0	100,0
S96	Output	28 064	0	0	15 496	33	43 593
	IC	10 363	0	0	4 022	9	14 394
	GVA	17 701	0	0	11 474	24	29 199
	% of GVA	60,6	0,0	0,0	39,3	0,1	100,0
S	Output	41 916	0	19	16 807	49 083	107 825
	IC	19 393	0	7	4 411	14 935	38 746
	GVA	22 523	0	12	12 396	34 148	69 079
	% of GVA	32,6	0,0	0,0	17,9	49,4	100,0

Table 3.25.3: NACE S – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	14 690	14 690	0	
	Administrative Records	32 031	5	32 026	
	Combined Data	47 294	23 127	24 167	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	2 721	0	2 721
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	2	2	0
		Total Extrap+Models	2 723	2	2 721
Other	0	0	0		
	Total (sources)	96 738	37 824	58 914	
Adjustments	Data validation	-16	0	-16	
	Conceptual	Allocation of FISIM	218	1 305	-1 087
		Allocation of insurance	27	108	-81
		Other conceptual	-68	-468	400
		Total conceptual	177	945	-768
	Exhaustiveness	N1	0	0	0
		N2	710	0	710
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
		N6	10 139	0	10 139
		N7	48	0	48
		Total exhaustiveness	10 897	0	10 897
Balancing	29	-23	52		
	Total (adjustments)	11 087	922	10 165	
Final estimate		107 825	38 746	69 079	

3.25.1 Output

Compilation of output largely follow the standard procedures laid out in Section 3.1 where figures for sectors S11 and S14 are described in section 3.1.2 while figures for S13 and S15 are outlined in more detail in section 3.1.3.

Table 3.1.2.1 shows that deducting these common elements leave 710 SEK millions of industry specific components, made up of one element found under the Exhaustiveness N2 header in table 3.25.3. This refers to illegal activities relating to prostitution, described in more detail in section 7.1

Repairs of household goods constitute a separate product group (S952) in the Swedish National Accounts. As with all output in NACE S production of product group S952 is set in the standard compilation procedure outlined in section 3.1, the primary source of which is the SBS. A confrontation is made between output and expenditure for repairs of household goods in the balancing of supply and use of product group S952 in the SUT framework.

3.25.2 Intermediate consumption

Compilation of intermediate consumption fully align with the standard approach outlined in section 3.1.

3.26 NACE T, Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use

While NACE Section T is compiled at the section and A*64 division level, it could be noted that all activity recorded in the section fall under the two-digit NACE division of T97 *Activities of households as employers of domestic personnel*. While household sector production for own final use is recorded in the accounts there is no undifferentiated component meaning all such covered activities are included in other NACE-sections.

The output value of the section thus consists of remuneration paid by private households to persons in the form of wages or benefits. This includes all fringe benefits such as food and accommodation. An addition is also made for unrecorded activities.

The industry is defined in such a way that only persons who are in an employment relationship with the household are included. Occasional payments by the household to cleaners, window-cleaners etc. are not recorded under this heading but constitute purchases of services from traders falling within other industries. As such the industry is definitionally entirely made up of units in the household sector and additionally unique in that it is the only industry where no intermediate consumption is recorded meaning output is equal to GVA.

The services produced in the industry consist mainly of assistance to disabled persons. The forms of assistance are laid down in a special legislation, the Act concerning Support and Service for Persons with Certain Functional Impairments (LASS). Disabled persons can choose assistance provided in various ways, either through local authority services or from non-profit organizations or the disabled person himself or herself may employ a person. It is this latter form of employment, which constitutes the main output value of the industry Households with persons employed. The disabled person then receives compensation in the form of a transfer to finance the employment.

Information is provided via the Swedish national financial management authority (ESV) records on total amounts and on hours worked and hourly pay from The Swedish Social Insurance Agency, who administers the social insurance. The source material is provided, split on the different provider categories.

The bulk of remaining output is based on a model calculation for primarily au pair or other childcare activities. The model takes into consideration the number of persons in the highest income group and an assumption that 5 percent of them employ a person for childcare services. An hourly wage in accordance with payments to undeclared labour is multiplied with an assessed number of hours worked.

While the section shares some individual elements with the standard procedure laid out in section 3.1 the bulk of both output and intermediate consumption are calculated from industry specific source materials and compilation procedures that are explained in full in this section.

Table 3.26.1: NACE T – Output, IC and GVA by A*64 division, SEK million 2021

NACE Rev 2	Output	IC	GVA	Share of GVA in			
				total GVA of NACE section (A*21) - %	total GVA - %	GDP - %	GNI - %
T	2 847	0	2 847	100,0	0,1	0,1	0,1

Table 3.26.2: NACE T – Output, IC and GVA by sector and A*64 division, SEK million 2021

NACE Rev 2		Institutional sectors					Total economy	
		S11	S12	S13	S14	S15		
T	Activities of households as employers of domestic personnel and undifferentiated goods and services production of households for own use	Output	0	0	0	2 847	0	2 847
		IC	0	0	0	0	0	0
		GVA	0	0	0	2 847	0	2 847
		% of GVA	0,0	0,0	0,0	100,0	0,0	100,0

Table 3.26.3: NACE T – Excerpt from Process Tables – Output, IC and GVA, SEK million 2021

		Output	IC	GVA	
Basis for NA Figures	Surveys & Censuses	0	0	0	
	Administrative Records	1 655	0	1 655	
	Combined Data	0	0	0	
	Extrapolation and Models	Benchmark extrapolations	0	0	0
		Commodity Flow Model	0	0	0
		CFC(PIM)	0	0	0
		Dwellings - stratification method	0	0	0
		FISIM	0	0	0
		Insurance	0	0	0
		Other E&M	0	0	0
Total Extrap+Models	0	0	0		
Other	0	0	0		
Total (sources)	1 655	0	1 655		
Adjustments	Data validation	0	0	0	
	Conceptual	Allocation of FISIM	0	0	0
		Allocation of insurance	0	0	0
		Other conceptual	0	0	0
		Total conceptual	0	0	0
	Exhaustiveness	N1	1 191	0	1 191
		N2	0	0	0
		N3	0	0	0
		N4	0	0	0
		N5	0	0	0
N6		0	0	0	
N7		0	0	0	
Total exhaustiveness	1 191	0	1 191		
Balancing	1	0	1		
Total (adjustments)	1 192	0	1 192		
Final estimate		2 847	0	2 847	

Administrative records relate to LASS (Act on the assistance benefits) forms of:

- Health insurance for State Assistance allowance. NA have monthly information concerning the number of people per hour and hours per week including "Own", "Several employers", "Under investigation" as well as "Missing/unknown" from the Swedish Social Insurance Agency. These categories are used for the calculation of the NACE T.
- The expenditure on Assistance payments on a quarterly basis from the ESV, which is delivered through the Government Finance-sector at Statistics Sweden. This amount is then distributed to three groups – municipal, private or other, where the latter one is the one that contains the categories mentioned in the paragraph above. The share of the data from ESV distributed to the "Other" group calculated using data from the Swedish Social Insurance Agency, then constitutes the Output related to administrative records in this section (NACE T).

Exhaustiveness adjustments refer to estimates of hidden activities by underground producers of Purchased household services (N1).

Balancing is the item used in the final consolidation process between supply and use sides.

3.28 Taxes on products, including VAT

Taxes on products are taxes that are payable per unit of a given good or service produced or transacted. The tax may be a specific amount of money per unit of quantity of a good or service, or it may be calculated as a specified percentage of the price per unit or value of the goods and services produced or transacted. For a separate description and a list of taxes on products paid to the institutions of the European Union, see chapter 8.2.

Taxes on products can be broken down into:

- a) Value added type taxes (VAT)
- b) Taxes and duties on imports, excluding VAT
- c) Taxes on products excluding VAT and import duties

(a) A value added tax is a tax on goods and services, which is successively recovered by enterprises and is ultimately charged in full to the final purchaser. The producer is only required to pay the difference between the VAT on his sales and the VAT on purchases for his own intermediate consumption of goods and services or for gross capital formation.

VAT is recorded net in the sense that:

- I. Output of goods and services and imports are valued exclusive of VAT on outgoing invoices.
- II. Purchase of goods and services are recorded inclusive of non-deductible VAT.

VAT is recorded as a charge on the purchaser, not the vendor, and only on those purchasers who cannot deduct it. The bulk of VAT is thus recorded in the system as paid on final consumption, mainly on the consumption of households. Part of VAT, however, may be paid by enterprises, particularly those whose output is VAT-exempt. In the economy as a whole, VAT is equal to the difference between all invoiced VAT and all deductible inward VAT.

The Swedish National Financial Management Authority (ESV) records VAT under central government revenue heading 1411. Taxable persons whose assessment base exceeds a certain amount per fiscal year must, with some exceptions, report and remit the tax in the month after the close of the accounting period. Other taxable persons must record the tax in a special VAT declaration once a year. In order to obtain the accrued VAT, various period reallocations are undertaken depending on when the VAT is entered under the revenue heading. Close to 80 percent of the total revenues is reallocated with a time shift of one month. The longest reallocations refer to September year $t+1$.

Depending on possible time lag the tax is recorded either pure cash or time adjusted cash in the data source referring to taxes on products. At the same time a reported corresponding amount is recorded in the tax declaration to the Swedish Tax Agency (accrual, referring to the correct period). After the outcome from the Tax Assessment is available, total amounts for each type of tax can be observed in the overall tax system and be recorded in national accounts on an accrual basis.

Small corporations/self-employed settles the tax only once a year in the final tax settlement. VAT is not finalized until final outcome from the assessment and declarations is finalized.

Until final outcome is available a forecast is used together with intermediate outcome. The final outcome for VAT for all units is available in October year $t+1$ referring to year t . The following deadlines for tax payers to pay and present the tax declaration to the Swedish Tax Agency are:

- i. Large corporations and government report VAT: month t+1
- ii. Small and medium corporations report VAT: month t+3 up to t+7
- iii. Self-employed report VAT: September year t+1
- iv. Final data are finalized: October year t+1

VAT is recorded based on information from the Tax Agency; monthly, quarterly or annual depending on size of the enterprise or organisation. Depending on size of the enterprise (the turnover), a taxpayer has to assess the VAT every month, quarterly or on an annual basis. For example, small corporations with an annual turnover less than 1 million SEK and self-employed report VAT annually in September year t+1 referring to year t at the latest. Therefore, final data for VAT year t is finalized in October year t+1. No repayments of VAT to non-taxable persons and to taxable persons for their exempt activities exist (Regulation (EU) 2021/1948). VAT is compiled split by industry but adjusted to the actual final total VAT.

Referring to Mini-One-Stop-Shop (MOSS) and One-Stop-Shop (OSS) the recording follows the general guidelines introduced by the framework of both the GNI and EDP. In national accounts, the total amount of the VAT enters the accounts of the beneficiary and not of the collecting Member State. Data from the Swedish Tax Agency is used.

Due to the change in ESA 2010, VAT recorded as central government revenue include VAT-based third EU own resource.

(b) Taxes and duties on imports excluding VAT comprise compulsory payments, which are levied by general government or by institutions of the European Union on imported goods, excluding VAT, before they can be freely traded within the economic territory, and on services provided to resident units by non-resident units. For goods imported from third countries, duties are levied in accordance with the customs tariff. Regarding importers, who not have credit granted at the Swedish Customs, the duties are charges directly. Duty is payable on private imports of alcoholic beverages and tobacco goods. Agricultural duties apply to agricultural products imported from third countries. Taxes and duties on imports are included in the central government revenue heading 1500.

(c) Taxes on products excluding VAT and import duties consist of taxes which are payable in conjunction with the production, export, sale, transfer, leasing or delivery of goods and services, or in conjunction with their use for own consumption or own fixed capital formation.

Taxes on products are recorded when the taxable activities, transactions or other events take place – when they become due. Only amounts that are supported by assessments, declarations or other instruments are recorded. In calculations of GDP on the output side, output is valued at basic prices. This means that taxes and subsidies on products must be added or subtracted, respectively, in order to obtain GDP at market prices. Taxes and subsidies on products function, here as a separately recorded component of the output of market products and must therefore also be calculated at constant prices.

The Swedish calculations for taxes on products are based mainly on the recording by the ESV of the income of central government departments and authorities under revenue headings, which are updated on a monthly basis.

Due to cash-based recording for payments entered under the revenue headings, period reallocations must be undertaken in order to obtain the accrued value. In practice the income is shifted back in time, for example income for February to January. The most common time shift is of one month.

A major part of the taxes within D.214 are finalized already at month t+1. Exceptions are tax on waste which have a time lag of two months, part of tax on electricity three months, and taxes like profits of fiscal monopolies which are based on annual statements in May year t+1 referring to year t. Fees to

battery fund, stamp duty and chemicals inspectorate levy are recorded cash which are approximately accrual in these cases.

The distinction between a tax and sales of service is based on information about compulsory payments to government without any link between the value of the fee and the cost of administration or performed service. Sales of goods and service consist of payments for non-market or market output. Border line cases between taxes and sales of goods and service are fees for issuing passports, driving licenses etc. where only the government has the right to offer these kinds of services. But the relation between the actual cost for administration (or similar, e.g. government act based on a regulatory function) and the fee, is legitimate so the fee is recorded as sales of service. On the other hand, if the payment is out of proportion of the cost of providing the service it is recorded as a tax. Please see several of taxes recorded within transaction code D.214 below.

The table below presents the taxes on products on a more aggregated level. But in national accounts, as well as in the National Tax List, taxes on products could be split on a more detailed level, which also is included in the ESA Transmission Program. The figures given in the table below do not represent the values under the various revenue headings below, but are the values entered in the Swedish national accounts. In general, all taxes in Sweden are based on the accrual principle and from assessment and declarations in form of the annual Tax Assessment.

Taxes on products (D.21)	Total amount, SEK million 2021
Value added type taxes (D.211)	499 361
Central government part	492 518
VAT referring to VAT-based third EU own resource	6 843
Taxes and duties on imports excluding VAT (D.212)	7 339
Import duties	7 339
Taxes on imports, excl. VAT and import duties	0
Taxes on products, except VAT and import taxes (D.214)	134 027
Excise duties and consumption taxes	105 592
Taxes on financial and capital transactions	15 524
Taxes on lotteries, gambling and betting	4 028
Taxes on insurance premiums	2 801
Other taxes on specific services	568
Profits of fiscal monopolies	3 276
Other taxes on products n.e.c.	2 238
Total	640 727

In the table above, VAT (D.211) contain two parts. One domestic (the major part), and one referring to EU VAT recording through central government, which is the same recorded as D.76.

The following revenue headings and fund income are classified as taxes on products, except VAT and import taxes. The description below follows the same disposition as ESA Transmission Program and the National Tax List. Within brackets signs the headings from the central government budget are presented (refer to budget 2021).

D.214A Excise duties and consumption taxes

Energy tax (1430)

The revenue heading consists of four parts: tax on electric power, petrol, other oil products and other energy taxes (gas, coal etc.). The heading contains taxes on certain fuels, such as coal products, petroleum coke, petrol, paraffin oil, diesel oil, heating oil, natural gas, methane and LPG, and electric power. The tax on electric power is levied based on a specific amount per kilowatt-hour. For tax on petrol, other oil products and other energy taxes, payments and reporting to the Swedish Tax Agency take place in the month after the accounting period, i.e. tax year t refers to the period February year t to January year t+1. Tax on electric power has a time lag of three months, i.e., tax year t refers to the period April year t to March year t+1.

The tax on petrol and unmarked oils is differentiated with respect to their environmental properties and litre or cubic meter. Other energy taxes are levied based on different quantity measures as well as environmental impact/environmental class.

Within taxes on electric power one part refers to rerouting renewable energy scheme thru central government based on the recording rules in the Manual on Government Deficit and Debt. The renewable energy tax consists of cancelled certificates. The data source is the Swedish Energy Agency. Compilation is performed by Statistics Sweden, and the tax is calculated based on number of cancelled certificate year t multiplied by an average price. Average price = [Revenue year t + Revenue for remaining certificate t-x] / Total active certificate (t-x until t). Total active certificate = New certificate + Remaining, not cancelled, certificate. The rerouting exists only in national accounts and not in the central government budget or in any central government revenue heading.

Tobacco duty (1421)

Tobacco duty is collected on cigarettes, cigars, cigarillos, pipe tobacco, chewing tobacco and snuff. The duty is levied at a specified amount per item or per kilo. For cigarettes, the duty also comprises a specified percentage of the retail price. Payment and reporting to the Swedish Tax Agency take place in the month following the accounting period.

Duty on alcohol (1422-1426)

The duty on alcohol consists of three main parts; duty on spirits, duty on wine and duty on beer. The duty on ethyl alcohol (spirits) is charged at a specified amount per litre pure ethyl alcohol. The duty on wine and other fermented beverages is charged at a specified amount per litre, depending on percentage of alcohol by volume. The duty on beer is charged at a specified amount per litre, depending on percentage of alcohol by volume. Payments and reporting to the Swedish Tax Agency take place in the month following the accounting period.

Nicotine duty (1427)

Nicotine tax is paid for e-liquids and other nicotine-containing products that are manufactured in Sweden, are brought in or received from another EU country, or that are imported from a third country. The duty is charged at a specific amount per litre or kilo. The same recording principle as tobacco duty.

Carbon dioxide tax (1440)

Carbon dioxide tax is levied on petrol, coal products, petroleum coke, paraffin oil, diesel oil, heating oils, natural gas, methane and LPG. The tax is charged at specified amounts per litre, tone or cubic meter in the month following the accounting period.

Tax on plastic bags (1464)

Tax on plastic bags refer to plastic bags with or without handles, intended to be provided to consumers to enable them to pack or carry goods. The tax is charged per piece and the thickness of the plastic.

Other environmental taxes (1450 part)

Sulphur tax is payable on the sulphur content of coal products, peat fuel, petroleum coke, diesel oil and heating oil. For solid fuels, the tax is collected at a certain amount per kilogram of sulphur in the fuel. For oils, the tax is levied at a certain amount per cubic meter of oil for every 10th of one per cent of sulphur. Recorded in the month following the accounting period.

Other taxes on goods and services (1458)

The tax on natural gravel is payable for broken natural gravel if extraction is carried out for any purpose other than the landowner's housing needs. The tax is levied at a specified amount per tonne. Also, other minor excise duties are included into this heading. Recorded in the month following the accounting period.

Excise duties and consumption taxes (D.214A)	Total amount, SEK million 2021
Taxes on fuel	48 598
Taxes on electrical power	27 612
Taxes on alcoholic beverage	16 788
Taxes on tobacco	11 907
Tax on plastic bags	398
Tax on gravel	128
Tax on sulphur	10
Other excise duties	151
Total	105 592

*D.214C Taxes on financial and capital transactions**Stamp duty (1361)*

Stamp duty is the tax you must pay when you purchase a property or site leasehold in connection with applying for title registration, as well as when you take out a mortgage on the property.

*D214F Taxes on lotteries, gambling and betting**Tax on gambling (1483)*

Tax on gambling is paid for gambling provided by a licensee according to the Gambling Act (2018:1138). The Gambling Act covers both games for money and games for winnings with a monetary value. The tax is paid for the earnings, corresponding to 18 percent of the balance for a tax period. Recorded in the month following the accounting period.

*D.214G Taxes on insurance premiums**Tax on vehicle insurance premiums (1474)*

The tax is levied on vehicle insurance premiums, i.e., third-party liabilities insurance and vehicle insurance fees. The annual levy is based on a percent of earned premiums and fees. Payments and reporting to the Swedish Tax Agency take place in the month after the accounting period.

*D.214H Other taxes on specific services**Tax on advertising and publicity (1486)*

The tax is levied on advertisements intended for publication within the country and on publicity intended to be disseminated within the country in a form other than advertisements. The tax is charged at a percentage of the taxable value. A certain portion of the tax paid by periodicals is repaid. In general, payment must be recorded in the month after the close of the accounting period.

Flight tax (1462)

Refers to commercial air travel. Paid for passengers traveling from an airport in Sweden in an aircraft approved for more than ten passengers with some exceptions as for example kids under the age of two, only transit, aviation staff working in the aircraft etc. The tax amounts are per passenger and destination. Recorded in the month following the accounting period.

*D.214J Profits of fiscal monopolies**Surplus supplied by Systembolaget AB (1481)*

The income comprises the annual profit of the Swedish alcohol retailing monopoly corporation Systembolaget AB after depreciation, consolidation and distribution to shareholders. Payments are entered in the revenue heading in the year following the revenue year.

Surplus supplied by Svenska Spel AB (1482)

Receipts from State sponsored pools. The income comprises surpluses arising in the operation of different kind of pools schemes. The amount payable consists of what remains of the government corporation's (Svenska Spel AB) annual profit after consolidation, appropriation to adjustment funds, distribution to shareholders and any advanced payments made. Payments are entered in the revenue heading in the year following the revenue year.

*D.214L Other taxes on products n.e.c.**Other environmental taxes (1450 part)*

One part is tax on waste and paid based on a specified amount per tonne, which is brought to a waste disposal installation, where a waste to a quantity of more than 50 tonnes is deposited or kept for more than three years. Levy on pesticides is a specified amount for every whole kilogram of active ingredient in the pesticide and some minor other environmental levies and taxes on chemicals are also included in this heading. Payments and reporting to the Swedish Tax Agency take place, in general, in the month after the accounting period.

In addition, the Chemicals Inspectorate levy is payable annually by any person who commercially manufactures or imports a total of more than one tonne of chemical products. The levy is in two parts, half based on number of products and half on quantities. Preliminary payment is due in one year and the final adjustment takes place in the following year.

Excise duty on chemicals (1461)

Tax on chemicals in certain electronics is paid for appliances goods (stoves, refrigerators, freezers, dishwashers etc.) and other electronic goods as computers, mobile phones etc. that are manufactured in Sweden or are imported from another countries. Levied based on weight, type of goods and type of flame-retardant chemicals. It also exists a maximum amount per goods. Recorded in the month following the accounting period.

Fees to battery fund (1644)

The fee is collected from those who produce or import nickel-cadmium batteries on a professional basis. The fee is a certain amount per kilo. Payment and reporting to the Swedish Environmental Protection Agency take place quarterly.

Tax amounts unlikely to be collected

Assessed amounts are neither adjusted by a coefficient nor recorded as a capital transfer corresponding to taxes unlikely to be collected. The tax calculations are based on taxes actually collected. Both individuals and companies have a tax account. All assessed taxes and payments are recorded on this account. If there is a deficit and the deficit is not settled in time the claim is handed over to the Swedish Enforcement Authority for collecting the claim. A part of these amounts is in fact collected by the Enforcement Authority and transferred to the tax authorities. This net amount (always a loss, of course) is recorded as taxes not to be collected. This means that amounts of taxes not collected can be referred to several years.

Since the tax account system does not allow specification of which taxes are paid or not paid, but only the total, it is not possible to know exactly if the taxes concern the present year or a previous year. However, since the handing of deficits to the Enforcement Authority is made every month, the main part of amounts not paid should concern prepayments of income taxes, social contributions and VAT for the current year. Maybe there will be a minor underestimation of losses for the former year, because the decision on final tax for corporations is made once a year and thus will be an extra claim apart from the monthly payments. Since the total loss does not differ very much from one year to another, this effect, however, will be levelled out over time. Randomly, technical effects can occur, depending on the exact time for handing over a claim to the Enforcement Authority. These effects can occasionally lead to misleading information for a separate year, which also will be levelled out over time.

3.29 Subsidies on products

Subsidies on products are current contributions from departments or authorities of general government or the European Union to producers. Subsidies on products are paid as a fixed or variable contribution per quantity or unit of value on the manufacture, sale or intermediate consumption of a certain product.

In calculations of GDP from the output side, output is valued at basic prices. Therefore, taxes on products and subsidies must be added or subtracted, respectively, in order to obtain GDP at market prices. Taxes on products and subsidies function, here as a separately recorded component of the output of market products, and must therefore also be calculated at constant prices. Product subsidies arise mainly in the transport sector and cover transport involving local bus services and railway transport. Subsidies paid by EU are also recorded but in much smaller amounts (see section 8.3).

Rerouting of renewable energy scheme through central government is based on the recording rules in the Manual on Government Deficit and Debt. This implies a central government tax as well as a central government subsidy. The renewable energy subsidy consists of issued certificates. The data source is the Swedish Energy Agency. Monthly data is available. The subsidy consists of an issued certificate year t multiplied by average price year t . The rerouting exists only in national accounts and not in the central government budget.

Another part of subsidies on products for central government is based on a data source at the Swedish National Financial Management Authority (ESV). ESV records transfer expenditures of departments and agencies of government as well as subsidies from the EU. The transfers are recorded according to recipient sector. The information in the data source from ESV are quite detailed which make it possible to distinguish subsidies from social transfers, investment grants, other miscellaneous transfers, capital injections into public corporations etc. The data sources regarding payments from government, as well as from the EU, are enough detailed to be able to divide the amounts by type of item/transfer, counterpart, split by appropriation, related to quantities of products and merchandises (D.31) or referring to production (D.39), social transfers etc. The main part of subsidies on products, except the renewable energy scheme, refers to education in form of vocational training and transport activities.

An additional data source is used concerning agriculture subsidies to farmers. From the Swedish Board of Agriculture supplementary information about agriculture subsidies are collected which enable a correct split between government and EU subsidies, a split between subsidies on products and other subsidies on production as well as assure an accrual based recording. Hence, we can observe both cash recording and accrual recording at the data source at ESV. In national accounts we use accrual recording. In case of only cash collected amounts for a certain item we use information from national accounts, as for example value added for the activity of interest, to time adjust the amounts to be accrual. This refers mainly to adjustments of quarterly reallocation within the year, i.e., annual amounts are already accrual.

For local government the main data sources are the Annual accounts for municipalities and regions, which are accrual data sources. Local government subsidies on products refer only to transport activities and mainly to bus and railway transports. Regions are responsible alone or together with the municipalities for public transport in the county.

The following expenditures, not including subsidies from EU, is recorded as subsidies on products for general government (ESA transaction code D.31):

Subsidies on products (D.31)	Total amount, SEK million 2021
<i>From central government</i>	4 143
Renewable energy scheme	558
Education activities	2 260
Transport activities	926
Agriculture activities	399
<i>From local government (only transport activities)</i>	19 891
Of which from municipalities	2 296
Of which from regions	17 595
Total	24 034

The Swedish car scrap scheme has been replaced by a higher responsibility undertaking for the car scrap at the manufacturers and importers. The scheme expired in year 2007. The car scrap scheme was conditional in Sweden and it was recorded as a tax on products in the Swedish national accounts (D.21) and not as subsidies on products (D.31), as stated in GNIC/232, rec. 3. According to the Commission's reservation IV for car scrap schemes, this was properly addressed by Sweden.

Chapter 4 GDP according to the income approach

4.0 GDP according to the income approach

Table 4.0.1 GDP according to the income approach by NACE-section and component, SEK million, year 2021

	GROSS VALUE ADDED B.1G	COMPENSATION OF EMPLOYEES D.1	OTHER TAXES ON PRODUCTION AND IMPORTS D.29	OTHER SUBSIDIES ON PRODUCTION D.39	GROSS OPERATING SURPLUS AND MIXED INCOME B.2G+B.3G
A Agriculture, forestry and fishing	62 815	18 842	5 792	-10 472	48 653
B Mining and quarrying	52 527	7 443	1 518	-65	43 631
C Manufacturing	698 849	328 930	63 594	-7 293	313 618
D Electricity, gas, steam and air conditioning supply	122 895	23 120	6 299	-1 708	95 184
E Water supply; sewerage, waste management and remediation activities	30 971	15 749	3 694	-43	11 571
F Construction	317 948	212 962	38 680	-2 293	68 599
G Wholesale and retail trade; repair of motor vehicles and motorcycles	545 032	302 126	55 182	-5 132	192 856
H Transportation and storage	231 299	122 137	26 422	-9 473	92 213
I Accommodation and food service activities	60 832	53 870	9 635	-5 836	3 163
J Information and communication	395 409	172 490	31 198	-6 401	198 122
K Financial and insurance activities	207 587	94 362	21 416	-209	92 018
L Real estate activities	400 522	45 152	40 905	-1 391	315 856
<i>_L of which Imputed rents of owner-occupied dwellings</i>	<i>104 684</i>	<i>0</i>	<i>17 537</i>	<i>-414</i>	<i>87 561</i>
M Professional, scientific and technical activities	375 453	231 367	42 870	-11 732	112 948
N Administrative and support service activities	161 074	121 714	21 628	-9 829	27 561
O Public administration and defence; compulsory social security	204 954	130 909	25 350	-1 286	49 981
P Education	280 575	219 134	44 498	-6 984	23 927
Q Human health and social work activities	521 740	410 680	83 603	-9 893	37 350
R Arts, entertainment and recreation	59 668	39 796	7 520	-6 957	19 309
S Other service activities	69 079	48 128	9 068	-1 476	13 359
T Activities of households as employers; undifferentiated goods- and services- producing activities of households for own use	2 847	2 534	299	0	14
TOTAL VALUES BY INDUSTRY	4 802 076	2 601 445	539 171	-98 473	1 759 933
D21 TAXES ON PRODUCTS	640 727				
D31 SUBSIDIES ON PRODUCTS	-25 043				
GROSS DOMESTIC PRODUCT	5 417 760				

Table 4.0.2 GDP according to the income approach by institutional sector and component, SEK million, year 2021.

	GROSS VALUE ADDED B.1G	COMPENSATION OF EMPLOYEES D.1	OTHER TAXES ON PRODUCTION AND IMPORTS D.29	OTHER SUBSIDIES ON PRODUCTION D.39	GROSS OPERATING SURPLUS AND MIXED INCOME B.2G+B.3G
S11 Non-financial corporations	3 289 667	1 760 300	343 219	-75 656	1 261 804
S12 Financial corporations	205 616	93 961	21 318	-208	90 545
S13 General government	983 230	680 361	139 206	-12 419	176 082
S14 Households	264 300	19 640	25 480	-7 712	226 892
S15 Non-profit institutions serving households	59 263	47 183	9 948	-2 478	4 610
TOTAL VALUES BY INSTITUTIONAL SECTOR	4 802 076	2 601 445	539 171	-98 473	1 759 933
D21 TAXES ON PRODUCTS	640 727				
D31 SUBSIDIES ON PRODUCTS	-25 043				
GROSS DOMESTIC PRODUCT	5 417 760				

4.1 The reference framework

GDP from production and expenditure approaches as well as the compilation of GDP according to the income approach are all compiled within the National accounts at Statistics Sweden. GDP from the income approach is not considered to be a fully independent approach to the estimation of GDP, see also section 1.4.3. The Swedish Tax Agency provides Statistics Sweden with detailed information on income from employment on a micro basis. The taxation data is combined with information from business registers and the compensation of employees is grouped by activity and by institutional sector.

4.1.1 The main sources

The main sources used for each institutional sector concerning GDP from the income side are as follows:

- S11 Non-financial corporations: Structural business statistics (SBS) which combines surveys and administrative data.
- S12 Financial corporations: Yearly income statement
- S13 General Government: Yearly surveys for all units and subsectors within the general government
- S14 Households: SBS and Income statements from taxation
- S15 Non-profit institutions serving households: Yearly survey for the organizations within the sector.

4.1.2 Quality of the Statistical sources

Annual data is collected every year for the different industries and institutional sectors and categories of transactions, which enable a calculation of each component of GDP from the income side. GDP from the income side consists of the following items: compensation of employees, D1, taxes on production, D29, subsidies on production, D39, gross operating surplus, B2G, and mixed income, B3G. The data is collected from surveys as well as from tax registers. The income statements for the nearly 400,000 companies and 600,000 own account workers are used to calculate production and intermediate consumption.

At this stage adjustments are made according to ESA 2010 requirements; this work is done to a large extent much related to the estimate of production and intermediate consumption. This also affects the operating surplus in a later stage when a coherent source is used in several steps. Much effort is also spent on estimating the total value of Compensation of employees that is described in section 4.7.

Surveys are combined with administrative data to ensure that the whole economy is covered, which means that data from all companies are collected regardless of the size of the companies. Supplements are made for hidden and illegal activities. The calculations use surveys as well as administrative data. In the final calculation each year $t+17$ months, all of the sources are used. The earlier estimates are preliminary. All sources are grossed-up to represent the entire population. For more in-depth description of data sources used for the income approach, see section 10.2.

4.2 Borderline cases

4.2.1 Wages and salaries versus intermediate consumption

Benefits are all forms of remuneration for work that employees can get in other forms than cash. A benefit arises in principle as soon as the employer pays for private living costs for an employee. Expenditure by the employee for their job such as for example protective work wear and travel expenses that the employer shall replace does not count as a benefit but is a part of the company's intermediate consumption. A more detailed review of compensation of employees is made in section 4.7. Benefits are reported in the yearly taxation by the employer.

4.2.2 Daily allowances received by employees on business trips

Daily allowances received by employees on business trips are recorded as wages and salaries or intermediate consumption depending on if they are taxable or non-taxable. Taxable daily allowances are recorded as wages and salaries and non-taxable as intermediate consumption. This is not in accordance with Eurostat's guidance on recording of daily allowances, as part of non-taxable allowances should be included in wages and salaries.

This issue has previously been raised and investigated. The estimated daily allowance that should be reclassified to compensation of employees from intermediate consumption is below the materiality threshold of 0.1% of GNI. This question will be followed up in the verification cycle 2025-2029 as a non-material issue.

4.2.3 Intermediate consumption versus gross operating surplus and mixed income

Intellectual Property Products are treated as gross fixed capital formation and is therefore not affecting the estimation of gross operating surplus or mixed income. A more detailed description of gross fixed capital formation is made in chapter 5.10 and of intermediate consumption in chapter 3.

4.3 Valuation

4.3.1 Compliance with ESA 2010 valuation rules.

Section 4.7, along with subsequent sections, provide detailed explanations of the sources and calculations used to determine the various types of transactions and the valuation of the components of GDP from the income approach.

4.3.2 Valuation of wages and salaries in kind

Chapter 4.7 provides a more detailed description of wages and salaries in kind. It covers the combined value of taxable benefits other than cash wages and salaries, such as the provision of a free or partially free car, food, housing, holiday accommodation, telephone, newspapers, sports facilities, transportation, and interest concessions. These taxable benefits are reported through gross pay by income statements, but a supplement is added to car benefits. Valuation is based on market rates, with deductions made for any amounts the employee contributes out of net pay. The full taxable value of the benefit is included in the calculation of wages and salaries, and the total value of car benefits is also incorporated into the production side of the economy.

4.3.3 Accrual principle

(a) Compensation of Employees

For wages and salaries or other forms of compensations paid, a cash principle applies as wages and salaries are paid during the period in which the work is done. Further details can be found in section 4.7.

(b) Taxes on production and import and subsidies

Taxes on production and import are recorded when the taxable activities, transactions or other events take place – when they become due. Only amounts that are supported by assessments, declarations or other instruments are recorded.

The Swedish calculations for taxes on production and import are based mainly on the recording by The Swedish National Financial Management Authority (ESV) of the income of central government departments and authorities under revenue headings, which are updated on a monthly basis.

Due to cash-based recording for payments entered under the revenue headings, period reallocations must be undertaken to obtain the accrued value. In practice the income is shifted back in time, for example income for February to January. The most common time shift is of one month. For more detailed information on taxes on production and import, see sections 3.28, 4.8 and 8.2. Sources and methods of the subsidies are described in detail in sections 3.29 and 4.9.

In section 3.29 subsidies on products are described: ESV records transfer expenditures of departments and agencies of government as well as subsidies from the EU. The information is quite detailed which makes it possible to distinguish subsidies from social transfers, investment grants, other miscellaneous transfers, capital injections into public corporations etc. The data sources regarding payments from government, as well as from the EU, are enough detailed to split the amounts by type of item/transfer, counterpart, split by appropriation, related to quantities of products and merchandises (D.31) or referring to production (D.39), social transfers etc. Both cash and accrual recordings are available in the ESV data. In national accounts, accrual recording is applied. When only cash data is available for a specific item, additional information - such as value added for the relevant activity - is used to time adjust the amounts to be accrual, primarily for quarterly allocations, since annual figures are already on an accrual basis. For local government, the main data source is Annual accounts for municipalities and regions, which are accrual data sources. Local government subsidies on products refer only to transport activities and mainly to bus and railway transports.

In section 4.9 subsidies on production are described in more details. Other subsidies on production consist of subsidies, apart from subsidies on products, which resident producers may receive because of involvement in production. For other non-market output, other non-market producers may receive other subsidies on production only in those cases in which such payments from general government are justified by general provisions applicable to both market and non-market producers. Subsidies are recorded when the transaction or event giving rise to the subsidy takes place.

4.4 Transition from private accounting and administrative concepts to ESA 2010 national accounts concepts

4.4.1 Private and public accounting versus national accounts concepts

GDP estimated from the income side is dependent on the adjustments made in the calculations of both GDP calculations from the production approach as well as from the expenditure approach. Each adjustment of production and each adjustment of intermediate consumption is adjusted by other components in the system. These adjustments are described in the respective part of Chapter 3 concerning GDP from the production approach and in Chapter 5 concerning GDP from the expenditure approach, and in the following sections in this chapter concerning compensation of employees, taxes on production, subsidies on production, gross operating surplus and mixed income.

4.4.2 Transition from private and government accounting to ESA 2010 concepts

Durable goods of small value

Purchases with an economic life shorter than one year are classified as intermediate consumption and excluded from GFCF. An obstacle is that Swedish corporate legislation has a limit of 3 years for a purchase to be classified as fixed investment or fixed capital while national accounts and ESA 2010 have a time limit of one year. To fill the gap between corporate legislation and national accounts a specific question has been included in the SBS asking for GFCF with an economic service life longer than one year but shorter than three years.

Every year the supply of products (production + imports – exports) for tools on the finest level, KN-level, is analyzed to separate smaller tools from larger tools and thereby GFCF from intermediate consumption. See also a description of measures taken to ensure satisfactory transition from private accounting to ESA 2010 concepts regarding durable goods of small value in Section 5.2.2.2

Major repairs and renovations

Improvements to existing fixed assets such as renovation, reconstruction and enlargements are asked for in the SBS as GFCF. See also a description of measures taken to ensure satisfactory transition from private accounting to ESA 2010 concepts regarding major repairs and renovations in Section 5.2.2.2.

Valuation of inventories

In section 5.11.2 the detailed descriptions of details of valuation of inventories are found.

Computer Software and databases

See section 5.10 for detailed description of sources and methods concerning Computer Software and databases

Entertainment, literary and artistic originals

See section 5.10 for detailed description of sources and methods concerning entertainment, literary and artistic originals.

Research and development

In section 5.10 detailed descriptions on sources and methods of gross fixed capital formation in research and development are given.

Insurance service charge

All insurance premiums are excluded from the costs of the companies to reach the correct intermediate consumption, gross value added and gross operating surplus in the National Accounts system. The

expenditure on the insurance service charge is recorded as a transfer in the secondary distribution of income account. The production of insurance service charge is calculated in the insurance industry K65 and is then together with the imports of the product divided between consumption for the consumers, intermediate consumption for the producers and exports.

Production and allocation of FISIM

FISIM is allocated by industries for non-financial corporations, financial corporations and general government in accordance with Commission Regulation (EC) No 1889/2002 of 23 October 2002, using the stocks of loans and deposits on a single letter NACE level. The full breakdown to the 100 industry level in the Swedish national accounts system uses the output of the respective industries as a key. The data for sector S.11 and S.12 uses stocks of loans and deposits by industry to allocate FISIM. Financial corporations S.12 are assumed to be equal to NACE K. For households except NACE L data on production is used as key for allocation by industry. Household's stock of loans with dwellings as collateral are used to calculate homeowners' intermediate consumption of FISIM which is allocated to NACE L. Non-profit institutions serving households uses value added as allocation key. FISIM is also described in section 3.17 in the Inventory.

Margins on trading financial assets

The issue about margins on trading financial assets, transversal reservation TR II Margin on trading financial asset, were proved to be non-material.³⁶

Leasing

IFRS 16 has had only a marginal impact on the statistics. All data collection from companies by Statistics Sweden pertains to information at the legal entity level, not the group level. Only some companies have acquired right-of-use assets, but this has not significantly affected the overall statistics, see also section 3.4.

The treatment of provisioning between private/public accounting and national accounts; especially in reference to decommissioning of large capital assets.

Stocks of fixed capital are built up of calculations regarding gross fixed capital formation, consumption of fixed capital and other changes in assets.

Below are the conceptual adjustments shown for gross operating surplus and mixed income where the biggest impact comes from a reduction of the intermediate consumption which results in higher value added as well as higher gross operating surplus and mixed income. Adjustments concerning allocation of FISIM have a bigger impact than other conceptual adjustments for the group of self-employed which is reflected in the accounts for the mixed income.

³⁶ This issue will be followed up in the verification cycle 2025-2029 as a non-material issue.

Table 4.4.1 Conceptual adjustments for gross operating surplus and mixed income, SEK million 2021

	Allocation of FISIM	Allocation of insurance	Other conceptual	Total conceptual
Gross operating surplus	-70 595	-23 784	230 057	135 678
Non-financial Corporations	-40 513	-12 820	205 727	152 394
Financial Corporations	-3 852	-7 332	24 316	13 132
General Government	0	0	14	14
Households	-26 230	-3 632	0	-29 862
NPISH	0	0	0	0
Mixed Income	-13 573	-400	-571	-14 545
Total	-84 168	-24 184	229 486	121 134

4.5 The roles of direct and indirect estimation methods and of benchmarks and extrapolations

4.5.1 Estimation methods

Direct estimation methods are methods based on sources that give a direct value for the variable to be estimated. Indirect estimation methods are used in the absence of such a direct value and may comprise models, use of ratios, etc. The different methods used in the calculations are described in chapter 3 concerning GDP according to the production approach and in the following sections in chapter 4.7 for compensation of employees. Since gross operating surplus and mixed income are partly derived from production, and intermediate consumption the methods used in those calculations also reflect gross operating surplus as well as mixed income.

In the tables below the different types of methods is shown for each category, compensation of employees, gross operation surplus and mixed income.

Table 4.5.1 Estimation method for Compensation of Employees, SEK million 2021.

			Compensation of employees	
Basis for NA Figures	Surveys & Censuses		528 905	
	Administrative Records		1 632 601	
	Combined Data		323 837	
	Extrapolation and Models	Benchmark extrapolations		0
		Commodity Flow Model		0
		CFC(PIM)		0
		Dwellings - stratification method		0
		FISIM		0
		Insurance		0
		Other E&M		0
		Total Extrap+Models		0
Other		0		
Total (sources)		2 485 343		
Adjustments	Data validation		0	
	Conceptual	Allocation of FISIM		0
		Allocation of insurance		0
		Other conceptual		0
		Total conceptual		0
	Exhaustiveness	N1		0
		N2		0
		N3		0
		N4		0
		N5		0
		N6		111 604
		N7		4 498
	Total exhaustiveness		116 102	
Balancing		0		
Total (adjustments)		116 102		
Final estimate		2 601 445		

The fact that the gross operating surplus and gross mixed income are derived from production, intermediate consumption, compensation of employees and net of taxes on production and subsidies on production, it means that the adjustments made in each category also has an impact on gross operating surplus as well as in the calculation of mixed income. The total common effects per category are shown in the tables below.

Table 4.5.2 Estimation method for Gross operating surplus, SEK million 2021.

			Gross operating surplus	
Basis for NA Figures	Surveys & Censuses		2 279 037	
	Administrative Records		-1 839 032	
	Combined Data		432 368	
	Extrapolation and Models	Benchmark extrapolations		4 419
		Commodity Flow Model		0
		CFC(PIM)		178 433
		Dwellings - stratification method		454 864
		FISIM		119 918
		Insurance		48 024
		Other E&M		-125 505
Total Extrap+Models		680 153		
Other		0		
Total (sources)		1 552 527		
Adjustments	Data validation		-69 167	
	Conceptual	Allocation of FISIM		-70 595
		Allocation of insurance		-23 784
		Other conceptual		230 057
		Total conceptual		135 678
	Exhaustiveness	N1		0
		N2		0
		N3		1 947
		N4		0
		N5		0
		N6		-2 686
		N7		391
	Total exhaustiveness		-348	
Balancing		1 912		
Total (adjustments)		68 075		
Final estimate		1 620 602		

Table 4.5.3 Estimation method for mixed income, SEK million 2021.

			Mixed income, gross	
Basis for NA Figures	Surveys & Censuses		7 199	
	Administrative Records		-13 368	
	Combined Data		95 476	
	Extrapolation and Models	Benchmark extrapolations		200
		Commodity Flow Model		0
		CFC(PIM)		0
		Dwellings - stratification method		7 237
		FISIM		0
		Insurance		0
		Other E&M		1 402
Total Extrap+Models		8 839		
Other		0		
Total (sources)		98 145		
Adjustments	Data validation		-3 288	
	Conceptual	Allocation of FISIM		-13 573
		Allocation of insurance		-400
		Other conceptual		-571
		Total conceptual		-14 545
	Exhaustiveness	N1		1 191
		N2		5 262
		N3		85
		N4		0
		N5		0
		N6		52 186
		N7		138
	Total exhaustiveness		58 862	
Balancing		156		
Total (adjustments)		41 186		
Final estimate		139 331		

More details on methods concerning compensation of employees are to be found in section 4.7 and methods concerning production and intermediate consumption in chapter 3.

4.6 The main approaches taken with respect to exhaustiveness

Descriptions of methods used to ensure exhaustiveness are given in chapter 7.3. An overview of exhaustiveness adjustments is provided in table 7.3.1

4.7 Compensation of employees

Compensation of employees is defined as the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done during an accounting period. This compensation is divided into two parts, wages/salaries and social contributions.

Table 4.7.1 Compensation of employees, SEK million 2021

		Total economy	Non financial corporations	Financial corporations	General government	Households	NPISH
		S.1	S.11	S.12	S.13	S.14	S.15
D.1	Compensation of employees	2 601 445	1 760 300	93 961	680 361	19 640	47 183
D.11	Wages and salaries in cash	2 127 643	1 432 170	72 115	564 974	18 231	40 153
D.11	Wages and salaries in kind	35 062	31 098	3 184	484	13	283
D.12	Employers' social contributions	438 740	297 032	18 662	114 903	1 396	6 747
D.121	Employers' actual social contributions	..*	..	..	..	..	..
D.122	Employers' imputed social contributions	..	..	..	..	..	..

4.7.1 Wages and salaries in cash and in kind

The prime source of information, about 95 percent, in the calculation of the total wages and salaries is monthly PAYE tax return per employee and annual income statement, LSUM (registerbaserad lönesummestatistik). LSUM is Statistics Sweden's adaptation of the gross pay by income statements (AGI/KU) from employers to the tax authorities. The data from the tax authorities are transferred to Statistics Sweden in its entirety and a KU register is then composed from where data can be retrieved. See more information about the data source in chapter 10. This gives us information about wages and salaries both in cash and in kind. To get the total wages and salaries in cash, certain supplements and deductions are made to and from this administrative data source to take account of boundaries, reclassifications and under coverage. When it comes to wages and salaries in kind a supplement is done regarding car benefits, but excluding that, the data used is from gross pay by income statements. The components will be discussed in more details below.

Table 4.7.1.1 Means used to complement the income statements, SEK million 2021

Gross pay based on income statements (LSUM)	1 997 642
Supplement	165 893
Deductions	830
Total volume of wages and salaries in Swedish output	2 162 705

Wages and salaries, components

Gross cash wages and salaries

Gross pay by income statements are the monthly and annual statements of gross wages and salaries in cash and other taxable forms of compensation, which resident employers render to the income recipients and tax authorities prior to assessment. They include gross wages and salaries in cash and other taxable forms of compensation. An income statement must be supplied to anyone who has received wages, salaries, fees, emoluments or other forms of compensation or benefits, which constitute taxable income for work performed. Even if there is no direct employer-employee relationship, an income statement must be supplied by a person who issues payment for work performed where there is a community of interest between the person issuing the payment and the employee. An income statement (AGI/KU) must be supplied if the total value of remuneration and benefits to a person is SEK 1000 or more for the whole year. No adjustments are made to take account of the people falling below this threshold since it is deemed to be of insignificant importance to the overall level of compensation.

For wages and salaries or other forms of compensations (benefits) paid, a strict cash principle applies as wages and salaries are paid during the period in which the work is done. Sick-pay which is paid by the

employer is counted as cash remuneration on the income statement and the classification of sick-pay is accepted in the national accounts. The gross pay data based on income statements include basic wages and salaries; enhanced payment; bonuses; holiday pay; savings schemes; and exceptional payment when leaving companies. The data does not include expenditures necessary for the production process; social insurance benefit; taxes or payment to outworkers. No extra adjustments are made to cover tips and gratuities not included in the gross pay by income statements data.

Taxable benefits

The combined value of taxable benefits other than cash wages and salaries is covered here, for example the benefit of a free or partially free car, food, housing, holiday accommodation, telephone, free newspapers, sports facilities, transportation, or interest concessions. Taxable benefits are collected in the gross pay by income statement, but a supplement is added to car benefits. The benefits are valued at the market rate with deductions for amounts the employee may have paid for the benefit out of his net pay. The taxable value of the benefit is included in its entirety in the wages and salaries calculation. Furthermore, the total value of car benefits is added to the production side of the economy.

For access to a free car, including fuel, a supplement to output (car hire) and income corresponding to the utility value of the car benefit was introduced in the national accounts. Up to the end of income year 1996, the fiscal value of the benefit was deemed to correspond to the utility value. The value of the car benefit broken down by sector and industry is obtained from the gross pay based on administrative sources (LSUM). The calculation of the fiscal value of the car benefit, however, was changed by political decisions several times during the 1990s. The latest change was introduced with effect from 1997. The benefit value for a completely free car was reduced in 1997 theoretically by 32-35 per cent relative to 1996. The variation is based on the assumed price of the new car. Earlier changes had a marginal effect on the value of the benefit and hence did not lead to any change in the assessment of the correspondence between the benefit value and the utility value. The change introduced in 1997, on the other hand, was more radical, hence the benefit value was recalculated to provide a better match with the utility value.

This readjustment of the benefit value was considered in the calculation of the output value, so that the value of the actual benefit would not be underestimated. The readjustment factor of 1.25 (+25%) is calculated based on the change in the fiscal assessment of the benefit value between 1996 and 1997, which means that it can be applied directly to the benefit value shown in the income statement data as of 1997. In the calculation of the readjustment factor, account was also taken of other changes between 1996 and 1997 which affect the total benefit level, for example the number of benefit recipients, new car prices and the average replacement value of the car constituting the benefit. The added value for 2021 due to this adjustment is SEK 4 501 million and the total value for the car benefit in 2021 was SEK 19 961 million.

Other taxable remuneration

This includes remuneration, which does not form part of the basis for social charges or special employer's contributions. It covers, inter alia, annuities, dividends from profit-sharing schemes and in certain cases compensation to competitors in sporting events. The latter case applies to non-profit associations which are tax-exempt, whose main purpose is to promote sporting activity and in which compensation does not exceed half the basic amount per recipient per year. If the compensation is greater, it is recorded as cash remuneration and benefit. The wages and salaries calculations include that part of the category Other taxable compensation, which is paid to competitors in sports events. In 2021 this amounted to SEK 696 million. The information is gathered in the KU income statement but is not included in the gross wages that is received from this source.

Undeclared wages

The national accounts must reflect all economic activities in the country, which means that income in the informal economy, or earnings from “undeclared work”, must be included. In the calculations, information from a study made by the National Swedish Tax Agency in 2020, has been used. The reconciliation possibilities inherent in the national accounts system have also been analysed.

These are based on the common identity, which must exist between income and expenditure. To assess the structure of labour in the informal economy with respect to industry etc. the above-mentioned study has been used. In this study a combination of methods has been used to shed light on labour in the undeclared economy. For estimation, data from audits in respect of income tax have been used. The results of audits covering six years from 2010 to 2016, is the basis for this process. The material was stratified into eight various types/sectors, 3 size groups and 24 activities. The material included 716 000 active companies including public sector and non-profit organisations with a total income of SEK 1 531 billion. Based mainly on these results the value of undeclared wages in 2021 amounted to SEK 111.6 billion, which has been included as a supplement in the wages and salaries calculations.

The results show that there was a strong concentration of underreported income from small companies. Self-employed and companies with total reported salaries of less than one million SEK represented 8 percent of reported income and as much as 44 percent of the calculated underreporting. Medium-sized limited companies defined as having salaries between one and five million SEK, represented 10 percent of reported income from employment and 43 percent of the calculated underreporting. Remaining units, i.e. limited companies with more than SEK 5 million in salaries, and those in other sectors represented 82 percent of reported income and only 13 percent of the compiled underreporting. As the relation between large and small companies varies among different activities the underreported amounts vary with the structure. Figures on the relative hidden income in relation to reported amounts were also compiled by activity. The results confirm to a large extent the general view of which lines of business are predominant in this respect. On the top were hairdressers, fishing, agriculture, taxis, restaurants, construction, other personal services, and building maintenance. Very small amounts were found in waste management, electricity production, mining, industrial manufacturing, and credit institutes.

Airline adjustment

The wages and salaries amount recorded for a large airline company in the income statements do not necessarily correspond to the three sevenths, which should be recorded in the Swedish national accounts in accordance with the distribution of ownership and the agreement between the three countries affected, Sweden, Norway, and Denmark. Discrepancies between the income statements and three sevenths of the company’s total wages and salaries bill are entered as an adjustment item. The item may in principle be either positive or negative.

Partnerships (handelsbolag, HB)

In line with ESA, institutional units, which keep a full set of accounts, enjoy independence in decision-making and are autonomous legal units and market producers should be assigned to the corporate sector. This applies to the Swedish partnerships and incorporated partnerships, which are classified in the business database as quasi corporations in the non-financial corporations’ sector. In accordance with SNA 7.30 (c), the income from work of owners of quasi-corporations is recorded as wages and salaries. The same approach is reflected in the Swedish tax rules, according to which broadly speaking only the shares of part-owners in gains from real estate transactions or tenant-ownership rights are to be taxed under the property income heading. Other income is taxed as mixed income. The income of part-owners from partnerships is therefore classified in the national accounts in its entirety as wages and salaries. The value for 2021 amounted to SEK 4 382 million and the source of this data is the gross income statements (KU).

Military service pay and military catering.

Persons performing their military service are treated in the national accounts as employees of the Armed Forces. Their compensation (pay) does not appear in the income statement data, however. Instead, a supplement is included for military service pay based on central government records according to the Swedish Financial Management Authority (ESV). In 2021 the value amounted to SEK 766 million. The value of military catering is treated, in line with military service pay, as a benefit in kind to military service personnel. The source is the ESV, and the value in 2021 was SEK 130 million.

Wage guarantee

Payments made under the government wage guarantee scheme in the event of company liquidation in accordance with the “Wage Guarantee Act” (1992:497) are included in the income statement data as wage and salary payments from departments and agencies of government. As the guarantee is financed by a social charge laid down by law, these payments are regarded in the national accounts as transfers to households in the form of social benefits. This value is therefore deducted from the wage and salary total shown in the income statement data. The value in 2021 was SEK 830 million.

Table 4.7.1.2 Wages and salaries, SEK million 2021

Wages and salaries	SEK million 2021
KU Gross cash pay	1 997 642
Taxable benefits	35 062
Other taxable compensations	696
Supplements Undeclared wages	111 604
Adjustment for airline	-997
Partnerships	4 382
Wages paid abroad	14 250
Military service pay	766
Military catering	130
Deduction Wage guarantee	830
Total amount of wages and salaries in Swedish output	2 162 705

4.7.2 Employers’ social contributions

The definition of employers’ social contributions is that they are payable by employers to social security schemes or other employment related social insurance schemes to secure social benefits for their employees. In the Swedish national accounts, a tougher interpretation about what to include in social contributions was implemented at the same time as ESA 2010, wherein only payments made by employers for a specific target and for a specific person was considered social contributions. Charges not linked to a specific individual benefit, are recorded as other taxes on production. More information about this can be found in section 4.8. By introducing this stricter definition, the only transactions still categorised as social contributions in the Swedish national accounts are pension related transactions. A division between employers’ actual social contributions and employers imputed social contributions is therefore not done in the Swedish accounts.

Employers’ social contributions correspond to flows in employers’ actual social contributions (D611) and in the Swedish national accounts the data source for the total social contribution is set by inflows in this variable since we have a better data for these transactions. Employers’ social contributions can be either compulsory or contributions regulated by agreement between employers and trade union organisations.

Compulsory social contributions of employers

The sum of total compulsory social contributions of employers are set by data from the Swedish national financial management authority (ESV), the Financial Supervisory Authority and Pensions Registration Institute (PRI). In 2021 the compulsory social contributions to retirement pension were set to 10.21 percent of the total salary. These charges are legally binding.

The value of employers' compulsory social contributions amounted to SEK 274 559 million in 2021.

Social contributions of employers regulated by agreement

Social contributions regulated by agreement comprise of security benefits from the same type as those provided under the Social Insurance system. The benefits are financed by contributions to pension funds or by transfers to accounts within enterprises. The most common form is insurance. A transfer to an account has the advantage that the pension funds can constitute working capital in the enterprise. The total sum of social contributions regulated by agreement are reported by the Swedish national financial management authority and local government annual accounts. The value of employers' social contributions regulated by agreement amounted to SEK 164 181 million in 2021.

Table 4.7.2 The value of social contributions, SEK million 2021

Social contributions	SEK million 2021
Compulsory by law	274 559
Regulated by agreement	164 181
Total social contributions	438 740

4.8 Taxes on production and imports

4.8.1 Taxes on products

For taxes on products see section 3.28.

4.8.2 Other taxes on production

Other taxes on production consist of all taxes for which the enterprise is liable as a consequence of its production activities, irrespective of the quantity or value of the goods and services produced or sold. They may be paid on land, fixed assets or labour in the production process or on certain activities or transactions. The time at which other taxes on production are to be recorded is when the taxable activities, transactions or other events occur – when their values have accrued or fallen due.

The Swedish calculations for other taxes on production are based for the most part on the records kept by the Swedish National Financial Management Authority (ESV) of the income of departments and agencies of central government by revenue headings, which are entered each month. As regards other taxes on production, in addition to revenue headings, ESV also records income items from a fund outside the budget – the Deposit Guarantee Scheme. The following taxes on production are recorded in national accounts.

The following revenues are recorded as other taxes on production:

Other taxes on production (D.29)	Total amount, SEK million 2021
Real estate tax	36 084
Vehicle tax	4 777
Total wage bill and payroll taxes	487 750
Of which General payroll tax	228 901
Of which Sick insurance contribution	69 018
Of which Special payroll tax	51 864
Of which Parental insurance contributions	50 980
Of which Labour market, employment, contributions	48 301
Of which Part of pension fee to state budget	23 042
Of which Survivors pension, contribution	11 805
Of which Other wage bill and payroll taxes	3 839
Business and professional licences	1 371
Taxes on pollution	3 105
Other taxes on production	6 084
Total	539 171

In principle, no taxes in Sweden are recorded either pure cash or time-adjusted cash (TAC) in national accounts. In Sweden, individuals and corporations/organisations have their own *unique* tax account. When a tax obligation occurs the taxpayer pay the tax into the tax account and make a tax declaration to the Swedish Tax Agency (*Skatteverket*). As a result of the structure of the tax system with a single tax account for all taxes, it is not possible to see each tax at the tax account (=cash or TAC). The paid tax has to be confirmed by a corresponding tax declaration. In national accounts, taxes are recorded based on the tax declaration, which approximately is the same as paid tax. Depending on possible time lag the tax is recorded pure cash or TAC but based on reported amounts in the tax declaration to the Swedish Tax Agency. After the outcome from the annual Tax Assessment is available, total amounts for each type of tax can be observed in the overall tax system and be recorded in national accounts. Therefore, time of recording for all taxes and social contributions are based on Assessment and declarations.

The description below follows the same disposition as the National Tax List. Within brackets signs the revenue headings from the state budget are presented (refer to state budget 2021).

D29A1 Real estate tax (1350)

Depending on the type of real estate, the tax is levied on a specified percentage of the assessment value. The tax is collected in conjunction with the collection of income tax from natural persons and legal

persons. Total real estate tax is split between central government real estate tax and local government real estate fee. However, it is the central government who decide both the tax base and the tax rate why real estate tax in national accounts is recorded at central government level and the part referring to local government is rerouted via central government. Both real estate tax and real estate fee are based on outcome from the annual Tax Assessment. The tax rates depend on type of property and the real estate assessed value. However, for households paying real estate fee, it exists a maximum amount for each house/apartment. Tax rates and the maximum amount for households are settled once a year.

D29B1 Vehicle tax (1471)

Vehicle tax is levied on motorcycles, cars, goods vehicles, busses, tractors, heavy off-road vehicles, motor-driven appliances and trailers if they are, or should be, entered in the vehicle register and are not immobilized (taxable vehicle). The vehicle tax is calculated according to the vehicle's taxable weight, category of vehicle, fuel, pollution categories etc. and is payable in principle in advance for the fiscal year or fiscal period. Only the part which is paid by legal persons is included in other taxes on production, the remaining part of vehicle tax paid by households is recorded as income tax (D.5). For cars from year 2006 or later the tax is levied based on an annual base amount together with an additional amount depending on carbon dioxide emission. For cars driving on diesel fuel additional costs are added. This item also includes special vehicle tax referring to vehicles during the sales period, i.e., can be used for non-registered vehicles during test drives, demo etc.

D29C Total wage bill and payroll tax

A major part of total taxes on production, about 90 percent, refers to wage bill and payroll tax. It does not exist a fixed correlation between paid fees and paid benefits. Therefore, it is recorded as other taxes on production. Total wage bill and payroll taxes can be split into different type of taxes where the general payroll tax is the largest and amounted to 229 billion SEK during 2021, which correspond to 47 percent of total wage bill and payroll tax. Revenue headings are divided based on if it is employers' contributions (revenue heading 1210) or households'/self-employed contributions (1240).

Wage bill and payroll tax rates, employers' social contributions	Percent of assessable income
Heading 1210	Year 2021
Sick insurance contribution	3.55
Parental insurance contribution	2.60
Work injuries insurance contribution	0.20
Old age pension contribution	10.21
Survivor pension contribution	0.60
Labour market, employment, contribution	2.64
General payroll contribution	11.62
Total	31.42

Wage bill and payroll tax rates, households'/self-employed social contributions	Percent of assessable income
Heading 1240	Year 2021
Sick insurance contribution	3.64
Parental insurance contribution	2.60
Work injuries insurance contribution	0.20
Old age pension contribution	10.21
Survivor pension contribution	0.60
Labour market, employment, contribution	0.10
General payroll contribution	11.62
Total	28.97

Of which General payroll tax (1217, 1247)

The income under this revenue heading consists of employers' contributions and self-employed traders' contributions. General payroll tax for year t refers to the period February year t to January year t+1, but also adjusted for amounts collected other periods that in fact refers to year t. This tax is a general tax and is the largest one within total wage bill and payroll tax.

Of which Sick insurance contribution (1211, 1241)

The objective of the sick insurance contribution is to finance sickness benefit, pregnancy benefit, part of activity support and rehab. Contribution for year t refers to the period February year t to January year t+1, but also adjusted for amounts collected other periods that in fact refers to year t. This is the second largest tax within total wage bill and payroll tax.

Of which Labour market, employment, contributions (1216, 1246)

Labour market and employment contribution is constructed to finance a range of benefits within this field, for example unemployment benefits and unemployment insurance schemes, supervision of unemployment benefit societies, part of activity support, wage assurance at bankruptcy and central government pension benefit. Contribution for year t refers to the period February year t to January year t+1, but also adjusted for amounts collected other periods that in fact refers to year t.

Of which Special payroll tax (1270)

One part of the special payroll tax refers to tax on imputed pensions and voluntary pension benefits. Corporations, organizations or government units that offer a voluntary pension benefit and pay a pension contribution are obligated to pay special payroll tax, which is a certain percent of the cost of commitment. The tax is collected in conjunction with the collection of income tax from natural persons (self-employed traders) and legal persons.

Another part is special employment tax on earned income, which is collected on earned income of which no part provides eligibility for social insurance benefits. The income consists of employers' contributions and self-employed traders' contributions.

Of which Parental insurance contribution (1212, 1242)

Parental insurance contribution should finance parent's insurance scheme and parent insurance benefits. Contribution for year t refers to the period February year t to January year t+1, but also adjusted for amounts collected other periods that in fact refers to year t.

Of which Survivor pension contribution (1215, 1245)

Survivor pension contribution should finance survivor pension benefits and related administration cost. Contribution for year t refers to the period February year t to January year t+1, but also adjusted for amounts collected other periods that in fact refers to year t.

Of which Part of pension fee to state budget (1214, 1244)

This refers to a part of the pension system. The income side of this revenue heading consists of employers' contributions and self-employed traders' charges. The expenditure consists of transfers to the Swedish National Pension Funds, the Central government and the Swedish National Debt Office, which all manage different parts of the retirement pension scheme. During year 2021 the proportion between the three recipients was 68.9 percent to national pension funds, 20.4 percent to the Swedish National Debt Office concerning the premium pension system and the remaining part 10.7 percent to Central government. Contribution for year t refers to the period February year t to January year t+1, but also adjusted for amounts collected other periods that in fact refers to year t.

Of which Other wage bill and payroll taxes

Consist of remaining parts of wage bill and payroll taxes which correspond to the same principle as above-mentioned tax headings but are minor. It consists of e.g. work injuries social contribution, undistributed social contribution and a special group life insurance premium tax. The special life insurance premium tax (heading 1290) is payable on premiums for group life insurance and on amounts disbursed representing compensation on the basis of such assurance.

D29E Business and professional licenses (1472, 1485)

Include fee for lorries and licences for lotteries. The fee for lorries is paid for motor vehicles with a total weight above 12 tons if the vehicle is used for only transportation on roads. Vehicles registered in Sweden pays for the right to use the Swedish roads. Foreign vehicles also pay to use the Swedish highways as well as some other main roads. Vehicles used by the defence, police and civil-defence are not obligated to pay the fee. The fee for lorries is based on the number of axles of the vehicle (both truck and trailer) and EURO-class.

Revenue headings referring to lotteries, casino etc. include fees for applications, inter alias, to operate lotteries, bingo, casino games and various gaming machines and for type approval or approval under the Lotteries Act. The amount of the fees is scaled according to fee classes. The revenue heading also records levies for the inspection and supervision of gambling and lottery schemes in Sweden. The fees and levies are collected monthly or quarterly.

D29F Taxes on pollution (1459, 1473)

Taxes on pollution vary over time. At present tax on pollution refers to a specific road tax, so called crowding tax with the aim to reduce traffic in large cities. Tax rates depend on time and are higher in the morning and afternoon, but with a maximum cost per vehicle and day (heading 1473).

In addition, emission trade permits are recorded time adjusted cash with 12 month lag (heading 1459). Based on auction revenues at the Swedish National Debt Office.

D29H Other taxes on production (1491, 1641, 1645, 1647)

A major part of the remaining taxes is the deposit insurance fee and the resolution fee. Together, they corresponded to 90 percent of the total remaining taxes under D.29H. The deposit insurance fee refers to a guarantee for deposits within banks and certain mutual funds. Every institution covered by the guarantee must pay an annual contribution. The contribution for one year is based on the deposits of the institution at the close of the preceding year to the extent that the deposits are covered by the scheme.

In 2016 the rules for managing financial crisis in Sweden changed. The new rules are based on the EU so-called Crisis Management Directive. A resolution reserve has been established in accordance with the regulations, which is financed through annual resolution fees paid by the institutions. The resolution fee replaces the former stability fee.

Remaining taxes are fee for telecommunication in form of a contingency fee, and fee for discharge of nitrogen, i.e., fee is collected for discharging and emissions of nitrogen dioxide (Knox) from larger facilities in Sweden.

4.9 Other subsidies on production

Other subsidies on production consist of subsidies, apart from subsidies on products (see section 3.29), which resident producers may receive as a consequence of involvement in production. For other non-market output, other non-market producers may receive other subsidies on production only in those cases in which such payments from general government are justified by general provisions applicable to both market and non-market producers. Subsidies are recorded when the transaction or event giving rise to the subsidy takes place.

In general, a major part of the Swedish calculations for other subsidies on production are based on a data source at the Swedish National Financial Management Authority (ESV). ESV records transfer expenditures of departments and agencies of government as well as subsidies from the EU. The transfers are recorded according to recipient sector. An additional data source is used concerning agriculture subsidies to farmers. From the Swedish Board of Agriculture supplementary information about agriculture subsidies are collected which enable a correct split between government and EU subsidies, a split between subsidies on products and other subsidies on production as well as an accrual-based recording for agriculture subsidies. Concerning other subsidies, no specific information is available on the period to which the expenditure belongs, i.e., no time-reallocation of other subsidies can be made in national accounts. However, a significant part refers to government or EU subsidies to agriculture activities.

However, year 2021 was significantly affected by Covid-19 related support. A major part of the support was thru government subsidies on production. The largest support was paid in year 2020, but the most of the introduced support schemes remained in 2021. Overall data for Covid-19 related support was based on ESV records (the ordinary data source) on appropriations. But to be able to record the support on different counterpart sectors, industries etc. supplementary data was collected from the central government authorities responsible for the different support schemes. In year 2021, the reorientation support showed the largest amount for support to private corporations, followed by central government sick pay responsibility and short-term layoffs in form of furlough scheme.

Due to the extra ordinary support as a result of the Covid pandemic, government subsidies on production were significantly larger compared to normal.

The following expenditure is recorded as other subsidies on production (ESA transaction code D.39):

Other subsidies on production (D.39)	Total amount, SEK million 2021
From central government	78 383
To central government corporations	10 048
To private corporations and private economic associations	65 184
Of which Covid-19 related support (estimate)	32 362
Of which Reorientation support	12 353
Of which Sick pay responsibility	9 952
Of which Short-term layoffs (furlough)	7 092
Of which Support to sport and culture	2 016
Of which Discount for fixed rental costs	949
To municipal corporations	674
Other central government subsidies	2477
From local government	12 080
Of which from municipalities	2 122
Of which from regions	9 958
From the EU	8 010
To agriculture activities	7 741
To other activities	269
Total	98 473

Based on information on government appropriations it is possible to split a significant part of the central government subsidies by receiving activity (split by NACE). 12 percent of central government and EU subsidies together, was given to agriculture activities (NACE A01) during year 2021, followed by

10 percent to R&D (NACE M72). Subsidies paid from central government to local government corporations consist mostly of miscellaneous contributions to public transport and culture activities.

The main source for other subsidies on production from local government is the Annual accounts for municipalities and regions. The Annual accounts are not only the source of the sum but also the source of what kind of activity that are considered. Contribution from municipalities consist mostly of grants for construction activity and for regions it refers mainly to culture activities. The regions contribution for culture is related to their responsibility for culture at a regional level such as regional theatres.

EU subsidies consist of payments from various funds, but the major part refers to agriculture. Where subsidies related to the so-called single farm payment scheme was the largest.

The information in the different data sources is very detailed which make it possible to distinguish subsidies on production from social contributions to households, investment grant, other miscellaneous transfers, capital injections into public corporations etc. The data sources regarding payments from government, as well as from the EU, are detailed and divided by type of item/transfer, counterpart, split by appropriation, related to quantities of products and merchandises (D.31) or referring to production (D.39) etc.

The Swedish car scrap scheme expired in 2007. It has been replaced by a higher responsibility/undertaking for the car scrap at the manufacturers and importers. The revenue for central government at the time of an existing scheme was recorded as tax on products, as stated in GNIC/232, rec. 3, and the fee was paid by corporations that sold the vehicle or households if the vehicle was imported by the household itself. The fee/tax was created to build up a fund/reserve which was used to compensate the person who finally scraps the vehicle. The fund was terminated in July 2008 and the remaining funds in the fund was paid to the first vehicles scraped after first of July 2008 (4 000 SEK per vehicle) until the fund became zero. Cars, trucks and busses with a weight of maximum 3 500 kg were included in this car scrap scheme. The fee was 1 500 SEK for private imported vehicles and 700 SEK for the others. The payments were made to the responsible central government authority – Swedish Road Administration. Payments from the car scrap fund were made to the owner of the vehicle. The fee was paid by unit (by vehicle) and the recording was based on former ESA95 §4.16. The payment from the fund to the owner of the vehicle was recorded as transfer expenditures from central government to households or corporations.

4.10 Gross operating surplus

The calculations in the income approach are based on the production, intermediate consumption, and GDP at market prices determined from the expenditure and production approaches. Gross operating surplus and mixed income are obtained as balancing items in the industry-by-industry calculations for the economy after recording D1 compensation of employees, D2 taxes on production and imports and D3 subsidies.

In the first stage, both production and intermediate consumption from the product accounts for the industry calculations is divided between S11 non-financial corporations and S14 households. The share of registered P1 production and registered P2 intermediate consumption for S11 and S14 is calculated with data from the structured business statistics (SBS), which shows the share of P1 and P2 for corporations divided by the legal form of ownership. In addition to this, assumptions are made for the share of S11 and S14 for P1 production regarding own-account software and car benefits, as well as unregistered activities divided into tax-evasive activities and illegal activities. Similar assumptions are made for the share of S11 and S14 for P2 intermediate consumption regarding adjustments to the SBS, tax-evasive activities, illegal activities and FISIM.

Production and intermediate consumption are also recorded for S12 financial corporations, S13 general government and S15 NPISH. Gross operating surplus is calculated as a balancing item when all relevant transactions are recorded. Likewise mixed income for S14 households is calculated as a balancing item simultaneously with gross operating surplus being calculated for S11 non-financial corporations. Because gross operating surplus originates from the calculations in the production approach, they are comprehensive in the same way as in the production approach. In particular, several adjustments are done in the SBS in order to align with the national accounts concepts. For a further description of all these matters, see sections 3.1-3.6.

4.10.1 Operating surplus, gross and net in S11 non-financial corporations

The operating surplus of S11 non-financial corporations is calculated for the sector as a whole. The starting point is the enterprise-based business accountings for the sector, which is available from the SBS. Since this data is not fully adapted to the national accounts definitions, adjustments are made together with calculations to compensate for the under coverage of tenant-owners' associations (where the owners own financial assets in the form of tenant ownership rights, other equity F.519). Unrecorded activities are added to this.

The definitional adjustments comprise adjustments for costs such as: inventory price changes, insurance costs and settlements, costs for financial leasing, capital formation in short-term inventories and computers as well as computer software and FISIM. In addition, the consumption of fixed assets calculated by enterprises is replaced by the national accounts calculation.

The adjustments for inventory price changes can be both positive and negative, depending on price trends for inventory goods. These so-called holding gains must not affect the operating surplus but are entered instead in the account for other changes in assets. The statistics on inventory changes do not currently give full coverage. The adjustment covers mining and manufacturing along with wholesale and retail trade.

The cost of financial leasing is deducted from intermediate consumption in its entirety. The leasing charge consists of two parts: interest and amortisation. The interest is treated as a capital cost and is entered in the income redistribution account, while amortisation is the redemption of a debt and is entered in the Financial Account. In the statistics, leasing is partially deducted from intermediate consumption. For the remainder the leasing costs are estimated on the basis of total revenue to financial corporations and the already deducted amount.

For insurance premiums, the amount entered in intermediate consumption is replaced by the value calculated in the national accounts for insurance services to enterprises. The entire amount of insurance settlements is deducted from receipts.

For short term inventories, computers and software, the investment concepts of the national accounts differ from the procedure in company accounting. Generally speaking, the accounting data underestimate true investment according to the national accounts definitions. The definitional difference has been estimated and deducted from intermediate consumption. This is also a reason why consumption of fixed assets according to the national accounts is higher and the corresponding adjustment partially offsets the previous adjustment.

4.10.2 Operating surplus of tenant-owners' associations

In the SBS no data are collected for tenant-owners' associations. It is therefore necessary to undertake a special estimate of the corresponding operating surplus, so that operating surpluses of non-financial corporations are not underestimated. For a further description of these matters, see section 3.18.

4.10.3 Operating surplus, gross and net in S12 financial corporations

The production and generation of income accounts in S12 is compiled from an industry perspective rather than a sector perspective. The source of data used in the compilation by industry and sector is the same as regarding the production account. Information on wages and salaries are used from the tax authorities. Other taxes on production, net, wages and salaries and social contributions as well as consumption of fixed assets have been deducted from value added at basic prices in these industries. There is an almost one-to-one relationship between the industry and sector accounts regarding production and generation of income accounts but there are two exceptions to this. How K64-K66 industries relate to sub-sectors in S12 is illustrated in the figure below. The two exceptions to this are the household unincorporated enterprises in financial industries (S1416) and (S15) NPISH in K64-66. Data from the SBS shows the share of P1 and P2 for corporations in each industry divided by the legal form of ownership. The SBS shows that there are unincorporated enterprises in K66 Activities auxiliary to financial services and insurance activities. This refers to insurance brokers in K66. 220 Activities of insurance agents and brokers. The production P1 for sector S1416 for the year 2021 is SEK 1509 million. The calculations for S1416 affect mixed income and are recorded in the household sector.

Subsectors	Sector	Subindustries	Industry
S12	Financial corporations	K64-K66	Financial and insurance activities
S121	The central bank	K64	Financial services, except insurance and pension funding
S122	Deposit-taking corporations except the central bank		
S123	Money market funds (MMFs)		
S124	Non-MMF investment funds		
S125	Other financial intermediaries except insurance corporations and pension funds		
S126	Financial auxiliaries	K66	Services auxiliary to financial services and insurance services
S127	Captive financial institutions and money lenders	K64	Corporations in this sector are not captured in the above K64-K66 industries. Hence separate source data
S128	Insurance corporations	K65	Insurance, reinsurance and pension funding services, except compulsory social security
S129	Pension funds		

4.10.4 Operating surplus, gross and net in S1313 local government

The operating surplus is generated in municipal public service undertakings. The calculation is based on sales and deducts wages and salaries, social contributions, other taxes on production and consumption of fixed capital that corresponds to the sales. These components are calculated in the same way as for the non-market producers of the local government sector. These calculations are described in more detail in section 5.9.

4.10.5 Operating surplus, gross and net in owner-occupied dwellings in S14 household sector

This item covers privately owned dwellings and holiday houses. The calculation of value added is described in section 3.18. Real estate tax, which is accounted as D.29 (other production taxes), is subtracted from value added. Furthermore, the value of D.39 (other production subsidies according to data from the Swedish Financial Management Authority), is added. Consumption of fixed assets is calculated in a model based on data from real estate tax assessment and real estate price statistics. A geometric rate of capital consumption is applied in the model with a rate of between 1.22-1.28 percent for different types of owner-occupied dwellings. These rates correspond to average service lives of between 65 and 75 years. The proportion of owner-occupied dwellings among all individual houses and holiday homes is set to 1, meaning that operating surplus in industry L68A corresponds to operating surplus in S14.

4.10.6 Consumption of fixed assets

The calculation of consumption of fixed assets made for all sectors in the national accounts follows in principle the model outlined in section 4.12.

4.11 Mixed income

Mixed income is the term used to denote the income of households from business activities and can be said to represent combined compensation for the personal capital invested in an unincorporated enterprise and compensation for the proprietor's own labour in the business. No separate data source exists for mixed income, instead it is estimated as a balancing item from the industry calculations for the economy, in conjunction with gross operating surplus. The calculation of mixed income therefore has a similar description as that of operating surplus in section 4.10.

Once gross operating surplus have been estimated for the household sector, described in section 4.10, that can be used to determine mixed income. From the households' gross value added, compensation of employees, consumption of fixed capital, taxes and subsidies are subtracted to estimate the sum of mixed income.

Note that mixed income is registered for household unincorporated enterprises in non-financial industries as well as in financial industries (K66 in Sweden), with production and intermediate consumption being divided by S1411 for non-financial industries and S1416 for financial industries. See section 4.10.3 for a description of the relation between K64-K66 (financial industries) and sectors S12 and S1416. In S12 the production leads to operating surplus and in S1416 the production leads to mixed income.

Because mixed income originates from the calculations in the production approach, they are comprehensive in the same way as in the production approach. In particular, several adjustments are done in the SBS according to the national accounts concepts. For a description of all these matters see sections 3.1-3.6.

4.12 Consumption of fixed capital

4.12.1 Introduction

The consumption of fixed assets is calculated for all producers. The gross value added in general government and non-profit institutions serving households (NPISH) is calculated as the sum of costs where consumption of fixed assets forms one part. The main purpose with the calculation is to distribute the value of capital formation in produced fixed assets to the period where it is used up in production.

The general method for the estimation of the consumption of fixed assets is the Perpetual Inventory Method (PIM). PIM is used for every combination of sector, activity and functions (COFOG) for which gross fixed capital formations is recorded. The depreciation functions are geometric for cohorts of assets (convex cohort depreciation function). The PIM model is used throughout the NA except for direct estimation methods used for: dwellings, livestock, aeroplanes, ships and vessels.

$$N_{t+1} = N_t + GFCF_t - CFC_t$$

Where N is the net stock at the beginning of the period (t) and the end of the period (t+1) and GFCF is the addition made by gross capital formation net of sales. Consumption of fixed assets (CFC) consists of two parts, the consumption of the initial stock at the beginning of the period (N_t) and the consumption of the capital formation done during the period (GFCF_t). The share of the latter is approximately half of the consumption of the initial stock.

$$CFC_t = \partial_t * N_t + (1 - (1 - \partial_t)^{1/2}) * GFCF_t$$

For non-market producers within the sectors general government and NPISH the PIM method is the only method used. The PIM is also used for helicopters and aeroplanes used in rescue operations, medical transports and fire protection. Within these sectors direct estimation methods are mainly used for dwellings.

In practice the PIM-model is modified to consider the impact of reclassifications ($K61_t$) and statistical discrepancies (SD_t) that occurs when two different data sources are used in combination, one for the stock estimate and the other for gross fixed capital formation.

$$N_{t+1} = N_t + GFCF_t - \partial_t * N_t - (1 - (1 - \partial_t)^{1/2}) * GFCF_t + K61_t + SD_t$$

Consumption of fixed assets is valued at actual replacement cost (current cost accounting) and in the average prices of the base year. The latter is needed to make comparisons between consecutive years and to construct chain volume indices. This means that fixed assets remaining in the stock but acquired in an earlier period must be re-valued in the current prices of the actual period.

4.12.2 Main aspect of the consumption of fixed capital

Consumption of fixed capital is calculated based on the information available on gross fixed capital formation. This means that the same classifications, as are used in the compilations of gross fixed capital formation, does provide the benchmark for the calculations of consumption of fixed assets. Information on price changes is also obtained from the investment calculations. Apart from gross fixed capital formation at current and constant prices, information is also needed on the rate of capital consumption, i.e. average economic service life in combination with the declining balance rate and other changes in the volume of assets. In the latter case it is mainly a question of reclassification effects when all or part of an establishment changes activity and/or function inducing a re-classification of industry or institutional sector belonging. For further information on gross fixed capital formation, see section 5.10.

4.12.3 The initial stock level

The net stock at the beginning of year 1993 has been estimated with long time series of data on gross fixed capital formation compiled according to the former activity classification (SNI69). Thereafter a

reclassification was made of the calculated stock value to SNI1992/NACE rev.1 for each asset group in the stock of fixed assets. The reclassification is based on the relation of gross fixed capital formation data regarding 1993 between the former and the actual activity classification. For weapon systems (AN.114) the net stock at the beginning of year 1993 has been calculated with a PIM, where a long times series for expenditure on military weapons system has been used from 1963 to 1992. For R&D the opening balance in year 1993 is based on a calculation of R&D capital stocks using GFCF series back to 1963 in the PIM model.

4.12.4 Price indices in the PIM

Information on price changes is obtained from the investment calculations. Constant price calculations are made for gross fixed capital formation in the system using supply- and use tables broken down into products, i.e. price index for domestic supply IHT-index (Internal NA index, see Section 6.1.2.3). Also, price index for domestic supply ITPI, are not calculated by the use of supply- and use tables but delivered by price statistics and is used exceptionally on certain products. Certain fixed capital formation product groups are regarded in the system as known values (K). Known values are not affected by the balance adjustments. For these, separate constant price calculations are made. IHT and ITPI indices are used for almost all others, see table 4.12.1

In the PIM approach NA distinguish between different components of dwelling stocks when conducting revaluation, and the different component is newly built dwellings, major renovations and extensions as well as costs of ownership transfer. For newly built dwellings construction price index adjusted for quality changes is used. The survey for construction price index is a comprehensive survey. For major renovations and extensions, a factor price index for reconstruction is used that exclude wage drift but adjusted for change in productivity. Concerning costs of ownership transfer the price index is based on the average price level, price development and turnover in the property market for approved transfers made via registration of title deeds. The statistics are comprehensive for the entire property market.

Table 4.12.1: Price index in the PIM

Product Groups	Product	Description	Known value	Index
A014C	0143 - 0144	Horses, camels		IMPI
A014E	Part of 014	Livestock for breeding and dairy cattle		Price index for domestic supply (IHT)
A02102A	Part of 02102	Forest drainage		IHT
B09	09	Mining support services	Partly K	ITPI and factor price index for own account production and use
C251	251	Structural metal products		IHT
C252	252	Tanks, reservoirs and containers of metal		IHT
C253	25300	Steam generators, except central heating hot water boilers		IHT
C254	25400	Weapons and ammunition	K	Price indices for weapon systems is based on price indices for domestic supply per CPA product. Data from the Swedish Armed Forces are obtained over the CPA proportions of the weapon systems which are paired with the price index of domestic supply from price statistics by Statistics Sweden.
C257	257	Cutlery, tools and general hardware		IHT
C259	259	Other fabricated metal products		IHT
C262	262	Computers and peripheral equipment		IHT
C263	263	Communication equipment		IHT
C264	264	Consumer electronics		IHT
C2651	26510	Measuring, testing and navigating equipment		IHT
C2652	26520	Watches and clocks		IHT
C266	26600	Irradiation, electro medical and electrotherapeutic equipment		IHT
C267	26700	Optical instruments and photographic equipment		IHT
C2711	27110	Electric motors, generators and transformers		IHT
C2712	27120	Electricity distribution and control apparatus		IHT
C273	27310-27330	Wiring and wiring devices		IHT
C274	27400	Electric lighting equipment		IHT
C2751A	Part of 27510	Refrigeration and freezers, washing machines and other white goods		IHT
C2751B	Part of 27510	Electric domestic appliances n.e.c.		IHT
C2752	27520	Non-electric domestic appliances		IHT
C279	27900	Other electrical equipment		IHT
C281	281110-28150	General-purpose machinery		IHT
C2822	28220	Lifting and handling equipment		IHT
C2823	28230	Office machinery and equipment (except computers and peripheral equipment)		IHT
C282A	28210, 28240 – 28290	Other general-purpose machinery n.e.c.		IHT
C283	28300	Agricultural and forestry machinery		IHT
C284	28410-28490	Metal forming machinery and machine tools		IHT
C2891	28910	Machinery for metallurgy		IHT
C2892	28920	Machinery for mining, quarrying and construction		IHT
C2893	28930	Machinery for food, beverages, tobacco processing		IHT
C2894	28940	Machinery for textile, apparel and leather production		IHT
C2895	28950	Machinery for paper and paperboard production		IHT
C2896	28960	Plastics and rubber machinery		IHT
C2899	28990	Other special-purpose machinery n.e.c.		IHT
C291A	Part of 29101-29102	Motor vehicles		Cars CPI 07111 and Trucks, buses, etc. ITPI
C291X	part of 29101-29102	Used motor vehicles		CPI 07112
C292	29200	Bodies (coachwork) for motor vehicles; trailers and semi-trailers		IHT
C3011	Part of 30110	Ships and floating structures		IHT
C3011X	Part of 30110	Used ships and floating structures	K	IMPI
C3012	30120	Pleasure and sporting boats		IHT
C302	30200	Railway locomotives and rolling stock		IHT
C303	30300	Air and spacecraft and related machinery		IHT
C304	30400	Military fighting vehicles	K	See product 25400
C3091	30910	Motorcycles		IHT
C3092	30920	Bicycles and invalid carriages		IHT
C3099	30990	Other transport equipment n.e.c.		IHT
C31	31000-31090	Furniture		IHT
C323	32300	Sports goods		IHT
C324	32400	Games and toys		IHT
C32501	32501	Medical and dental instruments and supplies		IHT
C329	32910-32990	Manufactured goods n.e.c.		IHT
C32A	32110-32130, 32200	Jewelry, bijouterie and related articles, musical instruments		IHT
C332	33200	Installation services of industrial machinery and equipment		IHT
F41_43	41-43	Constructions and construction works		IHT
J591	591	Motion picture, video and television program services	K	Wage index NACE R90-92
J62A	6201, 6202001, 6202002	Computer programming services; IT design and development services		Price index for domestic supply (ITPI)
J62AEG	6201, 6202001, 6202002	Computer programming services; IT design and development services produced on own account	K	ITPI
L68C	681, 683	Buying and selling services of own real estate; Real estate services on a fee or contract basis		IHT
M72	72	Scientific research and development services		ITPI
M72EG	72	Scientific research and development services, produced on own account	K	ITPI
M72S	72	Scientific research and development services (public sector internal)		ITPI
R90	90	Creative, arts and entertainment services	K	Wage index NACE R90-92

4.12.5 Distinction between market and non-market

The distinction between market and non-market producer is determined at the level of KAU (or local KAU if relevant). The criteria to determine whether an institutional unit should be assigned to general government are clearly set out in ESA 2010. Statistic Sweden has routines for re-classifications of units each year. Therefore, companies and foundations have been transferred into (or out of) the general government in the National Accounts. The GFCF for those units is transferred from the private sector, market producing enterprises to general government non-market producing institutional unit (IU) as far

back in time as relevant. The IU is split in separate KAU's and for each KAU the kind output is regarded when it is determined if the KAU is a market or a non-market producer.

Information about Kind of Activity Unit (KAU) is obtained from The Swedish National Financial Management Authority (ESV) as well as stated in the annual accounts for local governments.

4.12.6 Level of detail for the consumption of fixed assets

Statistics Sweden has disaggregated calculations of the consumption of fixed assets for the producers whose output is measured using the cost approach as well as for the market producers. Now 18 different types of capital assets are used for non-market producers. The non-market producers in the general government sector are broken down by sub sector and functions by COFOG. The number of subsectors used is 7 and the total number of functions is 60. The market producers are mainly located in 3 sub sectors, non-financial corporations, financial corporations and households, and broken down by NACE A*64 industries and 28 different types of capital assets is in use.

There are three different types of dwelling (AN.111) that are used entirely or primarily as residences which are Owner-occupied dwellings', Owner-occupied Holiday homes and Multiple occupancy buildings. Part of the investment in dwellings is major repairs and renovations which are accounted for separately, with a shorter asset life than new buildings. Repairs and maintenance (not improvements) are part of property costs in private accounting and therefore a part of intermediate consumption, see also section 3.4.1. The costs of ownership transfer are included but have the same asset life as the dwelling.

Buildings other than dwellings (AN.1121) is split further and is divided into different types of buildings. Service lives vary between building type and within each group may vary depending on industry and activity/function.

Other structure (AN.1122) is divided into railways and roads, see also section 4.12.8 below.

Land improvement (AN.1123) see section 4.12.8 below.

Transport equipment (AN.1131) are divided into aircraft, trains, ships and vehicles. Ships are further divided into ships and fishing vessels. Vehicles service lives depend on industry affiliation.

The geometric rate of CFC for machinery and equipment (AN.1139), except transport equipment, is a weighted average of assets included in the category machinery and inventory. The weights used corresponds to the values that are recorded in the balanced use table. Since the composition of products in GFCF differs among activities this translates into differences in the geometric rate of CFC, see table 4.12.2.

Table 4.12.2: CPA structure and average depreciation rate

CPA	Description	Depreciation rate
C251	Structural metal products	0,0917
C252	Tanks, reservoirs and containers of metal	0,0917
C253	Steam generators, except central heating hot water boilers	0,0516
C257	Cutlery, tools and general hardware	0,0917
C259	Other fabricated metal products	0,0917
C264	Consumer electronics	0,1500
C2652	Watches and clocks	0,1500
C266	Irradiation, electro medical and electrotherapeutic equipment	0,1350
C2711	Electric motors, generators and transformers	0,1834
C2712	Electricity distribution and control apparatus	0,0500
C273	Wiring and wiring devices	0,0500
C274	Electric lighting equipment	0,0500
C2751A	Refrigeration and freezers, washing machines and other white goods	0,1500
C2751B	Electric domestic appliances n.e.c.	0,1650
C2752	Non-electric domestic appliances	0,1650
C279	Other electrical equipment	0,1650
C281	General-purpose machinery	0,0717
C2822	Lifting and handling equipment	0,1225
C282A	Other general-purpose machinery n.e.c.	0,1225
C283	Agricultural and forestry machinery	0,1316
C284	Metal forming machinery and machine tools	0,1225
C2891	Machinery for metallurgy	0,1225
C2892	Machinery for mining, quarrying and construction	0,1500
C2893	Machinery for food, beverages, tobacco processing	0,0806
C2894	Machinery for textile, apparel and leather production	0,1031
C2895	Machinery for paper and paperboard production	0,0660
C2896	Plastics and rubber machinery	0,1179
C2899	Other special-purpose machinery n.e.c.	0,1072
C31	Furniture	0,1179
C323	Sports goods	0,1650
C324	Games and toys	0,1650
C32501	Medical and dental instruments and supplies	0,1350
C329	Manufactured goods n.e.c.	0,1473
C32A	Jewelry, bijouterie and related articles, musical instruments	0,1667

The geometric rate of CFC for computer hardware (AN.11321) is a weighted average of products included in the asset category machinery and inventory that should be accounted for as computer hardware. The weights used corresponds to the values that are recorded in the balanced use table.

The geometric rate of CFC for Telecommunications equipment (AN.11322) is a weighted average of products included in the asset category machinery and inventory that should be accounted for as telecommunications equipment. The weights used corresponds to the values that are recorded in the balanced use table.

Weapon systems (AN.114) are divided into aircraft, ships, tanks, armoured vehicles, electronic equipment, and other.

Animal resources yielding repeat products (AN.1151) is divided into livestock and racehorses and other draft animals with different service lives.

Tree, crop and plant resources yielding repeat products (AN.1152)

Research and development (R&D) (AN.1171) is calculated according to the manual on measuring Research and development in ESA 2010. The treatment of R&D as GFCF will make visible that R&D will be used in the productive process over multiple periods. All R&D production is measured and is accumulated into R&D capital stocks. The opening balance in year 1993 is based on a calculation of R&D capital stocks using GFCF series back to 1963 in the PIM model. A single average service life of 10 year is used, which is the recommendation of the Task Force on the Capitalisation of R&D in

National Accounts (DMES 2012/11/08), when no national data is available. The declining balance rate is set to 1.65 which in combination with a 10-year service life means a capital consumption rate of 16.5 percent.

Mineral exploration and evaluation (AN.1172) are accounted for and is discussed further in section 4.12.7.

For computer software and databases (AN.1173) a distinction is made as regards its economic service life depending on whether it was purchased (standard software) or developed in house.

There are no other intellectual property products (AN.1179) recorded in the Swedish NA.

4.12.7 Economic service life of units of capital

Information on depreciation rates have been taken from US Bureau of Economic Analysis (BEA).³⁷ In some cases, notably automobiles, roads, dwellings and weapon systems, modifications of the service life have been made. The geometric depreciation pattern is used for transparency. Assumptions have not been made about the distribution of retirements of assets around the average service life, i.e. a retirement function like the Winfrey retirement distributions used in combination with linear depreciation. Summing linear depreciation with Winfrey retirement distribution gives a convex shape of the depreciation and a such mimics the geometric shape and it has therefore not seemed relevant to add a retirement function to the geometric rates used. However, information on depreciation rates has been taken from US Bureau of Economic Analysis. In most cases, the rate of geometric depreciation is based on the Hulten-Wyckoff estimates³⁸ and those depreciation estimates reflect retirements by means of a Winfrey curve. No simultaneous exit is used.

Capital consumption rates (service life assumptions) depend on the aggregated product groups into which stocks of fixed assets are subdivided. Machinery and equipment are broken down into transport equipment, computer hardware, ICT equipment and other machinery and equipment.

Transport equipment consists mostly of passenger cars but, in cases where other transport equipment predominates, e.g. trucks and buses, the capital consumption rates are based on such information.

Buildings and structures are the other main category. Structures are calculated separately if they are of significant value, e.g. roads, streets and railways. For buildings allowance is often made for ways in which the area of use affects their economic life. Thus, a shorter life, higher rate of capital consumption, is assumed for public buildings, which are used by large numbers of people, e.g. schools and hospitals, than for purely administrative buildings used by courts and government departments.

For an accounting of service lives, declining balances and rate of capital consumption for general government and NPISH see table 4.12.3.

³⁷ Cf. U.S. Bureau of Economic Analysis, Survey of Current Business, May 1997.

³⁸ For further reading see, Fraumeni M. Barbara, *The Measurement of Depreciation in the U.S. National Income and Product Accounts*. Survey of Current Business, July 1997 (7-23).

Table 4.12.3: Depreciation rates for assets of general government and NPISH

Asset	Economic service life	Declining balance rate	Capital consumption rate
Buildings and structures:			
Public buildings	40-50 years	0.91	1.82% - 2.28%*
Roads and streets	40 years	1.5775	3.94%
Railways	50 years	0.9480	1.9%
Dwellings	65-75 years	0.91	1.21% - 1.4%
Transport equipment:			
Cars, trucks and buses	13 years	1.7252	13.27%
Machinery and equipment:			
Machinery in activities of general government and NPISH (capital consumption rates weighted together according to the composition of products in capital formation)			9,6% - 14,8%**
Other assets:			
Computer software, purchased	5 years	2.0	40%
Computer software, produced on own account	10 years	2.0	20%
Research and development	10 years	1.65	16.5%
Computer hardware	5 and 10 years	1,65 and 2,1832	16,5% - 43,7%**
ICT equipment	12 year	1,6203 and 1,65	13,6% - 13,76%
Weapons systems	5-50 years	1,65 and 0,91	1.82% - 11.99%***

* Depending on use, ** Depending on function/activity, *** Depending on type of capital

The average service lives in TF FIXCAP³⁹ correspond well with the Swedish average service lives, but Sweden does not use the double declining balance rate (DBR) by default. Sweden uses declining balance rates 2 or below based on our own assessments, but also based on research work done by other institutions, such as Bureau of Economic Analysis (BEA). The average service lives compared with the recommended service lives in the TF FIXCAP can be seen in table 4.12.4.

Nevertheless, some deviations exist and for other buildings and structures (AN.112) deviations exist for commercial building (AN.1121). However, as put forward, Sweden does not use the double declining balance rate by default. For commercial building the DBR is 0,8892⁴⁰.

For roads NA uses a service life of 40 years combined with a declining balance rate of 1.5775 which gives a depreciation rate of 3.94 percent. This depreciation rate is within the interval of 3.3 percent to 4.0 percent suggested by the GNI Committee, although the committee proposes a lifetime in the interval 50 to 60 years combined with a declining balance rate of 2.0. Due to lack of data on investments and on lifetimes, NA has not been able to make separate calculations for the different components of the roads (road base, surface layers etc.) In 2006, a study on the consumption of fixed capital on roads including investigation of life-time assumptions was made at Statistic Sweden. No changes in the estimation methods were made because of the study.

For weapon systems (AN.114) information about the service lives, declining balance rate and the capital consumption rate for the various military items, required to calculate the consumption of fixed capital on military weapons system, is taken from US Bureau of Economic Analysis and supplemented with other national⁴¹ and international data/information. Different capital consumption rates on detailed level

³⁹ DMES Task Force on fixed assets and estimation of consumption of fixed capital under ESA 2010.

⁴⁰ Commercial building is a type A asset in the Hulten-Wykoff Categories, i.e. are one of those for which extensive data were available for estimating geometric rates of depreciation. For further reading see footnote 1.

⁴¹ Service lives for different category of weapons systems; communication equipment 15 years, measurement devices 15 years, other electronic devices 5 years, parts for vehicles: 15 years, ships 35 years, airplanes 25 years, military vehicles 25 years, other weapon systems 24 years and for military facilities 50 years.

have been weighted together to create capital consumption rates at a higher level, i.e. transport equipment, machinery and buildings and structures. The assessment to have somewhat longer service lives is due to that Sweden until year 2024 has been non-alignment in peace and neutrality in case of war.

Mineral exploration and evaluation (AN.1172) have a shorter average service lives applied in comparison to the TP FIXCAP. In Sweden an exploration permit under the Minerals Act is valid for a period of three years. After special consideration, the exploration permit may be extended for a maximum of three years. The maximum validity period is 15 years. Therefore, an average service live of 10 year is plausible.

Software (AN.1173) a distinction is made as regards its economic service life depending on whether it was purchased (standard software) or developed in house. The latter type is assumed to have a longer economic service life and thus a lower rate of capital consumption, because it is tailored to the needs of the business and ready-to-use alternatives are seldom available.

For entertainment, literary and artistic originals (AN.1174) an average service life of 3 year is used. The declining balance rate is set to 1.65 which means a capital consumption rate of 55 percent. With a geometric function this leads to fast depreciations in early years of the assets lives as recommended by the committee. This service live is somewhat shorter than the recommendation outlined in the GNP Committee on Entertainment, Literary and Artistic Originals (GNC/475). However, the committee proposes a lifetime in the interval 5 to 10 years combined with a declining balance rate of at least a 2.0 (double-declining balance).

The service lives assumptions have been investigated and Sweden tries to monitor new phenomena but also new assumptions/information about service lives but due to lack of information no major changes has been made. However, in year 2014 a new weighting together was carried out, i.e. different capital consumption rates on detailed level have been weighted together to create capital consumption rates at a higher level, i.e. transport equipment, machinery and Buildings and structures, see table 4.12.2. A new “weighting together” is scheduled to be carried out and implemented in the next benchmark revision 2029.

Table 4.12.4: Average service lives from DMES Task Force and Swedish National accounts

Asset code	Asset	ASL TF FIXCAP	Range TF FIXCAP	Sweden ASL market producers	Comment	Sweden ASL non-market producers	Comment	DBR
AN.111	Dwellings							
	Dwellings	70	65-70	75	Owner occupied	75		0,91
	Dwellings	70	65-70	70	Owner occupied (Holiday homes)	70		0,899
	Dwellings	70	65-70	65	Multiple occupancy buildings	65		0,91
AN.112	Other buildings and structures							
AN.1121	Buildings other than dwellings							
	Warehouse and industrial buildings	30	25-35	31, 31 and 34	Depending on industry; C, F, G			0,9747
	Commercial buildings	50	45-55	36				0,8892
	Educational buildings	50	45-55	48		40-50	Depending on sector/function	0,91
	Health buildings	50	45-55	48		40-50	Depending on sector/function	0,91
	Buildings and structures for military use	50	45-55	N/A		50		0,91
	Other buildings	50	45-55	12-54	Depending on industry/capital	40-50	Depending on sector/function	0,91
	Buildings and structure (Not separable)			38	NACE A01-A03			0,91
	Mining explorations shafts and wells			12	NACE B			0,901
	Electric power plant			45	NACE D			0,948
	Buildings and structure (Not separable)			38	NACE E			0,948
	Land transport service			38	NACE H			0,899
	Land transport service (Rail transport)			54	NACE H49A			0,948
	Accommodation and food service activities			32	NACE I			0,899
	Telecommunication buildings			40	NACE J			0,948
	Buildings			38	NACE R and S			0,948
AN.1122	Other structures	55	50-60					
	Railways			N/A		50		0,948
	Roads			38	NACE A01 and A02	40		0,91/1,5775
AN.1123	Land improvements	55	50-60	38				
AN.1131	Transport equipment							
	Aircraft	20		20		20		1,65
	Trains	25		28		28		1,65
	Ships	25	20-30	27		N/A		1,65
	Fishing vessel			35		N/A		1,65
	Vehicles*	10	8-12	9-14				
	Cars			13		13		1,7252
	Vehicles			10	NACE F	N/A		1,55
	Vehicles			10	NACE G	N/A		1,7252
	Vehicles			14	NACE H49B	N/A		1,7252
	Vehicles			9	NACE H49D	N/A		1,7252
AN.1132	ICT equipment							
AN.11321	Computer hardware	6	5-7	5,3	Weighted average	5,6	Weighted average	2,1832
AN.11322	Telecommunications equipment	5	4-7	13,3	Weighted average	12,0	Weighted average	1,6203
AN.1139	Other machinery and equipment							
	CPA 25: Fabricated metal products**			18,3	Weighted average	17,5	Weighted average	1,65
	CPA 26: computer, electronic and optical products***							
		10	8-12	12,0	Weighted average	12,0	Weighted average	1,65
	CPA 27: electrical equipment	15	12-18	23,3	Weighted average	15,9	Weighted average	1,65
	CPA 28: machinery and equipment n.e.c.	20	15-25	16,5	Weighted average	16,5	Weighted average	1,65
	CPA 31: furniture	15	12-18	14		14,0		1,65
	CPA 32: other manufactured goods	10	8-12	11,5	Weighted average	11,9	Weighted average	1,65
AN.114	Weapons systems							
	Aircraft	25	20-30	N/A		25		1,65
	Ships	25		N/A		35		1,65
	Tanks	20		N/A		25		1,65
	Armoured vehicles	20		N/A		25		1,65
	Electronic equipment	10		N/A		15		1,65
	Other	15	5-25	N/A		5-15		1,65
AN.115	Cultivated biological resources							
AN.1151	Animal resources yielding repeat products (no CFC)	10		3 and 8				
	Livestock			3		N/A		0,45
	Racehorses and other draft animals			8		N/A		0,56
AN.1152	Tree, crop and plant resources yielding repeat products	15	10-20	15	Fruit trees	N/A		1,65
AN.117	Intellectual property products							
AN.1171	Research and development	10	8-12	10		10		1,65
AN.1172	Mineral exploration and evaluation	30	20-40	10	Commented in text	N/A		2
AN.1173	Computer software and databases	5		5 and 10	Commented in text			
	Computer software and databases, Purchased			5		5		2
	Computer software and databases, Own account			10		10		2
AN.1174	Originals	7	5-10	3	Commented in text	N/A		1,65
AN.1179	Other intellectual property products	No recommendation		N/A		N/A		N/A

*Possible differentiation e.g. trucks, trailers, buses, cars. **Except machinery and equipment. *** Except groups 261 and 262.

4.12.8 Depreciation function and reclassifications

The calculation of the net stock of assets and the value of capital consumption is made by use a Perpetual Inventory Method (PIM model). A geometric function, which describes how the value of the assets falls over time, is used. The method is used for data back to 1993.

For the succeeding years the net stock at the beginning of the year (opening balance), N_t , valued at the average prices of the previous year, is simply taken from the calculation of the previous year closing balance (end of the year). The stock is then recalculated to the average price level of the actual year to form the starting point of the calculation of capital consumption. The recalculation is done by use of the implicit price deflator of the corresponding data on gross fixed capital formation. The same deflator is used to convert consumption of fixed assets in current price into constant prices.

The consumption of fixed assets, P51c (=CFC) is calculated in current prices according to the following formula:

$$P51c = \delta_t \cdot N_t + (1 - \sqrt{1 - \delta_t}) \cdot GFCF_t$$

where δ_t is the geometric rate of capital consumption. This rate is kept fixed over time if no specific information on changes in the rate is available. $GFCF_t$ is the gross fixed capital formation during the year. The GFCF of the year is assumed to be in service half of the year on average.

The net stock at the end of the year, which is also equal to the net stock at the beginning of the next year in constant (the previous year) prices, is calculated according to the following formula:

$$N_{t+1} = N_t + GFCF_t - \delta_t \cdot N_t - (1 - (1 - \delta_t)^{1/2}) \cdot GFCF_t + K61_t + SD_t$$

where $K61_t$ is the sum of all changes in the stock level due to reclassifications. Further reading about reclassifications of existing assets into (or out of) the non-market sectors can be done in section 5.9.2.

4.12.9 Consumption of fixed capital on roads bridges etcetera

The government GFCF in construction is split into dwellings (AN.111) and other buildings and structures (AN112). However, most of the dwellings are classified in the non-financial corporate sector. Roads, streets and railways are separated from other structures.

For roads NA uses a service life of 40 years combined with a declining balance rate of 1.5775 which gives a depreciation rate of 3.94 percent. The depreciation rate is within the interval of 3.3 percent to 4.0 percent suggested by the GNI Committee, although the committee proposes a lifetime in the interval 50 to 60 years combined with a declining balance rate of 2.0. Due to lack of data on investments and on service lives, NA has not been able to make separate calculations for the different components of the roads (road base, surface layers etc.) In 2006, a study on the consumption of fixed capital on roads including investigation of life-time assumptions was made at Statistic Sweden. No changes in the estimation methods were made as a result of the study.

Roads accounts for 17.1 percent of the net capital stock. Roads can be further divided into Central government and Municipal roads. Railways accounts for 15 percent of the net capital stock and weapon system, buildings and structures, accounts for 2.4 percent of the net capital stock, see table 4.12.4. Due to lack of data on investments no further separation of single public infrastructure is possible today. The government GFCF time series is consistent back to 1993.

Table 4.12.5: Type of capital for central government non-market producers' year 2021, percent

Typ of capital	Share
Railways	15.0
Roads	17.1
<i>which of</i>	
<i>Central government</i>	59.5
<i>Municipal roads</i>	40.5
Other buildings and structure	48.2
Weapon system, buildings and structure	2.4
Other types of capital	17.3
Total	100.0

Land improvements should be reported according to ESA 2010 in the position AN.1123, if they can be reported separately. Due to lack of information Statistics Sweden can only separate clearance of forests, rocks etc. to enable land to be used in production for the first time. All other land improvements are reported in position AN.112. This has not resulted in any changes for the calculation of CFC in the PIM, as Statistics Sweden already calculated in this way.

To ensure that the borderline between capital formation and maintenance is correct for central government Statistics Sweden and the Swedish Transport Administration have agreed on a list of specific activities belonging to either one or the other of these two categories. In the case of local government only values from the capital account are used as GFCF.

Chapter 5 The expenditure approach

5.0 GDP according to the expenditure approach

The expenditure approach to GDP is identified by taking the definition of GDP given in the production account as output at basic prices plus taxes on products less intermediate consumption valued at purchasers prices and subsidies on products into the goods and services account where isolating these four components on one side yields the classic GDP-identity of final consumption expenditure plus gross fixed capital formation, changes in inventories and exports minus imports.

This estimate of GDP is derived independently from the production approach described in chapter 3 with the final GDP-figure resulting from reconciling the two through the compiling of a supply use system and final balancing as described in chapter 6.

Table 5.0.1 GDP according to the expenditure approach, SEK million 2021

Main aggregates	SEK million	Percent
Household final consumption expenditure, HFCE	2 365 018	44%
Government final consumption expenditure, GFCE	1 410 050	26%
NPISH final consumption expenditure	64 507	1%
Gross fixed capital formation, GFCF	1 360 714	25%
Changes in inventories	8441	0%
Exports	2 572 582	47%
Imports	2 363 552	44%
GDP	5 417 760	100%

*Changes in inventories including valuables.

5.1 The reference framework

These main components of the expenditure approach are largely compiled separately from each other and in most cases broken down by institutional sector where principal sources for each are:

- Compilations of HFCE are based on number of sources, the main of which are household consumption statistics used for about 54 percent of overall HFCE. Other main sources are the Annual accounts for local government, the stratification model for dwelling services, energy balances, vehicle register, foreign trade in service survey, and data from several public authorities, among other sources.
- Calculation of government final consumption expenditure is based on data provided by the Swedish Financial Management Authority for central government and Annual accounts for local government.
- The calculation of gross fixed capital formation is mainly based on data from the SBS and the Quarterly Investment Surveys plus data on GFCF in the public sector provided by the Swedish Financial Management Authority for central government and Annual accounts for local government. R&D and Capitalized software are compiled by the help of data from the survey on research and development (the Frascati survey) and the survey on IT expenditure in enterprises.
- Estimates on inventories are mainly based on the quarterly inventory survey Business inventories, with some additional adjustments made for other types of inventories. To mention two examples, the SBS is used as the source for inventories in services while the Swedish forest agency is the main source for inventories in forestry.
- The statistics of foreign trade in goods are derived principally from data provided by the Swedish Customs and the Intrastat Survey processed by Statistics Sweden. The major source of data on exports and imports of services is the International Trade in Services Survey (ITSS).

The characteristics of these sources are outlined in chapter 10

Compiling these components result in NA figures for each component further subdivided by the 425 products listed in section 9.1. In addition to product breakdowns consumption in households and general government is further subdivided by purpose in terms of Classification of Individual Consumption According to Purpose (COICOP) for households and Classification of the functions of government (COFOG) for general government. Gross fixed capital formation and changes in inventories similarly subdivide by type of asset.

This stage of initial estimation forms the first stage of the annual national accounts production process that takes place in parallel to the calculation of production components that are described in chapter 3 as these together allow for the construction of the supply-use system that form the basis for further analysis and quality control, complementing component level and time series analysis. This transition to a supply-use framework with product balances and the remaining steps of validation and the balancing procedure that yield final estimates is described in chapter 6.

The process of compiling GDP from the expenditure approach is integrated in the overall National Accounts production process that, as described in section 1.1.3, falls under the Balance of Payments, Financial Markets and National Accounts Unit of Statistics Sweden. Within the unit, responsibilities divide by institutional sector where figures for corporations, households and non-profit institutions serving households are compiled by Product Account Section while the general government sector is handled by the Public Finance Section.

While the Product Account Section largely work with source materials delivered from other units of the agency as well as in some cases from other government agencies the Public Finance unit handle the full range of statistics concerning government entities from national accounts, the production of various underlying surveys to receiving and compiling administrative data from other government agencies. Further information of main sources including agencies responsible for their compilation is found in chapter 10.

5.2 The borderline cases

5.2.1 The borderline cases for HFCE

5.2.1.1 Information on how the inclusion of the following borderline cases in HFCE is ensured:

Owner-occupied dwellings are compiled according to the stratification method recommended in Regulation EC 1722/2005. Data on the housing stock, broken down by various strata, is combined with information on actual rentals paid in each stratum, considering factors such as location, neighbourhood amenities, etc. as well as the size and quality of the dwelling. The main sources are the National apartment register and Rents for dwellings (HiB).

Goods and services received as income in kind by employees are also included in the HFCE. The Swedish tax agency collects data on cars, fuel and other compensations in kind. The figures reported on income in kind from private use of company cars are used to adjust production and HFCE. Other compensations in kind, which among others comprises dwellings and restaurant services, are included in the calculation of the relevant purposes which means that no extra adjustments must be done.

When it comes to agricultural goods the National Board of Agriculture calculates producers' own consumption of food and this estimate is added to HFCE. According to Swedish law, farmers must pay VAT on own consumption. Hence the farmers' own consumption is valued including VAT.

Household services by employing staff are rare in Sweden. Additions are made for two types of employment, a first for au-pair activities where the employing household act as underground producers, and a second for personal assistants employed under the Act concerning support and Service for persons with certain disabilities where qualifying individuals receive subsidies for purchasing assistance services. These individuals can choose to directly employ assistants as an alternative to contracting a private or public provider. Beyond these specific cases direct employment is uncommon as a consequence of the Swedish tax code allowing a 50 percent costs deduction to households for hiring employees from a service enterprise engaged in household services which makes this a much more favourable arrangement than directly employing staff.

Expenses for materials for small repairs and interior decoration of dwellings of a kind carried out by tenants as well as owners are included in the HFCE of COICOP 04. Also hiring of service enterprises for reconstructions and repairs is subject to a 30 percent costs deduction on the service component, i.e. not on costs of materials. Special records are kept at the Swedish Tax Agency on this kind of work. See more detailed information on the description of COICOP 0431 in section 5.7.3.

Expenses for materials for repairs to consumer durables are included in the respective purposes of HFCE. Information is collected from household consumption statistics.

The value of durable goods purchased under hire-purchase agreement is included in HFCE. When the source of the estimate is the household consumption statistics as for purpose COICOP 051 the value of the total sales, irrespective of whether a hire-purchase agreement has taken place or not, is included for the calculation of HFCE. For the calculation of expenditure on cars, car ownership and new car purchases are registered by personal identification number or corporate identification number in the vehicle register. In case of private consumption, the ownership of a car bought under a hire-purchase agreement is recorded on the private person, which means that this transaction is recorded as HFCE.

Purchases and sales of second-hand products such as clothing and cars are registered in the Swedish NA on a net basis, which means that sales via a dealer considers the dealers' margin while sales of these products from one household to another are not included.

FISIM used for final consumption purposes by households is calculated in the same model as for the estimates of the production, import and other uses of FISIM and then included in the HFCE under purpose COICOP 1261. For more information see section 3.17. HFCE of non-life insurance services is defined as premiums paid less claims settled plus direct returns on actuarial reserves allocated to policyholders. HFCE of life insurance services consists broadly speaking of the management costs incurred by the companies for the activity. For more information see section 5.7.3, COICOP 125.

Sweden has no car registration tax any longer. It was repealed in year 2000.

Pension funding services by the amount of the implicit service charge are calculated from the information given in annual reports of the pension funds. A cost approach is applied for these services.

Payments by households for licenses and permits that are regarded as services according to ESA are recorded as HFCE in the Swedish National Accounts. This is the case for payments such as licences for hunting and passport licenses and payments to the Swedish Enforcement Authority - in this latter case the part that covers the administrative costs, both registered as consumption of other services in COICOP 12702, and expenditures for driving licenses which are recorded as consumption of other services in respect of transport equipment in COICOP 0724. The Swedish National Financial Management Authority collects these data.

5.2.1.2 Information on how the exclusion of the following borderline cases from HFCE is ensured:

Purchases by general government of goods and services produced by market producers that are supplied to households for final consumption are registered in the Swedish NA as social transfers in kind as D632 constituting a part of Government Final Consumption expenditure. In most cases households pay a small part of the costs, and this part is included in HFCE.

Payments by households which are to be regarded as taxes are recorded in accordance with the rules set up in ESA 4.79 and 4.80. If the issue of licences involves little or no work on the part of government, the licences being granted automatically on payment of the amounts due, it is likely that they are simply a device to raise revenue and, in such cases, they are treated as taxes.

Data on subscriptions, contributions and dues paid by households to NPISH are collected in the NPISH survey and registered as current transfers D751 to NPISH. Additional data on contributions by households to The Church of Sweden are collected by the Swedish National Financial Management Authority and then recorded as current transfers as well. Data regarding the Church of Sweden is collected in a separate comprehensive survey. Information and statistics on fundraising is available from The Swedish Fundraising Control. This is a non-profit association who monitors the fundraising. The principals are The Swedish Trade Union Confederation, The Confederation of Swedish Enterprise, The Swedish Confederation of Professional Associations and The Swedish Confederation of Professional Employees.

The expenditures that an owner-occupier incurs on the decoration, maintenance and repair of the dwelling not typically carried out by the tenants are included in the intermediate consumption in industry L68A, owner-occupied dwellings and second homes.

See comment on household production of energy on own-account in 5.2.2.1.

5.2.2 The borderline cases for GFCF

5.2.2.1 How to ensure inclusion of borderline cases in GFCF

GFCF of R&D includes the processing of data from the Frascati survey on compensation of employees and intermediate consumption together with additions and subtractions with some other

data into an estimate in accordance with the recommendations of the Task Force on the Capitalization of R&D, DMES 2012/11/08.

Structures and equipment used by the military forces are either classified as weapons systems or as ordinary GFCF, machinery or buildings. The distinction is made by the Financial Management Authority, ESV, using data from the Swedish Armed Forces in accordance with the definitions in ESA 2010.

Non-military units do not have access to weapons and vehicles on their own. Organisations like e.g. the Home Guard are included in the Swedish Armed Forces.

Estimates on mineral exploration and evaluation are included in GFCF by the help of data received from the Geological Survey of Sweden (SGU). Data are collected and compiled using telephone interviews to enterprises and private individuals holding prospecting concessions. As exploration must be preceded by permission, the SGU can carry out a full census. Estimates for mineral exploration are registered as the actual costs for the activities performed plus a mark-up of 16 percent⁴².

Computer software investments are included and calculated as GFCF as described in 5.10.3. They are divided into purchased software and own account software.

Entertainment, literary or artistic originals are included in GFCF and the compilations are to a large extent based on annual payments of royalties and licenses. Detailed delimitation is described in 5.10.3.

Changes in stocks of livestock are based on numbers of animals reported and unit prices from the Board of Agriculture. Similar statistics to ensure an estimate of GFCF are received for breeding stock where the main source is the Economic Account for Agriculture.

Major renovations, alterations and additions that increase the performance, standard or production capacity of existing fixed assets and/or increase the previously expected service life. Enlarging or extending an existing building or facility constitutes a major change in this sense, as does remodelling or restructuring the interior of a building or vessel or a substantial expansion or improvement of an existing software system are treated as GFCF. For one- and two-family houses improvements to existing fixed assets beyond ordinary maintenance and repairs as well as repairs and maintenance are identified from the source BUT (Housing and housing expenses). For the owner-occupied dwellings the respondent is asked, with separate questions, in the BUT survey about their maintenance and repair (IC) and their reconstruction and extension (GFCF) of the dwelling. In the National accounts only financial leasing and not operational leasing counts as gross fixed capital formation. Financial leasing is defined as leasing provided by monetary financial institutions, classified as such by the Financial Supervisory Authority. The sources used are the motor vehicles model, the Financial Supervisory Authority's survey of the total supply of leasing items and the SBS business statistics.

The tax referring to registration of a vehicle is not included in the borderline cases of GFCF as it has expired in the Swedish tax system.

Decommissioning costs for large capital assets should be recorded as GFCF, in line with ESA 3.139. The issue of decommissioning large capital assets has been investigated and has been deemed non-material, i.e. it has no significant impact on GNI. Assets of the Nuclear Waste Fund have been classified outside public administration, and the nuclear power capacity tax (D.29B3) ended in 2018 and has reclassified back in time. The holder of a licence to own or operate a nuclear facility pays a special fee every year. The paid-in fee funds are set aside for each fee-payer and may only be used to

⁴² No information about the actual mark-up for mineral exploration is at hand and therefore the mark-up of the industry which contains technical consultants, division 71 in NACE Rev.2, is used in the mineral exploration calculations.

cover the costs attributable to that particular payer. The allocated funds are paid out, for example, to cover costs related to the decommissioning of a reactor. The Nuclear Waste Fund is administrated by the Legal, Financial and Administrative Services Agency (Kammarkollegiet). The Swedish National Debt Office (Riksgälden) examines and decides how allocated funds may be utilized. The fund pays out funds as costs arise. These issues will be followed up in the verification cycle 2025-2029 as a non-material issue.

Renewable energy installations used in the production of electricity by households should be included as GFCF. Own-account production of energy by households is currently not included in the production estimations. GFCF however, is included as part of GFCF in housing/dwellings etc., since this captured in the household survey on dwellings, Households Finances. Nonetheless, work is ongoing in accordance with the envisaged transversal reservation I on household electricity production to capture not only the investments but the production as well. The incorporation of household electricity production into the compilation is scheduled to be implemented by September 2026 at the latest.

5.2.2.2 Borderline cases, exclusion from GFCF

Small tools are included in IC in the Company book-keeping; therefore, they are not questioned as GFCF in NA.

Maintenance and repairs are activities that owners or users of fixed assets must perform at regular intervals to be able to use such assets during their expected life. Ordinary maintenance and repairs are excluded as the instructions to the investment survey specify what to include: As investments should be recorded acquisitions of tangible assets with a life length of at least one year and rebuilding and improvements which significantly improve capacity, standards and life length. Works of maintenance and repair character, however, refer to work that mainly will maintain an asset and to normal minor alterations and should not be recorded as investments. Only improvements to existing fixed assets such as renovation, reconstruction and enlargements are asked for in the SBS as GFCF.

To exclude operating leasing contracts Statistics Sweden only use data for financial leasing provided by monetary financial institutes for the Financial Supervisory Authority.

Information on number of animals to include in GFCF is made available from the Board of Agriculture every year. The National Board of Forestry provides data on forest activities from which tree felling can be compiled.

Fortunately, Sweden has not been exposed to many catastrophic losses. But in January 2005 a hurricane felled large numbers of trees. Consideration was then taken to reduce stocks of growing trees in the forests and increased stocks of felled trees. Prices were reduced as there was abundance of forest materials.

Machinery and equipment for HFCE. Motor vehicles are registered on personal identification number. Vehicle register model estimates for HFCE are confronted with HCS-estimates.

The distinction between HFCE and intermediate consumption or GFCF of unincorporated enterprises is made through collecting information in different surveys and registers. The SBS includes unincorporated enterprises, which follows the corporate legislation. SBS information is built on income tax returns supplied to the Swedish Tax Agency. All sole traders, e.g. natural persons that conduct business in their own name, are required to submit a yearly income tax return if the entrepreneur or company has had income which is liable to income tax in Sweden, where activities of the unincorporated enterprises is separated from other parts of a natural person's tax reporting.

Unincorporated enterprises have no HFCE, but as members of a private household consumption is recorded in HFCE sources such as the HCS where the line between costs incurred by households as consumers as opposed to producers is based on whether payments are made using a private card or a

company card. The method for separation is described further in description of the Household consumption statistic found in chapter 10.

5.3 Valuation

5.3.1 Valuation of HFCE

The final consumption expenditure of households is recorded at purchaser's prices. This is the price the purchaser pays for the products at the time of the purchase according to ESA 3.06. For used goods, which are sold in the household sector through a third party, only the margin realized on the sale is recorded. In the case of hire purchase, in accordance with ESA 15.22 it is the purchase price including all supplements in the form of delivery and installation charges, which constitutes the value of the product in question. The payments from purchaser to financier are recorded as repayments of principal and interest and broken up as current transfers and household consumption of FISIM.

Generally, estimates of HFCE are collected from sources that provide measures in purchasers' prices, e.g. the Household consumption statistics. If HFCE estimates are based on some other source, e.g. company book-keeping, an adjustment with VAT is made to the account figures, which are provided in basic prices.

5.3.2 Valuation of employee compensation in kind at basic prices

Data on car and fuel compensations in kind to employees that are produced by the employer are delivered by the Swedish Tax Agency. This data is by definition valued at basic prices and is used to adjust income, production and HFCE estimates. The same amount is used for the adjustment of the three sides. Compensation in kind other than car and fuel is considered to be bought by the employer but still included in the levels of the different COICOP-purposes in HFCE, which implies that no adjustment has to be done and that these are valued at purchaser' prices.

In the Swedish National accounts there are two purposes that register consumption of retained goods or services for own account. These are consumption of food (COICOP 01), and expenses for fuel wood (COICOP 0454). When it comes to expenditure on retained fuel wood for own account the calculation is made from the production approach and the same value at basic prices is used for both the output and for the HFCE figures. However, consumption of food produced for own account is valued at market prices. This is according to Swedish law producers must pay VAT on own consumption. Hence the farmers' own consumption is valued including VAT.

From the Swedish Tax Agency VAT- brochure 552B: The following are examples of self-supply for which you must report VAT: You take goods from the business and use them privately.

5.3.3 Procedures applied to ensure that GFCF is valued at purchaser's prices

According to the Generally Accepted Accounting principles, GAAP, which is the basis for enterprise accounting Objects included in Gross fixed capital formation must be valued at purchasers' prices including delivery and installation costs. This is reflected in the main statistical sources used to estimate gross fixed capital formation. The valuation also includes all other costs associated with the acquisition, for example customs duties and other indirect taxes, transport costs, financing of architectural and technical services. Non-deductible value-added tax is included. VAT on the investments of departments and agencies of government are also included in NA data. This treatment of government activities is not in accordance with Swedish tax legislation but with EU claims.

Regarding buildings and structures whose completion time normally extends over several years, the total investment value is apportioned in such a way that the investment amount recorded for each year corresponds to the part completed during that period. The source is SBS and data is collected from company book-keeping and they have certain rules to follow, the percentage-of-completion-method (succesiv vinstavräkning), which means that the degree of completion in each period is invoiced to the client.

5.3.4 Steps to ensure that GFCF produced on own account is valued at basic prices

For products or activities where a market price is not available the production cost is adjusted using a mark-up based on similar products or activities for which the production cost as well as the value at basic prices can be observed. The exact methods differ depending on the source data used and is described more in detail in chapter 5.10. for each type of own account gross fixed capital formation.

5.3.5 Valuation of acquisitions of intellectual property products

Estimates for mineral exploration are registered as the actual costs for the activities performed plus mark-up (16 per cent in 2021).

Estimates of imported, exported sold or bought computer software are registered according to the estimates supplied in the various sources for these activities. For in-house production values are calculated according to production costs plus mark-up for market producers and production costs for non-market producers. More detailed information on capital formation of software is found in section 5.10.

Entertainment, literary and artistic originals are in principle valued according to the discounted value of expected receipts. As there are no statistical sources providing information on the value of original works produced in any given year a model compilation is necessary. It is assumed that the value of the originals in question is equal to the discounted value of future royalty incomes.

The problem is that the future royalties are not known. However, information on current income from royalties from culture and entertainment is available in annual statistics. In the national accounts the simple assumption is chosen, to use the value of royalties received by the artists in question in year t as a proxy for the value of originals created in year t . The reasoning behind this simple convention is as follows: Since there is no information on future royalty earnings, it is assumed that in the long-term royalties increases somewhat faster than the economy as a whole, since leisure activities have income elasticity greater than one. More specifically, the future real growth rate is taken to be equal to the real rate of interest, which likewise is normally greater than the growth rate of the economy. With these assumptions, the equilibrium value of the originals created in any given year may be estimated as the income from royalties in the same year.

In the absence of a better methodology, the value of production of new original musical works is taken to be equivalent to the value of royalties earned on existing originals, See section 5.10.3.

5.3.6 Steps taken to value disposals of existing fixed assets

Information in SBS is available on closing balance and opening balance estimates for fixed capital formation. A net amount of GFCF is therefore possible to compile. Transport equipment is also checked by items also for exports and imports and motor vehicles sold from business sector to households are transferred between the sectors. Costs of ownership transfers are therefore not included in the estimates.

5.3.7 Valuation of inventories

The estimates for the main part of inventories are based on quarterly records in order to reduce the effect of large fluctuations of the stock data over time. A further description is provided in Section 5.11.

5.3.8 Valuation of exports and imports of goods

According to ESA 2010 imports and exports of goods are to be valued free on board at the border of the exporting country (FOB) for total exports and imports. For the individual product groups imports of goods should be valued at the cost-insurance-freight (CIF) price at the border of the importing country. In the Swedish NA both imports and exports of goods are valued at invoice values at the level

of products. A re-valuation to FOB/FOB valuation is made for total exports and imports. More information is given in Sections 5.13 and 5.15.

5.3.9 Valuation of exports and imports of services

As for goods invoice values are used on product level for exports and imports of services and a revaluation of the freight services are made to align with the FOB-FOB valuation of exports and imports of goods. When it comes to taxes on products the instructions in the international trade in services statistics are that VAT and other taxes on products shall not be included in the reported value. See valuation of exports and imports of services in Sections 5.14 and 5.16.

5.3.10 Treatment of transfer prices

Adjustments are made for intra-group transactions within MNEs in the case that these may not reflect market prices, i.e. transfer prices. To some extent we have information on the models applied for MNEs through the work of the Large Case Unit.

5.3.11 Components of expenditure to be recorded on an accrued basis

Expenditure estimates are generally collected and recorded on an accrual basis. However, for taxes some period reallocations are undertaken in order to obtain the accrued value. See Section 3.28 for more information.

5.4 Transition from private accounting and administrative concepts to ESA 2012 national accounts concepts

5.4.1 Private and public accounting versus national accounts concepts

Information on general Swedish accounting principles can be found in section 3.4. With the adaptation to the Structural Business Statistics, SBS, regulation, economic values are determined with the aid of statistics, which is not completely adapted to the definitions of the national accounts, so that some adjustments need to be made to the statistical value. The statistical sources are based on company accounting principles, which necessitates a few corrections to recorded values in order to obtain estimates complying with ESA 2010. There is also additional needs to use models for areas where other sources than SBS is the base. Special calculation models are used to adapt to the ESA guidelines for NA. These include investments in intellectual property, consumption of fixed capital, financial leasing, insurance, transfers in kind from employers, social transfers in kind, military equipment as GFCF, valuables, some biological assets such as trees.

5.4.2 Detailed description of the transition between private accounting and ESA 2010 concepts

Purchases with an economic life shorter than one year are classified as intermediate consumption and excluded from GFCF. Swedish corporate legislation has a limit of 3 years for a purchase to be classified as fixed capital formation while national accounts and ESA 2010 have a time limit of one year. To fill the gap between corporate legislation and national accounts a specific question has been included in the SBS asking for values of objects with an economic life longer than one year but shorter than three years.

More information on treatments of specific component is found in their respective sections:

- Durable goods of small value and major repairs and renovations in Section 5.2.2.2.
- Valuation of inventories in section 5.11.3.
- Own account software in section 5.10.3.
- Entertainment, literary and artistic originals in section 5.10.3.
- R&D in section 5.10.3.
- Insurance service charge and FISIM in section 3.17.1.1.

Statistics Sweden use data for financial leasing provided by monetary financial institutes to exclude operating leasing and to limit accounting differences.

The issue about consumption of margins on trading financial assets, transversal reservation TR II Margin on trading financial asset, were proved to be non-material⁴³.

Table 5.4.1 illustrate the conceptual adjustments made for each component to facilitate transition from definitions in underlying source statistics to those needed in national accounts. The first two categories of these concerning allocation of FISIM and insurance concern use of

For household final consumption this refers to final consumption of FISIM and insurance services while the recoding for general government and NPISH where the allocation of these services to intermediate consumption are recorded in the same way for output and final consumption expenditure as a consequence of the sum of cost approach.

⁴³ This issue will be followed up in the verification cycle 2025-2029 as a non-material issue.

For the remaining components classified as other conceptual adjustments further explanations are found in the sections for the respective expenditure components.

Table 5.4.1 Expenditure approach, conceptual adjustments., SEK million, 2021

	Conceptual											Total conceptual		
	Allocation of FISIM	Allocation of insurance	Repairs	Reclassification	Goods for processing	NA Surveys censuses and administrative records	Merchanting	Own account software/R&D	Sector reclassification	Purchased software/R&D	Company specific adjustments		VAT adjustments	Total
Total final consumption expenditure	32473	30968	0	807	0	0	0	-50679	0	-20517	0	0	-70389	-6948
Household final consumption expenditure	27770	30139	0	0	0	0	0	0	0	0	0	0	0	57909
NPISH final consumption expenditure	511	51	0	0	0	0	0	-450	0	0	0	0	-450	112
General government final consumption expenditure	4192	778	0	807	0	0	0	-50229	0	-20517	0	0	-69939	-64969
Gross capital formation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gross fixed capital formation	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Changes in inventories	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acquisitions less disposals of valuables	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Exports of goods and services	0	0	3255	19936	-2914	20	158175	0	0	0	40207	-12684	205995	205995
Exports of goods	0	0	0	15142	0	20	158175	0	0	0	40207	-2736	210808	210808
Exports of services	0	0	3255	4794	-2914	0	0	0	0	0	0	-9948	-4813	-4813
Imports of goods and services	0	0	11539	26417	6237	0	0	0	0	0	12793	-5566	51420	51420
Imports of goods	0	0	0	20292	0	0	0	0	0	0	12793	-4124	28961	28961
Imports of services	0	0	11539	6125	6237	0	0	0	0	0	0	-1442	22459	22459
Gross domestic product, expenditure approach	32473	30968	-8284	-5674	-9151	20	158175	-50679	0	-20517	27414	-7118	84186	147627

5.5 The roles of direct and indirect estimation methods and of benchmarks and extrapolations

Table 5.5.1 Expenditure approach, basis for NA figures, SEK million, 2021

	Basis for NA Figures											Other	Total (sources)
	Surveys and Censuses	Administrative Records	Combined Data	Benchmark extrapolations	Commodity Flow Model	Extrapolation and Models					Total Extrapolations		
						CFC (PIM)	Dwellings-stratification method	FISIM	Insurance	Other E&M			
Total final consumption expenditure	1091285	424520	1297763	72548	0	178433	466101	0	0	219206	936288	0	3749856
Household final consumption expenditure	173348	74797	1278597	72548	0	0	466101	0	0	145051	683700	0	2210442
NPISH final consumption expenditure	5132	54653	0	0	0	4610	0	0	0	0	4610	0	64395
General government final consumption expenditure	912805	295070	19166	0	0	173823	0	0	0	74155	247978	0	1475019
Gross capital formation	192055	68877	443181	79577	1831	0	0	0	0	577129	658537	0	1362650
Gross fixed capital formation	197856	65889	444108	79577	0	0	0	0	0	577129	656706	0	1364559
Changes in inventories	-5801	2988	-927	0	0	0	0	0	0	0	0	0	-3740
Acquisitions less disposals of valuables	0	0	0	0	1831	0	0	0	0	0	0	0	1831
Exports of goods and services	1606085	743872	0	0	0	0	0	10498	3997	-148	14347	0	2364304
Exports of goods	866316	743872	0	0	0	0	0	0	0	-849	8499	0	1621689
Exports of services	719769	0	0	0	0	0	0	10498	3997	8351	22846	0	742615
Imports of goods and services	1800108	508587	0	0	0	0	0	7221	2308	-13826	-4297	0	2304398
Imports of goods	1077034	508587	0	0	0	0	0	0	0	-35023	-35023	0	1550958
Imports of services	723074	0	0	0	0	0	0	7221	2308	-10203	-7226	0	753800
Gross domestic product, expenditure approach	1089317	728682	1740944	152125	1831	178433	466101	3277	1689	810013	1613469	0	5172412

5.5.1 For items for which the most current year estimates are based on models

Regarding HFCE all estimates based on models are calculated annually. The models try to provide the most representative picture of the component to which they are applied. The assumptions underlying the models are reviewed regularly. An example is the treatment of the discounts when estimating the value of the cars in the motor vehicle model where contacts with trade organization are taken regularly in order to update the premises in the model. Imputed rental values and FISIM are examples of calculations, which are compiled each year based on the most recent data sources.

5.5.2 Notes to items for which the most current year estimates are based on extrapolations from a benchmark year

For information on the extrapolation methods, for which a benchmark year is used and in how far the indicators used in extrapolations are representative of the activities to which they are applied see the detailed information on the section 5.7.3 for HFCE. The underlying assumptions for extrapolations are reviewed annually. The Retail Trade Sales and Assortment survey and the Structural business statistics, which are used for the formation of the matrix used in most of the extrapolations, are updated annually. In total 3.1 percent of HFCE is based on extrapolations from benchmark years, all of which are older than five years. Consumption expenditure corresponding to roughly half of these have been replaced with annual sources in the subsequent annual national accounts for reference year 2023.

Direct measurement methods are used for most expenditure in household consumption. However, indirect measurement methods are used to calculate the utility value of all dwelling services apart from rented apartments. In addition, indirect methods are used to record the utility value of car benefits under COICOP 07425.

For GFCF, annual benchmarks are compiled for a number of investment items. The most important benchmark estimation is the estimation of purchased software. This benchmark was updated last for the reference year of 2021. Part of the calculation for investment in financial leasing is also based on a benchmark estimation. Apart from software and financial leasing, only a few items with small value, drainage within agriculture and machines in owner-occupied homes, are calculated by an indirect estimation model. More detailed information about the specific methods, benchmark estimations and extrapolation approaches are outlined under each relevant investment type in section 5.10.

Up to 1999, the Swedish Board of Agriculture reported estimates for drainage in agriculture based on a survey. Presently no detailed explicit information is available, so the estimate, which was SEK 221 million 2021, is held almost constant over the years. A current survey by the SBA indicates that farmland has decreased somewhat which point towards a stagnant or decreasing development of drainage activities.

Another item where an indirect estimation model is used is the addition for households' replacement investments in white goods, i.e. machine investments in small houses and holiday houses. In Sweden all new residential properties are equipped with white goods, which is part of the total investment value of the property as built. In the event of replacement purchases the property owner bears the cost and finances the replacement through the charge collected from the residents of the property. This means that replacement purchases made by the owner are treated as an investment, and purchases of white goods by tenants are regarded as household consumption.

The current year estimate for white goods replacement investment is calculated with the aid of the housing and rental survey from 1996. An annual chaining is subsequently undertaken by adjusting the level of the current year estimate from the previously calculated year with the development of machine investments in NACE L68B, Property management. The result of the chaining is over time crosschecked and adjusted with respect to changes in the commodity flow, i.e. the domestic supply of a group of white goods products representing replacement investments

Another model used to evaluate or crosscheck the current year estimate is to extrapolate the original housing and rental survey with the changes of stocks of dwellings and price indices of white goods.

5.6 The main approaches taken with respect to exhaustiveness

Having comprehensive, updated registers such as the SBR described in more detail in section 3.1 and 10.0, complete coverage is ensured in most areas. Processes for total coverage in case of non-responses are in place. Widespread access to administrative data sources and to some big data sources, laws to cover the collection of data, compilation models on estimates that are treated differently in company book-keeping compared to NA-manuals, models on hidden and illegal activities, confronting data sources, investigations and cooperation with trade organizations, cooperation with other authorities and especially the Swedish Tax Agency. Consolidation and balancing of estimates in the detailed NA-system also contributes to reliable estimates.

Cooperation within Statistics Sweden between different departments and the work of the Large Case Unit, which is responsible for contacts with the large companies is of vital importance. Service level agreements are negotiated annually and feed-back is given in bilateral meetings with all source statistics. A special group of representatives of bodies working on business statistics, investment surveys, the national accounts and statistical methods continuously assess the results and the construction of surveys in relation to one another.

For the GFCF, the comprehensive SBS is the main source for total values. The investment survey and other sources are used for detailed information and for checking the adequacy of the estimates. Problems on over- and under-coverage are also dealt with, according to statistical methodology.

Based on this there are no exhaustiveness adjustments made for final consumption expenditure in NPSIH or general government, changes in inventories or either imports or exports. For gross fixed capital formation coverage in main sources used mean no adjustments are needed for general government, NPISH or either financial or non-financial corporations.

Adjustments are however needed in the household sector where these sources do not maintain full coverage for household acting as producers for own final use or in their role as consumers. For these areas additions are made concerning gross fixed capital formation from production for own final use concerning dwellings in addition to a series of components in household final consumption expenditure. These respective components, illustrated in table 5.6.1 are described in more detail in sections 5.7, 5.10 and 7.2.

Table 5.6.1. Exhaustiveness adjustments expenditure approach, SEK million 2021

	Exhaustiveness Adjustments							Total
	N1	N2	N3	N4	N5	N6	N7	
Total Household final consumption Expenditure	1 191	5 262	0	0	0	83 961	6 727	97 141
01 food and non-alcoholic beverages	0	0	0	0	0	12 175	1 700	13 875
02 alcoholic beverages, tobacco and narcotics	0	3 975	0	0	0	1 070	0	5 045
03 clothing and footwear	0	0	0	0	0	6 799	0	6 799
04 housing, water, electricity, gas and other fuels	8	0	0	0	0	224	529	761
05 furnishings, household equipment and routine household maintenance	943	0	0	0	0	9 284	0	10 227
06 health	0	0	0	0	0	2 324	0	2 324
07 transport	0	0	0	0	0	14 234	4 498	18 732
08 information and communication	0	0	0	0	0	2 550	0	2 550
09 recreation, sport and culture	0	577	0	0	0	10 844	0	11 421
10 education services	0	0	0	0	0	101	0	101
11 restaurants and accommodation services	0	0	0	0	0	6 920	0	6 920
12 insurance and financial services	0	0	0	0	0	1 953	0	1 953
13 personal care, social protection and miscellaneous goods and services	240	710	0	0	0	15 483	0	16 433
Total Gross Fixed Capital Formation	0	0	4 896	0	0	0	0	4 896
AN111 - Dwellings	0	0	4 896	0	0	0	0	4 896

5.7 Household final consumption expenditure

5.7.1 Overview

Household final consumption expenditures (HFCE) cover expenses incurred by Swedish resident households in procuring goods and services used for the direct satisfaction of the individual needs of their members. These expenditures enter the accounts of the household sector, and that of the total economy, in the use of income account and in the formulation of GDP from the expenditure approach where the total final consumption expenditures in the household sector S14 of 2 365 018 million SEK in 2021 made it the second largest individual component, closely behind figures for total exports.

Compilations are done by product group and by purpose, the latter expressed in terms of the Classification of Individual Consumption According to Purpose (COICOP). Codes used for both are listed in chapter 9 with product group in section 9.1 and COICOP in 9.3. Final NA-estimates for the year 2021 were published in the 2018 version of the COICOP nomenclature. Table 5.7.1 show an excerpt from Annex-A process tables that break down final NA-estimates of HFCE by two-digit COICOP 2018 division and by process table category.

Table 5.7.1 HFCE by COICOP 2018 – Excerpt from process tables, SEK million, 2021

		Total HFCE	COICOP													Transition to national concept	
			01	02	03	04	05	06	07	08	09	10	11	12	13		
Basis for NA Figures	Surveys & Censuses	173 348	578	361	-1 764	133 349	21	6 995	747	-818	5 520	5 221	0	0	18 435	4 702	
	Administrative Records	74 797	0	0	0	1 655	8 964	15 463	0	21 333	501	0	0	26 881	0		
	Combined Data	1 278 597	284 218	77 093	92 926	5 063	129 881	26 188	169 055	110 126	155 999	967	147 647	0	79 434	0	
	Extrapolation and Models	Benchmark extrapolations	72 548	0	0	0	18 287	0	28 595	12 229	0	6 758	119	0	0	6 559	0
		Commodity Flow Model	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		CFC(PIM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Dwellings - stratification method	466 101	0	0	0	466 101	0	0	0	0	0	0	0	0	0	0
		FISIM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Other	Other E&M	145 051	0	0	0	0	0	86 384	0	0	1 362	0	56 725	580	0	
		Total Extrap+Models	683 700	0	0	0	484 388	0	28 595	98 613	0	6 758	1 481	0	56 725	7 139	0
	Total (sources)		2 210 442	284 796	77 454	91 162	622 800	131 557	70 743	283 878	109 308	189 610	8 171	147 647	56 725	131 889	4 702
	Adjustments	Data validation	349	344	1	-3	2	-1	1	-1	4	1	0	1	0	0	0
Conceptual		Allocation of FISIM	27 770	0	0	0	0	0	0	0	0	0	0	0	27 770	0	0
		Allocation of insurance	30 139	0	0	0	0	0	0	0	0	0	0	0	30 139	0	0
		Other conceptual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Total conceptual	57 909	0	0	0	0	0	0	0	0	0	0	0	57 909	0	0
Exhaustiveness		N1	1 191	0	0	0	8	943	0	0	0	0	0	0	0	240	0
		N2	5 262	0	3 975	0	0	0	0	0	0	577	0	0	0	710	0
		N3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		N4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		N5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		N6	83 961	12 175	1 070	6 799	224	9 284	2 324	14 234	2 550	10 844	101	6 920	1 953	15 483	0
		N7	6 727	1 700	0	529	0	0	0	4 498	0	0	0	0	0	0	0
Total exhaustiveness		97 141	13 875	5 045	6 799	761	10 227	2 324	18 732	2 550	11 421	101	6 920	1 953	16 433	0	
Balancing	-823	-52	-29	-40	-25	-95	-15	-202	-72	-111	-5	-79	-25	-73	0		
Total (adjustments)	154 576	14 167	5 018	6 756	738	10 131	2 309	18 529	2 481	11 311	96	6 841	59 838	16 361	0		
Final estimate		2 365 018	298 963	82 472	97 918	623 538	141 688	73 052	302 407	111 789	200 921	8 267	154 488	116 563	148 250	4 702	

The annual national accounts concerning 2021 was penultimate year in which source materials and all primary NA-compilations of individual COICOP items were conducted using the older COICOP 1999 nomenclature. The 132 individual COICOP-1999 items compiled in this first stage were then reallocated to 162 categories from the updated nomenclature of COICOP 2018 using COICOP and product group weights constructed by NA-compilers. It was then results after this reallocation that entered the supply use system as well as final balancing procedures, described in more detail in Chapter 6, leading to the final published results expressed in the updated nomenclature. Lists of COICOP-codes used in calculations from both nomenclatures are provided in section 9.3.

This two-stage compilation procedure affects the descriptions of individual COICOP items as well as the presentation of process table excerpts presented throughout the section. All descriptions of sources and compilation procedures for individual COICOP items are presented by the nomenclature actually used for calculations, meaning the 1999 version. This allows for the presentation of a partial process table excerpt based on the older nomenclature, seen in table 5.7.2, that show all columns of sources and adjustments in use for HFCE except for balancing adjustments, some components under data validation that arise in the relocation, and the resulting final estimates.

This is followed by table 5.7.3 that illustrate the reallocation between the nomenclatures where each row of COCIOP 1999 is distributed to some number of COCIOP 2018 items. While the relocation between nomenclatures carried out in the actual compilation of the accounts were carried out at the most detailed COICOP 1999 level listed in chapter 9.3 in combination with breakdowns by product group, the relocation done for the process-table column breakdown is, as can be seen in table 5.7.1.3 done at the most detailed COICOP level but aggregated over product group. At this level, shares are applied uniformly for all columns in the process-table breakdown.

Summing over the right half of table 5.7.3 while grouping by COCIOP 2018 yields the 15 rightmost columns in table 5.7.4. Following reallocation values at the COICOP-product group level are rounded to whole million SEK to arrive at the final, non-balanced, result. This step has some minor effects on COICOP totals shown in the table that amount to six million SEK for HFCE as a whole, which is recorded in table 5.7.3 under data validation and shown in the column *of which rounding error* for purposes of transparency. It could be noted that while non-balanced COICOP-totals with this data validation item added sum to whole million SEK, values in individual columns have decimal points that are not shown in the tables. Adding the balancing column together with the resulting final estimates to the table results in the full process-table excerpt by COCIOP 2018, where the two-digit COICOP division levels shown in table 5.7.3 correspond to figures included in the full Annex A process-tables as well as those shown in table 5.7.1.

It should be noted that, as can be seen in table 5.7.2, the reallocation of expenditure from COICOP 1999 codes to COCIOP 2018 does not affect any process-table column totals and has no effect on total expenditure in the household sector or on either GDP or GNI. There is also no effect on household consumption expenditure by product. That is except those effects arising from rounding figures post reallocation.

Starting from the annual accounts of reference year 2023 all source materials and compilation procedures have been reviewed and adjusted to allow for direct compilation using COICOP 2018.

Table 5.7.2 HFCE by COICOP 1999, SEK million, 2021

COICOP 1999	Surveys and Censuses	Administrative Records	Combined Data	Extrapolation and Models			Data validation	Conceptual		Exhaustiveness			
				Benchmark extrapolations	Dwellings - stratification method	Other E&M		Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7
01	578	0	284 218	0	0	0	344	0	0	0	0	12 175	1 700
0111	0	0	41 671	0	0	0	16	0	0	0	0	1 486	0
0112	0	0	45 329	0	0	0	0	0	0	0	0	1 743	1 288
0113	0	0	14 857	0	0	0	0	0	0	0	0	509	0
0114	0	0	41 967	0	0	0	0	0	0	0	0	2 515	119
0115	0	0	7 809	0	0	0	0	0	0	0	0	0	0
0116	0	0	21 913	0	0	0	268	0	0	0	0	1 155	0
0117	0	0	31 761	0	0	0	0	0	0	0	0	1 266	293
0118	13	0	35 050	0	0	0	0	0	0	0	0	3 322	0
0119	565	0	12 414	0	0	0	60	0	0	0	0	0	0
0121	0	0	8 980	0	0	0	0	0	0	0	0	86	0
0122	0	0	22 467	0	0	0	0	0	0	0	0	93	0
02	360	0	77 080	0	0	0	0	0	0	0	3 975	1 069	0
02111	0	0	10 259	0	0	0	0	0	0	0	0	0	0
02112	0	0	0	0	0	0	0	0	0	0	65	0	0
02113	0	0	0	0	0	0	0	0	0	0	145	0	0
02121	0	0	25 817	0	0	0	0	0	0	0	0	0	0
02122	0	0	0	0	0	0	0	0	0	0	18	0	0
021311	360	0	11 204	0	0	0	0	0	0	0	0	0	0
021312	0	0	0	0	0	0	0	0	0	0	99	0	0
02132	0	0	2 841	0	0	0	0	0	0	0	0	0	0
02201	0	0	26 959	0	0	0	0	0	0	0	0	1 069	0
02202	0	0	0	0	0	0	0	0	0	0	268	0	0
0230	0	0	0	0	0	0	0	0	0	0	3 380	0	0
03	-1 787	0	94 138	0	0	0	0	0	0	0	0	6 874	0
0311	0	0	2 737	0	0	0	0	0	0	0	0	0	0
0312	-1 787	0	73 783	0	0	0	0	0	0	0	0	5 789	0
0313	0	0	3 302	0	0	0	0	0	0	0	0	0	0
0314	0	0	105	0	0	0	0	0	0	0	0	0	0
0321	0	0	14 117	0	0	0	0	0	0	0	0	1 085	0
0322	0	0	94	0	0	0	0	0	0	0	0	0	0
04	133 384	0	255	18 287	466 101	0	0	0	0	0	0	158	529
0411	0	0	0	1 655	126 972	0	0	0	0	0	0	0	0
0412	0	0	0	1 186	95 272	0	0	0	0	0	0	0	0
0421	0	0	0	0	219 246	0	0	0	0	0	0	0	0
0422	0	0	0	0	24 611	0	0	0	0	0	0	0	0
0431	0	0	0	12 805	0	0	0	0	0	0	0	0	0
0432	0	0	255	0	0	0	0	0	0	0	0	0	0
0451	86 155	0	0	0	0	0	0	0	0	0	0	0	0
0452	1 017	0	0	0	0	0	0	0	0	0	0	0	0
0453	1 011	0	0	0	0	0	0	0	0	0	0	0	0
0454	0	0	0	2 641	0	0	0	0	0	0	0	158	529
0455	45 201	0	0	0	0	0	0	0	0	0	0	0	0
05	30	0	136 761	0	0	0	0	0	0	1 191	0	10 237	0
0511	-909	0	50 766	0	0	0	0	0	0	0	0	3 384	0
0512	0	0	5 983	0	0	0	0	0	0	0	0	0	0
0513	0	0	48	0	0	0	0	0	0	0	0	0	0
0520	1	0	12 480	0	0	0	0	0	0	0	0	145	0
0531	0	0	11 714	0	0	0	0	0	0	0	0	0	0
0532	0	0	5 718	0	0	0	0	0	0	0	0	0	0
0533	0	0	1 225	0	0	0	0	0	0	0	0	0	0
0540	0	0	12 901	0	0	0	0	0	0	0	0	400	0
0551	0	0	5 459	0	0	0	0	0	0	0	0	421	0
0552	0	0	6 234	0	0	0	0	0	0	0	0	81	0
0561	938	0	13 804	0	0	0	0	0	0	0	0	1 510	0
0562	0	0	10 429	0	0	0	0	0	0	1 191	0	4 296	0

COICOP 1999	Surveys and Censuses	Administra tive Records	Combined Data	Extrapolation and Models			Data validation	Conceptual		Exhaustiveness			
				Benchmark extrapolati ons	Dwellings - stratificatio n method	Other E&M		Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7
06	6 960	8 964	25 780	28 491	0	0	0	0	0	0	0	2 322	0
06111	0	8 964	0	0	0	0	0	0	0	0	0	0	0
06112	0	0	13 453	0	0	0	0	0	0	0	0	0	0
0612	0	0	2 416	0	0	0	0	0	0	0	0	0	0
0613	0	0	9 911	0	0	0	0	0	0	0	0	170	0
0621	2 236	0	0	7 809	0	0	0	0	0	0	0	0	0
0622	2 398	0	0	15 379	0	0	0	0	0	0	0	2 152	0
0623	1 165	0	0	4 485	0	0	0	0	0	0	0	0	0
0630	1 161	0	0	818	0	0	0	0	0	0	0	0	0
07	241	15 463	166 620	12 105	0	86 384	0	0	0	0	0	14 023	4 498
0711	316	0	0	0	0	86 384	0	0	0	0	0	0	0
0712	-454	0	4 886	0	0	0	0	0	0	0	0	0	0
0713	0	0	2 731	0	0	0	0	0	0	0	0	0	0
0721	360	0	15 713	0	0	0	0	0	0	0	0	109	0
07221	0	0	56 833	0	0	0	0	0	0	0	0	0	0
07222	0	0	1 358	0	0	0	0	0	0	0	0	0	0
0723	0	0	38 867	0	0	0	0	0	0	0	0	8 710	0
07241	0	0	3 204	0	0	0	0	0	0	0	0	0	0
07242	19	0	0	1 375	0	0	0	0	0	0	0	0	0
07243	0	0	852	0	0	0	0	0	0	0	0	0	0
07244	0	0	6 863	0	0	0	0	0	0	0	0	1 504	0
07245	0	15 463	0	10 007	0	0	0	0	0	0	0	148	4 498
0731	0	0	6 125	0	0	0	0	0	0	0	0	0	0
07321	0	0	9 280	0	0	0	0	0	0	0	0	3 439	0
07322	0	0	630	0	0	0	0	0	0	0	0	0	0
0733	0	0	2 931	0	0	0	0	0	0	0	0	0	0
0734	0	0	3 610	0	0	0	0	0	0	0	0	72	0
0735	0	0	11 814	0	0	0	0	0	0	0	0	41	0
0736	0	0	923	723	0	0	0	0	0	0	0	0	0
08	-843	0	66 785	0	0	0	0	0	0	0	0	1 345	0
0810	79	0	3 617	0	0	0	0	0	0	0	0	215	0
0820	0	0	14 057	0	0	0	0	0	0	0	0	974	0
0830	-922	0	49 111	0	0	0	0	0	0	0	0	156	0
09	5 703	21 333	201 119	6 891	0	0	0	0	0	0	577	12 258	0
0911	1 260	0	10 209	0	0	0	0	0	0	0	0	0	0
0912	0	0	990	0	0	0	0	0	0	0	0	0	0
0913	5 692	0	20 972	0	0	0	0	0	0	0	0	0	0
0914	0	0	864	0	0	0	0	0	0	0	0	518	0
0915	0	0	208	0	0	0	0	0	0	0	0	0	0
0921	97	0	12 782	320	0	0	0	0	0	0	0	252	0
0922	0	0	902	0	0	0	0	0	0	0	0	0	0
0923	0	0	0	2 692	0	0	0	0	0	0	0	0	0
0931	938	0	13 033	0	0	0	0	0	0	0	0	2 910	0
0932	-454	0	21 421	0	0	0	0	0	0	0	0	0	0
0933	0	0	16 054	0	0	0	0	0	0	0	0	671	0
0934	490	0	12 450	0	0	0	0	0	0	0	0	0	0
0935	0	0	6 863	0	0	0	0	0	0	0	0	1 470	0
0941	498	0	31 432	3 879	0	0	0	0	0	0	0	3 292	0
0942	-11 850	0	28 046	0	0	0	0	0	0	0	0	2 422	0
0943	9 032	21 333	0	0	0	0	0	0	0	0	577	74	0
0951	0	0	6 909	0	0	0	0	0	0	0	0	649	0
0952	0	0	8 218	0	0	0	0	0	0	0	0	0	0
0953	0	0	493	0	0	0	0	0	0	0	0	0	0
0954	0	0	2 937	0	0	0	0	0	0	0	0	0	0
0960	0	0	6 336	0	0	0	0	0	0	0	0	0	0

COICOP 1999	Surveys and Censuses	Administra tive Records	Combined Data	Extrapolation and Models			Data validation	Conceptual		Exhaustiveness			
				Benchmark extrapolati ons	Dwellings - stratificatio n method	Other E&M		Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7
10	5 206	501	0	0	0	1 362	0	0	0	0	0	0	0
1011	5 206	0	0	0	0	1 362	0	0	0	0	0	0	0
1014	0	501	0	0	0	0	0	0	0	0	0	0	0
11	0	0	147 647	0	0	0	0	0	0	0	0	6 920	0
1111	0	0	126 580	0	0	0	0	0	0	0	0	6 068	0
1120	0	0	21 067	0	0	0	0	0	0	0	0	852	0
12	18 814	28 536	78 194	6 774	0	57 305	0	27 770	30 139	0	710	16 580	0
1211	0	0	22 149	0	0	0	0	0	0	0	0	10 533	0
1212	0	0	2 305	0	0	0	0	0	0	0	0	0	0
1213	7	0	33 230	0	0	0	0	0	0	0	0	0	0
1220	0	0	0	0	0	0	0	0	0	0	710	0	0
12311	0	0	6 914	0	0	0	0	0	0	0	0	0	0
12312	0	0	230	0	0	0	0	0	0	0	0	0	0
1232	938	0	4 686	0	0	0	0	0	0	0	0	0	0
124011	3 265	0	0	0	0	0	0	0	0	0	0	0	0
124012	0	0	0	0	0	580	0	0	0	0	0	0	0
124021	12 468	0	0	4 330	0	0	0	0	0	0	0	493	0
124031	0	8 137	0	0	0	0	0	0	0	0	0	0	0
124032	0	18 744	0	0	0	0	0	0	0	0	0	0	0
124033	0	1 655	0	0	0	0	0	0	0	0	0	0	0
12404	239	0	0	744	0	0	0	0	0	0	0	0	0
1251	0	0	0	0	0	0	0	0	9 248	0	0	0	0
1252	0	0	0	0	0	0	0	0	2 548	0	0	0	0
1253	0	0	0	0	0	0	0	0	7 282	0	0	0	0
1254	0	0	0	0	0	0	0	0	9 774	0	0	0	0
1255	0	0	0	0	0	0	0	0	1 287	0	0	0	0
1261	0	0	0	0	0	0	0	27 770	0	0	0	0	0
1262	0	0	0	0	0	56 725	0	0	0	0	0	1 953	0
12701	0	0	2 948	0	0	0	0	0	0	0	0	45	0
12702	0	0	0	1 700	0	0	0	0	0	0	0	0	0
12703	1 897	0	5 732	0	0	0	0	0	0	0	0	3 556	0
15	60 071	0	0	0	0	0	0	0	0	0	0	0	0
16	-55 369	0	0	0	0	0	0	0	0	0	0	0	0
Total	173 348	74 797	1 278 597	72 548	466 101	145 051	344	27 770	30 139	1 191	5 262	83 961	6 727

Table 5.7.3 Transition from HFCE by COICOP 1999 to COICOP 2018, SEK million, 2021

COICOP 1999	Surveys and Censuses	Administrative Records	Combined Data	Extrapolation and Models			Data validation	Conceptual		Exhaustiveness				Share of 99 in 18	COICOP 2018	Surveys and Censuses	Administrative Records	Combined Data	Extrapolation and Models			Data validation	Conceptual		Exhaustiveness						
				Benchmark extrapolations	Dwellings - stratification method	Other E&M		Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7						Benchmark extrapolations	Dwellings - stratification method	Other E&M		Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7			
0111	0	0	41 671	0	0	0	16	0	0	0	0	1 486	0	0,8883	0111	0	0	37 016	0	0	0	14	0	0	0	0	0	0	1 320	0	
														0,0014	0117	0	0	60	0	0	0	0	0	0	0	0	0	2	0		
														0,1103	0119	0	0	4 595	0	0	0	2	0	0	0	0	0	164	0		
0112	0	0	45 329	0	0	0	0	0	0	0	0	1 743	1 288	0,9190	0112	0	0	41 659	0	0	0	0	0	0	0	0	0	1 602	1 184		
														0,0810	0119	0	0	3 670	0	0	0	0	0	0	0	0	0	141	104		
0113	0	0	14 857	0	0	0	0	0	0	0	0	509	0	0,9431	0113	0	0	14 011	0	0	0	0	0	0	0	0	0	480	0		
														0,0569	0119	0	0	846	0	0	0	0	0	0	0	0	0	29	0		
0114	0	0	41 967	0	0	0	0	0	0	0	0	2 515	119	1,0000	0114	0	0	41 967	0	0	0	0	0	0	0	0	0	2 515	119		
0115	0	0	7 809	0	0	0	0	0	0	0	0	0	0	1,0000	0115	0	0	7 809	0	0	0	0	0	0	0	0	0	0	0		
0116	0	0	21 913	0	0	0	268	0	0	0	0	1 155	0	1,0000	0116	0	0	21 913	0	0	0	268	0	0	0	0	0	1 155	0		
0117	0	0	31 761	0	0	0	0	0	0	0	0	1 266	293	0,9123	0117	0	0	28 977	0	0	0	0	0	0	0	0	0	1 155	268		
														0,0877	0119	0	0	2 784	0	0	0	0	0	0	0	0	0	111	26		
0118	13	0	35 050	0	0	0	0	0	0	0	0	3 322	0	1,0000	0118	13	0	35 050	0	0	0	0	0	0	0	0	0	3 322	0		
0119	565	0	12 414	0	0	0	60	0	0	0	0	0	0	1,0000	0119	565	0	12 414	0	0	0	60	0	0	0	0	0	0	0	0	
0121	0	0	8 980	0	0	0	0	0	0	0	0	86	0	0,8245	0122	0	0	7 404	0	0	0	0	0	0	0	0	0	71	0		
														0,0414	0124	0	0	371	0	0	0	0	0	0	0	0	0	4	0		
														0,1341	0123	0	0	1 204	0	0	0	0	0	0	0	0	0	12	0		
0122	0	0	22 467	0	0	0	0	0	0	0	0	93	0	0,4370	0121	0	0	9 819	0	0	0	0	0	0	0	0	0	41	0		
														0,4651	0126	0	0	10 449	0	0	0	0	0	0	0	0	0	43	0		
														0,0979	0125	0	0	2 199	0	0	0	0	0	0	0	0	0	9	0		
02111	0	0	10 259	0	0	0	0	0	0	0	0	0	0	1,0000	02111	0	0	10 259	0	0	0	0	0	0	0	0	0	0	0	0	
02112	0	0	0	0	0	0	0	0	0	0	0	65	0	1,0000	02112	0	0	0	0	0	0	0	0	0	0	0	0	65	0		
02113	0	0	0	0	0	0	0	0	0	0	0	145	0	1,0000	02113	0	0	0	0	0	0	0	0	0	0	0	0	145	0		
02121	0	0	25 817	0	0	0	0	0	0	0	0	0	0	0,9400	02123	0	0	24 268	0	0	0	0	0	0	0	0	0	0	0		
														0,0300	02111	0	0	775	0	0	0	0	0	0	0	0	0	0	0		
														0,0300	0219	0	0	775	0	0	0	0	0	0	0	0	0	0	0		
02122	0	0	0	0	0	0	0	0	0	0	0	18	0	1,0000	02124	0	0	0	0	0	0	0	0	0	0	0	0	18	0		
021311	360	0	11 204	0	0	0	0	0	0	0	0	0	0	1,0000	021311	360	0	11 204	0	0	0	0	0	0	0	0	0	0	0	0	
021312	0	0	0	0	0	0	0	0	0	0	0	99	0	1,0000	021312	0	0	0	0	0	0	0	0	0	0	0	0	99	0		
02132	0	0	2 841	0	0	0	0	0	0	0	0	0	0	1,0000	02132	0	0	2 841	0	0	0	0	0	0	0	0	0	0	0	0	
02201	0	0	26 959	0	0	0	0	0	0	0	0	1 069	0	1,0000	02303	0	0	26 959	0	0	0	0	0	0	0	0	0	0	1 069	0	
02202	0	0	0	0	0	0	0	0	0	0	0	268	0	1,0000	02304	0	0	0	0	0	0	0	0	0	0	0	0	268	0		
0230	0	0	0	0	0	0	0	0	0	0	0	3 380	0	1,0000	0240	0	0	0	0	0	0	0	0	0	0	0	0	3 380	0		
0311	0	0	2 737	0	0	0	0	0	0	0	0	0	0	1,0000	0311	0	0	2 737	0	0	0	0	0	0	0	0	0	0	0	0	
0312	-1 787	0	73 783	0	0	0	0	0	0	0	0	5 789	0	0,9870	0312	-1 764	0	72 821	0	0	0	0	0	0	0	0	0	0	5 714	0	
														0,0130	0922	0	0	962	0	0	0	0	0	0	0	0	0	75	0		
0313	0	0	3 302	0	0	0	0	0	0	0	0	0	0	0,9057	0313	0	0	2 990	0	0	0	0	0	0	0	0	0	0	0	0	
														0,0013	0521	0	0	4	0	0	0	0	0	0	0	0	0	0	0		
														0,0186	0312	0	0	61	0	0	0	0	0	0	0	0	0	0	0		
														0,0030	1312	0	0	10	0	0	0	0	0	0	0	0	0	0	0		
														0,0715	0721	0	0	236	0	0	0	0	0	0	0	0	0	0	0		
0314	0	0	105	0	0	0	0	0	0	0	0	0	0	1,0000	0314	0	0	105	0	0	0	0	0	0	0	0	0	0	0	0	
0321	0	0	14 117	0	0	0	0	0	0	0	0	0	0	1,0000	0321	0	0	14 117	0	0	0	0	0	0	0	0	0	0	0	1 085	0
0322	0	0	94	0	0	0	0	0	0	0	0	0	0	1,0000	0322	0	0	94	0	0	0	0	0	0	0	0	0	0	0	0	

Table 5.7.4 HFCE COICOP 2018, SEK million, 2021

COICOP 2018	Surveys and Censuses	Administrative Records	Combined Data	Extrapolation and Models			Data validation	of which rounding error	Conceptual		Exhaustiveness				Balancing	Final estimate
				Benchmark extrapolations	Dwellings - stratification method	Other E&M			Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7		
01	578	0	284218	0	0	0	344	0	0	0	0	0	12175	1700	-52	298963
0111	0	0	37016	0	0	0	14	0	0	0	0	0	1320	0	-5	38345
0112	0	0	41659	0	0	0	0	0	0	0	0	0	1602	1184	-6	44439
0113	0	0	14011	0	0	0	0	0	0	0	0	0	480	0	-2	14489
0114	0	0	41967	0	0	0	0	0	0	0	0	0	2515	119	-5	44596
0115	0	0	7809	0	0	0	0	0	0	0	0	0	0	0	-1	7808
0116	0	0	21913	0	0	0	268	0	0	0	0	0	1155	0	-3	23333
0117	0	0	29037	0	0	0	0	0	0	0	0	0	1157	268	-15	30446
0118	13	0	35050	0	0	0	0	0	0	0	0	0	3322	0	-5	38380
0119	565	0	24309	0	0	0	62	0	0	0	0	0	445	130	-4	25507
0121	0	0	9819	0	0	0	0	0	0	0	0	0	41	0	-2	9857
0122	0	0	7404	0	0	0	0	0	0	0	0	0	71	0	-1	7474
0123	0	0	1204	0	0	0	0	0	0	0	0	0	12	0	0	1216
0124	0	0	371	0	0	0	0	0	0	0	0	0	4	0	0	375
0125	0	0	2199	0	0	0	0	0	0	0	0	0	9	0	-1	2208
0126	0	0	10449	0	0	0	0	0	0	0	0	0	43	0	-2	10490
02	361	0	77093	0	0	0	1	7	0	0	0	3975	1070	0	-29	82472
02111	0	0	11034	0	0	0	0	0	0	0	0	0	0	0	-1	11033
02112	0	0	0	0	0	0	0	0	0	0	0	65	0	0	0	65
02113	0	0	0	0	0	0	0	0	0	0	0	145	0	0	0	145
02123	0	0	24268	0	0	0	0	0	0	0	0	0	0	0	-4	24264
02124	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18
021311	360	0	11204	0	0	0	0	0	0	0	0	0	0	0	-2	11562
021312	0	0	0	0	0	0	0	0	0	0	0	99	0	0	0	99
02132	0	0	2841	0	0	0	0	0	0	0	0	0	0	0	0	2841
0219	0	0	775	0	0	0	0	0	0	0	0	0	0	0	-1	774
02303	1	0	26972	0	0	0	0	0	0	0	0	0	1070	0	-10	28034
02304	0	0	0	0	0	0	0	0	0	0	0	268	0	0	-1	267
0240	0	0	0	0	0	0	0	0	0	0	0	3380	0	0	-10	3370
03	-1764	0	92926	0	0	0	-3	-3	0	0	0	0	6799	0	-40	97918
0311	0	0	2737	0	0	0	0	0	0	0	0	0	0	0	-3	2734
0312	-1764	0	72882	0	0	0	-1	-1	0	0	0	0	5714	0	-31	76800
0313	0	0	2990	0	0	0	0	0	0	0	0	0	0	0	0	2990
0314	0	0	105	0	0	0	-1	-1	0	0	0	0	0	0	0	104
0321	0	0	14117	0	0	0	0	0	0	0	0	0	1085	0	-6	15196
0322	0	0	94	0	0	0	0	0	0	0	0	0	0	0	0	94
04	133349	0	5063	18287	466101	0	2	2	0	0	8	0	224	529	-25	623538
0411	0	0	0	1634	125338	0	0	0	0	0	0	0	0	0	0	126972
04121	0	0	0	0	1007	0	0	0	0	0	0	0	0	0	0	1007
04122	0	0	0	21	1634	0	0	0	0	0	0	0	0	0	-2	1653
04123	0	0	0	15	1171	0	0	0	0	0	0	0	0	0	-1	1185
04211	0	0	0	0	219246	0	0	0	0	0	0	0	0	0	0	219246
04212	0	0	0	1171	94101	0	0	0	0	0	0	0	0	0	0	95272
0422	0	0	0	0	23604	0	0	0	0	0	0	0	0	0	0	23604
0431	7	0	4516	12805	0	0	1	7	0	0	0	0	23	0	-5	17347
0432	-4	0	479	0	0	0	1	7	0	0	0	0	15	0	-2	489
0444	0	0	68	0	0	0	0	0	0	0	8	0	28	0	0	104
0451	86155	0	0	0	0	0	0	0	0	0	0	0	0	0	-9	86146
0452	1095	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	1094
0453	895	0	0	0	0	0	0	0	0	0	0	0	0	0	0	895
0454	0	0	0	2641	0	0	0	0	0	0	0	0	158	529	0	3328
0455	45201	0	0	0	0	0	0	0	0	0	0	0	0	0	-5	45196
05	21	1655	129881	0	0	0	-1	-1	0	0	943	0	9284	0	-95	141688
0511	-903	0	52566	0	0	0	0	0	0	0	0	0	3363	0	-30	54996
0512	0	0	202	0	0	0	0	0	0	0	18	0	64	0	-1	283
0521	1	0	12657	0	0	0	1	7	0	0	0	0	140	0	-7	12792
0522	0	0	12	0	0	0	0	0	0	0	1	0	5	0	0	18
0531	0	0	10705	0	0	0	-1	-7	0	0	0	0	0	0	-11	10693
0532	0	0	6931	0	0	0	0	0	0	0	0	0	6	0	-6	6932
0533	0	0	1237	0	0	0	0	0	0	0	1	0	5	0	-1	1242
0540	2	0	13036	0	0	0	0	0	0	0	7	0	425	0	-9	13461
0551	0	0	5573	0	0	0	0	0	0	0	0	0	412	0	-4	5980
0552	4	0	5388	0	0	0	0	0	0	0	0	0	80	0	-6	5466
0553	0	0	53	0	0	0	0	0	0	0	0	0	4	0	0	57
0561	917	0	13502	0	0	0	0	0	0	0	0	0	1477	0	-10	15886
0562	0	1655	8019	0	0	0	-1	-7	0	0	916	0	3303	0	-10	13882

COICOP 2018	Surveys and Censuses	Administrative Records	Combined Data	Extrapolation and Models			Data validation	of which rounding error	Conceptual		Exhaustiveness				Balancing	Final estimate	
				Benchmark extrapolations	Dwellings - stratification method	Other E&M			Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7			
06	6995	8964	26188	28595	0	0	1	7	0	0	0	0	2324	0	-15	73052	
061111	0	8964	0	0	0	0	0	0	0	0	0	0	0	0	-2	8962	
061112	1	0	13469	0	0	0	0	0	0	0	0	0	2	0	-3	13468	
0612	0	0	2432	0	0	0	1	7	0	0	0	0	0	0	-1	2432	
0613	0	0	10288	0	0	0	1	7	0	0	0	0	170	0	-2	10456	
0614	65	0	0	249	0	0	0	0	0	0	0	0	0	0	0	314	
0621	238	0	0	850	0	0	1	7	0	0	0	0	0	0	-1	1088	
06221	336	0	0	2153	0	0	0	0	0	0	0	0	301	0	-1	2789	
06222	2062	0	0	13226	0	0	0	0	0	0	0	0	1851	0	-3	17136	
0623	3147	0	0	11090	0	0	-1	-7	0	0	0	0	0	0	-2	14235	
0631	1102	0	0	857	0	0	0	0	0	0	0	0	0	0	0	1959	
0641	44	0	0	169	0	0	0	0	0	0	0	0	0	0	0	213	
07	747	15463	169055	12229	0	86384	-1	-7	0	0	0	0	14234	4498	-202	302407	
07111	227	0	0	0	0	62007	0	0	0	0	0	0	0	0	-58	62176	
07112	89	0	0	0	0	24377	0	0	0	0	0	0	0	0	-4	24462	
0712	-329	0	3544	0	0	0	0	0	0	0	0	0	0	0	-2	3212	
0713	-37	0	3102	0	0	0	0	0	0	0	0	0	0	0	-2	3063	
0721	377	0	16073	0	0	0	1	7	0	0	0	0	110	0	-17	16543	
07221	0	0	19936	0	0	0	0	0	0	0	0	0	0	0	-16	19920	
07222	0	0	36540	0	0	0	0	0	0	0	0	0	0	0	-18	36522	
07223	0	0	357	0	0	0	0	0	0	0	0	0	0	0	-2	355	
07224	3	0	1468	0	0	0	-1	-7	0	0	0	0	1	0	-4	1467	
0723	0	0	38867	0	0	0	-1	-7	0	0	0	0	8710	0	-35	47541	
07241	0	0	6794	0	0	0	0	0	0	0	0	0	1489	0	-5	8278	
07242	0	0	852	0	0	0	0	0	0	0	0	0	0	0	0	852	
07243	21	0	3314	1389	0	0	0	0	0	0	0	0	12	0	-2	4733	
07244	0	5214	0	3374	0	0	0	0	0	0	0	0	50	1517	-7	10148	
07245	0	10249	0	6633	0	0	0	0	0	0	0	0	98	2981	0	19961	
0731	0	0	6125	0	0	0	0	0	0	0	0	0	0	0	-3	6122	
07321	0	0	630	0	0	0	0	0	0	0	0	0	0	0	0	630	
07322	0	0	9280	0	0	0	0	0	0	0	0	0	3439	0	-7	12712	
07329	318	0	0	110	0	0	0	0	0	0	0	0	13	0	-1	440	
0733	0	0	2916	0	0	0	0	0	0	0	0	0	0	0	-6	2910	
0734	0	0	2888	0	0	0	0	0	0	0	0	0	58	0	-2	2944	
0735	0	0	11814	0	0	0	0	0	0	0	0	0	41	0	-7	11848	
0736	0	0	77	48	0	0	0	0	0	0	0	0	0	0	-1	124	
0741	53	0	2423	0	0	0	0	0	0	0	0	0	144	0	-2	2618	
0749	26	0	2055	675	0	0	0	0	0	0	0	0	71	0	-1	2826	
08	-818	0	110126	0	0	0	4	4	0	0	0	0	2550	0	-72	111789	
0811	0	0	172	0	0	0	0	0	0	0	0	0	12	0	-1	183	
0812	0	0	13285	0	0	0	0	0	0	0	0	0	921	0	-9	14197	
0813	4712	0	17757	0	0	0	-1	-7	0	0	0	0	0	0	-15	22454	
0814	1260	0	10209	0	0	0	0	0	0	0	0	0	0	0	-8	11461	
0815	155	0	659	0	0	0	1	7	0	0	0	0	52	0	-2	865	
0819	155	0	572	0	0	0	0	0	0	0	0	0	0	0	-3	725	
0820	514	0	1893	0	0	0	0	0	0	0	0	0	0	0	-9	2398	
0831	-123	0	6539	0	0	0	0	0	0	0	0	0	21	0	-3	6434	
0832	-99	0	5267	0	0	0	0	0	0	0	0	0	17	0	-3	5182	
0833	-301	0	16019	0	0	0	1	7	0	0	0	0	51	0	-7	15763	
0834	-99	0	5267	0	0	0	0	0	0	0	0	0	17	0	-2	5183	
0835	0	0	627	0	0	0	0	0	0	0	0	0	42	0	-3	666	
0839	-6993	0	31859	0	0	0	1	7	0	0	0	0	1419	0	-7	26278	
09	5520	21333	155999	6758	0	0	1	7	0	0	0	0	577	10844	0	-111	200921
0911	4	0	1595	14	0	0	1	7	0	0	0	0	45	0	-1	1658	
0912	21	0	13488	602	0	0	0	0	0	0	0	0	296	0	-4	14404	
0921	831	0	11705	2	0	0	1	7	0	0	0	0	2167	0	-12	14694	
0922	-435	0	22183	0	0	0	1	7	0	0	0	0	75	0	-6	21818	
0931	0	0	14267	0	0	0	-1	-7	0	0	0	0	596	0	-6	14856	
0932	488	0	12620	0	0	0	0	0	0	0	0	0	0	0	-12	13097	
0942	6	0	418	826	0	0	0	0	0	0	0	0	52	0	-2	1299	
0943	241	0	3579	0	0	0	0	0	0	0	0	0	758	0	-9	4569	
0944	19	0	1257	154	0	0	0	0	0	0	0	0	129	0	-4	1554	
0945	0	0	6863	492	0	0	0	0	0	0	0	0	1470	0	-5	8820	
0946	456	0	28777	4662	0	0	-1	-7	0	0	0	0	3014	0	-21	36887	
0947	9032	21333	0	0	0	0	0	0	0	0	0	0	577	74	-3	31013	
0951	0	0	880	0	0	0	0	0	0	0	0	0	0	0	0	880	
0952	-4	0	730	0	0	0	0	0	0	0	0	0	432	0	-1	1156	
0961	-3934	0	9386	0	0	0	-1	-7	0	0	0	0	804	0	-3	6252	
0962	-919	0	2175	0	0	0	0	0	0	0	0	0	188	0	0	1444	
0963	-297	0	702	0	0	0	0	0	0	0	0	0	61	0	-1	465	
0969	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	6	
0971	0	0	6793	0	0	0	1	7	0	0	0	0	639	0	-5	7427	
0972	0	0	8336	0	0	0	0	0	0	0	0	0	11	0	-5	8342	
0973	0	0	419	0	0	0	0	0	0	0	0	0	0	0	0	419	
0974	11	0	2771	0	0	0	-1	-7	0	0	0	0	18	0	-2	2798	
0980	0	0	7058	0	0	0	0	0	0	0	0	0	14	0	-9	7063	

COICOP 2018	Surveys and Censuses	Administrative Records	Combined Data	Extrapolation and Models			Data validation	of which rounding error	Conceptual		Exhaustiveness				Balancing	Final estimate
				Benchmark extrapolations	Dwellings - stratification method	Other E&M			Allocation of FISIM	Allocation of insurance	N1	N2	N6	N7		
10	5221	501	967	119	0	1362	0	0	0	0	0	0	101	0	-5	8267
1010	5206	0	0	0	0	1362	0	0	0	0	0	0	0	0	-1	6567
1040	0	501	0	0	0	0	0	0	0	0	0	0	0	0	0	501
1050	15	0	967	119	0	0	0	0	0	0	0	0	101	0	-4	1199
11	0	0	147647	0	0	0	0	0	0	0	0	0	6920	0	-79	154488
1111	0	0	126580	0	0	0	0	0	0	0	0	0	6068	0	-69	132579
1120	0	0	21067	0	0	0	0	0	0	0	0	0	852	0	-10	21909
12	0	0	0	0	0	56725	1	7	27770	30139	0	0	1953	0	-25	116563
1211	0	0	0	0	0	21415	0	0	0	12889	0	0	737	0	-8	35033
1212	0	0	0	0	0	0	0	0	0	3641	0	0	0	0	-1	3640
1213	0	0	0	0	0	0	0	0	0	2548	0	0	0	0	-1	2547
1214	0	0	0	0	0	0	0	0	0	9774	0	0	0	0	-2	9772
1219	0	0	0	0	0	0	0	0	0	1287	0	0	0	0	0	1287
1221	0	0	0	0	0	0	0	0	27770	0	0	0	0	0	0	27770
1222	0	0	0	0	0	13542	1	7	0	0	0	0	466	0	-6	14003
1229	0	0	0	0	0	21768	1	7	0	0	0	0	749	0	-7	22511
13	18435	26881	79434	6559	0	580	0	0	0	0	240	710	15483	0	-73	148250
1311	0	0	2305	0	0	0	0	0	0	0	0	0	0	0	-1	2304
1312	7	0	31222	0	0	0	0	0	0	0	0	0	0	0	-23	31206
1313	33	0	22360	0	0	0	1	7	0	0	12	0	10637	0	-19	33024
1321	0	0	6680	0	0	0	0	0	0	0	0	0	0	0	-4	6676
1322	0	0	235	0	0	0	0	0	0	0	0	0	1	0	-1	235
1329	925	0	6089	0	0	0	0	0	0	0	0	0	25	0	-10	7029
133011	3265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3265
133012	0	0	0	0	0	580	0	0	0	0	0	0	0	0	0	580
13302	12150	0	0	4220	0	0	0	0	0	0	0	0	480	0	-2	16848
133031	0	8137	0	0	0	0	0	0	0	0	0	0	0	0	-1	8136
133032	0	18744	0	0	0	0	0	0	0	0	0	0	0	0	-3	18741
13304	205	0	0	640	0	0	0	0	0	0	0	0	0	0	-1	844
13901	0	0	0	0	0	0	0	0	0	0	0	710	0	0	0	710
13902	1851	0	10542	1700	0	0	-1	-7	0	0	228	0	4339	-1	-8	18652
15	60071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60071
16	-55369	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-55369
Total	173348	74797	1278597	72548	466101	145051	349	5	27770	30139	1191	5262	83961	6727	-823	2365018

5.7.2 Main data sources and their conversion to national accounts results

5.7.2.1 The general approach to estimate HFCE

All relevant available sources are used for estimating and validating HFCE. However, the main source for the compilation of HFCE is the Household consumption statistics (HCS) that was implemented in the benchmark revision 2024 (GNIQ and RQ 2024). The Household consumption statistics is the source for 86 COICOP-items and account around 54 percent of the total value of household consumption. The Household consumption statistics is validated and confronted with other different sources. Other main statistical source used to estimate HFCE, see section 5.7.2.2, are also confronted with other relevant sources.

In the annual national accounts compilation process the validation of HFCE is a continuous process that go on throughout the stages of initial calculation, construction and analysis of SUT-product balances and finally in the balancing of the SUT-system and the accounts as a whole. The Swedish national accounts are based on an input-output system, which means that all production and use of goods and services is arranged in a system of product group balances in commodity flow analysis. In this way it is possible to check the household consumption estimates and other uses against the supply of the corresponding goods and services. Analysis and adjustments can thus be carried out for all the 229 product groups in which household consumption is found, where the COICOP-product group breakdown constitute the smallest building blocks of household consumption. In the end of this process the SCM method, described in more detail in chapter 6, is used to balance the system, i.e. allocate differences between supply and use to the various underlying transactions in products.

The selection of the best source is sufficiently justified with regard to comparisons and checks in different sources and the SUT balancing procedure. Sources are evaluated and Statistics Sweden continuously review available source materials and methods of compilation in order to identify possible avenues of improving the quality of NA-estimates.

Beyond use of internally available Statistics Sweden materials, an important part of the estimation of in particular exhaustiveness items related to hidden consumption is an ongoing cooperation with the Swedish Tax Agency. New information from the Agency has been implemented in the benchmark revision 2024 to better estimate hidden consumption in different purposes such as household services, repair of car, restaurant visit, hairdressing, etc. In this work the estimates are set to match a part of the hidden production, which is produced with the help of a new report on hidden income from the Swedish Tax Agency. For year 2021, about 4 percent of total consumption was explained by hidden consumption, see also section 7.1.3.2.

Information relating to consumption of cross-border goods/services provided under the One-Stop-Shop (OSS) is not directly in use but is used for cross-checking of data. However, the value of the Swedish OSS data is small. Information relating to consumption of cross-border goods/services is at hand in the card data both from the International trade in services survey and transaction data from banks and card issuers, which is described in more detail in section 5.7.2.2.

5.7.2.2 Main sources used and calculation steps from source data to NA results.

Household consumption expenditure defined in accordance with the national account principles are not available in any single statistical source. Instead, compilations are based on a number of separate calculations based on a range of different source materials that are combined to ensure coverage of HFCE as a whole. These can be grouped into two categories where a first consist of broader materials that cover consumption across a wider range of the COICOP-classification. These are, in order of overall consumption value:

- *Household consumption statistics*, used for 86 COICOP representing 54.0 percent of overall HFCE. The HCS is a new source material developed at Statistics Sweden where in January-2023 the project Subject Area Design (SAD), delivered the first results of the Household consumption statistics from this new method to National accounts and Consumer price index. The project was launched due to the need to bring forward a new baseline method for calculation of household consumption to improve the quality and increase the level of detail. Household consumption statistics is compiled among other from the Structural Business statistics (SBS). SBS has information on sales from all companies in Sweden. The statistics are divided by industries. In order to split sales from SBS into household consumption and other consumption, transaction data from banks, card issuers and card payment terminals (card acquirers) are used to split the sales by counterpart. The statistics show whether the purchase is registered on a private card or a company card, which is then used to split sales. This new method has been used as the main source for calculating of several purposes for the new benchmark year of 2021. In the SBS annual information on turnover is collected from close to all active units in institutional sectors S11 and S14. The survey component of the SBS additionally ask respondents to break down turnover by institutional sectors, i.e. sales to corporations, households, NPISH or non-resident units. This information has also been used for cross-checking estimates from on payment provider data and in some cases these breakdowns have been used in the Household consumption statistics HFCE estimation.

For food and beverages, the new household statistics is based on data from the survey Food sales statistics. The Household consumption statistics for year 2021 was delivered based on the old nomenclature i.e. COICOP-1999 and NA has converted them to the COICOP-2018. The data delivery for final estimate of year 2023 will be according to the new manual COICOP 2018.

HCS includes VAT and provides measures in purchaser' prices for calculating of HFCE.

More information on the HCS itself is presented in section 10.3.

- *N6 Exhaustiveness adjustments*, used for 48 COICOP representing 3.5 percent of overall HFCE. Adjustments to account for misreporting further subdivide into VAT-fraud with or without complicity from the purchasing party, i.e. the household. As the HCS takes SBS-turnover based on tax reporting as its starting point any turnover missing due to misreporting will lead to undercounting HFCE in the same way as is the case for output, meaning corresponding adjustments are needed to both output and HFCE. These adjustments are described in more detail in section 7.2.
- *Annual Accounts of municipalities and regions*, used for 8 COICOP representing 1.2 percent of overall HFCE. The annual accounts are a census survey that collect and compile accounting information from all regional and municipal governments. These materials include figures for charges and fees levied on individuals when accessing publicly provided services. These include
 - Charges and contributions paid by patients for in-or out-patient attendance and treatment and for dental treatment under COICOP 062-063.
 - Fees paid by parents for the enrolment of children in preschool activities in COICOP 1011 as well as fees paid by parents for child welfare including family day nurseries in COICOP 124011.
 - Charges paid by elderly and disabled care recipients to the local authorities for different forms of care and for mobility service in COICOP 124021.
 - Charges for individual welfare services where charges covered relate tinter alia, to family guidance services, found in COICOP 12404.
- *International trade in services survey*, used for 29 COICOP representing a net 0.5 percent of overall HFCE. where the item used for HFCE-calculations comprises the data collected in accordance with IMF recommendations and classified as item Travel in the Swedish balance of payments statistics. The item also includes the internet purchases on foreign websites by Swedish households. The sources are information in the quarterly survey of external trade of services and information from credit card companies, whose reporting contains data on use of cards abroad by Swedes and use of cards in Sweden by foreigners. This enters HFCE as two components that respectively add consumption expenditure by Swedes abroad and remove consumption expenditure of foreign visitors in Sweden.

Consumption of households abroad covers the costs of Swedish households for temporary stays abroad. The total Swedish travellers' data are reduced by the share constituted by Swedish business travellers' subsistence expenses. The share has been calculated on the basis of the intermittent travellers' foreign exchange surveys conducted by the Swedish Central Bank. The purpose is, amongst other things, to measure the distribution of total travel between business journeys and leisure travel which enables the calculations of the Intermediate consumption and the HFCE.

Consumption in Sweden by non-residents covers the subsistence expenses of foreign visitors and the expenses of foreign embassies in Sweden. Here too the source is provided by information from the travel item in the foreign trade in services survey.

There was no exact commodity breakdown for either Swedish expenditure abroad or for the expenditures of visitors in Sweden before the revision year of 2024. In the revision of 2024, NA-compilers managed to divide parts of this overall component to specific purposes, although larger parts remain unallocated and grouped in COICOP 15, Consumption expenditure by Swedes abroad, and COICOP 16, Consumption expenditure of foreign visitors in Sweden. The product balancing is solved through the fact that these two different purposes have their own product groups. COICOP 15 is product X9901 and COICOP 16 is product X9902. Through this solution a product balancing without commodity breakdown can be done. However, in the tourism satellite accounts an overall

breakdown is made in accordance with some information from surveys and credit card data on incoming visitors to Sweden. As the share that have been allocated to individual COICOP items include both adjustments for Swedes abroad and foreign visitors in Sweden effects on items can be either positive or negative depending on the relative size between the two subcomponents.

Complementing these in terms of range of COICOP affected broadly applied source materials are a series of more area specific components that include source materials covering some narrower type of activity or COICOP range.

- Dwellings - stratification models, used for 4 COICOP representing 19.7 percent of overall HFCE. For rented dwellings number of square meters and actual rents paid per square meters are calculated for HFCE. The same model is applied for tenant ownership rights. For owner occupied dwellings a rental value is compiled based on actual rents paid by tenants for a comparable dwelling. Data is stratified by age, region and size. Secondary homes calculated with a rent and regional based stratification model, see also section 3.18.
- Energy balances, used for 4 COICOP representing 5.6 percent of overall HFCE. The calculations for the energy consumption of households are undertaken in the special energy balances of the national accounts. Statistics for energy products are available from a variety of sources, and these are coordinated in sixteen different product balances, in which the allocation to different user groups is specified.
- Vehicle register, used for 1 COICOP representing 3.7 percent of overall HFCE. Data on number of new cars registered and recorded by identification number and industry where appropriate is received each quarter from the vehicle register. Prices per model are applied and the estimates on HFCE and GFCF respectively are compiled. Information is also provided on the number of cars sold by business sector to households via car dealers and an appropriate value, reduced by the age of the cars, is calculated. This is mostly previously leased cars. More detailed information regarding the vehicle registration register is found in section 10.3.
- Private childcare provision, used for 2 COICOP representing 0.1 percent of overall HFCE. Fees levied on parents for enrolment, which are publicly regulated and the same for public and private providers, are calculated using fees paid by parents to public providers divided by the number of children enrolled in public childcare provision. This fee per child is then multiplied with the number of children enrolled in privately provided childcare to arrive at an estimate for total amounts paid. Data on numbers of children enrolled by type of provider is delivered by the Swedish National Agency for Education, fees paid to public providers are taken from NA-estimates in turn based on reporting to the Annual accounts of municipalities and regions survey.
- Financial services & allocation of FISIM and insurance, used in 7 COICOP representing 4.8 percent of overall HFCE, are compiled based on materials from the Swedish Financial Supervisory Authority, the Riksbank and internal statistics Sweden materials on statistics on financial sector result. Sources used and compilation procedures are described in more detail in section 3.15.
- NPISH lotteries, used for 1 COICOP representing 0.02 percent of overall HFCE, is based on NA output of product group R92 gambling and betting from institutional sector S15 NPISH where these figures in turn are based on the NPISH-survey.
- Administrative records, present in 7 COICOP representing 3.2 percent of overall HFCE, refer to several sources collected from other government agencies. Ordered by COICOP these are
 - COICOP 06111 - Swedish e-Health Authority, data on sales of prescription medicines
 - COICOP 07245 - Swedish Tax Agency, data from income statement concerning car benefits

- COICOP 0943 - Swedish Gambling Authority, data on licensed commercial gambling
- COICOP 1014 - The Swedish Board of Student Finance, data on fees paid for entrance exams
- COICOP 124031-124033 - National Social Insurance Board and Swedish financial management authority, data on compensation per hour and the number of hours worked for by personal assistants under the Act concerning support and Service for persons with certain disabilities.

All these components taken together cover all process table columns except *benchmark extrapolation*, *Data validation* and exhaustiveness items *N1 – underground producers*, *N2 – illegal producers that fail to register* and *N7 – statistical deficiencies in data*.

Benchmark extrapolations consist of areas which the new HCS in its first iteration used in 2021 did not cover, meaning that older benchmark levels have been maintained with continued extrapolations. From the year 2023 the compilation of HCS has been reworked to align with COICOP-2018 and some purposes that had old benchmark years are also covered by Household consumption statistic from year 2023. For 2021 these together made up 17 items corresponding to 3.1 percent of overall HFCE, in 2023 consumption corresponding to 9 of those items and 1.6 percent of overall HFCE remained based on benchmarks, with the rest replaced by the expanded HCS.

Data validation concern minor additions, amounting to 344 million SEK, made to purposes in COICOP 01 Food and non-alcoholic beverages made to add HFCE to some product groups that did not receive any consumption from other sources but where plausibly some amount of consumption should occur.

The N1 item relates to consumption of paid domestic services purchased from underground producers.

The N2 item further subdivide in activities related to prostitution, home-distilling of alcohol, illegal gambling and smuggling of drugs, alcohol, tobacco and various medicines for drug use.

The N7 component consist of two subcategories with a first concerning own withdrawal by non-incorporated household producers active in A01 Agriculture and A02 Forestry and logging who produce foodstuffs and firewood for own final use. A second item is a correction made to the calculation car benefits in COICOP 07245 that correct for differences between valuations of car benefits used in tax reporting and those needed in national accounts.

Sources and methods used for compiling exhaustiveness items are described in more detail in sections 7.1 and 7.3.

Table 5.7.5 illustrate the breakdown of the COICOP 1999 process-table excerpt seen in table 5.7.2 into these various underlying components. The shaded rows denote those individual items that are fully covered by the four broadly applied source materials, for these there are no specific calculations or adjustments done at the individual item level. For the remaining items where such calculations or adjustments are done the more general descriptions in this section are complemented by descriptions of sources used and compilation procedures presented item by item in section 5.7.3.

Table 5.7.5 HFCE by COICOP 1999 and breakdown by source or NA-calculation, SEK million, 2021

COICOP 1999	Surveys and Censuses				Administrative Records	Combined Data	Extrapolation and Models					Data validation	Conceptual		Exhaustiveness				Total, pre allocation to COICOP 2018			
	International trade in Services	Energy balances	Annual accounts in municipalities	NPISH			HCS	Benchmark extrapolations	Dwellings - stratification method	Other E&M			Allocation of FISIM	Allocation of insurance	N1	N2	N6			N7		
										Vehicle register	Private childcare						Financial services	VAT-fraud no aggrement		VAT-fraud with aggrement	Own withdrawals	Car benefits
0111	0	0	0	0	0	41 671	0	0	0	0	0	16	0	0	0	0	0	1 486	0	0	43 173	
0112	0	0	0	0	0	45 329	0	0	0	0	0	0	0	0	0	0	1 191	552	1 288	0	48 360	
0113	0	0	0	0	0	14 857	0	0	0	0	0	0	0	0	0	0	370	139	0	0	15 366	
0114	0	0	0	0	0	41 967	0	0	0	0	0	0	0	0	0	0	0	2 515	119	0	44 601	
0115	0	0	0	0	0	7 809	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7 809	
0116	0	0	0	0	0	21 913	0	0	0	0	0	268	0	0	0	0	0	1 155	0	0	23 336	
0117	0	0	0	0	0	31 761	0	0	0	0	0	0	0	0	0	0	0	1 266	293	0	33 320	
0118	13	0	0	0	0	35 050	0	0	0	0	0	0	0	0	0	0	0	3 322	0	0	38 385	
0119	565	0	0	0	0	12 414	0	0	0	0	0	60	0	0	0	0	0	0	0	0	13 039	
0121	0	0	0	0	0	8 980	0	0	0	0	0	0	0	0	0	0	0	86	0	0	9 066	
0122	0	0	0	0	0	22 467	0	0	0	0	0	0	0	0	0	0	0	93	0	0	22 560	
02111	0	0	0	0	0	10 259	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10 259	
02112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	0	0	0	0	65	
02113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	145	0	0	0	0	145	
02121	0	0	0	0	0	25 817	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25 817	
02122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18	
021311	360	0	0	0	0	11 204	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11 564	
021312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99	0	0	0	0	99	
02132	0	0	0	0	0	2 841	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 841	
02201	0	0	0	0	0	26 959	0	0	0	0	0	0	0	0	0	0	0	1 069	0	0	28 028	
02202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	268	0	0	0	0	268	
0230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3 380	0	0	0	0	3 380	
0311	0	0	0	0	0	2 737	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 737	
0312	-1 787	0	0	0	0	73 783	0	0	0	0	0	0	0	0	0	0	195	5 594	0	0	77 785	
0313	0	0	0	0	0	3 302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3 302	
0314	0	0	0	0	0	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105	
0321	0	0	0	0	0	14 117	0	0	0	0	0	0	0	0	0	0	0	1 085	0	0	15 202	
0322	0	0	0	0	0	94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	
0411	0	0	0	0	0	0	1 655	126 972	0	0	0	0	0	0	0	0	0	0	0	0	128 627	
0412	0	0	0	0	0	0	1 186	95 272	0	0	0	0	0	0	0	0	0	0	0	0	96 458	
0421	0	0	0	0	0	0	0	219 246	0	0	0	0	0	0	0	0	0	0	0	0	219 246	
0422	0	0	0	0	0	0	0	24 611	0	0	0	0	0	0	0	0	0	0	0	0	24 611	
0431	0	0	0	0	0	0	12 805	0	0	0	0	0	0	0	0	0	0	0	0	0	12 805	
0432	0	0	0	0	0	255	0	0	0	0	0	0	0	0	0	0	0	0	0	0	255	
0451	0	86 155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86 155	
0452	0	1 017	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 017	
0453	0	1 011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 011	
0454	0	0	0	0	0	0	2 641	0	0	0	0	0	0	0	0	0	158	0	529	0	3 328	
0455	0	45 201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45 201	

COICOP 1999	Surveys and Censuses				Administrative Records	Combined Data HCS	Extrapolation and Models					Data validation	Conceptual		Exhaustiveness				Total, pre allocation to COICOP 2018		
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									Vehicle register	Private childcare	Financial services						VAT-fraud no aggrement	VAT-fraud with aggrement		Own withdrawals	Car benefits
0511	-909	0	0	0	0	50 766	0	0	0	0	0	0	0	0	0	0	703	2 681	0	0	53 241
0512	0	0	0	0	0	5 983	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 983
0513	0	0	0	0	0	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
0520	1	0	0	0	0	12 480	0	0	0	0	0	0	0	0	0	0	145	0	0	0	12 626
0531	0	0	0	0	0	11 714	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11 714
0532	0	0	0	0	0	5 718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 718
0533	0	0	0	0	0	1 225	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 225
0540	0	0	0	0	0	12 901	0	0	0	0	0	0	0	0	0	0	400	0	0	0	13 301
0551	0	0	0	0	0	5 459	0	0	0	0	0	0	0	0	0	0	421	0	0	0	5 880
0552	0	0	0	0	0	6 234	0	0	0	0	0	0	0	0	0	0	81	0	0	0	6 315
0561	938	0	0	0	0	13 804	0	0	0	0	0	0	0	0	0	0	531	979	0	0	16 252
0562	0	0	0	0	0	10 429	0	0	0	0	0	0	0	0	1 191	0	2 049	2 247	0	0	15 916
06111	0	0	0	0	8 964	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8 964
06112	0	0	0	0	0	13 453	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13 453
0612	0	0	0	0	0	2 416	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 416
0613	0	0	0	0	0	9 911	0	0	0	0	0	0	0	0	0	0	170	0	0	0	10 081
0621	-59	0	2 295	0	0	0	7 809	0	0	0	0	0	0	0	0	0	0	0	0	0	10 045
0622	0	0	2 398	0	0	0	15 379	0	0	0	0	0	0	0	0	0	2 152	0	0	0	19 929
0623	0	0	1 165	0	0	0	4 485	0	0	0	0	0	0	0	0	0	0	0	0	0	5 650
0630	0	0	1 161	0	0	0	818	0	0	0	0	0	0	0	0	0	0	0	0	0	1 979
0711	316	0	0	0	0	0	0	0	86 384	0	0	0	0	0	0	0	0	0	0	0	86 700
0712	-454	0	0	0	0	4 886	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4 432
0713	0	0	0	0	0	2 731	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 731
0721	360	0	0	0	0	15 713	0	0	0	0	0	0	0	0	0	0	109	0	0	0	16 182
07221	0	0	0	0	0	56 833	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56 833
07222	0	0	0	0	0	1 358	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 358
0723	0	0	0	0	0	38 867	0	0	0	0	0	0	0	0	0	0	0	8 710	0	0	47 577
07241	0	0	0	0	0	3 204	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3 204
07242	19	0	0	0	0	0	1 375	0	0	0	0	0	0	0	0	0	0	0	0	0	1 394
07243	0	0	0	0	0	852	0	0	0	0	0	0	0	0	0	0	0	0	0	0	852
07244	0	0	0	0	0	6 863	0	0	0	0	0	0	0	0	0	0	1 504	0	0	0	8 367
07245	0	0	0	0	15 463	0	10 007	0	0	0	0	0	0	0	0	0	148	0	0	4 498	30 116
0731	0	0	0	0	0	6 125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6 125
07321	0	0	0	0	0	9 280	0	0	0	0	0	0	0	0	0	0	3 439	0	0	0	12 719
07322	0	0	0	0	0	630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	630
0733	0	0	0	0	0	2 931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 931
0734	0	0	0	0	0	3 610	0	0	0	0	0	0	0	0	0	0	72	0	0	0	3 682
0735	0	0	0	0	0	11 814	0	0	0	0	0	0	0	0	0	0	41	0	0	0	11 855
0736	0	0	0	0	0	923	723	0	0	0	0	0	0	0	0	0	0	0	0	0	1 646

COICOP 1999	Surveys and Censuses				Administra tive Records	Combined Data HCS	Extrapolation and Models					Data validation	Conceptual		Exhaustiveness				Total, pre allocation to COICOP 2018		
	Inter- national trade in Services	Energy balances	Annual accounts in municipalities	NPISH			Benchmark extrapolations	Dwellings - stratification method	Other E&M				Allocation of FISIM	Allocation of insurance	N1	N2	N6			N7	
									Vehicle register	Private childcare	Financial services						VAT-fraud no aggrement	VAT-fraud with aggrement		Own withdrawals	Car benefits
0810	79	0	0	0	0	3 617	0	0	0	0	0	0	0	0	0	0	215	0	0	0	3 911
0820	0	0	0	0	0	14 057	0	0	0	0	0	0	0	0	0	0	598	376	0	0	15 031
0830	-922	0	0	0	0	49 111	0	0	0	0	0	0	0	0	0	0	0	156	0	0	48 345
0911	1 260	0	0	0	0	10 209	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11 469
0912	0	0	0	0	0	990	0	0	0	0	0	0	0	0	0	0	0	0	0	0	990
0913	5 692	0	0	0	0	20 972	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26 664
0914	0	0	0	0	0	864	0	0	0	0	0	0	0	0	0	0	518	0	0	0	1 382
0915	0	0	0	0	0	208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	208
0921	97	0	0	0	0	12 782	320	0	0	0	0	0	0	0	0	0	252	0	0	0	13 451
0922	0	0	0	0	0	902	0	0	0	0	0	0	0	0	0	0	0	0	0	0	902
0923	0	0	0	0	0	0	2 692	0	0	0	0	0	0	0	0	0	0	0	0	0	2 692
0931	938	0	0	0	0	13 033	0	0	0	0	0	0	0	0	0	0	2 910	0	0	0	16 881
0932	-454	0	0	0	0	21 421	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20 967
0933	0	0	0	0	0	16 054	0	0	0	0	0	0	0	0	0	0	671	0	0	0	16 725
0934	490	0	0	0	0	12 450	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12 940
0935	0	0	0	0	0	6 863	0	0	0	0	0	0	0	0	0	0	1 470	0	0	0	8 333
0941	498	0	0	0	0	31 432	3 879	0	0	0	0	0	0	0	0	0	3 292	0	0	0	39 101
0942	-11 850	0	0	0	0	28 046	0	0	0	0	0	0	0	0	0	0	2 422	0	0	0	18 618
0943	8 590	0	0	442	21 333	0	0	0	0	0	0	0	0	0	577	74	0	0	0	0	31 016
0951	0	0	0	0	0	6 909	0	0	0	0	0	0	0	0	0	0	649	0	0	0	7 558
0952	0	0	0	0	0	8 218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8 218
0953	0	0	0	0	0	493	0	0	0	0	0	0	0	0	0	0	0	0	0	0	493
0954	0	0	0	0	0	2 937	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 937
0960	0	0	0	0	0	6 336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6 336
1011	0	0	5 206	0	0	0	0	0	0	1 362	0	0	0	0	0	0	0	0	0	0	6 568
1014	0	0	0	0	501	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	501
1111	0	0	0	0	0	126 580	0	0	0	0	0	0	0	0	0	0	6 068	0	0	0	132 648
1120	0	0	0	0	0	21 067	0	0	0	0	0	0	0	0	0	0	852	0	0	0	21 919
1211	0	0	0	0	0	22 149	0	0	0	0	0	0	0	0	0	0	10 533	0	0	0	32 682
1212	0	0	0	0	0	2 305	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2 305
1213	7	0	0	0	0	33 230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33 237
1220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	710
12311	0	0	0	0	0	6 914	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6 914
12312	0	0	0	0	0	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	230
1232	938	0	0	0	0	4 686	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 624
124011	0	0	3 265	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3 265
124012	0	0	0	0	0	0	0	0	0	580	0	0	0	0	0	0	0	0	0	0	580
124021	0	0	12 468	0	0	0	4 330	0	0	0	0	0	0	0	0	0	493	0	0	0	17 291
124031	0	0	0	0	8 137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8 137

COICOP 1999	Surveys and Censuses				Administra tive Records	Combined Data	Extrapolation and Models					Data validation	Conceptual		Exhaustiveness				Total, pre allocation to COICOP 2018		
	Inter- national trade in Services	Energy balances	Annual accounts in municipalities	NPISH		HCS	Benchmark extrapolations	Dwellings - stratification method	Other E&M				Allocation of FISIM	Allocation of insurance	N1	N2	N6			N7	
									Vehicle register	Private childcare	Financial services						VAT-fraud no aggrement	VAT-fraud with aggrement		Own withdrawals	Car benefits
124032	0	0	0	0	18 744	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18 744
124033	0	0	0	0	1 655	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 655
12404	0	0	239	0	0	0	744	0	0	0	0	0	0	0	0	0	0	0	0	0	983
1251	0	0	0	0	0	0	0	0	0	0	0	0	9 248	0	0	0	0	0	0	0	9 248
1252	0	0	0	0	0	0	0	0	0	0	0	0	2 548	0	0	0	0	0	0	0	2 548
1253	0	0	0	0	0	0	0	0	0	0	0	0	7 282	0	0	0	0	0	0	0	7 282
1254	0	0	0	0	0	0	0	0	0	0	0	0	9 774	0	0	0	0	0	0	0	9 774
1255	0	0	0	0	0	0	0	0	0	0	0	0	1 287	0	0	0	0	0	0	0	1 287
1261	0	0	0	0	0	0	0	0	0	0	0	0	27 770	0	0	0	0	0	0	0	27 770
1262	0	0	0	0	0	0	0	0	0	0	56 725	0	0	0	0	0	1 953	0	0	0	58 678
12701	0	0	0	0	0	2 948	0	0	0	0	0	0	0	0	0	45	0	0	0	0	2 993
12702	0	0	0	0	0	0	1 700	0	0	0	0	0	0	0	0	0	0	0	0	0	1 700
12703	1 897	0	0	0	0	5 732	0	0	0	0	0	0	0	0	0	3 556	0	0	0	0	11 185
15	60 071	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60 071
16	-55 369	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-55 369
Total	11 325	133 384	28 197	442	74 797	1 278 597	72 548	466 101	86 384	1 942	56 725	344	27 770	30 139	1 191	5 262	50 450	33 511	2 229	4 498	2 365 836

HFCE-
share

0,5 5,6 1,2 0,0 3,2 54,0 3,1 19,7 3,7 0,1 2,4 0,0 1,2 1,3 0,1 0,2 2,1 1,4 0,1 0,2 100,0

5.7.2.3 Other available materials and crosschecking

A great effort to catch data is made in household budget surveys and surveys on household expenditure, i.e. HBS and households housing cost. These surveys have been carried out at intervals for many years. Statistics Sweden has attempted to measure household expenditure in terms of definitions which coincide as closely as possible with those of the national accounts.

HBS-statistics have for long time struggled with quality problems. The response rate has always been low, and the households have found it difficult to respond to the questionnaires. The redesigned HBS was implemented in 2021, resulting in significantly improved response rates. The new design involves partitioning the HBS into three separate surveys:

- A survey focusing on consumption of food and drinks, clothing, transportation, and restaurant services.
- A survey dedicated to housing costs and expenditures.
- A survey covering other goods and services.

To simplify respondent participation, the redesigned approach replaces the traditional practice of keeping records in a diary with recall questions regarding purchases made during the specified period. Additionally, the level of detail regarding expenditure has been reduced compared to previous surveys. Specifically, information is now collected at the 3 or 4-digit level of the Classification of Individual Consumption According to Purpose (COICOP), whereas previous surveys collected data at the 5-digit level of COICOP. But even in its current form, the new HBS does not provide sufficiently detailed information to meet the needs of the NA and CPI.

While these remaining issues guided the decision to develop a new baseline source in the Household Consumption Statistics the HBS remains the best alternative source material for a comprehensive HFCE-estimate largely aligned with NA-definition, meaning that it makes a valuable tool for crosschecking compiled NA-figures. For 2021 such a comparison points to largely consistent figures for the two approaches of the full NA-compilation and the final HBS-result without any adjustments where NA estimate for total household consumption is somewhat higher than those reported by the HBS, although the NA-total fall within the confidence interval provided by the survey.

Households housing cost statistics show households' housing costs in different forms of tenure. The household consists of all persons who lived in the same dwelling and who shared finances and housekeeping during the reference period. The target variable is primarily housing expenditure and its subcomponents.

5.7.2.4 From purposes to products

A breakdown of 132 or 162 purposes is not enough for the needs NA and CPI. To fulfill all the requirements of NA and CPI, consumption also needs to be distributed by product group. To solve this, the project has continued to work with cash registers from the large companies and chains. From a private company, Statistics Sweden has acquired detailed data with information on purchases in home electronics and appliances. This has led to improved reporting of household consumption at a detailed level and the project continues to look for useful data sources.

A special processing of *total food-sales* is made every year. As food has a specific VAT-rate by 12 percent it is possible to select the total value of food sales from the comprehensive VAT-register. As the sales of food are very concentrated on a few hands in Sweden, a favourable cooperation with the main retail chains is established. They represent 85 percent of the total food sales. Statistics Sweden receives data from them, which is taken out of their cash registers. This material gives exact information on sales values by product. It is therefore possible to provide a comprehensive and high-quality data on food sales

5.7.2.5 Tables from the “Tabular Approach to Household Final Consumption Expenditure” developed in the context of the Phare program.

Statistics Sweden has not used the Phare-program approach for compilations and valuations of household consumption estimates.

5.7.2.6 Purchases of residents abroad and purchases of non-residents on the domestic territory in relation to HFCE estimates.

Total private consumption of households, which is contained in the balance of resources, comprises the consumption of resident households. Resident households are considered to include persons who are permanently resident in Sweden, which means that they must have stayed in the country for at least one year. The consumption of resident households consists of consumption both in Sweden and abroad, hence tourist expenditure and expenditure of diplomats and military personnel abroad are included. In the case of business travel, the portion financed by travel allowances is included in the employers’ intermediate consumption or as wages and salaries depending on type of per diem, narrow or broad. The expenditures of non-resident tourists, diplomats etc. in Sweden are deducted to obtain the consumption of only resident households.

In practice the procedure is that, when the calculations are performed for the various goods and services items, what is consumed in Sweden is measured, regardless whether it is foreign tourists or Swedes who make the purchases. In order to calculate total household consumption, a supplement is added for the consumption of Swedes abroad and a deduction is made for the consumption of foreigners in Sweden.

Before the benchmark revision 2024, neither supplement nor deduction was allocated to the various purposes, and they were recorded as lump sums (COICOP 15 and 16). From the benchmark revision 2024 and onward, NA have managed to distribute parts of COICOP 15 and 16 to purposes.

See a more detailed description of sources and methods for the estimation of the COICOP 15 and 16 in the description of the use of the International trade in services survey in section 5.7.2.2 above.

5.7.2.7 Treatment of HFCE in relation to intermediate consumption of producers of illegal activities

In the models created for estimates of illegal activities in the Swedish NA the assumption is that intermediate consumption is insignificant and covered as HFCE. For instance, when it comes to drugs as a product, there is no evidence of Swedish production but only imports. Therefore, only trade margins are recorded as production (total resources) which equals household consumption (total use). For a more detailed description see the points illicit distilling and trade margin for smuggling (COICOP 021 and 022), drugs (COICOP 0230) and prostitution (COICOP 122) in section 5.7.3.)

5.7.2.8 The service charge for pensions given under output is allocated to HFCE.

The compilation of output for service charges for pensions is calculated with data from Swedish Financial Supervisory Authority. The output amount is allocated to HFCE and thus the product group balance has no residual and is exempt from the reconciliation with SCM.

5.7.3 Detailed calculations by COICOP 1999

As described in 5.7.2.2 compilation procedures of most household consumption components are covered four broadly applied source materials in the Household consumption statistics, International trade in services survey, Annual accounts of municipalities and regions and exhaustiveness adjustments under grouping N6 concerning misreporting that together cover the 83 COICOP corresponding to 59.3 percent of overall HFCE that are shown as shaded in table 5.7.5. The remaining

49 items and 40.7 percent of overall HFCE are described here in order, where sources listed are those used beyond the above mentioned four:

- **COICOP 01, food.** Individual item level calculations concerning foodstuffs consists of two components, a first is farmers withdrawal from production for own final consumption. Here the National Board of Agriculture calculates producers' own consumption of food and this estimate is added (N7). According to law farmers have to pay VAT on own consumption. Hence the farmers' own consumption is valued including VAT. A second concern adjustments that add in total 334 million SEK of HFCE to products in three COICOP items. This was done for some individual product groups that were not allocated any HFCE by the HCS but where NA-compilers deemed that some level of consumption should reasonably exist.

Sources: National Board of Agriculture, HCS

- **COICOP 021-022, alcohol and tobacco.** Individual item level calculations cover consumption from N2 illegal producers who fail to register that in turn divide into consumption of output from home distilling and smuggling of alcohol and tobacco products. For these and all other N2 items consumption directly mirror estimated production. For more information on sources and methods used, see section 7.1 and 7.2.
- **COICOP 0230, narcotics.** The utility value is based on average consumption volumes as measured in wastewater analysis. According to the analysis, a new benchmark year 2021 is set for all drugs except heroin, ecstasy and tramadol which are not included in wastewater analysis and relies on the older benchmark. The wastewater analysis is based on data from six regions that have multi-centre wastewater analysis projects ongoing under the guiding and supervision provided by the EMCDDA. More information on the method, see 7.1.3.1.2.3.
- **COICOP 0411, tenancies in multiple-occupancy buildings.** The utility value is based on the stratification method, see 3.18.3.2. Component under benchmark extrapolations concern garages, benchmarked using Revenues and expenditure of multi-dwelling buildings (IKU) in 2012 and extrapolated using change in non-dwelling areas in Real estate taxation register.

Sources: National apartment register, Number of unlet apartments (BOSM), Rents for dwellings, (HiB), Revenues and expenditure of multi-dwelling buildings (IKU), Real estate taxation register.

- **COICOP 0412, tenant-ownership rights in multiple-occupancy buildings.** Figures recorded under Dwellings-stratification method cover the utility value is based on the stratification method, see 3.18.3.3. Component under benchmark extrapolations concern garages, benchmarked using Revenues and expenditure of multi-dwelling buildings (IKU) in 2012 and extrapolated using change in non-dwelling areas in Real estate taxation register.

Sources: National apartment register, Rents for dwellings (HiB), Revenues and expenditure of multi-dwelling buildings (IKU), Real estate taxation register.

- **COICOP 0421, Owner-occupied dwellings.** The utility value is based on the stratification method, see 3.18.3.4

Sources: National apartment register, Rents for dwellings (HiB) and Revenues and expenditure of multi-dwelling buildings (IKU).

- **COICOP 0422, Secondary residences.** The utility value is based on a rent and regional based stratification method, see 3.18.3.5.

- Sources: Real estate taxation register, Accommodation statistics.

- **COICOP 0431 Materials for the maintenance and repair of the dwelling.** The purpose comprises goods and materials for minor repairs and maintenance to the dwelling. Materials intended for permanent and holiday homes are also included in this group. The work is carried out by the household living in the dwelling and no cost or reporting of time used is included in this

item. Examples of minor works are interior decorations and repairs, such as wallpapering and painting. The initial value for 1995 was obtained from the household budget statistics through thorough analysis of the expenditures that households stated they had had. The value is updated with the aid of the annual growth rate in retail trade turnover at current prices per quarter.

Sources: HBS, turnover statistics, the VAT Register, SBS. Corresponding purpose is covered by household consumption statistics from 2023.

- **COICOP 0451, Electricity.** The annual national accounts include an electricity balance in which the supply is reconciled with total use, broken down by different user categories. The calculations are based on data on the consumption of electricity (GWh) by households according to annual electricity, gas and district heating statistics from the Swedish Energy Agency and Statistics Sweden. Price indices from CPI and changes in tax rates are also used for current price compilations of the quantity data. The consumption is extrapolated by the annual change in quantity delivered to households and by consumer price index for electricity including changes in tax rates.

Sources: Swedish Energy Agency and SCB Electricity supply, district heating and supply of natural and gasworks gas statistics. CPI for electricity, tax rates from The Swedish Tax Agency, tax revenues from The Swedish National Financial Management Authority.

- **COICOP 0452, Gas.** The annual calculations are based on data on the consumption of gas from gasworks and natural gas (m³) by households according to annual electricity, gas and district heating statistics from the Swedish Energy Agency and Statistics Sweden. The consumption is extrapolated by the annual change in quantity delivered to households and by consumer price index for gasworks gas and price index for domestic supply (IHT) including changes in tax rates. In the national accounts a gas balance is also produced for the country, in which supply is reconciled with use broken down by the various user categories.

Sources: Swedish Energy Agency and SCB Electricity supply, district heating and supply of natural and gasworks gas statistics. CPI for town gas is estimated by a price index for domestic supply of natural gas. Tax rates from The Swedish Tax Agency, tax revenues from The Swedish National Financial Management Authority

- **COICOP 0453, Liquid fuels.** This item includes light and heavy fuel oils, propane and light oils. The annual calculation is based on the energy balances in the national accounts, in which data on quantities multiplied by price data are calculated and reconciled. Consumption of heating oil and other liquid fuels (m³) by households is obtained from Swedish Energy Agency and SCB Monthly fuel, gas and inventory statistics and Annual Energy balances for individual houses, multiple-occupancy buildings and commercial premises. The consumption is extrapolated by the annual change in quantity delivered to households and by consumer price index and price index for domestic supply.

Sources: Swedish Energy Agency and SCB Monthly fuel, gas and inventory statistics and Annual Energy balances for Sweden. CPI for light fuel oils, price index for domestic supply. Tax rates from The Swedish Tax Agency, tax revenues from The Swedish National Financial Management Authority.

- **COICOP 0454, Other fuels.** This purpose includes HFCE on charcoal, wood for fuel and wood pellets, of which expenditures on wood pellets constitutes the largest share. All components are extrapolated using volume change in domestic supply, i.e. NA output plus imports minus exports, for each constituent product group. The domestic supply of Fuel wood A0220004 is largely made up of the N7 adjustment made to output concerning own withdrawal of firewood, as such a corresponding amount to that adjustment, 529 million SEK, is recorded in the same way here. The remaining 2 641 million SEK is recorded under Benchmark extrapolations.
- **COICOP 0455, District heating.** The annual calculations are based on data on the consumption of district heating (GWh) by households according to annual electricity, gas and district heating

statistics from the Swedish Energy Agency and Statistics Sweden. The statistics cover deliveries to one- and two-family houses and multiple-family houses. The consumption is extrapolated by the annual change in quantity delivered to households and by consumer price index for district heating in one- and two-family houses and multiple-family houses. A heat balance is also undertaken each year in the national accounts, in which supply is reconciled with use broken down by different user categories.

Sources: Swedish Energy Agency and SCB Electricity supply, district heating and supply of natural and gasworks gas statistics and CPI for district heating in one- and two-family houses and multiple-family houses.

- **COICOP 0562, Domestic and household services.** Individual item level calculations cover consumption from N1 – underground producers concerning paid domestic services. These adjustments and underlying calculations are described in more detail in section 3.26, 7.1 and 7.2.
- **COICOP 06111, Prescription medicines.** These medicines carry substantial subsidies for the private consumer. The subsidy system is based on a graduated scale and imposes a maximum amount per person in any one year. Only the amount that is actually paid by households is included in household consumption. Data on sales to households and the subsidy constituted by the refunds from general government to the pharmacist are obtained quarterly from the Swedish e-Health Authority. The annual calculations are reconciled with data from the Swedish e-Health Authority's annual accounts.

Sources: Swedish e-Health Authority.

- **COICOP 062, Outpatient care services.** This purpose includes the charges paid by patients themselves for out-patient attendance and treatment and for dental treatment. Annual data on publicly financed and provided care is obtained from the Annual accounts for regions, which also show revenue from patient charges. Data on charges collected by private operators are based on the customer breakdown from the SBS 20121

Sources: Annual accounts for regions, SBS, RFV.

- **COICOP 063, Inpatient care services.** For publicly financed treatment provided in the public sector, data are obtained from the Annual accounts for local government on revenue received in the form of patients' contributions. The calculation of contributions for treatment not provided within the public sector is based on the customer breakdown in the SBS 2021.

Sources: Annual accounts for the local government, SBS.

- **COICOP 0711, Motor cars.** Consumption by households of motor cars consists partly of purchases of new cars and partly of purchases of used cars. Estimates of household spending on new cars are based on information processed from the vehicle register supplemented by price data on make and models of the cars bought. This provides direct information on the numbers and models of vehicles sold to private individuals. The estimates are derived by multiplying these data by trade information on list prices, together with estimates for any additional 'on the road' costs.

Car model, HFCE	2021Q1	2021Q2	2021Q3	2021Q4	2021 total
New registrations	35 236	35 259	37 306	37 440	
Directly imported, withdrawn	1 421	2 303	1 981	1 679	
Car transfers from car dealers to households	3 578	3 580	3 788	3 802	
Average prices (weighted)	356 627	374 023	386 892	454 987	
Average discount	-5,6%	-5,6%	-5,6%	-5,6%	
Average surcharge for additional equipment	9,0%	9,0%	9,0%	9,0%	
Results, SEK million	13 789	14 130	15 647	18 613	62 179

Expenditures on used vehicles have two different components, depending on the type of previous owners. For vehicles previously owned by households for private use, only the dealers' margins on the vehicles are recorded in household consumption. For vehicles previously owned by businesses,

the full values of the vehicles as well as any dealers' margins are included in household expenditure.

Car model, used cars	2021Q1	2021Q2	2021Q3	2021Q4	2021 total
Used cars transferred from car dealers to households	27 012	22 262	8 229	11 612	
Avg. price for used cars from car dealers to households	222 988	241 046	263 124	297 271	
Used cars transferred from households to car dealers to households	39 037	46 015	46 124	38 835	
Avg. price for used cars, households to car dealers to households	214 915	223 660	230 374	275 300	
Total	7 701	7 425	4 290	5 590	25 006

Calc. Example 2021Q1: $7\,701 = ((27\,012 * 222\,988) + (39\,037 * 214\,915 * 0,2))$

Car ownership and new car purchases are registered by personal identification number or enterprise identification number in the vehicle register. By comparing the vehicle register with Statistics Sweden's business register, cars owned by natural persons who are also self-employed traders can be filtered out. Cars purchased by unincorporated enterprises with an annual income of over SEK 200 000 are not included in household consumption but are entered as investment in the national accounts. For investment vehicles, which are also used privately the entrepreneur must record a benefit value for taxation, and this procedure is disadvantageous unless the car is used a lot for the purposes of the business. The above-mentioned income threshold is used, as it is unlikely that a self-employed trader below this annual income level would charge the purchase of a car to his business; it is more likely that he would record the costs of using his private car in the course of his business.

The data in the motor car register also include the make and model of the car and month of manufacture, as well as the owner. Autovista compiles price data for different car models and, on the basis of this information, values are calculated at current prices for new car purchases. Price data for transfers of car ownership from legal to natural persons are calculated with the aid of a model in which data are used on the age of the cars and the corresponding value reduction in relation to new car prices. The model was devised after consultation with the motor trade. It is mainly previously leased company cars that are covered in this group.

Every quarter a value calculation for cars newly registered to natural persons, cars transferred from legal to natural persons and cars sold by one household to another household through the motor trade is carried out with the aid of SCB processing operations based on the vehicle register in combination with the enterprise register and price data. The calculation of transferred ownership implies an assumption that no cars owned by legal persons are scrapped.

The value of the motor trade's margins on the resale of used cars from household to household is calculated with the aid of quantitative data (including models and age) from the motor car register and a percentage mark-up on used car prices.

Direct imports of certain used cars. After Sweden became a member of the EU in 1995, it became advantageous to import used cars directly. The term "used" in this context refers to a car that has been driven for 6000 kilometres and is six months old. Data on the number of directly imported cars is obtained from the new registration statistics. The national accounts calculate a value for these cars by applying to them a standard reduction on the new car prices for the makes in question. The value of direct imports is deducted from purpose 0711, since it is already included in the foreign exchange item included under purpose 15.

The HBS includes sales between households and is therefore not appropriate to use for comparisons without adjustments.

The Swedish car scrap scheme expired in 2007. It has been replaced by a higher responsibility/undertaking for the car scrap at the manufacturers and importers. The car scrap scheme was conditional in Sweden and it was recorded as a tax on products in the Swedish national accounts (D21) albeit the GNI Committee recommendation is to record as subsidies on products D31 as stated in GNIC/232, rec. 3. It is noted that the recording as D21 is GNI neutral. According to the

Commission's services the recording was properly addressed by Sweden. For more information see chapter 4.9.

Summary of the main sources: vehicle register, SCB enterprise register, NA car model. More detailed information regarding these sources is available in chapter 10.3.

- **COICOP 07242, Vehicle inspection and testing.** The initial value for 2012 is based on a quarterly survey of the Swedish Motor Vehicle Inspection Company (AB Svensk Bilprovning). This was the only agency authorized to conduct official vehicle inspections until June 2010 when the market was opened to other private subjects. The market was still greatly dominated by the Swedish Motor Vehicle Inspection Company until 2012. From 2013 the value is updated with the aid of annual growth rates from the turnover statistics at current prices per quarter.

Sources: turnover statistics, AB Svensk Bilprovning. Corresponding purpose is covered by HCS from 2023.

- **COICOP 07245, Car benefit and car hire.** The purpose consists primarily of the value recorded by households for the benefit of using a company car for private purposes. The amount is partly obtained annually from the income statement information supplied by employers to the Swedish Tax Agency. However, since 1997 an addition is made to the Tax Agency estimate, because of the introduction of a new method. The car benefits, included here, is a benefit in kind. The same amount is also recorded as employers' output and as a payroll expense. The purpose also includes the short-term hire of cars and moving trucks to households. The value is updated with the aid of annual growth rates from the SBS.

Sources: Car benefits: data from income statements provided by the Swedish Tax Agency, Car hire: turnover statistics and SBS, Retail trade sales.

- **COICOP 0736, Other purchased transport services, e.g. removals.** This COICOP item further subdivide by product where one component in CPA H49 is covered by HCS while components in H52 warehousing and N79 tourism not covered where instead based on benchmark values for the year 2004. For data on the customer distribution from the SBS was used. Updates are made by the annual growth rates in SBS. Corresponding purpose is totally covered by household consumption statistics from 2023.

Sources: SBS, turnover, the VAT Register.

- **COICOP 0921, Major durables for recreation and culture.** The individual component compiled in this item concern riding horses and ponies, part of product group A014C Horses, camels. This amounts to 320 million SEK entered under benchmark extrapolation. The initial value, from 2006, is based on a calculation of the number of foals born and average prices. The purpose includes live-born foals per year of light and heavy stock and ponies. Trotting horses and thoroughbreds for flat racing are not included. Annual data on the number of foals are recorded by the Swedish Horse Council Foundation, the Islandic Horse Association and The Swedish Warmblood Association. Reflation to current prices is carried out through the total CPI.

Sources: Swedish Horse Council Foundation, Islandic Horse Association and The Swedish Warmblood Association. Corresponding purpose is covered by HCS from 2023.

- **COICOP 0923, Repair and maintenance of durables for recreation.** For the repair of pleasure boats, motor caravans and musical instruments the initial value for 1995 is based on a product classification for the repair industry drawn from an intermittent survey of household repairs. Updating is carried out using annual growth rates from the turnover statistics at current prices per quarter. For veterinary services for horses and ponies used for recreational riding the initial value for 2004 is based on SBS.

Sources: turnover statistics, SBS, the VAT Register. Corresponding purpose is covered by HCS from 2023.

- **COICOP 09413, Charges for hire of boats, charges for the use of locks and canals, etc.** This includes the expenditure of households for hire of boats, berths in marinas, laying-up costs for winter storage and charges for the use of locks and canals. The benchmark 2004 is set with the aid of consumer information in the SBS. Annual updating is carried out with the aid of the annual growth rates from the SBS whereas turnover statistics and the VAT Register are used in the quarterly calculations.

Sources: turnover statistics, the VAT Register, SBS. Corresponding purpose is covered by HCS from 2023.

- **COICOP 09414, Municipal music school fees.** The consumption consists of fees to pupils for singing and instrument tuition and for the hire of instruments at municipal schools of music. The source for the annual calculations is the Swedish Council of musical and cultural schools.

Sources: Sveriges Musik- och Kulturskoleråd (SmoK). Corresponding purpose is covered by HCS from 2023.

- **COICOP 09415, Course fees of adult education associations.** The expenses by households for study circles and lectures arise mainly from the sale of education by non-profit organizations. Benchmarking was carried out with the aid of data obtained from the Adult education council in 1997 (Folkbildningsrådet), which amongst other things compiles records for the expenditure of the various adult education associations. Extrapolation is made by the number of participants according to the Adult education council and reflat by CPI. The customer distribution in the SBS is also used to verify the total level of expenses in this COICOP.

Sources: Folkbildningsrådet, SBS Corresponding purpose is covered by HCS from 2023.

- **COICOP 0943, Gambling and betting activities.** Calculations are based on five components. The Swedish Gambling Authority provide figures for domestic licensee commercial gambling operations. This is complemented by lottery output from NPISH which is assumed to directly translate to HFCE, N2 and N6 additions for illegal and misreported activity, described in more detail in chapter 7, and adjustments using the international trade in services survey for Swedish household expenditure on gambling abroad and deductions for foreign nationals gambling in Sweden. HFCE is equal to the operators' proceeds minus winnings repaid.
- **COICOP 1011, Education.** In Sweden education in schools as such is financed by taxation and does not therefore give rise to any personal fees or charges. What is covered here are charges paid by households for preschool activities. Estimates are compiled with data from the Swedish National Agency for Education concerning privately provided childcare and Annual report of local government accounts for publicly provided. Information on charges paid is obtained in the same way as for child-care, see COICOP 12401.

Sources: National Agency for Higher Education, Swedish National Agency for Education, Annual report of local government accounts, The child-care survey, City of Stockholm.

- **COICOP 10141, University aptitude test.** The expenditure of households for the university aptitude test is covered under this purpose. The number of participants and the rate of the fee are obtained annually from the National Agency for Higher Education.

Sources: National Agency for Higher Education

- **COICOP 10142, University studies abroad.** The purpose includes households expenditure for the college and university studies abroad. The data consists of a total amount paid for tuition fees for studies at schools abroad is collected yearly from the Swedish Board of Student Finance (CSN), what is to be conducted for this purpose is the part that relates to college and university studies abroad and is deflated by index of foreign exchange.

Sources: The Swedish Board of Student Finance (CSN), index of foreign exchange

- **COICOP 1220, Prostitution.** Estimates for prostitution are compiled by the help of a special model corresponding to the basic model for estimates of prostitution services in the handbook on the compilation of statistics on illegal economic activities. It is by large built on the number of prostitutes according to special intermittent surveys. The benchmark is from 2004 and intermittent updates may be possible when special investigations are made by the National Board of Health and Welfare (see detailed description in chapter 7.1.3.1.2.1). A study published in 2019 indicates that no major changes can be traced. Sources: Intermittent surveys published as Statens Officiella utredningar and material on the subject from The National Board of Health and Welfare, Research report from Malmö highschool.
- **COICOP 12401, Child-care fees for child welfare.** The consumption consists of fees paid by parents for child welfare including family day nurseries. The main source for the annual calculations is Annual accounts for the municipalities. For child-care provided in facilities other than those of the municipality, the following calculation model is used. The number of children placed in different forms of care is taken from the annual child-care surveys. The average cost per year and per child is calculated with the aid of charges collected by the local authority child-care services and the number of children in local authority care. With the aid of the average cost per child, the total amount of charges for other child-care is calculated.

Sources: Annual accounts for municipalities, The Swedish National Agency for Education annual child-care survey.

- **COICOP 12402, Elderly-care including mobility service.** The main part of the consumption consists of charges paid by elderly and disabled care recipients to the local authorities for different forms of care and for mobility service. The different forms of care consist of services in the person's own home, special accommodation in serviced houses and apartments and residence in group facilities. The sources for the annual calculations are the Annual accounts for local government, in which the charges paid by care recipients are recorded. A smaller part is charges collected by private entrepreneurs in this case the value is based on consumer information in the SBS.

Sources: Annual accounts for local government as well as SBS.

- **COICOP 12403, Compensation for a personal assistant under the Act concerning support and Service for persons with certain disabilities.** This covers compensation to disabled persons who receive care to pay for the services of personal assistants. Decisions on the right to a personal assistant must have been taken within the municipal social services. The law that gives the right to personal assistant came into force in 1993 and is part of a larger reorganization of services, for which registration in national accounts first began in 1994. This service had previously been provided entirely in closed facilities. Care recipient has the option to choose for himself who he or she wishes to employ as a personal assistant. Assistants represent several different employer groups such as government, cooperatives, social work activities and other service organizations.

Data on compensation per hour and the number of hours worked is provided every month from the Swedish financial management authority and the National Social Insurance Board. The material is based on reimbursement of the aid authorised and paid. Source: Swedish financial management authority (ESV), National Social Insurance Board (RFV)

- **COICOP 12404, Charges for individual welfare services.** The charges covered here relate, inter alia, to family guidance services. Data on the charges paid under this heading are obtained from the local government annual accounts.

Sources: Annual accounts for the local government.

- **COICOP 125, Insurance services.** Insurance services are calculated annually in conjunction with the output calculations for insurance companies and consist of insurance services for life insurance and non-life insurance. Data are obtained from the Financial Supervisory Authority and are processed for the national accounts in such a way that definitions in line with ESA 2010 are

obtained. The consumption by households of life insurance services consists broadly speaking of the management costs incurred by the companies for the activity. The consumption by households of non-life insurance services is defined as premiums paid plus direct returns on actuarial reserves allocated to policyholders, less claims settled. The source of information used for the calculation of the output of other non-life insurance services does not contain information on the allocation of the output.

Insurance	Final consumption %	
1	Health and accident insurance	100
2	Employers no-fault insurance	100
3	Householder's and homeowner's insurance	40
4	Business and homeowner's insurance	0
5	Motor vehicle insurance	70
6	Motor third party insurance	70
7	Marine insurance	30
8	Aviation insurance	0
9	Transport insurance	0
10	Credit insurance	0
11	Discharge insurance	100
12	Animal insurance	50

Insurance classes 2 and 11 are set to 100 percent final consumption and insurance class 4 is 100 percent intermediate consumption. Insurance class 1, contractual insurance is deducted from non-life insurance and is a part of COICOP 1262. Health and accident insurance paid by employers outside of contractual agreements are not included. Insurance classes 8, 9 and 10 are set to 100 percent intermediate consumption where the proportion of final consumption is believed to be nothing or negligible. Insurance classes 3, 7 and 12 use benchmark information from 2008. Insurance classes 5 and 6 were benchmarked in 2005 using information from the Swedish Insurance Federation (Trade association) and the Swedish Financial Supervisory Authority.

In addition to data from the Financial Supervisory Authority concerning domestic insurance provision there is a minor component, -14 million SEK, from the International trade in surveys survey that corresponds to the net adjustment for insurance services consumed by Swedish households abroad and those consumed by non-resident households in Sweden.

All insurance types as well as the adjustment taken from the International trade in survey are recorded in process tables under Allocation of Insurance.

Source: Swedish Financial Supervisory Authority, International trade in services survey.

- **COICOP 1261, FISIM.** HFCE of FISIM comprises FISIM on loans and deposits for consumption and FISIM on loans for tenant-ownership rights in multiple-occupancy buildings and is calculated annually. Stocks of loans and deposits for consumption are obtained by subtracting the households total with stocks of loans and deposits for intermediate consumption (households as owners of dwellings and unincorporated enterprises) and tenant owned flats. The source of information for the stock of loans for tenant owned flats is the Riksbank's Financial Market Statistics on housing credit institution's lending by collateral. The calculation of FISIM is described in section 3.17.

Sources: The Swedish Financial Supervisory Authority and the Riksbank.

- **COICOP 1262, Financial services.** HFCE of financial services consist partly of directly measurable services in the form of commissions, brokerage fees and charges paid for various financial services and partly of indirect charges on household fund savings. Commission income is recorded by banks, credit institutes and mutual funds. It is also recorded in NACE 66, for example, by the Swedish Securities Register Centre, the Stock Exchange and foreign exchange offices.

Sources: statistics on financial sector results and the Swedish Financial Supervisory Authority.

- **COICOP 12702, Miscellaneous charges, including fees for passports and fishing permits and fees payable to the enforcement service.** The initial value is from 2014. Annual data obtained from Financial Management Authority records on fees received are used for extrapolation.

Sources: ESV records, Enforcement Authority, the Swedish Police. Corresponding purpose is covered by HCS from 2023.

5.8 NPISH final consumption expenditures

5.8.1 Introduction

The non-profit institutions serving households (NPISH) consist of organisations in the household sector which is operated without a profit objective. Organisations such as trade unions, churches, political parties, sport associations and welfare organisations belong to this sector.

Like non-market government units, the output of NPISH is valued at the total costs of production. From the output estimate, final consumption expenditure is compiled by adding and subtracting items in accordance with ESA 3.117 and the scheme below:

+ Intermediate consumption
 + Wages and salaries
 + Employers social contributions
 + Consumption of fixed capital
 + Other taxes on production
 - Other subsidies on production
 = **OUTPUT**
 - Payments for sold goods and services
 - Own-account capital formation
 = **FINAL CONSUMPTION EXPENDITURE**

Value added is calculated by subtracting intermediate consumption from output.

5.8.2 Sources and methods

The compilations are based on several sources. One main source of information for the calculations is the wages and salaries data which all employers must submit to the tax authorities for every person employed; Gross pay based on administrative sources, LSUM. The data are comprehensive and comprise wages and salaries paid and pay-related benefits, recorded in NA under D11. Source data is distributed on activities according to NACE. Social contributions, D12, are compulsory and constitutes security benefits under the Social Insurance system. Sources and methods used for calculating wages and salaries and social contributions are described in more detail in section 4.7

Another main source is the survey on Non-profit institutions serving households. This source gives detailed information on income (payments for sold goods/services, P131) and expenditure (intermediate consumption, P2) distributed by 32 different NACE activities. Figures on wages and salaries and number of employees are also collected but as this is a sample survey the registers from the Swedish tax authority are used instead as they are comprehensive.

The third main source contains data for the Church of Sweden. The survey is divided into three different parts covering different activities within the Church. The activities of the parishes are covered in one of them and the activities of the dioceses in the second one. The third recording contains a special collection of data covering the ownership and management of land, forests and buildings belonging to the Church. The survey contains comprehensive and detailed information on income, expenditures, investments and balances for the needs of NA-compilations, which in the compilation of final consumption expenditure means that the survey is used for intermediate consumption, P2, and payments for sold goods/services, P131. In the national accounts, NPISH are divided by industry, where the Church of Sweden is found within S94.

Consumption of fixed capital, P51c, is added to each kind of activity. The value of capital consumption depends on the stock of capital and the mix of capital items. CFC compilations are based on the perpetual inventory method using data on acquisitions and disposals of gross fixed capital formation covering a long period and information on service lives of different type of capital and thus the rate at which the value of assets decline over time. Methods of CFC are elaborated in section 4.12.

The subsidies are collected from the government accounts and deducted from the output value. There are both domestic and EU subsidies.

Production for own final use, P12, from own-account capital formation refers to development of in-house software and R&D. Like for other sectors of the economy, estimates are based on a model compilation, described in section 5.10. Estimates are recoded as conceptual adjustments resulting in data on computer software and R&D. There is no other own-account capital formation except computer software and R&D. There are no expenditures by NPISH on goods and services produced by market producers that are supplied, without any transformation, to household as social transfer in kind, ESA 2010 §3.97(b).

Intermediate consumption of FISIM and insurance is compiled in connection with the compilations for the rest of the economy and added to intermediate consumption P2. Source data is supplied by the Financial Supervisory Authority.

Table 5.8.1 NPISH FCE by transaction, SEK million, 2021

NACE 2007	P2	D11	D12	D29	D39	P51C	P1	P131	P12	P31
A01	138	20	2	5	-2	2	165	232	0	-67
A02	245	51	7	12	-5	0	310	586	0	-276
D351	43	4	1	1	0	2	51	603	0	-552
E37_39	76	7	1	2	0	0	86	12	0	74
G47	353	452	50	111	-126	18	858	745	2	111
H52A	152	34	6	8	0	34	234	18	0	216
I55	103	119	9	29	-3	19	276	213	0	63
I56	31	34	3	8	-2	5	79	42	2	35
J58	27	5	1	1	-2	0	32	24	0	8
J59	27	31	3	8	-3	7	73	41	2	30
J63	35	72	17	18	0	9	151	93	11	47
K64	397	227	26	56	-1	87	792	165	6	621
L68B	4528	416	30	102	-25	344	5395	1809	2	3584
M69	20	25	5	6	0	1	57	4	0	53
M70	140	123	11	30	-1	4	307	153	2	152
M71	295	192	31	47	0	5	570	205	2	363
M72	192	403	69	99	-1	41	803	272	5	526
M73	5	7	1	2	0	2	17	4	2	11
M74	37	52	6	13	-3	0	105	44	0	61
N78	0	22	2	5	0	2	31	19	2	10
N79	31	34	6	8	0	16	95	80	5	10
N82A	28	53	9	13	-1	14	116	12	0	104
P85	2686	6479	915	1586	-713	404	11357	3152	34	8171
Q86	74	553	83	135	-1	25	869	466	6	397
Q87	288	937	109	229	-44	84	1603	934	2	667
Q88	1636	1689	235	413	-153	74	3894	1279	12	2603
R90	271	312	45	76	-15	61	750	266	12	472
R91	131	390	53	95	-71	24	622	243	2	377
R92	18	9	2	2	0	25	56	15	2	39
R93	4733	5385	643	1318	-558	580	12101	8285	32	3784
S94	14926	22280	4364	5505	-746	2721	49050	5953	305	42792
S96	9	19	2	5	-2	0	33	12	0	21
Total	31675	40436	6747	9948	-2478	4610	90938	25981	450	64507

Minor shares of the small organizations which are not coded to any of the activities mentioned above are included in other services. All Swedish companies and organizations in all sectors are covered by the business register, SBR. In the NPISH sample survey (not a census) all organizations listed as NPISH in the SBR except the Church of Sweden represent the population. In year 2021, 2 732 organizations of the total NPISH population of 226 954 take part in the NPISH survey. For more

information on the Statistical Business Register and how the distinction of the criteria given in ESA 2010 §3.30-3.36 is applied, see section 3.1.1. As the register cover all relevant units no adjustments for under coverage are made in the process of NA-compilation.

5.8.3 Process tables

In the process tables, below, intermediate consumption and the transaction P131, non-market sales are derived from surveys while wages and social contributions, other taxes/subsidies are derived from administrative records. Consumption of fixed capital is derived from The PIM model. The calculation involves adding up and subtracting cost items according to the calculation scheme above. At a first stage output is compiled and then among other things is withdrawn. Production for own final use, P12 and FISIM and other minor adjustments are put under conceptual adjustments. No adjustments are made to the sector for purposes of exhaustiveness or balancing.

The table shows total NPISH FCE corresponding to figures in Annex A process tables in the leftmost column while remaining columns show process table breakdowns for the respective underlying components that make up the sum of cost approach.

Table 5.8.2 NPISH FCE – Excerpt from process tables, SEK million, 2021

		Total NPISH	Breakdown in sum of cost components								
		FCE	P2	D11	D12	D29	D39	P51c	P131	P12	
Basis for NA Figures	Surveys & Censuses	5 132	31 113								
	Administrative Records	54 653		40 436	6 747	9 948	-2 478				
	Combined Data	0									
	Extrapolation and Models	Benchmark extrapolations	0								
		Commodity Flow Model	0								
		CFC(PIM)	4 610						4 610		
		Dwellings - stratification method	0								
		FISIM	0								
		Incurrence	0								
		Other E&M	0								
		Total Extrap+Models	4 610						4 610		
	Other	0									
	Total (sources)	64 395	31 113	40 436	6 747	9 948	-2 478	4 610	-25 981	0	
Adjustments	Data validation	0									
	Conceptual	Allocation of FISIM	511	511							
		Allocation of incurrence	51	51							
		Other conceptual	-450								-450
		Total conceptual	112	562							-450
	Exhaustiveness	N1	0								
		N2	0								
		N3	0								
		N4	0								
		N5	0								
		N6	0								
		N7	0								
		Total exhaustiveness	0								
Balancing	0										
Total (adjustments)	112	562							-450		
Final estimate	64 507	31 675	40 436	6 747	9 948	-2 478	4 610	-25 981	-450		

5.9 Government final consumption expenditure

General government final consumption expenditure (GFCE) covers the value of the goods and services produced by general government itself excluding own account capital formation, market output and payments for non-market output, as well as goods and services purchased by general government and supplied to households as social transfers in kind.

These expenditures enter the accounts of the general government sector, and that of the total economy, in the use of income account and in the formulation of GDP from the expenditure approach, where total final consumption expenditures in the general government sector S13 in 2021 stood at 1 410 050 million SEK. Table 5.9.1 show the breakdown of this figure by subsector and by recording in Annex A process tables.

Table 5.9.1 GFCE by subsector – Excerpt from process tables, SEK million 2021

		GFCE				
		Total general government	Central government	Social security sector	Local government	
Basis for NA Figures	Surveys & Censuses	912 805	0	0	912 805	
	Administrative Records	295 070	294 557	-588	1 101	
	Combined Data	19 166	0	3 373	15 793	
	Extrapolation and Models	Benchmark extrapolations	0	0	0	0
		Commodity Flow Model	0	0	0	0
		CFC(PIM)	173 823	101 945	64	71 814
		Dwellings - stratification method	0	0	0	0
		FISIM	0	0	0	0
		Insurance	0	0	0	0
		Other E&M	74 155	24 904	434	48 817
	Total Extrap+Models	247 978	126 849	498	120 631	
Other	0	0	0	0		
Total (sources)	1 475 019	421 406	3 283	1 050 330		
Adjustments	Data validation	0	0	0	0	
	Conceptual	Allocation of FISIM	4 192	2 037	406	1 749
		Allocation of insurance	778	9	0	769
		Other conceptual	-69 939	-57 649	0	-12 290
		Total conceptual	-64 969	-55 603	406	-9 772
	Exhaustiveness	N1	0	0	0	0
		N2	0	0	0	0
		N3	0	0	0	0
		N4	0	0	0	0
		N5	0	0	0	0
		N6	0	0	0	0
N7		0	0	0	0	
Total exhaustiveness	0	0	0	0		
Balancing	0	0	0	0		
Total (adjustments)	-64 969	-55 603	406	-9 772		
Final estimate		1 410 050	365 803	3 689	1 040 558	

These individual components are described in detail throughout this section where:

- *Surveys and censuses* refer to annual accounts of local government.
- *Administrative records* and *combined data* refer to central government records, annual reports and Structural business statistics used for calculation of output for region owned corporations.
- *Extrapolation and models* refer to consumption of fixed capital (section 4.12), value-added tax for general government (section 3.1.3.1.1) and model calculation for the non-profit institutions belonging to the local government sector.
- *Conceptual adjustments* refer to FISIM and insurance (section 3.17), software and R&D (section 5.10) and other adjustments on intermediate consumption, see sections 3.1.3.1.2-3.1.3.1.6 and 3.1.3.1.11.

5.9.1 General government – introduction

5.9.1.1 Scope and size

In the national accounts general government consists of three subsectors – central government, local government and the social security sector. The breakdown in terms of the relative scale of general government consumption expenditure including VAT in 2021 was as follows:

	<u>Value</u>	<u>Share %</u>
Central government	365 803	25.9
Social security sector	3 689	0.3
Local government	1 040 558	73.8
- <i>Primary municipalities</i>	<i>656 151</i>	<i>46.5</i>
- <i>Regions</i>	<i>384 407</i>	<i>27.3</i>
General government	1 410 050	100.0

General government is one of the so-called institutional sectors. These sectors consist of institutional units (ESA 2010, 2.12). All institutional units are producers and produce goods and services. There are three main types of producers. The first type is market producers (ESA 2010, 3.24), which are characterized by the fact that they produce goods and services that are sold on a market at economically significant prices, so-called market products. The second type of units produces mainly so-called other non-market products for collective and individual consumption. A major part of their output is provided for free or at not economically significant prices (ESA 2010, 3.26). The third type of producers consists of producers for own final use, whose output is used within the same institutional unit (ESA 2010, 3.25).

The general government sector includes all institutional units, which are either non-market producers, or producers for own final use that are mainly financed and/or controlled by general government. There are units within general government, which are organized as limited corporations but are nevertheless classified as other non-market producers because they are mainly controlled and/or financed by general government. Similarly, there may be units which are similar to corporations but do not have the legal status of a corporation. These so-called quasi-corporations are also classified as market producers. They are characterized both by the fact that they keep a full set of accounts and by the fact that they are managed as though they were corporations. Thus, with certain exceptions, publicly owned corporations and quasi-corporations do not form part of general government. Also, some non-profit institutions (NPI) mainly controlled and financed by general government are classified within general government.

An institutional unit may consist of several kind-of-activity units (KAU) (ESA 2010, 2.148-2.151). In general government there are KAUs, which are classified as market producers or producers for own final use. Government Final Consumption Expenditures, GFCE, only arises in units, which are other non-market producers.

5.9.1.2 Definitions

GFCE is calculated as the output value, i.e. the total costs of production less payments for non-market output, e.g. fees for health care, less own account capital formation, e.g. in-house R&D production, less market output by non-market producers (ESA 3.98). Market output by non-market producers refers to production by non-market producers which is sold at significant prices. Included in GFCE are also social transfers in kind, i.e. purchases by general government of goods and services produced by market producers and supplied to households, without any further handling in general government (ESA 3.98). The output value of public services is defined in chapter 3.1.3.1.

5.9.1.3 Classification by purpose

General government consumption expenditure is classified according to purpose. The classification by purpose follows Consumption of Functions of Government (COFOG). Public services may either concern society as a whole, i.e. they may constitute collective consumption expenditures, or consist of individually oriented services, i.e. individual consumption expenditures. As the COFOG purposes are divided into individual and collective expenditures respectively, classification in accordance with COFOG amongst other things offers the possibility of distinguishing between individual and collective services provided by general government. In the national accounts expenditures for individual consumption is treated as transfers in kind. By deducting them from total final consumption expenditures in general government, it is possible to obtain actual consumption of general government. By adding the individual part of GFCE to the final consumption expenditure of households, it is possible to obtain the actual consumption of households. Classification by purpose is undertaken for each component individually. Intermediate consumption, sales and transfers in kind are further divided into income and expenditure types. Production classified in accordance with COFOG is recoded to NACE industries for the industry-by-industry presentation of the production accounts.

5.9.2 Reference framework

5.9.2.1 The register of general government units

Government sector delimitation analysis (and resulting reclassification, if any) is established and performed on a regular basis according to the criteria stated in ESA 2010 and MGDD 2022 edition in the national accounts. An investigation of government owned corporations is ongoing. The work with investigating public corporations is carried through on a regular basis, both annually in connection to the annual questionnaire about public owned and controlled units, as well as continuous analysis of new units. When new government authorities, municipalities and regions are established/terminated, information is provided to the SCB by official decisions by government. If it concerns other units, information is provided by the business register at SCB who is responsible for classification of units in the business register. It is, however, the responsibility of the national accounts at SCB to ensure that all units are correctly classified in national accounts based on ESA 2010.

As a base for analysing public corporations a designed database at SCB containing all public corporations is used. The review does not refer to all of these, because there are more than 2 700 corporations. But all large corporations i.e. referring to total liabilities, number of employees and corporations that fail the market/non-market test, are analysed. Also, government owned holding corporations and head offices/parent corporations are analysed more thoroughly as well as corporations with zero employees and other investigations upon request by Eurostat.

Units that are classified into or out of public administration is submitted to Business Register in February each year.

At Statistics Sweden (SCB), the following criteria are used for sector classification:

- Legal status
- Economically significant prices
- Ownership
- Industry (NACE)
- Public influence and control
- Economic information, number of employees etc.
- Quantitative 50% criteria

All of the above-mentioned criteria, except for economically significant prices and government influence and control, are included in the above mentioned SCB database. The information is collected from different sources, but the main sources are the Swedish Business Register together with economic information from standardized accounting statements and Structural Business Statistics.

Some supplementary information from annual reports is also used to verify administrative data in the register. Information about government influence and control, ancillary services, market behaviour etc. is mostly collected from annual reports and information from official statements and corporation websites. The degree of government ownership is however included in the database.

The market/non-market test does not always provide a clear answer whether the entity should be classified within or outside general government. Further investigations are performed based on qualitative aspects according to ESA 2010 such as the degree of influence and mandate general government have on the entity, government financing etc.

Statistical surveys are kept updated regarding the sector classification used in national accounts. In addition, also different kind of teams and working groups are discussing and dealing with classification issues on a regular basis. All sub sectors of government use integrated data sources, i.e. the population for non-financial and financial accounts is identical for the sub sectors of government.

The result of the investigation and the outcome from working with sector delineation for general government and within the framework of both the Excessive Deficit Procedure (EDP) and the implementation of ESA 2010 is that 223 corporations have been reclassified into general government. 199 have been placed into the local government, 21 into the central government and 3 into the social security sector. Most of the corporations are very small with either zero or only a few employees. The five corporations referring to hospitals, now included in local government, is an exception with between 400-6000 employees each.

The sector delineation is reviewed every two years in connection with audit visits within the framework of the Excessive Deficit Procedure (EDP).

5.9.2.2 The central government sector

Definitions and scope

Central government includes all administrative departments of central government and other central authorities and institutions whose powers range over the entire economic territory, apart from the administration of the social security sector. This demarcation coincides to a large extent with the legal entity of the State. Also included are non-profit institutions, which are controlled and largely financed by central government. The legal form of these institutions is that of representational associations, other foundations or funds, social security funds and public corporations and establishments along with a few public limited corporations.

Sveriges Riksbank, Sweden's central bank, is assigned to the financial corporate sector. Certain units, for example the royal theatres and Chalmers University of Technology, which are operated as public limited corporations, form part of the central government sector because they cannot be viewed as market producers. This is because they are controlled by the central government and their incomes from sales do not cover more than 50 percent of their production costs. The current list of institutions forming part of central government is continuously updated and is available from both the Swedish Financial Management Authority and Statistics Sweden.

Sources

The calculations are based on the recording by the Swedish National Financial Management Authority (ESV) of the expenditures of departments and agencies of central government by type of expenditure, the so-called basis of central government net lending. The basis for these records is derived from the central government accounting system and therefore covers all expenditures of these bodies, also those financed from sources outside the State budget. All expenditures are thus recorded as consumption, capital formation or a transfer and are specified by type of expenditure and purpose.

The ESV statistics on central government are based on the government accounts, the accounting system to which the departments and agencies of central government report expenditures and income.

With effect from 1999 the real economic codes are integrated with the codes for end-of-year financial statements. They are referred to by the common designation “S-codes”, or State reporting codes. Data for central government authorities is collected on either a monthly, quarterly or yearly basis depending on the type of transaction.

The code designations for the real economic income/expenditure types in the ESV basic data are five-character expressions. The codes start with an S which is followed by four digits. For certain bodies for which special information needs arise there is a further two-digit breakdown. The S codes are grouped in the following code classes:

- S1 Assets
- S2 Capital and liabilities
- S3 Income of the activity
- S4 Costs of the activity (staff costs)
- S5 Costs of the activity (expenses for premises and other operating costs)
- S6 Disposal, writing off and depreciation of fixed assets
- S7 Collection of revenue and transfers
- S8 Results from shares in subsidiaries and participations and capital changes

These code classes consist of a large number of detailed codes in which various staff costs, various types of other activity costs and income for services and goods etc. are specified. ESV and Statistics Sweden co-operate and meet at least once a year, and the result is that each variable is classified according to the national accounts’ needs and the relevant COFOG-codes in the dataset that ESV delivers. Different parts within the material are handled in different ways but each variable in the dataset at ESV corresponds to one (or more) defined variable(s) in NA. It depends on the level of detail on which the calculations are performed. For example, in the ESV data, compensation of employees is broken down into subcategories, in this case wages and salaries as well as employer’s social contributions. These subcategories can easily be used to construct relevant NA aggregates, such as compensations of employees (D.1) in the above example.

Records for non-profit institutions and other institutional units, which are classified as central government bodies but not covered by the State budget are collected by ESV in separate sequence and are included and distributed in real economic terms in ESV’s material.

Other sources include models for calculating purchased software and R&D, that are recorded as capital formation and deducted from intermediate consumption, and own account software and R&D, that are included in government production but not consumption. These sources are described in greater detail in section 5.10. Intermediate consumption of FISIM is calculated separately with a model, see chapter 3.17. GFCF of machinery and inventories acquired through financial leasing is also calculated separately with a model, extrapolated from a benchmark. As the amount for these costs are not covered by the main data source they are not deducted from overall GFCF of machinery & equipment. See more about financial leasing of machinery & inventories in chapter 5.10.

5.9.2.3 The local government sector

Definitions and scope

In 2021 the local authorities comprised 290 civic primary municipalities (primärkommuner, pk), 20 regions, 182 municipal associations (kommunalförbund, kfb) and 173 corporations.⁴⁴ The calculations of the local government sector also include the Swedish Association of Local Authorities and Regions (Sveriges kommuner och regioner, SKR) and non-profit institutions (ideella

⁴⁴ The Church of Sweden, previously included in the local government sector, became an independent non-profit organization on 1 January 2000.

organisationer, IO) belonging to the local government sector. The shares of the various units in local government consumption expenditure including VAT for 2021 are shown below:

Units	Value SEK million	Share per cent
Primary municipalities	640 475	62
Regions	363 720	35
Municipal associations, Swedish Associations of Local Authorities and Regions, non-profit institutions and other government bodies	36 363	3
Total	1 040 558	100

The primary municipalities in Sweden are responsible by law for:

- Social services including elderly-care, child-care and social assistance issues
- The system of public education for children and young people
- Planning and construction issues
- Protection of health and the environment
- Sanitation and waste disposal
- Emergency services
- Water and sewerage

The municipality of Gotland (Sweden's largest island) is in addition responsible for health and medical care. The local authorities may also conduct activities on a voluntary basis in the fields of leisure and culture, supplementary basic education for adults (KOMVUX), housing, energy and trade and industry. Output of waste disposal, water and sewerage, housing and energy is performed by units classified as market producers. Hence, they are not included in the calculations for the consumption expenditures of primary municipalities.

In Sweden, the 20 regions plus the municipality of Gotland are engaged in "regional activities". About 90 per cent of county council activity consists of health and medical care. Other tasks consist of education and cultural activities and, together with the municipalities, responsibility for the regions public transport and tourism promotion activities. In the field of education, the responsibilities of the regions have progressively diminished. The municipal association, Swedish Association of Local Authorities and Regions belong to the local government sector.

Sources

The main source for the calculation of the consumption expenditure of the local government is provided by the annual accounts which are compiled annually by Statistics Sweden except for the five units. For those units Structural Business Statistics is used. The data is collected using an electronic form. As well as the questionnaire itself, the electronic form also contains pre-printed data, scrutiny checks and key figures, which are calculated automatically. There is also feedback reporting to the units in order to safeguard the quality of the data collected. For all corporations information from the annual accounts as well as from Structural Business statistics is supplemented with the information from annual reports.

The statistics for the primary municipalities, municipal associations and regions are comprehensive, i.e. all units are included. The provisional annual accounts are published annually in June and the definite results are published in August. They refer to annual expenditures and incomes for the preceding year. In the annual accounts for the primary municipalities, municipal associations and regions a breakdown is shown by both fields of activity and types of expenditure and income. Data by field of activity are used in the distribution by purposes in accordance with COFOG.

The statistic used for calculation of consumption of other local government bodies other than five hospitals is not that detailed and is supplemented by the information from annual reports.

Other sources used in the calculations of local government consumption include the annual report of the Swedish Association of Local Authorities and Regions, employment statistics from Statistics

Sweden and material from the National Agency for Education and the National Board of Health and Welfare.

5.9.2.4 Social security sector

Definitions and scope

The social security funds subsector includes institutional units of general government whose main activity is to manage funded social security schemes. They were set up and are monitored by the State, through legislation or otherwise, with the aim of providing social security transfers to the entire community or to large sections of it. The institutions must be independent with respect to the State, which is guaranteed by the fact that the transfers are financed by way of funds. The funds are more independent than most government agencies because the Board has sole responsibility for the operations of the Fund and because Sweden's national pension funds are regulated solely by legislation and not by government directives. The Ministry of Finance reviews the national pension funds' performance on an annual basis.

Social security schemes must fulfil two criteria (ESA 2.117):

It is compulsory by law or by regulation for certain groups in the population to participate in the scheme or to pay contributions.

General government is responsible for the management of the institution as regards determining or approving the contributions and transfers independently of its role as a supervisory body or employer.

The Swedish Social Security Sector consists of The Swedish Pensions Agency and AP-Funds number 1, 2, 3, 4 and 6. The AP-Funds are government agencies constituting buffer funds in the Swedish national income pension system. Together, the buffer funds hold around 18% of total pension system assets. The income pension system is a distribution system in which pension contributions paid in by the gainfully employed during the year are used to pay out pensions to pensioners the same year. The surpluses and deficits that arise when contributions deviate from disbursements are handled by the AP Funds, which is why they are often referred to as "buffer funds". The funds manage diversified portfolios of listed and unlisted equities, fixed income assets and alternative investments. Alternative investments consist of private equity, real estate, timberland, infrastructure assets and new strategies. They generate investment returns that help to finance the system over the long term.

The social security funds subsector comprises the National Pension Scheme, excluding the investment funded part of the premium pension which is classified in a notional unit within the pension funds subsector, sector 129. Though, the traditional insurance plan in the premium pension scheme is classified in the social security funds subsector.

Sources

The National Pension Scheme is administered by the management boards of the Swedish National Pension Fund. Public consumption in the social security funds subsector is made up of the administrative costs of the various insurance schemes. Sources for the consumption expenditure are the annual accounts of the national pension funds, based on the official annual reports, quarterly survey including revenues and expenditures carried out by Statistics Sweden as well as a survey conducted by the Swedish Pension Agency which is also available for Statistics Sweden. Data for the consumption expenditure relating to the activities of the Swedish Pension Agency is collected by ESV and made available to Statistics Sweden. Also, the annual report for the Swedish Pension Agency is used. All different data sources are compared and analysed. All units are covered in the data sources.

The following information is collected for each item within social security funds consumption expenditures (amounts in SEK million in year 2021):

Item	Data sources	Amounts
Intermediate consumption	SPA* via ESV**, SCB*** and annual reports	2595
Wages and salaries	SPA via ESV, SCB and annual reports	987
Employers social contributions	SPA via ESV, SCB and annual reports	416
Other taxes on production	SPA via ESV, SCB and annual reports	215
Consumption of fixed capital	SCB	64
Sales	SPA via ESV	588
Final consumption		3689

*The Swedish Pension Agency, **The Swedish National Financial Management Authority, ***Statistics Sweden

The major part of the production costs refer to intermediate consumption which contain pure administration costs, cost for provisions and costs relating to performance of investments for the AP-funds (together 1418 million of SEK year 2021), administration costs at the Swedish Pension Agency (337), FISIM (406) and the rest referring to value added tax (434).

5.9.3 Valuation

Consumption expenditure consists up of the output value of the activity units of general government, which are classified as other non-market producers, minus their sales income plus their purchases from market producers of goods and services, which are supplied to households directly without further processing as social transfers in kind. The output value is defined in chapter 3.1.3.1.

SEK million 2021	Description in chapter	S.1311	S.1313	S.1314	S.13
+ Output value	3.21	427 289	970 173	4 277	1 401 739
- Sales of goods and services	5.9.7.2	37 587	96 533	588	134 708
- Production for own final use	5.9.7.2	42 033	8 196	0	50 229
+ social transfers in kind	5.9.7.3	18 134	175 114	0	193 248
= Consumption expenditure		365 803	1 040 558	3 689	1 410 050

VAT is added on Social transfers in kind, which are described in chapter 3.1.3.1.1 together with the treatment of VAT on intermediate consumption and gross fixed capital formation.

5.9.4 Transition from private accounting concepts to ESA 2010 national accounts concepts

See adjustments for the various calculation groups (types of expenditure) in sections 3.1.3.1.2-3.1.3.1.6 and 5.9.8.

5.9.5 Roles of direct and indirect estimation methods

Direct estimation methods are applied in the calculations for general government. Software and R&D are compiled by the help of models in accordance with ESA guidelines.

5.9.6 Roles of benchmarks and extrapolation

The calculations are based on annual data at current prices, hence extrapolation is not used.

5.9.7 Exhaustiveness

The basic material is comprehensive since data are collected for all activities. A plausibility check of the material is always carried out when it is received by Statistics Sweden. Comparisons in the form of time series are also used in order to detect any major divergences between years. The material is also returned to the data providers, inter alia in the form of key figures, which facilitate comparisons between different local authorities. The suppliers are then able to correct their data if they consider there to be an error.

5.9.8 Description of the calculation methods for the consumption expenditure

In accordance with ESA 3.117 final consumption expenditure is equal to the sum of output

plus the expenditure on products supplied to households via market producers,

minus payments for goods or services provided

minus own-account capital formation

Data at current prices are obtained from the ESV material for central government and the Annual Accounts for local government and some minor additional sources.

5.9.8.1 Output

Output is calculated by summarizing the total costs of production (ESA 3.49). These consist of intermediate consumption, wages and salaries, social contributions, consumption of fixed capital and other taxes on production, less other subsidies on production. The process is described in chapter 3.1.3.1.

5.9.8.2 Sales

Sales from government units comprise for example:

- Rental income from external tenants
- Services bought by private entrepreneurs, e.g. laboratory services, X-ray-activities
- Services provided to households/individuals, e.g. fees for child and elderly care, health and dental care, sports centres, energy and waste distributions, driving licenses, etc.

5.9.8.2.1 Central government

Data for sales of the central government is obtained through the main data source, described above in 5.9.2.2. Sales denote the sale by departments and agencies of government of goods and services, including rental income. Sales income is a deduction item in the calculation of consumption. Sales income must include both charges payable under public law and charges payable in the execution of orders and contracts, as well as marketing activities. The borderline between taxes and purchases of services from general government, in respect of payments by both enterprises and private individuals, is defined as follows:

If permits/licenses are issued automatically in return for the payment of a fixed amount, the payments are treated as taxes. If on the other hand general government uses licensing effectively as a form of control (for example, as a means of controlling the competence or qualifications of the persons or enterprises concerned), the payment for the license is treated as a purchase from general government, unless the payment is out of all proportion to the cost of providing the service.

In the national accounts a calculation is used to determine the scale of software purchases by the different sectors and of their production of software for own account. The estimate on software produced for own account is subtracted from consumption expenditures and added to gross fixed capital formation instead. The same method is used for the capitalization of R&D. Within the central government own-account R&D is to a large extent made up of basic research at universities.

The amount of internal sales income, broken down by rentals and other goods and services, which are matched by commensurate amounts on the expenditure side partly in the form of other current intermediate consumption and partly in the form of internal rental costs, is recorded in and obtained from the ESV material. These amounts are deducted from both sales and intermediate consumption. An exception is made for sales and purchases of R&D made internally between central government agencies. These remain within the recorded sales but are still deducted from intermediate consumption and instead recorded as GFCF of purchased R&D.

An adjustment is made for income from the lease of equipment. An internal model is used to calculate the amounts from the lease, which are deducted from sales and instead recorded as transfers and transactions in financial assets and liabilities. The data from the model is sent to ESV and included in the primary data source correctly recorded. The lease period is long and will continue for a few more years. Additionally, an adjustment was made for the resale of Covid vaccines purchased through the

shared EU procurement. Within that process Sweden committed to buying certain amounts of vaccines. In the end, some of the vaccines were not needed and were resold to other countries without passing the borders of Sweden. These amounts, which are recorded in the ESV material, are removed from both sales and intermediate consumption.

5.9.8.2.2 Primary municipalities

The information on sales for primary municipalities is obtained from the annual accounts, columns for tariffs and charges, external rentals for housing and premises and other external income. The following items are deducted from the records of the annual accounts:

Sales to other municipalities which are calculated from the specification in the annual accounts. The primary municipalities sell and purchase activities to and from each other, which are excluded. See further under intermediate consumption: purchases and sales between primary municipalities, section 3.1.3.1.

Operating grants from central government and the National Labour Market Board to the primary municipalities are counted as transfers.

Grants from the EU to the primary municipalities are also counted as transfers.

The calculation of *software produced for own account* is described in detail in the section on acquisitions minus disposals of intellectual property products (5.10). Software produced for own account is subtracted from consumption expenditures and added to investments instead. The same method is used for *R&D produced for own account*.

Mobility schemes, which have been developed in Sweden since the 1960s, are intended to supplement public transport provision and to extend travel facilities to elderly and disabled persons who experience substantial difficulties in moving from place to place unaided. The costs of transportation services for elderly and disabled are split between households and municipalities/regions. Elderly and disabled pay fees (a small part of the total costs) when they use these mobility services. The fees users pay are counted as household consumption expenditure. The costs that the fees from households do not cover are recorded as social transfers in kind and as consumption expenditure in the municipalities /regions.

The information on sales for other local government bodies is obtained from annual accounts. Since annual source only includes income statement and is not that detailed, the data is supplemented by information from annual reports.

5.9.8.2.3 Regions

For the calculations of the regions, information on sales is available from the annual accounts for the regions. The items recorded for the regions are divided according to the following income types:

- Goods
- Services excluding rentals and charges
- External premises rentals
- Patient charges for public dental treatment
- Patient charges for out-patient medical treatment
- Patient charges for in-patient medical treatment
- Software produced for own account
- Research and development produced for own account

Patient charges for public dental treatment

For the annual calculations, data are available in the annual accounts on patient charges received by the regions.

Patient charges for out-patient medical treatment

These include charges in respect of attendance both for primary care and for care provided under regional schemes and for other health-care services, such as physiotherapy, district nurses, auxiliary nurses, psychiatric teams, occupational therapy, midwives etc. (maternity and infant welfare, which are free of charge, are not included in attendance charges).

5.9.8.2.4 Social security funds

For Social security funds, the sales are the service charges for the administrative costs of the Swedish Pension Agency related the premium pension scheme. The figures are available in the data source collected by ESV, and also in the annual accounts of the Swedish Pension Agency.

5.9.8.3. *Social transfers in kind*

Social transfers in kind arise at central government, primary municipality and regional level. Social transfers in kind arise in the activities social welfare, education and health and medical care and is described below.

5.9.8.3.1 Central government

Social transfers in kind of central government include for example public legal aid, vocational training, dental care and accommodation for migrants. Data is obtained from the Swedish National Financial Management Authority in the standard data source.

5.9.8.3.2 Primary municipalities

The annual accounts of the primary municipalities record purchases of activities and purchased contract services by contracting party and area of activity. Purchases of local authorities from enterprises and from associations and foundations are classified as social transfers in kind.

For *health and medical care* summations of the activity purchases by Gotland according to the annual account for regions are applied. As of 1998, the only primary authority remaining untied with a county council is Gotland and therefore Gotland is the only primary municipality that purchases activities in health and medical care.

Purchases of *Child welfare* from enterprises, associations and foundations are classified both as social transfers in kind and as grants. Parents' cooperatives, which count as enterprises, associations and foundations are assigned to non-profit institutions serving households (NPISH); purchases from these are therefore classified as grants. Social transfers in kind are obtained residually after the grant element has been deducted from the purchased activities. They are calculated with the aid of data from the National Agency for Education, who has statistics on the number of children receiving welfare in parents' cooperatives and the total number attending privately operated crèches or recreation centres. The grant element is obtained as the proportion of children in parents' cooperatives in relation to children receiving welfare in privately operated facilities times the amount of purchases from enterprises, associations and foundations.

Social transfers in kind of *welfare for the elderly and disabled* consist of the purchases of the relevant activities from enterprises, associations and foundations. Part of social transfers in kind consists of restitutions in accordance with the Act concerning Support and Service for Persons with Certain Functional Impairments (LSS), which came into force in 1994 and is a statute of rights, intended to guarantee good quality of life for persons with extensive and long-term disabilities. After assessment of needs, the disabled person may amongst other things be granted an allowance for personal assistance and accompaniment service measured in number of hours. The primary municipalities always pay for the first 20 hours. Hours in addition are paid for by central government. The portion of the assistance allowance funding provided by central government, which the municipalities use to purchase external services is counted as social transfers in kind.

Social transfers in kind of *education* are calculated from the statistics of the National Agency for Education on the number of pupils in primary and secondary education who attend a school run by a private corporation. The number of pupils and the amount paid per pupil are available. All education in Sweden is financed by general taxes and this is how private entrepreneurs within the school area are reimbursement per child.

Mobility services / national mobility services supplied by private corporations are also classified as social transfers in kind. The purchases by local authorities of mobility journeys are recorded in external services in the annual accounts. The charges paid by the passenger himself/herself are deducted from the amount. The remainder constitutes what the primary municipalities pay for the service.

5.9.8.3.3 Regions

Social transfers in kind for the regions consist of care agreements with private care providers and net purchases by the regions of mobility services. The data are recorded in the annual accounts. From 1997 onwards, the provision of incontinence protection is also included in social transfers in kind and, from 1998 costs of medicines covered by medical transfers for outpatient treatment.

5.10 Acquisitions less disposals of produced fixed assets

Gross fixed capital formation consists of resident producers' acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets realized by the productive activity of producers or institutional units. Fixed assets are produced assets used in production for more than one year, in accordance with ESA 3.124.

5.10.1 Overview

5.10.1.1 Description given by type of asset

Acquisitions less disposals of fixed assets consist of many types of capital in the national accounts. The main types of non-financial assets are dwellings, other buildings and structures, machinery, equipment and weapons systems, cultivated biological resources and intellectual property products. Intellectual property products is the largest type of assets, representing 27 percent of total GFCF. Divided by NACE industries, Real estate activities, NACE L68, takes the largest part of GFCF followed by manufacturing industries. See more details in section 5.10.3.

Table 5.10.1 Gross fixed capital formation, NACE sections A*21 and type of asset (AN111-117), SEK million, 2021

Gross fixed capital formation	AN 111 Dwellings		AN 112	AN 113T114	AN 115	AN 117	Total
	Non-owner-occupied dwellings	Imputed rents of owner-occupied dwellings	Other buildings and structures	Machinery and equipment and weapon systems	Cultivated biological resources	Intellectual property products	
NACE A*21							
A01-A03 Agriculture, forestry and fishing	646		10 473	16 742	1 989	341	30 191
B05-B09 Mining and quarrying			1 120	6 663		2 172	9 955
C10-C33 Manufacturing			10 363	81 173		101 275	192 811
D35 Electricity, gas and steam			24 285	26 559		4 307	55 151
E36-E39 Water and waste management services			13 325	10 213		2 158	25 696
F41-F43 Construction			4 850	26 913		3 158	34 921
G45-G47 Wholesale and retail trade; repair of motorcycles			8 210	39 172		33 622	81 004
H49-H53 Transportation and storage			73 368	33 350		6 025	112 743
I55-I56 Accommodation and food service activities			2 323	5 353		765	8 441
J58-J63 Information and communication			21 713	15 428		88 183	125 324
K64-K66 Financial and insurance activities			594	9 691		23 967	34 252
L68 Real estate activities	162 399	122 973	73 540	13 856		2 637	375 405
M69-M75 Professional, scientific and technical activities			3 951	18 670		59 605	82 226
N77-N82 Administrative and support service activities			1 037	22 231		3 577	26 845
O84 Public administration and defence			26 352	21 220		16 797	64 369
P85 Education			21 115	6 261		10 758	38 134
Q86-Q87 Human health and social work activities			10 572	14 373		6 538	31 483
R90-R93 Arts, entertainment and recreation			15 029	5 049	400	6 052	26 530
S94-S96 Other service activities			1 516	2 086		1 631	5 233
Total	163 045	122 973	323 736	375 003	2 389	373 568	1 360 714

Table 5.10.2 Additions to value of non-produced non-financial assets by type of asset, SEK million, 2021

NACE A*64	Type of asset	GFCF
A01 Agriculture	Drainage	221
A01 Agriculture	Costs of ownership transfer	197
A02 Forestry	Forestry management operations	2 037
A02 Forestry	Costs of ownership transfer	449
Total		2904

Table 5.10.3 GFCF by institutional sector and type of asset, SEK million 2021

Gross fixed capital formation		AN 111	AN 112	AN 113T114	AN 115	AN 117	Total
		Dwellings	Other buildings and structures	Machinery and equipment and weapon systems	Cultivated biological resources	Intellectual property products	
Institutional sector							
S11	Non-financial corporations	126 445	156 487	301 019	1 364	268 408	853 723
S12	Financial corporations	0	529	9 675	0	23 961	34 165
S13	General government	2 128	149 362	46 935	0	75 258	273 683
S14	Households	157 445	13 992	16 215	1 025	3 156	191 833
S15	Non-profit institutions serving households	0	3 366	1 159	0	2 785	7 310
Total	Total	286 018	323 736	375 003	2 389	373 568	1 360 714

Table 5.10.4 GFCF Intellectual property products by subcategory, SEK million 2021

Type of asset		GFCF	Own account as share of asset
AN. 1171	Research and development	158 289	
of which	Purchased R&D	37 864	24%
	Own account R&D	120 425	76%
AN. 1172	Mineral exploration and evaluation	1 414	
AN. 1173	Computer software and databases	210 002	
of which	Purchased computer software & databases	109 900	52%
	Own account computer software & databases	100 102	48%
AN. 1174	Entertainment, literary or artistic originals	3 863	
AN. 117	Intellectual property products	373 568	

5.10.1.2 Distinction between resident and non-resident units

The distinction between resident and non-resident units acquiring produced and non-produced non-financial assets is outlined in Section 8.4.2.2. Non-residents, who own property, e.g. secondary dwellings in Sweden are sorted out by help of the addresses in the Swedish Real Estate Taxation Register. Cross-border income flows for the properties of this group is calculated based on stock values of the property * annual rate of return * occupation period.

Table 5.10.5 GFCF by AN asset type – Excerpt from Process Table, SEK million 2021

		Total GFCF	AN						
			111	112	113	114	115	117	
Basis for NA Figures	Surveys & Censuses	197 856	93 218	80 792	21 682	0	2 164	0	
	Administrative Records	65 889	0	43 201	9 825	7 820	-53	5 096	
	Combined Data	444 108	18 146	177 616	248 346	0	0	0	
	Extrapolation and Models	Benchmark extrapolations	79 577	0	221	0	0	0	79 356
		Commodity Flow Model	0	0	0	0	0	0	0
		CFC(PIM)	0	0	0	0	0	0	0
		Dwellings - stratification method	0	0	0	0	0	0	0
		FISIM	0	0	0	0	0	0	0
		Insurance	0	0	0	0	0	0	0
		Other E&M	577 129	178 553	24 368	94 290	1 939	400	277 579
		Total Extrap+Models	656 706	178 553	24 589	94 290	1 939	400	356 935
	Other	0	0	0	0	0	0	0	
	Total (sources)	1 364 559	289 917	326 198	374 143	9 759	2 511	362 031	
Adjustments	Data validation	-8 121	-8 121	0	0	0	0	0	
	Conceptual	Allocation of FISIM	0	0	0	0	0	0	0
		Allocation of insurance	0	0	0	0	0	0	0
		Other conceptual	0	0	0	0	0	0	0
		Total conceptual	0	0	0	0	0	0	0
	Exhaustiveness	N1	0	0	0	0	0	0	0
		N2	0	0	0	0	0	0	0
		N3	4 896	4 896	0	0	0	0	0
		N4	0	0	0	0	0	0	0
		N5	0	0	0	0	0	0	0
		N6	0	0	0	0	0	0	0
		N7	0	0	0	0	0	0	0
	Total exhaustiveness	4 896	4 896	0	0	0	0	0	
Balancing	-620	-674	-2 462	-8 899	0	-122	11 537		
Total (adjustments)	-3 845	-3 899	-2 462	-8 899	0	-122	11 537		
te		1 360 714	286 018	323 736	365 244	9 759	2 389	373 568	

Surveys and censuses for output refer to the Annual accounts for municipalities and regions, foreign trade statistics, new construction of residential buildings, the quarterly investment survey and the economic report for the church of Sweden.

Administrative records is the source of motor vehicles and the main source for Central government investments.

Combined data refers to SBS and the survey for non-profit institutions serving households, which is supplemented with Standardised accounting statements (SRU).

Benchmark extrapolations refer to drainage in agriculture, investments in household appliances in own homes, 1-2 year machinery investments in NACE K, mineral prospecting and purchased computer software.

Other E&M refer to new construction and reconstruction of multiple-occupancy buildings, one- and two-family houses and secondary homes (exclusive of own account reconstruction), general government VAT, leasing investments, computer software on own account, artistic originals and R&D.

Data validation refers to under coverage in reconstruction of multiple-occupancy buildings and one- and two-family houses and adjustments of the total value of these two types of assets due to uncertainty of the sources as well as a correction for undercoverage.

Exhaustiveness N3 refers to investment of own account for reconstruction of multiple-occupancy buildings, one- and two-family houses and secondary homes.

Balancing is the item used in the final consolidation process between production and expenditure approaches.

5.10.2 Main data sources and their conversion to national accounts results

Gross fixed capital formation is calculated as the difference between the closing and opening balance adjusted with the difference between remaining value and sales value as mirrored in the reported capital gains/losses. This latter item is the difference between the book-keeping value and the value according to the National Accounts (ESA). The sum of this calculation will be the net investments for the period.

From the SBS is sorted out which companies have made major investments during the year. For the detailed information on objects firstly the ordinary quarterly investment survey is used and for the rest of the companies, which have not received and answered the quarterly survey, a special complementary annual survey is sent out. In addition to this tax data is also used to ensure comprehensive coverage of all transactions in new and existing produced fixed assets among entities not included in the investment survey or the complementary annual survey. The investment concept used is defined as the acquisition of capital assets with a calculated economic life of at least one year together with reconstruction and improvements, which significantly increase capacity, standard or economic life. The SBS and the investment survey do not cover intellectual property products. The calculations of IPP are based on R&D surveys and models like e.g. number of employed IT-developers, compensation for their work and other related expenses. More detailed information about the method and sources used for R&D and software capital formation is found in section 5.10.3 as well as in chapter 10.

The surveys give information on investment amounts broken down by object. The material is also broken down by new works in progress, by new investments, by purchases of existing items and production for own account. For machinery and transport equipment new acquisitions during the year and new installations of machinery in progress less sales of machinery and equipment is calculated. For buildings and structures the calculation covers new constructions of buildings and structures in progress less purchases of existing buildings and structures. All new and existing produced fixed assets are covered.

Detailed descriptions of the main data sources of GFCF can be found in chapter 10.

Additions to the value of non-produced non-financial assets

Gross fixed capital formation covers additions made to the value of non-produced assets arising in the course of the productive activity of a producer or institutional unit. The national accounts in this context calculate gross fixed capital formation for improvements made to land and costs of changes in ownership, i.e. intermediation charges.

Drainage in agriculture constitutes an improvement of so called non-produced investments, see table 5.10.2. Up to 1999, the Swedish Board of Agriculture reported annual estimates based on a survey made to farmers. As no detailed explicit information is available nowadays in the EAA-calculations, the estimate, which is SEK 221 million in 2021, is held constant in volume terms.

Another kind of addition to the value of non-produced non-financial assets is forestry management operations. Records covered here include operations such as cleaning, soil scarification, forest cultivation, forest regeneration, forest fertilization, forest drainage etc. Annual information is obtained from the Swedish Forest Agency.

The ‘one year’ rule is applied and small tools for production purposes are excluded in investment values. As Swedish book-keeping requires an object to be used more than 3 years in order to be classified as an investment, a special question is posed in the SBS in order to cover investments intended to be used more than one year. A special book-keeping account is used for recording small tools, so this value is used as the estimate.

5.10.3 Detailed estimation methods used by AN code

5.10.3.1 Detailed description of specific sources and adjustments

Dwellings AN.111

The housing and real estate management industry is divided by sub-industries and sub-assets and the following categories can be observed; one and two-family houses, holiday houses and multiple-occupancy buildings and other real estate management. Investment estimates also include brokerage costs, which cover the remuneration received by brokers and agents for intermediation and sales of available dwellings.

The calculations of dwellings are based on monthly data of number of apartments commenced and completed. This data is reported to the local government and forwarded to Statistics Sweden. In addition, data is also collected on construction costs. They are gathered in a comprehensive survey to construction companies. The survey contains data on newly constructed multi-dwelling buildings and collectively built one- and two-dwelling buildings. Information is given on ground costs, building costs and total production costs. Construction costs are distributed with the aid of a construction cost profile determining what share of the commenced projects are finalized in the respective quarter. The cost profile is based on the data supplied on beginning and end of the projects. With the help of this NA calculate the costs incurred each quarter. The profile has the following distribution in percent by quarter for one- or two-dwelling buildings and multi-dwelling buildings respectively:

	Q1	Q2	Q3	Q4	Q5	sum
One- or two-dwelling buildings	0.25	0.43	0.22	0.10		1.0
Multi-dwelling buildings	0.11	0.22	0.28	0.23	0.16	1.0

The compilations of dwellings are separated into two main categories; one- and two-family houses and multi-dwelling buildings. Furthermore, compilations are made separately for new investments and reconstruction within the main categories. The calculation process in table 5.10.6 shows step by step compilations for *new investments* in detached houses (one- and two-family dwellings). The procedure for multi-dwelling buildings is similar. However, in the multi-dwelling buildings, a small part of the

investments is made by the municipalities.⁴⁵ The source of these investments is the Annual accounts. The survey on construction costs does not cover individually built detached houses, but only collectively built. Therefore, a mark-up for the difference in constructions costs between collectively built and individually built objects is applied. The mark-up is estimated, after discussions with the Swedish Construction Federation, to an adjustment by 24 percent. This covers the fact that individually built detached houses on average are larger and contain higher quality materials and machinery equipment.

Table 5.10.6 The compilation process for new investments in one- and two-family houses, SEK million 2021

Individually and collectively built houses				
Construction cost collectively build one and two dwelling houses/house		3066		
Construction cost individually built, 23.96 % extra: more quality and size/house		1.2396*3066		
Number of collectively built, 34,2 %	3541			
Number of individually built 65,8 %	6843			
Average construction cost: $3066*0.342+1.2396*3066*0.658$	3550			
		2021Q1	2021Q2	2021Q3
Construction costs are distributed by quarters in construction profile		0.25	0.43	0.22
Number of starts/commenced per quarter	13922	3234	3934	3345
Average construction cost (derived above)	3550			
Construction cost index, used for distribution of the annual construction costs by quarter		957.83983	973.08641	1001.8445
				1014.06391666667
Calculation (not exact due to roundings for visual ease)				
from previous year		1045		
from previous year		1969	909	
from previous year		4990	2593	1214
2021, new		2825	4937	2601
2021, new			3492	6183
2021, new				3057
2021, new				3153
Total investment each quarter 2021		10829	11931	13054
				12873
Example calculations for				
New objects 2021Q1		$2825 = (3234*3550*0.25*(957.84/973.09))/1000$		
New objects 2021Q2		$3492 = (3934*3550*0.25*(973.09/973.09))/1000$		
New objects 2021Q3		$3057 = (3345*3550*0.25*(1001.84/973.09))/1000$		
New objects 2021Q4		$3156 = (3409*3550*0.25*(1014.06/973.09))/1000$		

Reconstruction of one- or two- dwelling buildings is compiled with the help of information from the Survey on Housing costs, (BUT⁴⁶). In recent years, this survey has not been obtained annually. For the period 2024-2030, it will be published every other year, thereafter every 2-3 years (see more in chapter 10.3). Since the survey does not cover rented and tenant-owned apartments in one- or two-dwelling buildings, an adjustment is made to account for this. The adjustment is based on the housing stock and reconstruction costs provided in BUT, as detailed under “reconstruction value BRF” and “reconstruction value rented houses” in table 5.10.7. For the years when information from the BUT needs to be extrapolated, we have used the change in current prices in the reconstruction of one- and two-dwelling buildings in the quarterly accounts as an indicator. The investments on quarterly basis are estimated with a volume index for wholesale trade in timber, building materials and hardware goods and deflated with a specific price index that concerns reconstruction. See details of the compilations of reconstruction of one- and two-family houses in table 5.10.7.

⁴⁵ For example, in 2021 the total investment in multi-dwelling buildings was 104 138 SEK million. The investment made by the municipalities was 2 128; a share of about 2 per cent of the total investments.

⁴⁶ For one- and two-family houses improvements to existing fixed assets beyond ordinary maintenance and repairs as well as repairs and maintenance are identified from the source BUT (Housing and housing expenses). For the owner-occupied dwellings the respondent is asked, with separate questions, in the BUT survey about their maintenance and repair (IC) and their reconstruction and extension (GFCF) of the dwelling. The statistics are based on interview responses and the respondent get information and instructions what should be accounted for as reparation and what should be accounted for as reconstruction and extension.

There is an addition made for Attefallshus. This is a dwelling of max 30 square meters the owner can construct in his or her garden without a building permit. It can be a guest house or provide extra living space.

Table 5.10.7 The compilation process for reconstruction of one- and two-family houses, SEK million 2021

Reconstruction of one- or two-dwelling buildings	Owned	BRF	Rented		
Total number of houses by owner category	1921709	100186	93434		
Total number according to BUT with additions by yearly changes in the National apartment register	1535767				
Missing number BUT	385942				
Estimated undercoverage 2021, BUT survey	0.20				
Reconstruction cost/house from BUT, SEK, 2021 extrapolated as described above	40065				
Reconstruction share for the BUT population surveyed	1.00				
Estimated reconstruction share for the houses missing in BUT	0.40				
Reconstruction value, acc to BUT population, SEK million	61531	=(1535767*40065*1.00)/1000000			
Reconstruction value, missing BUT population, SEK million	6185	=(385942*40065*0.40)/1000000			
Reconstruction value one- or two-dwelling buildings, SEK million	67716	=(61531+6185)			
Estimated reconstruction share, BRF houses	0.60				
Reconstruction value BRF, SEK million	2408	=(100186*40065*0.6)/1000000			
Estimated reconstruction share, rented houses	0.01				
Reconstruction value, rented houses, SEK million	37	=(93434*40065*0.01)/1000000			
Total reconstruction value all building types, SEK million	70162	=(67716+2408+37)			
Investment in reconstruction reclassified as repairs (intermediate consumption) in industry L68A, NA estimate 25 %	-17541	=(70162*(-0.25))			
Remaining reconstruction value, SEK million	52622	=(70162+(-17541))			
Output for own final use attributable to one- or two-dwelling buildings, special calculation based on time use survey	3291				
Addition for Attefallshus	801	=(5343 units*150 000 SEK)/1000000			
Reconstruction value according to sources, SEK million	56714	=(52622+3291+801)			
Data validation	1797				
Balancing	2191				
Total reconstruction value, SEK million	60702	=(56714+1797+2191)			

The special calculation based on the time use survey in table 5.10.7 refers to household own production which is added to the production as P.12 in NACE F since this information is not captured in the SBS, and also as own fixed capital formation.⁴⁷ The special calculation is conducted in the following manner:

The population is multiplied with the average time used maintenance and repairs per day and the number of days in a year. This is converted to hours and multiplied with the average hourly pay for manual workers in relevant occupations in the private sector. The average hourly pay is divided by two to account for the possibility that productivity in own production might be lower than in regular manual work, as a means to not overestimate.

The investments in reconstruction of one- or two-dwelling buildings, multi-dwelling buildings and in secondary homes before accounting for the own production determines their respective share of the estimated cost for the household own production related to maintenance and repair.

⁴⁷ Comparison with Table 3.12.3 or 7.1.2.1 exhaustiveness adjustment N3 “owners production/construction and repair of owner occupied dwellings” will result in residual since the value for own production in table 5.10.7-8 refers *only* to the production for own final use attributable to one- or two-dwelling buildings whereas exhaustiveness adjustment N3 covers the construction and extensions to *all* types of buildings.

Table 5.10.8 The calculation process for household own production in one- or two dwelling buildings, SEK million 2021

Population 20-64 years	5898671		
Time use per day and person	1		
Days in a year	365		
Minutes worked in a year	2153014915	=(5898671*1*365)	
Hours worked in a year, corrected upwards*	47844776	=(2153014915/45)	
Average hourly pay in SEK for relevant occupations according to SSYK**	204,67		
Average hourly pay/2	102,34	=(204,67/2)	
Estimated cost for own production of construction related maintenance and repair, SEK million	4896	=(47844776*102,34)/1000000	
Own production in multi-dwelling buildings, estimated within that calculation, SEK million	214		
Estimated cost for own production in the three types shown below, SEK million	4682	=(4896-214)	
	value	share	
Reconstruction investments in one- or two-dwelling buildings	53424	70,3%	
Construction and reconstruction in secondary homes	10138	13,3%	
Reconstruction investments for BRF (tenant-owned dwellings)	12450	16,4%	
total, before accounting for own production	76012	100,0%	
Household own production in one- or two dwelling buildings	3291	=(4682*0,703)	
* Since 2020 we correct the hours worked upward because we have indications that time use is higher than one minute per day and person			
** The Swedish Standard Classification of Occupations			

Reconstruction of dwellings in *multi-dwelling buildings*, see table 5.10.9, is based on information on construction costs for different owner categories and tenant categories from an annual inquiry from Statistics Sweden, the Revenues and expenditure survey for multi-dwellings, IKU. The survey has since then been discontinued, and the reconstruction costs for the calculation of year 2021 are extrapolated for each ownership type. The extrapolation method is to use information on construction and reconstruction costs from the Investment survey, which is one of the main sources for GFCF (see chapter 10.3).

Tenant-ownership rights in multiple-occupancy buildings, here abbreviated as BRF, is object to a special treatment in this calculation. A holder of a tenant's right of ownership does not own his apartment but holds a share in a tenant-owners' association, BRF. The holder, however, buys his apartment to ordinary and high market prices, at least in the metropolitan areas. The holder also has the right to reconstruct and change the inner contents of his apartment, for example replacing all kitchen equipment. This is quite often the case when apartments change holders. Therefore, an extra investment value is added for BRF-apartments in the calculation below.

Tenants not living in BRF-apartments are not allowed to replace the contents of their apartments. Their landlords have to keep ordinary rented apartments in satisfactory conditions and of course pay for any alterations and reconstructions.

Other populations in the table below are a 3 percent addition to the sample frame because certain legal entities were not part of the IKU survey. It refers to foundations, etc. Furthermore, which is shown on the row "additions, population undercoverage in IKU 5 %" an addition of 5 percent is added to each ownership type due to an estimated undercoverage in the survey.

Table 5.10.9 Calculation process, reconstruction of multi-dwelling buildings, SEK million 2021

Reconstruction of multi-dwelling buildings	Local government enterprises	Private	BRF	Other pop (+3 %)	Total
Reconstruction costs, IKU survey extrapolated with investment survey	9911	9146	9208	493	28758
Additions, population undercoverage in IKU, 5 %	496	457	460	25	1438
NA additions for work and materials in BRF, 2 % on 100%			193*		193
NA additions for work and materials in other pop 2 % on 5%				21**	21
Bought services from professionals in BRF			12450		12450
Household own production in BRF			767		767
Data validation					0
Total reconstruction including BRF					43627
Balancing					-372
Adjustment for rounding error in this table					-1
Total reconstruction cost, SEK million					43254

* 193 = (0.02*1.00*(9208+460))

** 21 = (0.02*0.05*(9911+9146+493+496+457+25))

For the calculation of construction of secondary homes used as *weekend/holiday homes*, see table 5.10.10. The number of secondary homes (total stock) is calculated from the real estate taxation register. From the Survey on Housing costs (BUT) the total expenditures per permanent house are collected. Construction costs for secondary homes are reduced in relation to construction costs for permanent houses. The relation is based on the relations in size between secondary and permanent houses plus an extra addition for machinery equipment. For permanent houses the average floor space is 122 square meter and 65 for secondary homes, which would give a construction cost share of 0.53. The construction cost estimate based only on floor space is, however, an underestimation for the distribution of building costs because the essential parts of the house are more expensive than extra square meters of space. To account for this, the share of construction costs for secondary houses with respect to the data on permanent houses are adjusted upward to 0.65, which is also close to the relationship of average sales prices between the house types. As described above in the section on reconstruction of one- or two-dwelling buildings the costs in BUT are extrapolated for recent years.

There is no explicit data available for the construction cost profile for secondary homes as there is for one- or two-dwelling buildings and multi-dwelling buildings. This is due to the fact that even if a building permit is always needed to start a secondary home, the municipalities often have no data of completion date for these objects. The underlying objects that do still have completion dates are very few and considered statistically unreliable. Statistics on the building permits are therefore used to estimate the addition of new units each year (see the row “estimated new units in 2021, based on building permits” below), and a preliminary profile is assumed, in accordance with the profile for one- or two-dwelling buildings. The calculation is based on the assumption that 67 percent of the building permits year t will incur costs in the current year, whereas 33 percent will stem from projects started in the previous year. For the year 2021 there is a mistake in the formulas which does that the 33 percent are taken from the next year (2022) instead of the previous year (2020) since building permits are available quarterly. The mistake amounts to the estimated new units being 212 to many (3847 but should be 3635) and the total new construction value being 488 million to high (8877 but should be 8389).

Of the total number of holiday homes about 25 percent are subject to reconstruction every year, a share obtained in discussions with the Swedish Construction Federation. Construction periods normally extend over two years, but as mentioned there is no reliable data on the quarterly distribution to periodize the investments.

Table 5.10.10 The calculation process for construction and reconstruction of secondary homes, SEK million 2021

New construction of secondary homes		
Total stock of buildings for seasonal and secondary use, 2020	610372	
Estimated new units in 2021, based on building permits	3847	
Cost of construction one- or two-dwelling buildings	3550	
Share of construction costs for holiday homes	0.65	
Construction costs/holiday homes	2308	$= (0.65 * 3550)$
Total new construction value holiday homes, SEK million	8877	$= ((3847 * 2308) / 1000)$
Reconstruction of secondary homes		
Total stock of buildings for seasonal and secondary use, 2020	610372	
Reconstruction occurrence rate, share of total buildings	0.25	
Reconstruction costs/permanent house	40065	
Reconstruction value in 2021, SEK million	3974	$= ((610372 * 0.25 * 40065 * 0.65) / 1000000)$
Reconstruction, own production	733	
Total value new construction and reconstruction of secondary homes	13584	$= (8877 + 3974 + 733)$

Other buildings and structures AN.112

Estimates of other buildings and structures are based on data from the SBS and the investment surveys for most NACE sections. SBS doesn't cover financial companies such as banks and insurance companies.

The annual change in capital formation for NACE K64-66 is estimated using data from the quarterly investment survey. Also, some reallocations and additions are made in a few cases described below.

Roads in agriculture are based on data from the Swedish Transport Administration, which records the amount of grants paid for the construction of private roads. As the grant is paid at the rate of 60 per cent of the total cost, total investment in roads can be calculated.

For the industry electricity, gas, heat and water supply the total investment amount in the SBS is reallocated between buildings and machinery. The reason for the reallocation is that the Swedish legislation since the middle of the 1980s has allowed the distribution structures of utilities to be recorded as machinery investment. This is in conflict with the ESA guidelines, according to which distribution facilities should be recorded as investment in buildings and structures. A certain share of investment in machinery is therefore transferred. The share was determined after contacts with the industry and on the basis of the ratios, which applied in the years prior to the change in tax legislation. The ratios vary somewhat depending on the form of ownership and sub-industry involved.

For sub-industry Electricity and heating supply, NACE D35, the following ratios are used: Private corporations including previously state-owned public service undertakings: 40 percent of total investment in buildings and structures and 60 percent in machines. Central government corporations: 44 percent of total investment in buildings and structures and 56 percent in machines. Local government corporations: 65 percent of total investment in buildings and structures and 35 percent in machines. For the sub-industries gas supply and water supply only investments in buildings and structures arises.

For transport, storage and communication the values of the business statistics, SBS, are used for all sub-industries except for the telecommunication industry. Here the same issue regarding accounting rules prevail, which necessitate a reallocation from machinery to buildings and structures. The total annual value reported for buildings and machinery in SBS is allocated based on information supplied in footnotes to the financial reports of the largest company Telia Company AB. In 2021, 95 per cent of the total annual value is recorded as buildings and structures in the national accounts.

The estimate of buildings and structures in real estate management is calculated according to a special model taking care of information from the SBS and the NA dwelling compilations.

Table 5.10.11 Other buildings and structures in NACE L68B, real estate management, SEK million 2021

	SBS, Other buildings and structures, NACE L68B	94 554
+	SBS, Privately rented multiple-occupance buildings in the total economy	68 082
-	NA, Privately rented multiple occupancy buildings	87 566
=	NA, Other buildings and structures, NACE L68B	75 070

In the SBS, most investments in privately rented multiple-occupancy buildings are recorded in NACE L68B, but there are also small values in other NACE-industries. The small values from other industries in SBS are reallocated to NACE L68B for a reconciliation of total values of buildings and structures including rented multiple-occupancy buildings.

For dwellings, the NA dwelling compilations described above are performed at a detailed level for all types of dwellings. Therefore, the NA construction value regarding privately rented multiple-occupancy buildings are more detailed and accrual than the SBS value for the same objects. However, the total SBS-level of investments in privately rented multiple-occupancy buildings and other buildings and structures is considered as a comprehensive measure. Therefore, to keep the SBS total value and at the same time use the data of dwellings from the NA dwellings compilation model, other buildings and structures in L68B is adjusted by the difference between privately rented multiple-occupancy buildings as recorded in the SBS and the value from the NA dwellings compilations model.

The difference between the two sources of investment in privately rented multiple-occupancy buildings amounted to about SEK 19.5 billion in year 2021

Construction and also other relations regarding tenant-ownership rights in multiple-occupancy buildings, called BRF, have to be treated in special ways. New construction BRF-objects are not included in the SBS, so they are calculated separately outside the SBS-data. The very special ownership form also creates problems in other contexts. They are neither included in multiple-occupancy buildings aimed for tenants nor in owner-occupied dwellings as the ownership is only connected to the BRF-association. Therefore, there is no landlord but a BRF-association who owns the building, and these buildings are not included in the Real Estate industry in the Business register. So there have to be other solutions for treating them in the NA.

Costs of ownership transfers are calculated for owner-occupied houses, i.e. one- and two-family houses and weekend/holiday homes, multiple-occupancy buildings and agricultural and forestry properties. Ownership transfer costs include real estate agents' fees and stamp duty paid during property acquisition. The calculation uses data from SBS on agents' income and the Swedish Financial Management Authority on stamp duties.

Central government investments in other buildings and structures are calculated from the source Basis of central government net lending, UFS, which is compiled by the Financial Management Authority (ESV) and grouped in accordance with the national accounts definitions.

Regarding investments of primary municipalities total investment expenditure is obtained directly from the investment accounts of the annual accounts (RS). Purchases of machinery and equipment and purchases of land, buildings and technical structures are deducted from total investment. Building investment, which comprises buildings and structures both purchased and produced for own account, is therefore calculated residually. Purchases of existing buildings are excluded in order to record only new own account investments during the year. Investments are grouped according to the relevant COFOG and activity.

Data on investment for the regions are also obtained from the annual accounts (RS). For the four hospitals also classified as country councils, investment data is collected from Structural Business Statistics (SBS).

Investments in other buildings and structures of other types of local authority are based on investments accounts from the annual accounts (RS) of municipal associations and the annual accounts of the Swedish Association of Local Authorities and Regions. This annual accounts also gives a breakdown by different activities.

NPISH, are divided into two separate units with different sources; the Church of Sweden and other NPISH organizations. The Church of Sweden belonged until 1 January 2000 to the Government. Both groups are covered by surveys. The church survey is comprehensive and the NPISH survey is a random sample survey. The NPISH survey gives information about acquisitions and disposals of buildings and machinery. As an effect of non-response, the survey is also supplemented by taxation data from The Swedish Tax Agency. Investments by NPISH organizations are distributed into twenty-eight NACE industries.

Machinery and equipment and military weapons systems (AN.113 and AN.114)

Estimates of machinery and transport equipment are mainly based on data from the SBS. Some reallocations between assets in the survey are made, as described in the previous section about buildings and structures. The SBS covers both acquisitions and divestments of machinery and transport equipment which gives the net amount of new machinery and transport equipment for each NACE industry.

Administrative registers for vehicles, ships and aero planes and also the foreign trade statistics are used in order to crosscheck the information of the SBS. Transport equipment investments are included in the data on machinery investment for enterprises from the SBS, but not leasing investments. Another source for leasing investment is therefore included in the calculations. Own financed and leasing investments are recorded separately, specified by industry and calculated in accordance with the models described later in this section, investments in motor vehicles and leasing investments.

For electricity, gas, heat and water supply, NACE D35-E39, the same reallocation between machinery and structures and buildings as described above about recording of distribution facilities is made using inverted shares. The source is the SBS.

Regarding transports, storage and communication annual information is collected from the SBS regarding the total estimate of machinery and transport equipment. In order to distribute the total estimate on different objects, various sources described below are used. Transports, storage and communication are divided into 16 NACE-industries. Motor vehicle investments for the different industries are obtained from the model described in the following section below. Investment in ships is divided in new and used ships. The main source is the foreign trade statistics for exports and imports and, for production, the SBS. Also, an estimate for on-going work is classified as GFCF and is based on information from the SBS. Currently information is collected in the foreign trade statistics and Statistics Sweden also uses information from the Swedish Maritime Administration's register on ships.

Investments in aircraft are calculated with the aid of Statistics Sweden's international trade statistics. Net imports of civil helicopters with a weight of over 2000 kg and civil aero planes are counted as investments in aircraft. The foreign trade statistics are checked in order to ensure that aircraft manufactured in Sweden and directly exported is not included as GFCF. Investments in railway trains are calculated using data from the quarterly investment survey.

For the sub-industry telecommunications, around five per cent of the annual value for buildings and machinery is recorded as investments in machinery. This allocation is based on data obtained from the annual financial reports of the largest corporations in the industry. (Compare to the section above on Dwellings and other buildings and structures).

After the inclusion of ESA 2010, ICT investments, AN.1132, were specified in GFCF as computers and communication equipment. The ICT investments are calculated according to the value of the product group computers and communication equipment in every NACE industry. In more detail, investments in computers consist of the sum of product groups; computers and peripheral equipment

and office machinery and equipment. Communication equipment consists of; communication equipment, instruments and appliances for measuring, testing and navigation, optical instruments and photographic equipment and installation of industrial machinery and devices.

Central government investments in machinery are calculated from the source Basis of central government net lending, UFS, which is compiled by the Financial Management Authority (ESV) and grouped in accordance with the national accounts definitions of an economic life of one year or more and a significant level of value (different limits for different authorities).

Investments in machinery for the social security sector are investments relating to the activities of the Swedish Pension Agency and is collected by ESV and made available to Statistics Sweden.

Purchases of machinery and equipment by the primary municipalities with an economic life of more than three years are recorded separately in the investment accounts of the annual accounts. In order to obtain the net value a deduction is made with the amount sold machinery and equipment, which are recorded as investment income. Investments are grouped according to the relevant COFOG and activity.

Data on investment expenditure in medical technical equipment and other inventories for the regions are obtained from the annual accounts. Investment expenditure for the five hospitals classified within the regions is calculated from the SBS. Investments are grouped according to the relevant COFOG and activity.

Investments in machinery for other types of local authority are based on investments accounts from the annual accounts (RS) of municipal associations and the annual accounts of the Swedish Association of Local Authorities and Regions. This annual accounts also gives a breakdown by different activities.

NPISH investments of machinery are divided into two separate units with different sources; the Church of Sweden and other NPISH organizations. The church survey is comprehensive and the NPISH survey is a random sample survey. GFCF is covered from information about acquisitions and disposals of machinery and other buildings and structures, adjusted by taxation data from The Swedish Tax Agency.

In ESA 2010 military weapons systems, AN.114, are classified as GFCF and are divided into vehicles and other equipment such as warships, submarines, military aircraft, tanks, missile carriers and launchers etc. The source for weapons systems data is the same as for most central government data, namely the Financial Management Authority (ESV), where data from all authorities are gathered. Data on weapon systems is available from the source for the entire time series. Further, ESV was consulted regarding the choice of accounting methods and classifications related to military weapon systems when ESA 2010 was introduced. Other investments in military weapons system are divided into different investment types, machinery, transport equipment and building and structures. The split is made based on a distribution provided by ESV on data delivered from the Swedish Armed Forces and was introduced in the accounts in the ESA 2010 implementation (2014). Military weapons systems, AN.114, are presented together with Machinery and equipment, AN.113, in tables from Statistics Sweden, e.g. table 5.10.5.

Investment in motor vehicles - The motor vehicle model

Sources and definitions

The main source for calculation of both investment and household consumption of vehicles are Statistics Sweden's vehicle statistics. Statistics Sweden (SCB) continuously receives data on newly registered and deregistered vehicles from the national vehicle register kept by the Swedish Transport Agency. The register contains both technical and administrative data on different types of vehicles. All vehicles are registered by either personal identification number or enterprise identification number. On the basis of these data Statistics Sweden compiles distributions by NACE industry and institutional

sector, and also a breakdown by legal and natural persons. Vehicles used in a financial leasing agreement have a special code attached and can therefore easily be identified in the register. Used vehicles, which are directly imported also get a special identification code.

For self-employed traders the enterprise identification number is the same as the personal identification number; in this respect therefore, they count as natural persons. From the national accounts point of view, a problem arises from this interpretation. In the national accounts the motor vehicle purchases of self-employed traders are recorded as investment and those of natural persons as household consumption. Motor vehicles purchased by self-employed traders must therefore be identified and transferred to the investment calculation.

By comparing the vehicle data with the business register, it is possible to filter out vehicles owned by self-employed traders. In this matching only traders with an annual income exceeding 200 000 SEK are included. The reason for the income limit is that it is more advantageous for self-employed traders with a low annual income to buy the car privately and declare the cost of using a private vehicle for business purposes. This has to do with the fact that taxes on the benefit of using a business car for private purposes are quite high. It is therefore necessary to use the car relatively intensively in the business before this solution becomes more advantageous than purchasing the car privately and entering the cost of using it for business purposes as a charge on the business. Data matching between private and business ownership is carried out every quarter.

ESA 2010, §3.182 stipulates that an item of goods that is used both privately and in a business activity, e.g. a car, must be apportioned as to a component representing household consumption and a component representing investment or intermediate consumption. The apportionment must be based on the proportion of the use of the item what is private and what is business-related. In the national accounts, however, a car purchase made by a legal person is recorded as investment and a car purchase made by a natural person as household consumption. But for all business cars, which are also used privately a benefit value must be reported to the Swedish Tax Agency which reflects the utility value of a certain car to the person who benefits from it. Statistics Sweden receives these data directly from the Swedish Tax Agency and they are entered both as household consumption expenditure and production and as a benefit classified as pay to the person concerned. See section 4.7 regarding the valuation of the utility element. The car in its entirety, however, is also recorded as a capital item.

In the model, investment expenditure on motor vehicles is calculated for acquisitions both in the form of outright purchase and in the form of financial leasing. With the aid of the enterprise identification code, vehicles can be allocated to NACE industries. Calculations are performed for four vehicle types: passenger cars, goods vehicles, trailers and buses. The model comprises all new registrations and de-registrations. The numerical data of the vehicle register also contain directly imported used vehicles, and for these an adjustment to avoid double-counting must be made since they also appear in the foreign currency exchange item under household consumption expenditure.

The following sections describe the essentials of the investment calculations for the different vehicle types but, because of the close link, the consumption calculations are also affected to a certain extent. Purchases of lorries and buses count 100 per cent as investment. A small proportion of the acquisition of trailers is included in household consumption, the remainder constituting investment.

Calculation of passenger cars and goods vehicles

The annual calculation is based on data on the number of new car registrations allocated by NACE industries and by natural persons, respectively, and to car models. The material also contains information on the number of leased vehicles in the various industries.

The data on numbers of passenger cars is combined with new car prices per car model in accordance with a price list produced by the automotive analysis company Autovista. Where no price is available for a special car model in the source material, an algorithm is used for matching the missing prices. The prices are corrected for discounts and accessories to arrive at an estimated transaction price.

The algorithm is using average prices depending on several variables of existing cars and their prices, to match the missing prices. The variables used are brand, model, year, car body, car power, cylinders, weight, fuel type, fuel consumption, gear type.

With the aid of the price information, a weighted mean price is calculated which is combined with industry-by-industry data on numbers and a value for each industry is obtained. Goods vehicle prices have been set in cooperation with the Swedish Association of Haulage Contractors for an initial year and are thereafter updated with the price trend for goods vehicles.

The calculations also take account of sales of used passenger cars from the corporate sector to the household sector. This flow of sales from legal to natural persons is shown as a deduction in the investment calculations, and as a corresponding addition in the calculation of household consumption. The transfer varies substantially from year to year and is of great significance to the outcome of the calculations. In order to obtain a more differentiated picture of the background to these fluctuations, stock variations in certain individual sub-industries are also examined, e.g. the scrap trade, the retail motor trade, car repair workshops, agriculture, forestry and construction activities.

Price data for cars whose ownership is transferred from legal to natural persons is calculated with the aid of a model in which data on the cars' age and corresponding depreciation in relation to new car prices are used. The model was devised after consultation with the motor trade. It is mostly cars previously leased by enterprises, which fall into this group.

Car dealers (legal persons) continuously register new cars in their businesses. Some of the cars are sold to natural persons. They are then recorded as transferred from legal to natural persons in the vehicle register, although in practice they are cars newly registered to natural persons. For these cars a special analysis must be carried out. In February each year, therefore, a processing routine is conducted for the previous year covering the number of cars in total stock on December 31 and, of the total, those newly registered during the year. This processing routine includes re-registration, i.e. passenger cars which were first registered with car dealers but subsequently sold on to private individuals are treated as new registrations to natural persons here and not as second hand cars transferred to them.

The value of investment in the various vehicle types (passenger cars and goods vehicles, buses and trailers) is summed by industry and only the total vehicle investment in the particular industry, broken down as to acquisition by purchase and acquisition by leasing, is recorded in the national accounts system.

Calculation for buses and trailers

The statistical source material consists of data on the number of new registrations of buses and trailers, respectively, per NACE industry and the value at purchasers' prices of the total domestic supply calculated as production and imports less exports and with a supplement for trade margins. This value is allocated to the various industries in accordance with the new registration statistics. A small number of trailers are purchased by households and are therefore recorded under household consumption expenditure; hence they are excluded from the investment calculation.

Leasing investments

A distinction is made between financial and operational leasing depending on the terms of the leasing contract. A feature of financial leasing is that the contract between supplier and customer is strictly financial in nature, which is illustrated by the fact that the customer is responsible for repairs, maintenance, insurance etc. Financial leasing is thus to be regarded as a type of financing, a means of obtaining credit. Contracts, which cannot be characterized as financial leasing, are classified as operational leasing. Operational leasing usually includes some form of maintenance and guarantee commitment on the part of the lesser.

In the national accounts only financial leasing counts as gross fixed capital formation. Financial leasing is defined as leasing provided by Monetary Financial Institutes, MFIs, classified as such by the Financial Supervisory Authority. The sources used are data collected from the MFIs of the total supply of leasing items, the motor vehicles model and the SBS business statistics and the investment survey. The MFI survey has some information on different objects and also on user sector. Leasing investment in motor vehicles is calculated by data from the motor vehicle model and is allocated to industries on detailed NACE-industry.

Table 5.10.12 Calculation model for machine leasing, SEK million 2021

Calculation model	SEK million
Total economy, leasing investments, motor vehicles and machinery ex. VAT, MFI data	48 182
+ VAT passenger cars, non-deductible in private and public sector	8 795
+ Addition for non-deductible VAT on other machinery from WAR-calculation	25
= Total economy, leasing of motor vehicles and other machinery	57 002
- Leasing in motor vehicles, incl. Non-deductible VAT, market prod, NA's motor vehicle model	49 134
- Leasing in motor vehicles, public sector	679
= Total economy, leasing of machinery except motor vehicles	7 189
- Leasing in machinery public sector	230
= Leasing in machinery , excl. Public sector*	6 959

*SBS statistics on financial leasing fees are used to distribute total leasing by NACE industry

The model for calculation of machine leasing starts with the value of new leasing contracts minus the disposals during the year. This information is collected in the quarterly survey answered by the MFIs who provide financial leasing activities. The annual value is benchmarked 2006 and extrapolated with annual growth rate since then. The value incorporates both passenger cars and all other kinds of machinery. Valuation in the survey is at basic prices, i.e. excluding VAT.

As explicit information on the value of leased passenger cars is available from the calculations of the NA's vehicle model, the value of leased passenger cars is withdrawn from the total leasing value according to the MFI survey. However, valuation in the NA vehicle model is inclusive of non-deductible VAT. Only industries which use leased cars in their production process, i.e. taxi, funeral, car hire and driving education services are allowed to deduct VAT according to taxation rules. Therefore, this amount has to be considered in the calculation process, SEK 6 709 million. Another correction has to be made regarding industries which cannot deduct VAT on other machinery, i.e. financial, education, health care services, the SEK 201 million. This amount is available in the weighted average rate calculations.

After leased car vehicles both in the private and the public sector have been properly valued and withdrawn, the remaining value represents other machinery items. The value for non-market producers is based on a benchmark from year 2000 recorded in the government annual accounts. This benchmark is extrapolated with the annual growth rate of the private sector leasing.

The remaining value represents machinery leasing investments by market producers. However, the survey gives no information by industry, which is desirable from the point of view of the national accounts. The value of the supply of leasing items is therefore allocated to user industries by the help of the fees paid. Data are obtained from the SBS business statistics on the financial leasing fees paid by industry. The industries' respective shares of the financial leasing fees are used for distributing the total value of leasing items by industry.

Cultivated biological resources (AN.115)

Investments in cultivated biological resources consist of livestock, draught animals and dairy cattle which relates to net changes in stocks of these animals. The calculations are carried out by the Swedish Board of Agriculture on the basis of numbers reported and unit prices. Racehorses are cultivated assets bred for the purpose to be used repeatedly in the production process. The money from horse races that go back to the horse owners is the basic frame for the calculation of horses. One

source for calculation is the Economic Account for Agriculture (EAA) that gives stud farms sales value a small raising premium. Another source is wages to horse trainers that give the increment to the sales value and the raising premium. The figures also include foreign trade and intermittent consumption figures. Moreover, AN. 115 includes other forestry operations. Records covered here include forest management operations, such as cleaning, soil scarification, forest cultivation, forest regeneration, forest fertilization, forest drainage etc. The data are obtained from the National Board of Forestry.

Intellectual property products (AN.117)

The following types of GFCF in intellectual property products are distinguished in ESA 3.127 (8-11).

Table 5.10.13 Intellectual property products, SEK million 2021

AN. 117	Intellectual property products	741 859
AN. 1171	Research and development	158 289
AN. 1171	Purchased R&D	37 864
AN. 1171	Own account R&D	120 425
AN. 1172	Mineral exploration and evaluation	1 414
AN. 1172	Computer software and databases	210 002
AN. 1172	Purchased computer software & databases	109 900
AN. 1172	Own account computer software & databas	100 102
AN. 1174	Entertainment, literary or artistic originals	3 863

R&D in GFCF estimates (AN.1171)

The approach used to measure Research and Development (R&D) involves summing up the costs incurred in the course of production. The source for the current cost and capital expenditures is the Frascati survey on R&D. The Frascati survey is an exhaustive source for all R&D performed. The measurement of the output is the sum of current cost i.e. compensation of employees and payments for intermediate consumption, consumption of fixed capital etc. The level of software R&D is deducted from the expenditures on R&D by industry to avoid double recording.

Additional notes on the estimations of R&D are also available in section 3.19.

To eliminate double recording of own-account production of software, Statistic Sweden makes the following adjustment. With the information from the Frascati survey on R&D in year 2001 about software related to R&D, the proportion of the total expenditure which constitutes software-related expenditure on R&D by industry has been calculated. This proportion by industry is applied on the total expenditure on R&D from the Frascati survey by industry each year. The level of software R&D is then deducted from the expenditure on R&D by industry.

A contribution of capital services from other traditional capital assets such as buildings, machinery etc. is added. The capital services are measured through the value of capital consumption of these assets. Further reading about capital services is available in section 4.12. Taxes on production, not included in the Frascati survey, are added and subsidies on production are subtracted. Other taxes on production are calculated as follow. The sum of other taxes on production by industry is divided with total output by industry in current price. This gives the proportion of tax on production by industry. This share is then applied on own production of R&D that gives the taxes on production by industry. This amount of taxes by industry is then added to the own production of R&D that gives own production of R&D including tax on production. The source for the subsidies on production is The Swedish National Financial Management Authority. Extramural⁴⁸ purchases of R&D that should be recorded as intermediate consumption is added using R&D survey data of units in NACE72, i.e. their information on outsourced R&D. The R&D survey is done every other year and the year without a survey is extrapolated with a simplified set of data on total own account R&D costs.

⁴⁸ From outside the unit in question

In the estimation of consumption of fixed capital as part of the output estimation of R&D, the specific consumption of fixed capital of R&D assets are not included since that would lead to a self-inflating effect on output in a sum-of-cost context.

In addition, for market producers an extra item is added in the form of a mark-up reflecting the need to generate enough operating surplus. The net-operating surplus of market producers of own-account R&D is derived with a mark-up including unsuccessful R&D. No adjustment is done to the sum of cost derived from the Frascati survey which entails that the unsuccessful R&D is included in the calculation of the mark-up. The mark-up is calculated as an average of several years' net operating surplus for all industries, except the pharmaceutical industry and the industry for real estate activities.

An addition is made by industry for those producers that are not included in the Frascati survey frame, i.e. industries with less than ten employees. The addition is an upward adjustment of 3.2 percent that is applied to all industries that produce R&D. The upward adjustment is based on the relation between employees in these small enterprises and the surveyed population. A work is in progress to include producers with less than ten employees in the Frascati survey frame and a pilot study has been conducted. The result from the pilot study showed that the results were in line with the upward adjustment already made. Other adjustments in sector 13 refers to Stockholm School of economics and municipals associations. Further, ALF⁴⁹ funds goes from the state through university to university hospitals and is thus the public consumption of counties and as transfers from the state to counties under National accounts. This has previously been treated as purchases and sales between sectors of NA. In the R&D statistics (Frascati survey) include ALF funds both in the county and the university, which allows us to draw ALF from the university.

From the results of total R&D, as calculated above, the R&D that is sold is deducted. Hence, the remaining result is own account R&D. The source for the sold R&D by industries is the SBS.

The source for R&D produced by specialized commercial research laboratories and institutes is also the SBS. The production is valued at market price by adding net taxes on products. Moreover, the tables show the templates that are used to calculate total output and GFCF of R&D, whether it is R&D sold or on own account.

To the total R&D output, the imports of R&D are added. The source is the foreign trade statistics on services. However, for large enterprises this data is compared with the extramural expenditure of the Frascati surveys, which will include purchases from abroad. Taxes on products are added and subsidies on products are subtracted. The taxes on products are value added tax.

Extramural purchases of R&D that should be recorded as intermediate consumption and changes in inventories of finished R&D are subtracted. The source for changes in inventories is the SBS. The work in progress in SBS has the same definition as the accounting principles prevailing. There are costs incurred for R&D which is ordered and will be sold but not yet invoiced. The exports of R&D are subtracted. The source for the exports of R&D is the foreign trade statistics on services. Finally, net purchases of R&D between domestic sectors is added. The calculations can also be followed in the tables below.

Government, non-profit and non-market producers

All expenditures by government units on R&D are recorded as GFCF. The Frascati survey on R&D is the source for the calculations. R&D by government units and non-profit research institutes is valued as the sum of costs of production including capital consumption for assets held, but no mark-up is imputed. Otherwise, the calculation of the output for non-market producers is carried out with the same principles as for market producers. The Swedish national financial management authority (ESV) is the source for the revenues from sale of R&D by non-market producers of R&D. The revenues from sale of R&D by non-market producers of R&D are recorded as revenues from secondary market

⁴⁹ Agreement on medical training

output. The R&D production calculated with data from Frascati survey is adjusted with the secondary market output to avoid double counting.

The main sources for non-market producers of R&D are three separate R&D surveys based on the Frascati manual. The surveys cover:

- Central and local government agencies, Public research foundations, Government financed local and regional research-units
- Universities and High schools
- Non-Profit Institutions Serving Households

Table 5.10.14 Output of R&D, SEK million and percentages, 2021

	S11		S12		S13		S14		S15		Total	
	+	-	+	-	+	-	+	-	+	-	+	-
1 Frascati Manual Intramural expenditures on R&D	115 014		3 096		49 416				201		167 727	
2 Subtract payments for licences to use intellectual products that should be recorded as GFCF						0						0
3 Subtract expenditure on own-account production of software		15 701		887		333						16 921
4 Add payments to postgraduate students not included in FM data					0							0
5 Subtract capital expenditures		6 889		431		1 804						9 124
6 Add other taxes on production not included in FM data	3 900		187		0						4 087	
7 Subtract other subsidies on production		3 889				0						3 889
8 should be recorded as IC (only applicable to R&D industry).	4 390		0		0						4 390	
9 Sub-total (1-8): current expenditures	123 304	26 479	3 283	1 318	49 416	2 137			201	0	176 204	29 934
10 capital (for non-market producers only CFC)												
11 expenditures (line 9) or compensation of employees	14 449		539		0						14 988	
12 - Option 2: As cost of capital services measured with a PIM					2 474						2 474	
13 Adjustment for exhaustiveness	3 561		80		0						3 641	
14 Other adjustments	295	621		295	43	242					338	1 158
15 Balance: Output of R&D		114 509		2 289		49 554			201			166 553

Table 5.10.15 Gross Fixed Capital Formation of R&D, SEK million and percentages, 2021

	S11		S12		S13		S14		S15		Total	
	+	-	+	-	+	-	+	-	+	-	+	-
1 R&D output	114 509		2 289		49 554				201		166 553	
2 Add imports of R&D	35 089			496		308				1 841		37 734
3 Add trade margins												0
4 Add taxes on products	27			132		79				328		566
5 Subtract subsidies on products												0
6 Subtract extramural purchases of R&D that should be recorded as intermediate consumption. Applies only to R&D industry.				3 873								3 873
7 Subtract acquisitions of R&D not expected to provide a benefit												0
8 Subtract changes in inventories of finished R&D				199								199
9 Subtract exports of R&D			42 492									42 492
10 Add net purchases of R&D between domestic sectors	3 597			65		-3 828				166		0
11 Sub-total	153 222	46 564	2 982	0	46 113	0			2 536	0	204 853	46 564
12 Balance: Total GFCF of R&D		106 658		2 982		46 113			2 536			158 289

The calculation of CFC of R&D is made with a geometric depreciation function, see also section 4.12. Due to lack of specified information on service life, the recommendation from the Task Force on R&D of 10 years is used. A declining balance rate of 1.65 results in a depreciation rate of 16.5 percent. The Frascati survey in 2013 posed question regarding service life of R&D but the results were deemed too uncertain in terms of quality to motivate a change from the recommended 10-year period.

Back casting of R&D estimates and the estimates for years between the R&D surveys.

The source for the current cost and capital expenditures is the Frascati survey on R&D. Sources are available for different periods for different sectors. Market producers and Central government from 1964, Local government from 2005, University from 1971 and for NPISH from 1964.

Complete calculations as described above is done for the business sector back to 2005. For earlier years the Frascati survey on R&D have also been the source for the calculations. However, an extrapolation has been done for companies that employs 10-49 persons that is not surveyed before year 2005. The companies that employ 10-49 persons in the Frascati survey year 2005 and forward, on average stands for 8 percent of the business sectors R&D expenditure. The total R&D expenditure the years before 2005 has been grossed up with 8 percent. The gross up has been distributed down by industry using each industry's share of total costs in 2007.

Before 2001, NACE K, financial services and insurance activities, was not surveyed. A back cast has been done for earlier years. The share of NACE K R&D expenditure in year 2001 has been used to extrapolate NACE K back in time.

For Central government and universities, the Frascati survey on R&D have been the source for the calculations the whole time series. The regions and the municipalities are not surveyed before year 2005. Complete calculations are done from 2005 and forward. The years before 2005 the regions and the municipalities R&D expenditure is back casted with the growth of output for each sector respectively.

For Non-Profit Institutions Serving Households the Frascati survey on R&D have been the source for the calculations since 2011. Before 2011 the survey had another survey sampling frame, private non-profit, and where therefore not usable. Before year 2011 the R&D expenditures are back casted with wage growth in the sector.

Own account R&D in years in which no primary statistics are available, the R&D is carried out every two years, have previously been extrapolated with the development of production in each industry. The R&D survey also collect forecast for the coming year $t+1$. The statistic previously had poor quality but has in recent years become much better, which has made that we have begun to use this as a source for R&D. The main source of extrapolation between survey years is now based on this forecast data, which yields estimates for total own account R&D expenditure. It is assessed that this data results in higher quality estimates of non-survey years compared to the previous method.

Computer software and databases (AN.1173)

Investment in computer programs consists of two parts which are separately estimated: *purchased software* and *software produced for own account*. Hardware consultancy services are separately identified and described in section 3.16 and not included here. The methodological basis for the estimations are, in addition to the rules outlined in ESA chapter 3, the recommendations from the GNI Expert Group (GNIG/026A) as well as the OECD handbook on Deriving Capital Measures of Intellectual Property Products.

Purchased software

The main statistical data sources for purchased software is the IT survey *Enterprises' IT expenditure* in combination the SBS. In short, the model relies in a benchmark estimation based on data from both the IT survey as well as the SBS. The benchmark estimation is extrapolated annually using data on software related expenditure from the SBS. The IT survey is intermittent with a five-year cycle, which allows the benchmark to be regularly updated in accordance with the GNI recommendations on benchmark revisions. The most recent benchmark revision was made for the reference year of 2021.

The IT survey provides data on software expenditure with separate answers for a set of accounts associated with such costs. The specifications are based on BAS-accounts, which is the standard business accounting standard in used in Sweden, with the option for respondents not using BAS-

accounts to instead chose the most similar available accounts with the BAS-structure as guidance. The advantage of using BAS accounts is first of all that it makes it practically feasible for respondents to more accurately identify software related expenditure, as these costs are often difficult to separately identify in their business accounts. Secondly, it allows data to be cross-checked with a set of SBS accounts with overlapping definitions.

The specified accounts were in summary 542x software, 654x IT-services, 691x license fees and accounts concerning consultancy costs such as 654x and 685x. In addition to that, a section was also included to list software expenditures on *other accounts otherwise not listed*, to ensure that no relevant software costs were excluded. Finally, a section with investment/capital formation accounts was included, to include software expenditure treated as capital formation in the business accounts. Guidance was given to respondents in terms of what software expenditure to include and what to exclude, partially in order to avoid double counting with own account capital formation of software as well as with bundled or embedded software etc, in accordance with the OECD handbook chapter 27.3. Further guidance was also included to limit the scope of including software related expenses that are always beyond the scope of capital formation, such as minor unplanned changes relating to bug fixes or support, in accordance with the OECD handbook section 27.5. This is to ensure that expenditure on maintenance and repair of software and software to be used in production for less than one year is treated as intermediate consumption.

The resulting expenditures are then estimated for each covered industry using the sampled respondents and their population weights. Additions are also made for smaller entities not covered by the survey using SBS data. Specifically, the SBS ratio of smaller entities share of software costs are used to adjust the survey data. In a similar way industries not covered by the survey are estimated using SBS data and the amount of software costs relative to surveyed industries. A comparative analysis between the adjusted survey results and SBS data is then made for business accounts overlapping between the sources, for example the cost accounts for software, licenses and IT-services. In cases where the NACE 2-digit industry totals according to the SBS was lower than the survey estimations, adjustments were made under the assumption that survey estimations of these expenditures should theoretically not exceed SBS data. The reason is that the survey is estimating subsets of these accounting totals included in the SBS.

The resulting dataset included estimations of total software expenditure on cost and investment accounts aggregated by industry and divided by the respective accounts. Regarding the estimations based on investment accounts, these expenditures were included in their entirety as capital formation. The assumption is that the vast majority of expenditure that businesses activate as investments also fulfil the NA capital formation criteria, since the business accounting requirements for capital formation generally is more restrictive than the NA capital formation requirements. The same kind of inclusion was made for the software cost account, namely all listed expenditure of the estimates were included as capital formation. This also represents a risk of overestimation, but the assumption is that the vast majority of software expenditure listed on the account has an economic usage in production of above one year and fulfils the investment criteria. Regarding the remaining include cost accounts, there is a lack of further details. For example, there is no detailed information about contract length regarding software related license costs or the economic usage of software expenditures regarding external purchases of IT-services. The expectations are, however, that a considerable part of these expenditures do not fulfil capital formation criteria. A cautionary rate of 50 percent was utilized for the division between intermediate consumption and capital formation, mainly in order to avoid underestimation of capital formation.

The benchmark estimation is then extrapolated annually using data from the SBS. Specifically, the same SBS accounts that were used to cross-check the expenditure from the IT survey is used, namely licences and royalties, IT-services, software as well as consultancy costs. The yearly development for each type of SBS account is weighted for the respective weight in the benchmark and computed for each industry.

Software produced for own account

Own account software is software that is intended for internal use by the developing company in their production process; or for the purpose of selling copies and is therefore treated as an investment.

For the calculation of own account software the following sources are used:

- Vocational Register: the number of computer specialists (ISCO 08; 213) employed by sector and industry.
- Salary Statistics: average salaries for computer specialists employed by sector and industry.

The survey “Enterprises’ IT expenditure”, that is carried out by Statistics Sweden. In the questionnaire, companies are asked to allocate time spent by computer specialists to three parts:

- Own account software development
- Software development on commission
- Maintenance, support and repairs.

The survey also contains information about the number of computer specialists.

Structural Business Statistics: production value and salary totals for NACE 62, Computer consultants.

The calculation of gross fixed capital formation in own account software is a multistage process consisting of several steps:

$$\begin{aligned} \text{Own account software} = & \\ & \text{The number of computer specialists (adjusted)} \\ & \quad \times \\ & \text{Average salaries for computer specialists including employer's contributions} \\ & \quad \times \\ & \text{Percent share of computer specialists' time spent on own account software development} \\ & \quad \times \\ & \text{Production to Salary ratio of NACE62 Computer consultants} \end{aligned}$$

As a first step in the compilation process new sector distributed data on the number of computer specialists was aggregated into the NA industry codes. After this salary totals were compiled for each industry and sector as the product of the number of employees and average salaries over a year. Salary totals were compiled inclusive of employer contributions.

The data was then adjusted to account for the fact that computer specialists do not spend 100 percent of their time on the development of own account software. The adjustment factor for each industry depends on the shares provided in the IT-survey. The estimate for number of computer specialists is considerably lower in the IT survey compared to the vocational register. Interviews with responding companies indicates that the discrepancy stems from that they tend to list computer specialists that are focused mainly on software development rather than all computer specialists working with software development, even if it is only to a small extent. The estimated time shares spent on software development will therefore be accurate for the IT-surveys population but represent an overestimation for the vocational register population as a whole. This means that using the time fractions from the IT survey cannot be used outright for the vocational register populations, since that would result in serious overestimations of own account software. An adjustment is therefore made to align the

population in the vocational register with the one estimated in the IT-survey, for 2021 this adjustment factor was 0.45. This enables using the time fractions from the IT survey. Finally, an additional adjustment has to be made to include those computer specialists that only spend limited time on software development that are potentially not captured in the IT-survey. Because of a lack of data about this number as well as about their time shares an approximation of five percent has been used i.e., 1.05. The table below gives a detailed numerical example of the calculations for 2021:

Table 5.10.16 Calculation of own-account software

NACE	Number of computer specialists	Adjustment vocational register and IT-survey	Addition for computer specialists not included in IT-survey	Average year salaries for computer specialists, SEK th., incl. Employers' cont.	Percent share of computer specialists' time on own account software development, %.	Production value/salary ratio, NACE 62 computer consultants	Output of own account software = Investment of own account software
A01	63	0,51	1,05	754 039	51	2,3	30
..
C21	347	0,51	1,05	811 609	46	2,3	161
C22	133	0,51	1,05	797 196	46	2,3	61
C23	59	0,51	1,05	761 213	70	2,3	39
..
J58	9 847	0,51	1,05	747 208	55	2,3	4 963
J59	900	0,51	1,05	769 665	55	2,3	467
J60	52	0,51	1,05	758 609	55	2,3	27
..
M71	6 081	0,51	1,05	694 749	40	2,3	2 088
M72	1 990	0,51	1,05	788 227	40	2,3	775
M73	1 158	0,51	1,05	710 324	40	2,3	407
..
Total							90 856

Ex. NACE A01 output = $(65 \times 0,51 \times 1,05 \times 754\ 309 \times 51/100 \times 2,3) / 1000\ 000 = 30$

Finally, the adjusted values were transformed into a market value by applying the ratio between production value and salary totals for NACE 62-Computer consultants to the estimates based on the computer specialists salaries by industry and sector. Thus, intermediate consumption, consumption of fixed capital and a mark-up for net operating surplus is included implicitly.

Investment in entertainment, literary and artistic originals (AN.1174)

As recommended from the GNI Committee; in GNIC/475 on Entertainment, Literary and Artistic Originals; the estimation of gross fixed capital formation in the form of originals covers literary and musical works and the production of films and certain TV and radio stock programs. However, they must be covered by copyright, have primary artistic intent, meet the capitalization criterion of use for more than one year and not be accounted for anywhere else in the NA.

These intellectual property rights are assets, which will give the holder regular earnings for the foreseeable future. When the assets are created and traded, the acquisition and disposal values should be recorded. The current payments which constitute present and future earnings on intellectual property assets will be the capital formation. Two different methods of estimation are recommended.

A production costs approach including a mark-up for operating surplus. Production costs should include any royalty payments made for the use of other originals.

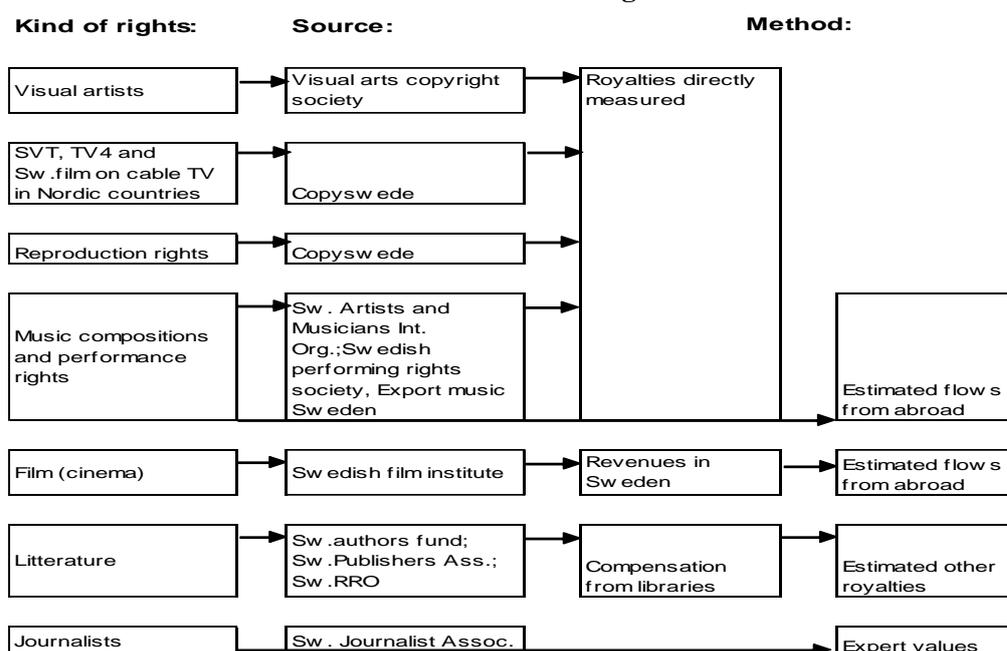
A discounting approach of future returns at the present value. In this approach it is assumed that output and discount factor is on average the same when looked upon over a period of time. The value W can then be compiled by the help of formula $W = H \cdot (1+r-i)$ for each object where H is the value of annual fees of royalties, copyrights and r is the growth rate of royalties. It is assumed that the value of the originals in question is equal to the discounted value of future royalty incomes.

The problem is that the future royalties are not known. However, information on current income from royalties from culture and entertainment is available in annual statistics. In the national accounts the simple assumption is chosen, to use the value of royalties received by the artists in question in year t as a proxy for the value of originals created in year t . The reasoning behind this simple convention is as

follows: Since there is no information on future royalty earnings, it is assumed that in the long-term royalties actually increase somewhat faster than the economy as a whole, since leisure activities have income elasticity greater than one. More specifically, the future real growth rate is taken to be equal to the real rate of interest, which likewise is normally greater than the growth rate of the economy. With these assumptions, the equilibrium value of the originals created in any given year may be estimated as the income from royalties in the same year. In the absence of a better methodology, the value of production of new original musical works is taken to be equivalent to the value of royalties earned on existing originals.

Where copyright and related rights generated by a work are collected mainly via management societies, the output of original works is estimated on the basis of the royalties paid by all the Swedish management societies combined to Swedish recipients. The following items are covered:

Table 5.10.17 Sources and methods of artistic originals



The method chosen for the Swedish estimates mainly use data from organizations in charge of copyrights to authors, artists, musicians etc. Information has been collected with the assistance of the respective member organizations. There are a great number of organizations covering a wide range of activities within the area. They all keep annual records on what is paid from clients to the originators.

The pattern of payments under the copyright system is somewhat complicated. Both Swedish and foreign companies or private persons can be registered in Sweden as rights holders and the contents of the member organizations regard them all as Swedish. The information available relates to annual payments of compensation for rights which are either totally new or have existed for an unknown number of years. The calculation, therefore, includes current payments under copyrights and other payments such as royalties, which occur particularly in the field of literature and music. Other occasional income is not regarded as capital formation. Both payments under copyright and royalties in the field of literature and music are included.

Although there are rights' transfers, it is assumed that this is own account capital formation. Data on annual payments are used, irrespective of whether the work is new or not. There is output from the production of originals and any costs for these can be accommodated during one year.

Swedish cinema is defined somewhat differently than other rights, inter alia owing to the nature of the available data. Revenue from Swedish cinema in Sweden is recorded as annual revenue, without payment of compensation under the copyright. There are no data on Swedish films abroad at present,

whereas Swedish music abroad has been calculated in cooperation with the organization Export Music Sweden.

Depreciation is calculated using a depreciation rate of 0.55 for artistic originals. We do not have any empirical data supporting this rate. It is based on an assumption that normally these rights have a substantial economic benefit over a few years after the right has been established. We have agreed on an average service life of 3 years but in most cases it is shorter, including video rights and the like. But to include exceptions like block busters and ABBA a slightly longer service life is chosen. The declining balance value used is the same as is used by BEA for machinery when no other information is at hand, i.e. 1.65. This gives us $1.65/3$, which equals 0.55.

5.10.3.2. Consumption of fixed capital on roads and bridges

For roads Statistic Sweden uses a 40-year lifetime combined with a declining balance rate of 1.5775 which gives a depreciation rate of 3.94 percent. This depreciation rate is within the interval of 3.3 percent to 4.0 percent suggested by the GNI Committee, although the committee proposes a lifetime in the interval 50 to 60 years combined with a declining balance rate of 2.0. See Section 4.12.3 for more details.

5.10.3.3 Car scrap schemes

The Swedish car scrap scheme expired in 2007. It has been replaced by a higher responsibility/undertaking for the car scrap at the manufacturers and importers. The car scrap scheme was conditional in Sweden, and it was recorded as a tax on products in the Swedish national accounts (D21) albeit the GNI Committee recommendation is to record as subsidies on products D31 as stated in GNIC/232, rec. 3. It is noted that the recording as D21 is GNI neutral. According to the Commission's services the recording was properly addressed by Sweden. For more information see chapter 4.9.

5.10.3.4 Land improvements in GFCF

According to ESA 2010 §3.128; when major improvements are made on land, i.g. draining of land to enable land to be used in production for the first time, the activity is treated as a non-produced asset GFCF. Land improvements (AN.1123) in Sweden concern draining of agricultural and forest land as well as woodland improvement like soil preparation in order to improve regeneration after fellings. Information is received from the Swedish Board of Agriculture and the Swedish Forest Agency. For numerical details, see table 5.10.2, drainage and forestry management operations in NACE section A.

5.10.3.5 Costs of ownership transfer in GFCF estimates

According to ESA 2010 §3.127 costs of ownership transfer on non-produced assets are treated as GFCF. Costs of ownership transfer on non-produced assets (AN.116) are treated as a special item. However, when stock levels are itemized, the value of these costs of ownership transfer is included within the non-produced assets to which they refer. Also see section 5.2. For numerical details, see table 5.10.2, costs of ownership transfer in NACE section A.

5.10.3.6 Economic ownership of intellectual property products

The identification of economic ownership of intellectual property products within MNEs as well as for global production arrangements may present measurement difficulties. The UNECE Guide to Measuring Global Production (2015) highlights some characteristics of IPP flows that under certain conditions could help to identify the ownership of an intellectual property product.

The decision tree cannot be said to be in use in the day-to-day activity at the Swedish NA. However, NA is aware of the guidelines and have taken notice of them and consults the manual when the need arises.

Intellectual property products In Sweden, is highly concentrated to R&D and software. R&D spending has long been concentrated in a few large performers. In 2021, the 10 largest R&D performers accounted for 47 percent of the entire corporate sector's R&D spending. Software spending is also relatively concentrated but not to the same extent as R&D.

For the larger players in Sweden NA together with, among others, LCU, SBS and R&D statistics have a good insight into the structure of the groups. The cooperation and contacts with the major players who are MNEs and involved in global production arrangements have occasionally led to changes in the compilation of fixed capital formation concerning intellectual property products of units, i.e. economic ownership of the intellectual property products has been changed. However, work on ownership of Intellectual property products is an ongoing process that is discussed and handled when issues arise and LCU provides excellent assistance to NA when contacts with companies is required. Contacts can be made digitally but if required also through company visits where, if necessary, NA is represented.

5.11 Changes in inventories

5.11.1 Overview

In the Swedish NA, the main sources used to calculate changes in inventories is a quarterly business survey called “Business inventories”⁵⁰, which is carried out by Statistics Sweden. This survey covers industrial inventories (including manufacturing, mining and quarrying) as well as inventories in trade (including wholesale and retail trade). This source is then combined with several other sources for the industries agriculture, forestry, electricity, fuel and gas, construction and services.

Two main methods are used to estimate changes in inventories. The first, and most important, method is based on the bookkeeping values of opening and closing stocks of inventories from business accounts. Enterprise surveys are used to obtain the inventory stocks followed by a process of deflation, differencing and reflation to the average price of the period, which is described below in section 5.11.3. The second method is the so-called quantity revaluation approach, where the calculation is based on information about quantities of inventories at the beginning and end of a period. The quantities are multiplied with the price of the products to obtain the change in inventories.

When calculating changes in inventories from opening and closing stocks, irrespective of book values or quantities are available, it is important to use short time periods because of the large fluctuations of the stock data overtime. Briefly summarized, the adjustments necessary to transition from business accounting to correct NA-valuations is different in times of rising and falling prices. Therefore, higher frequency information on when in time prices of inventories fluctuates enables a more precise and correct separation of changes in inventories from holding gains and losses. This topic is further elaborated on in section 5.11.3 and is the main reason figures based on quarterly (and monthly) statistics are preferred to annual information. Hence the Swedish figures for annual inventories are where possible based on quarterly information from surveys carried out by Statistics Sweden, where the annual value will be the sum of four quarters. Annual balance sheet information from sources based on business accounting such as the SBS is only used for a small part of inventories where higher frequency data is not available.

5.11.2 The borderline cases

Natural growth of animal and vegetable products as well as growth of standing timber and output of uncompleted structures for which the buyer is unknown are activities that should be included as work-in-progress in NA. Regarding animals, there are borderline problems between stocks and fixed gross investments. The animals that provide continuous returns such as dairy cattle are investments while animals that are raised just for slaughter are stocks. The Swedish Board of Agriculture provides annual details by type of animal for the investments as well as for the changes in inventories and output. These are included in the NACE division A01.

Growth in standing timber is included in output of NACE division A02 forestry. The Swedish Forest Agency provide data for the calculations of output as well for the change in inventories. For more details, see section 5.11.5. Uncompleted structures where the buyer is unknown are not recorded as

⁵⁰ The survey “Business inventories” replaced the previously used surveys “Industrial Inventories” and “Inventories in trade and services” from and including the second quarter of 2021 and onwards. Concerning both the trade services (NACE G) and the manufacturing industries (NACE B & C), figures from the previously used surveys inventories in trade and services and industrial inventories respectively are used for the first quarter of 2021. However, the main thing that differs between these surveys is the design of the questionnaire where the business inventories survey collects values at a more detailed level compared to industrial inventories, as well as only collecting data in the industry dimension compared to the inventories in trade and services survey which collected data on both industry and products. The business inventories survey also has a larger target population compared to its predecessors, as it aims to replace the two previous surveys. Concerning all other aspects - the new survey mimics the previous ones in that they gather information from the same accounting items and processes it in an identical way. Therefore, we will only refer to the business inventories survey, and not the industrial inventories survey or the inventories in trade and services survey going forward in this chapter.

work-in-progress but are continuously captured as gross fixed capital formation and output throughout the building process. The typical case refers to Dwellings (see chapter 5.10 under dwellings).

5.11.3 Valuation principles

To calculate changes in inventories according to national accounts definitions, information on all entries into and withdrawals from inventories are required. These entries and withdrawals should also be valued at the actual prices when transactions are made. However, these flows and the valuation are difficult to measure in practice.

Business accounts, which are the main source for the quarterly business surveys, have two major shortcomings in this aspect. First, enterprises usually do not keep full details of inventory flows. The surveys instead measure stocks of inventories at the beginning and at the end of a quarter. Second, enterprises use varieties of historic cost methods, e.g. acquisition costs, for valuation of inventories, none of which satisfy the national accounts concept of valuation. Consequently, approximations and models are needed to recalculate data to meet national accounts requirements.

There is no complete information on what kind of accounting methods each of the individual enterprises use, but previous studies have been carried out to obtain information on which methods are the most common. The kind of activity units are instead asked to value the inventories in a specific and consistent way.

In the business inventories survey, kind of activity units are asked to value the inventories of materials and supplies and goods for resale (including trade inventories) at acquisition cost. The acquisition cost of the inventory can be calculated according to the FIFO (First-In-First-Out) method, weighted average prices or a similar principle. For inventories of work-in-progress and finished goods the valuation by the enterprises should be the net sales value of the measurement day (excluding taxes on products, i.e. valued at basic prices), but enterprises not able to do this can use manufacturing cost plus a mark-up.

Recurrent losses in inventories are deducted according to accounting rules. If net sales value is reported, then deduction is made for inventory obsolescence and if acquisition cost is reported then the enterprises use a standard deduction. This applies under the condition that the enterprises have an ongoing inventory accounting or at least quarterly inventory and follow the accounting rules.

A changed valuation of the stock of inventories in kind of activity units contains effects of both a change in stock volume for a product and a change in price per unit of the product. Only the former effect should be considered when calculating changes in inventories in the national accounts. The effect of price changes is treated as holding gains/losses.

Holding gains/losses are not the result of a production process and thus do not contribute to GDP or GNI. The nominal holding gains/losses are instead a part of both the asset and liability side of changes in net worth (K7), within the revaluation account in the non-financial sector accounts.

Holding gains and losses

Statistics Sweden's model for calculating changes in inventories in the Business inventories survey is described in the six steps below that also explain how the holding gains/losses are excluded. Numerical examples are given at the end of this chapter.

Steps:

- 1) The opening and closing stocks of inventories that are collected in the surveys are, as previously mentioned, valued at acquisition cost for raw materials and consumables and goods for resale by the enterprises. Inventories of work-in-progress and finished goods are valued in net sales values.
- 2) The inventories valued at acquisition cost (i.e. raw materials and consumables and goods for resale) are re-calculated by Statistics Sweden to replacement cost using the price index

for the reference month in relation to the average price of the time period the products have been held in inventory. The time-period for which the goods has been held in inventory is estimated as the number of months (12) times the value for the average inventory divided by the cost of sold inventories.

- 3) Opening and closing stocks of inventories are then deflated with the price index of the end month in the quarter to obtain stock in constant prices (fixed base year). The difference between the deflated opening and closing stock of inventories are the changes in inventories at constant prices (fixed base year).
- 4) The changes in inventories at constant prices (t-1) are calculated by reflating the changes of inventories in constant prices (fixed base year) with the average price of the previous year.
- 5) The changes in inventories at current prices (average monthly price) are then calculated by reflating the changes of inventories in constant prices (fixed base year) with the average price of the quarter.
- 6) The holding gains/losses are then the difference between the result in step 5 and the change in inventories valued at replacement cost, in step 2. This item not included in GDP but recorded in the revaluation account.

A numerical example from the process conducted in the Business inventories surveys given in section 5.11.6.

For inventories where the quantity revaluation approach is used (see table 5.11.2), the holding gains and losses will be excluded in the calculation since the method is based on changes in volumes.

Numerical examples for calculations based on the quantity revaluation approach (which mainly concerns fuels and forestry on a yearly basis), can also be found section 5.11.6.

For inventories based on balance sheet data from SBS (construction and service industries) holding gains and losses will occur as holding losses, since the general business accounting rule is to value the inventories at the lowest value of acquisition value and market value (re-acquisition value).

In times of falling prices a loss will occur that should not be part of the changes of inventories in NA. The share of the changes in stocks of inventories for these two industries was around 4 per cent of the total changes in stocks of inventories in 2021 (excluding standing timber), according to the balance sheet data in national accounts in 2021.

Consistency with the valuation of output and intermediate consumption

Output should, according to ESA, exclude holding gains and losses on inventories of finished goods, work-in-progress and goods for resale.

Table 5.11.1a Consistent recording of changes in inventories

Expenditure approach			Production approach				Income approach
Type of inventory	NACE	Changes in inventories	NACE	Adjustment of output for changes in inventories, work in progress	Adjustment of output for changes in inventories, finished goods	Adjustment to GVA	Adjustment to operating surplus
Materials and supplies	05-33	-59	01	-6		-6	
	35	-280	02	3 025		3 025	
	41-43	119	03				
Work-in-progress	01	-6	05-33	7 947	-8 691	-744	
	02	3 025	35-39				
	05-33	7 947	41-43				
	49-98	-1 046	45-47	-1 046		-1 046	
Finished goods	02	-31	49-98	-31		-31	
	05-33	-8 691					
Goods for resale	05-33	1 408					
	45-47	4 483					
Balancing		-259					
Total		6 610		9 889	-8 691	1 198	1 198

Table 5.11.1b Consistent recording of holding gains and losses*

Expenditure approach			Production approach				Income approach
Type of inventory	NACE	Holding gains and losses in inventories*	NACE	Adjustment of output for holding gains and losses	Adjustment of Intermediate consumption for holding gains and losses	Adjustment to GVA	Adjustment to operating surplus
Materials and supplies	05-33	39 239	05-33		39 239	-39 239	
Goods for resale	05-33	1 509	05-33	-1 509		-1 509	
	45-47	16 607	45-47	-16 607		-16 607	
Total		57 355		-18 116	39 239	-57 355	-57 355

* Derived according to the example in 5.11.6

In **agriculture and forestry** (NACE A) additions to output are made for the work-in-progress of timber and animals raised for slaughter. These estimates are based on quantities and the prevailing market prices and holding gains and losses will therefore not affect the estimates.

In the **manufacturing industries** (NACE B and C) the calculations of output are based on sales at market prices (net turnover) according to Production of commodities and industrial services (IVP). Changes in inventories of finished goods and work-in-progress are added to the IVP production value based on the Business inventory survey. According to the procedure described in the numerical example in section 5.11.6, the inventories are valued at the average prices for each period and holding gains and losses and holding gains and losses will not impact the estimates.

Concerning **construction**, total output and intermediate consumption is obtained from the SBS. Work-in-progress are included in the output value and recorded as gross fixed capital formation.

For **trade services** (NACE G), as well as for trade as secondary activity in other industries, the output will be impacted, overstated, from holding gains in the SBS due to that inventories of goods for resale are valued at the lowest price of acquisition value and market value. However, this issue of holding gains is adjusted for in the calculations of output for trade services. A description of this method is included in chapter 3.4 concerning the transition from private accounting and administrative concepts to ESA 2010 national accounting concept.

For the **other service industries** (excluding K) the SBS is the main source for output as well as the source for inventories. Changes in inventories are valued according to private accounting and holding gains and losses can be part of the inventory values. The changes in stocks of goods for the service industries are small compared to the total changes in stocks in the Swedish national accounts and only work in progress is included in the accounts.

Intermediate consumption should, according to ESA, be valued at market prices and withdrawals of materials and supplies from the stock of inventories for the use in the production process should also be valued a market price (replacement costs).

The general rule for inventories in Swedish business accounting is the lowest value principle, the lower of acquisition value and sales value (replacement cost). This is also the data reported in the SBS. In times of falling prices the lowest value principle will imply that the intermediate consumption that comes from inventories is valued at market prices (replacement cost), in line with the valuation in National Accounts. In times of increasing prices, however, the intermediate consumption will not be valued at market prices (replacement cost), since the inventories are to be valued at acquisition cost in business accounting. For this reason, an adjustment is made in the national accounts to have a correct valuation of intermediate consumption (according to the Transaction Specific Reservation on Holding gains and losses in the 2016-2019 verification cycle).

For the other industries, agriculture and forestry, energy, construction and service industries no adjustments are made to the intermediate consumption due to any holding gains. The reason for this is that the topic of holding gains in these industries has been verified in the GNI verification cycle of 2016-2019, as well as for the verification cycle of 2020-2024 – where it was shown that holding gains in these industries were minor⁵¹.

5.11.4 Inventory by type and industry

Inventories are calculated for agriculture, forestry, mining and quarrying, manufacturing, electricity, gas and water, construction, trade, other service industries and central government contingency inventories. These industry-groups are allocated in different inventory type subcategories (P52). The connection to the ESA 2010 §3.148 categories is shown in table 5.11.2.

Table 5.11.2: Changes in inventories at the beginning and at the end of the year by different categories, SEK million 2021

Inventories*	Industry	Changes in inventories**	Main Sources***	Estimation Method	
a	Materials and supplies	Mining and manufacturing industries	-59	Business inventories	Book-keeping values
		Construction industries	119	SBS	Book-keeping values
		Inventories in electricity and gas industry	-280	Quarterly Fuel Statistics	Quantity revaluation approach
b	Work-in-progress	Agriculture	-6	Swedish Board of Agriculture	Quantity revaluation approach
		Forestry industry, net growing of standing timber	3025	The Swedish Forest Agency, Forestry Research Institute of Sweden and Statistics Sweden	Quantity revaluation approach
		Mining and manufacturing industries	7947	Business inventories	Book-keeping values
		Service industries	-1046	SBS	Book-keeping values
c	Finished goods	Mining and manufacturing industries	-8691	Business inventories	Book-keeping values
		Forestry industry, felled timber	-31	The Swedish Forest Agency and Statistics Sweden	Quantity revaluation approach
d	Goods for resale	Mining and manufacturing industries	1408	Business inventories	Book-keeping values
		Trade industries	4483	Business inventories	Book-keeping values
	Balancing	-259			

*ESA2010 §3.148, **P52 ***Additional sources are used in minor corrections. These are described more further down in this chapter.

Provided below is an excerpt from the Process Tables showing the values from individual categories of sources and values of conceptual, exhaustiveness and balancing adjustments.

The values found within Survey & Censuses refers to values derived from the “Business inventories”-survey, as well as to values derived from the “Quarterly Energy Statistics”-survey as well as the “Monthly fuel and gas inventory”-survey. The values within administrative records are derived from data collected at *The Swedish Board of Agriculture and The Swedish Forest Agency respectively. For the section combined data, it refers to values collected and derived from the SBS-survey.*

⁵¹ This issue was deleted from the small issues list since it has been checked for materiality a second time.

Table 5.11.3: Excerpt from the Process table for Changes inventories, SEK million 2021

		Total	AN				
			121	122	123	125	
Basis for NA	Surveys & Censuses	-5 801	-339	1 441	-8 691	1 788	
Figures	Administrative Records	2 988	0	3 019	-31	0	
	Combined Data	-927	119	-1 046	0	0	
	Extrapolation and Models	Benchmark extrapolations	0	0	0	0	0
		Commodity Flow Model	0	0	0	0	0
		CFC(PIM)	0	0	0	0	0
		Dwellings - stratification method	0	0	0	0	0
		FISIM	0	0	0	0	0
		Insurance	0	0	0	0	0
		Other E&M	0	0	0	0	0
		Total Extrap+Models	0	0	0	0	0
	Other	0	0	0	0	0	
	Total (sources)	-3 740	-220	3 414	-8 722	1 788	
	Adjustments	Data validation	10 609	0	6 506	0	4 103
		Conceptual	Allocation of FISIM	0	0	0	0
Allocation of insurance			0	0	0	0	0
Other conceptual			0	0	0	0	0
Total conceptual			0	0	0	0	0
Exhaustiveness		N1	0	0	0	0	0
		N2	0	0	0	0	0
		N3	0	0	0	0	0
		N4	0	0	0	0	0
		N5	0	0	0	0	0
		N6	0	0	0	0	0
		N7	0	0	0	0	0
		Total exhaustiveness	0	0	0	0	0
Balancing		-259	-2 536	4 977	207	-2 907	
Total (adjustments)		10 350	-2 536	11 483	207	1 196	
Final estimate		6 610	-2 756	14 897	-8 515	2 984	

The adjustments made on the values of changes in inventories are data validation and balancing. Data validation refers mainly to two enterprise specific adjustments within work-in-progress and goods for resale, respectively. The balancing adjustments are done due to imbalances in the use or production of product groups by the other factors in the aggregated demand and supply. The balancing procedure is explored further in chapter 6.

5.11.5 Methods and sources for calculation used by industry

Agriculture

Data on inventories in agriculture are produced by the Swedish Board of Agriculture. Separate records are made for cereal, animals raised for slaughter and field crops. In agriculture, supplies of bread cereals are mainly stored by the farmers' organizations are therefore recorded as inventories in the industry Wholesale and retail trade. Smaller quantities are stored on farms and changes in inventories are recorded at the end of every year. In the output calculations the value of crop production is spread evenly over the year. The reason for this procedure is that production activities are carried on during most of the year, whereas deliveries in the form of sales of crops are concentrated to the second half of the year. The difference between production evenly distributed and farm deliveries is treated as production building up inventories. The sum over a year is zero, while inventories are built up in the first and second quarters and correspondingly reduced in the third and fourth quarters. A numerical example concerning animals raised for slaughter, which have an impact on the yearly figures, is found in section 5.11.6.

Forestry

In the forestry industry, changes in inventories are recorded for net growing of standing timber and felled timber. Inventories consist of the change in coniferous sawlogs and pulpwood. This item only includes the timber felling enterprises' own forest-based inventories of timber. Inventories of timber for intermediate consumption by the processing industries or which remains in the forest but have been bought by and belong to the industry, are not part in the inventories in the forestry industry. These inventories are instead intermediate consumption inventories of manufacturing industry.

The inventories of forestry also consist of net growth of standing timber (see description of output in forestry, chapter 3.7). The value of work-in-progress of timber is estimated according to the stumpage value method (EFA §4.75). Transforming sales prices to stumpage prices includes the exclusion of

logging costs and converting prices in cubic meters under bark to prices in cubic metres over bark. The source behind the inventories and the appropriate logging costs, price indices and the volume coefficient are provided by The Swedish Forest Agency, the Forestry Research Institute of Sweden and Statistics Sweden. The information regarding inventory of coniferous saw logs, pulpwood and chips and average prices of pulpwood of spruce, pine and birch and delivery of saw logs.

Numerical examples concerning felled timber and the net growing of standing timber respectively for the forest industry is given in section 5.11.6.

Mining, manufacturing, wholesale and retail trade

In the national accounts the business inventories survey is the source for the total change in inventories of the mining, quarrying and manufacturing industries. The business inventories survey is also used to allocate the change in inventories in different subcategories of inventory types into several manufacturing industries and into product groups⁵². As noted in table 5.11.2 these categories are not the same as listed in ESA 2010 manual, they are however consistent with §3.148 in the European System of National and Regional Accounts (ESA 2010). Inventories are collected from accounting items (book-keeping values), and are then compiled into four different inventory types:

- Inputs goods: Raw materials, semi-finished products, components, and other items required for the production and distribution of the finished product.
- Work-in-progress (including work-in-progress on account of another person): Products who's processing in the unit has been commenced but not yet completed⁵³.
- Finished goods of own manufacturing: Products which have been processed in the unit and which, regardless of the degree of processing, are ready for sale to customers or are supplied to another unit (possibly in the same enterprise).
- Finished goods not produced in own manufacturing (goods for resale): Products that have been purchased for resale without further processing in the unit.

No part of the annual and quarterly total changes in inventories is calculated as a residual.

Changes in inventories are calculated as the differences between the stocks of inventories held at the end and the beginning of the period respectively in constant prices (fixed base year). Opening and closing stocks are revaluated to the average prices, both related to the current quarter and to the previous year. In the revaluation care has been taken to type of inventory and average time stored. If the average prices refer to the current year, the value corresponds to volume changes in inventories in current prices. If the average prices refer to the previous year, the value corresponds to the volume changes in inventories at constant prices. Appropriate price indices are used in the calculations in accordance with the table below.

Table 5.11.4 Used price indices by inventory type

Changes in inventories - Price indices	
Inventory types	Price Index
Inputs used in the manufacturing industry	Intermediate goods and price index ^{*,***}
Goods-in-progress in the manufacturing industry	Producer price index ^{** ,****}
Finished good in the manufacturing industry	Producer price index ^{** ,****}
Goods for resale in the manufacturing industry and the trade sector	Producer price index ^{** ,**** ,*****}
*Abbreviation: INPI, **Abbreviation: PPI, *** Two sectors constitute exceptions: C12 and C14 which use PPI instead, **** Sector B09 constitute an exception which uses Producer Price Index for Services (SPPI), ***** The trade sectors constitute exceptions, where G45 and G46 uses Price Index for domestic supply (ITPI), and G47 uses the Consumer Price Index (CPI).	

⁵² SPIN 2015 – Swedish product classification 2015 (svensk produktindelning 2015).

⁵³ One business specific adjustment is made to the values of Work-in-progress.

For finished goods, goods for resale and work-in-progress the deflator is mainly the industrial producer price index (PPI) by product group. For input goods, a special price index series are created by using appropriate price index from the domestic supply index.

The business inventories survey is complemented by data from Statistics Sweden's energy statistics on a quarterly basis with regards to materials and supplies. The information collected is quantities of coal and fuels (ton and m³). By using appropriate prices per m³/ton, the values of the inventories are calculated in constant prices. When reflating these constant prices with appropriate price indices, values in current prices are obtained. The method is illustrated in section 5.11.6.

The business inventory survey is also the source used for inventories of trade industries and include calculations for the wholesale trade, the retail trade and the motor trade⁵⁴. The value for second-hand goods in the motor trade is also collected to separate inventories of second-hand goods from newly produced goods, where the former are excluded from inventories in motor trade.

As stated previously - enterprises are asked about opening and closing stocks, and changes in inventories are calculated as the differences between the stocks of inventories held at the end and at the beginning of the period respectively. As with the inventories of raw materials in the manufacturing industries (NACE B and C), the inventories of the trade industry are valued at acquisition cost. Therefore, the prices of the goods are reflated according to the process described to eliminate holding gains and losses, which were described in section 5.11.3. Price indices the acquisition costs reported by the enterprises are recalculated to average replacement cost applicable for the period. Care has been taken to type of inventory and average time inventories are stored. Price indices from domestic supply (ITPI) are used for calculations in the motor trade and the wholesale trade, and the consumer price index (CPI) is used for calculations in the retail trade sector – as shown in table 5.11.4. Numerical examples from the Business inventories survey concerning mining, manufacturing as well as trade industries are given in section 5.11.6.

Oil and energy companies within wholesale and retail are excluded in the business inventories in trade and services survey. For this reason, the Monthly fuel, gas and inventories statistics-survey produced by Statistics Sweden is also used to capture changes inventories in trade for fuel and gas. As in the case with the complementary calculations of fuels within the Materials and supplies category, as well as for the Electricity, gas and water industry, the information that is collected is quantities is converted to constant and current prices using the same process outlined in section 5.11.6.

Inventories in departments and agencies of central government (so-called contingency stocks) are recorded together with those of the wholesale trade for confidentiality reasons. Inventories consist mainly of the Swedish Armed Forces contingency stocks (ammunition, etc.) and all other governmental institutions materials and supplies.

Electricity and gas

Inventories in electricity and gas comprise stock investment in private, central government and local government corporations and central and local government enterprises classified in the industries Electricity generating plants, Gasworks and Heat generating plants. They also include inventories from corresponding activities in departments and agencies of local government. Inventories as a whole are made up of 5 different types of fuel. The stock figures in quantities are collected in the Statistics Sweden's energy statistics on a quarterly basis – where the method for these values is illustrated in section 5.11.6.

⁵⁴ One business specific adjustment is made to the values of inventories in trade.

Construction

Inventories comprise inventories of goods (inputs). The source is the annual SBS. There is no breakdown of these inventories in product groups in the available sources. Other construction inventories (finished goods and work-in-progress) are recorded as gross fixed capital formation.

Service industries excluding trade

Inventories in service industries excluding trade are based on SBS yearly estimates and consist of inventories of the type of work-in-progress. The stocks in these industries are small compared to the stocks in manufacturing and trade. There are quarterly surveys of inventories in the “Business inventories”-survey of the major service industries (NACE J & M). However, as 2021 was the year that this survey was implemented, annual values for the SBS was still used in the calculation for this year since the new values from the “Business inventories”-survey was not fully implemented yet. The plan for coming years is to use the quarterly data from the “Business inventories”-survey to a larger extent in these calculations. A more in-depth description of the method used for Service industries excluding trade is provided at the end of section 5.11.6.

5.11.6 Numerical examples on the exclusion of holding gains and losses from changes of inventories in the *Business inventories* survey

The business inventories survey covers inventories of materials and supplies, work-in-progress, finished goods and traded goods. The example is a stylized example for a given industry and the second and third quarter of a year.

*Exclusion of holding gains and losses from changes of inventories in the business inventories survey***Step 1. Data collected**

For finished goods and work-in-progress respondent’s reports opening and closing stocks valued at sales values at the end of the quarter in current prices. For materials and supplies and goods for resale the stocks are reported at acquisition cost.

Step 2. Revaluation to replacement cost

For materials and supplies and goods for resale the acquisition values are re-valued to replacement cost on micro level using the price index from the time the goods entered the inventory. The time the goods entered the inventory is estimated using a model on how long goods on average are in the inventory (inventory-to-sale ratio) and the assumption that purchases for inventory is distributed evenly over the period. IMPI, PPI and ITPI (see table 5.11.4) are the main price indices used for most industries in these types of calculations.

- i) The respondent’s reports data valued at acquisition cost
 - Reported value Q2: 3000 SEK
 - Reported value Q3: 3100 SEK
- ii) The collected data are re-calculated on micro level to the replacement cost in current prices (last day of the reference quarter) based on the turnover rate of the inventory stock and price indices.

Data on price index are on monthly basis and a weighted average of the price index⁵⁵ is calculated as:

⁵⁵ This formula presupposes that the rate of inventory turnover is at least a month, as this is the finest frequency our price indexes are measured in.

$$PI_{Inventory}^A = \frac{(v_y^A - [v_y^A]) * PI_{m-[v_y^A]}^A + \sum_{n=(m-[v_y^A]+1)}^{n=m} PI_n^A}{v_y^A}$$

Where:

- m is the last month in the reference quarter (current quarter).
- $PI_{Inventory}^A$ is then the average price level for the products in industry A for the time the products were held as inventories, in relation to a given base year.

To capture the change in prices between the last month in the reference quarter (current quarter) and the time the products were held as inventories the following ratio is used:

$$D_{(y,q)}^A = \frac{PI_m^A}{PI_{Inventory}^A}$$

The denominator is the price level at the time the goods entered the inventories, and the nominator is the price level for the reference month (current month). The calculation from acquisition cost to replacement cost value are calculated as:

$$Inventories_{(y,q),repl}^k = Inventories_{(y,q),acqu}^k \times D_{(y,q)}^A$$

Where:

- $Inventories_{(y,q),acqu}^k$ is the value of inventories for enterprise k belonging to industry A year y quarter q at acquisition cost.
- $Inventories_{(y,q),repl}^k$ is corresponding inventories in replacement cost.

Numerical example

Rate of inventory turnover = 1,78 months

Then, for the second quarter:

$$PI_{inventoryQ2} = \frac{(1,78-1)*101,0+102,0}{1,78} \approx 101,5618$$

Where 102,0 and 101,0 represents the price levels for June (PI_m^A) and May (PI_{m-1}^A) respectively for this given year, as they are the last and second to last month in the second quarter. The average price level is then used as the denominator in the equation below to calculate how much prices has increased compared to the average price level during the period that the inventories are held.

$$D_{Q2} = 102,0/101,5618 \approx 1,004315$$

$$Inventories_{Q2} = 3000 * 1,004315 \approx 3013$$

Where $Inventories_{Q2}$ is the inventory value for the second quarter re-valued from acquisition cost (3000 SEK) to replacement cost (3013 SEK).

The same procedure applies for Q_3 , but for this example a sharper price during the time the products are held in inventories is used:

$$PI_{inventoryQ3} = \frac{(1,78-1)*103,0+105,0}{1,78} \approx 104,1236$$

Where 105,0 and 103,0 represents the price levels for September (PI_m^A) and August (PI_{m-1}^A) respectively for the third quarter.

$$D_{Q3} = 105,0/104,1236 \approx 1,008417$$

$$\text{Inventories}_{Q3} = 3100 * 1,0084170 \approx 3126$$

The stock of inventories per industry is then estimated using a Horvitz-Thompson (HT) estimator. Stratification is made in two steps by industry ($d=1,2,\dots,D$) and within industries by enterprise size ($h=1,2,\dots,H$)

$$\hat{t}_{(y,q)}^A = \sum_{h=1}^H \frac{N_h}{m_h} \sum_{s_h} l_k f_d,$$

Where:

l_k = Enterprise k:s value of the stock of inventories in quarter, q, and year, y.

N_h = Number of enterprises in the frame population in strata h.

m_h = Number of enterprises that respond in strata h.

A= Industry

f_d = grossing-up coefficient for strata d (industry)

For the rest of the numerical example, current prices at the end of the quarter as a base are set to:

Q2: 12 137 million SEK

Q3: 12 387 million SEK

Step 3. Calculation on changes in inventories in constant prices with fixed base year (base year =2010).

When calculating the prices that prevails the last month in the relevant quarter in relation to the 2010 price level, changes of inventories in 2010 prices are then calculated as (for industry A, quarter q and year y):

$$Diff_{(y,q),2010}^A = \frac{\hat{t}_{(y,q)}^A}{PI_{(y,3q),2010}^A} \times 100 - \frac{\hat{t}_{(y,q-1)}^A}{PI_{(y,3(q-1)),2010}^A} \times 100$$

Numerical example:

$$\frac{12387}{105,5} \times 100 - \frac{12137}{105,3} \times 100 \approx 11741 - 11526 = 215$$

215 million SEK is then the estimated value for changes in inventories between Q2 and Q3 in **constant prices** (2010 price level) for the industry.

Step 4. Volume change of inventories in previous years average prices

To get the volume change the stock of inventories for Q2 is deflated with the price index in June in relation to the average price of the previous year. And the stock for Q3 is deflated with the price index

for September in relation to average price of the previous year. The volume changes in inventories in **previous years average prices** (Industry A, quarter q and year y) are then calculated as:

$$Diff_{(y,q),y-1=100}^A = \frac{t_{(y,q)}^A}{PI_{(y,3q),2010}^A / \frac{1}{12} \sum_{m=1}^{12} \frac{PI_{(y-1,m)}^A}{100}} \times 100 -$$

$$\frac{t_{(y,q-1)}^A}{PI_{(y,3(q-1)),2010}^A / \frac{1}{12} \sum_{m=1}^{12} \frac{PI_{(y-1,m)}^A}{100}} \times 100 = Diff_{(y,q),2010}^A \frac{1}{12} \sum_{m=1}^{12} \frac{PI_{(y-1,m)}^A}{100}$$

where $PI_{(y-1,m),2010}^A$ is the price index for year $y-1$ and month m base year 2010 in industry A.

Numerical example:

$$\frac{12387}{105,5 * \left(\frac{1}{12} * 12,6\right)} * 100 - \frac{12137}{105,3 * \left(\frac{1}{12} * 12,6\right)} * 100 \approx 12328,295 - 12102,42 \approx 225,872$$

$$\approx 226$$

Approximately 226 million SEK is the volume change in inventories in **constant prices**, previous year's average prices.

Step 5. Volume change of inventories in current prices (average prices)

To get to current prices in average prices for the quarter a deflation of the constant prices is done using the average price for the quarter. Changes of inventories, in the average price for the quarter (Industry A, quarter q and year y) are then calculated as:

$$Diff_{(y,q),\bar{q}}^A = Diff_{(y,q),2010}^A \frac{1}{3} \sum_{m=1}^3 \frac{PI_{(y,3(q-1)+m)}^A}{100}$$

where $PI_{(y,3(q-1)+m),2010}^A$ is the price index for year y and month $3(q-1) + m$ with the base year 2010 for industry A.

Numerical example:

$$Diff_{(y,q),\bar{q}}^A = 226 \times \frac{1}{3} \times 3,164 \approx 238,35 \approx 238$$

Approximately 238 million SEK is then the volume change in inventories in **current prices** (average prices for the quarter)

Step 6. Holding gains and losses

Holding gains and losses can then be calculated as the difference between p.2 and p.5

Numerical example:

$(12387 - 12137) - 238 = 250 - 238 = 12$ million SEK is then the holding gains and losses for the third quarter.

Numerical example for the Electricity and gas industry

The fuel, gas and inventory statistics collect quantities of a series of fuel products held by the companies at the end of the period. The statistics are on a monthly or quarterly basis, but the national accounts use only quarterly data. Quarterly producer price indices and prices per unit are also used in the calculations, which are produced at Statistics Sweden's price statistics unit.

The quantities collected in the energy statistics is usually expressed in cubic meters or tonnes. The example used below is the calculation for Coal within inventories in the electricity and gas industry. However, the method is identical for the complementary calculations within materials and supplies in the mining and manufacturing industry as well as for the complementary calculations within the wholesale and retail trade industry – both of which was mentioned in section 5.11.5.

The calculation starts with the information on price per 1 000 tonnes in 2020, which in this case was SEK 3296 SEK. Since it is a producer price, taxes are excluded. From the opening and closing stock quantity, the change in stock volume between 2020Q4 and 2021Q1 is calculated, -5 in the table. The volume change is then multiplied with the unit price of fuel oil to get the value change in inventories in constant prices $((3296 * -5) / 1000) = -16$, where -16 is the value in million SEK in the price level of 2020, which is (T-1) in this example.

To get the value of change in inventories in current prices, the value change in constant prices is simply multiplied with the price change (captured by the price index in the table below), $-16 * 130,9 / 100 = -22$. The annual value is the sum of the four respective quarters.

Table 5.11.5 Calculation of changes in inventories for the electricity and gas industry – with Coal as an example.

Example on calculation from changes in inventories for the electricity and gas industry (2021)						
Quarter	Quantity (1000 tons)	Changes in quantity (1000 tons)	Price in 2020, SEK per 1000 tons	Price index (where year t-1=100)	Changes in inventories - Constant prices	Changes in inventories - Current prices
2020-Q4	91					
2021-Q1	86	-5	3296	130,9	-16	-22
2021-Q2	83	-3	3296	155,6	-10	-15
2021-Q3	83	0	3296	176,6	0	0
2021-Q4	80	-3	3296	199,4	-10	-20

Numerical example from the Agricultural industry

Concerning inventories of animals raised for slaughter – data is collected directly from the Swedish agricultural board and covers the year of calculation, in this case 2021. No calculations which add value on a yearly basis are performed at Statistics Sweden – other than summing four different items to one value.

Table 5.11.6 Calculation of changes in inventories for the agricultural industry

Numerical example of calculations of agricultural inventories (2021)			
Code	Definition	Value MSEK (2021)	Sum of all values
EAA_OL1	Cattle (Calves)	-17	-6
EAA_OL2	Cattle (Heifer, Bull and Steer)	37	
EAA_OL	Pigs	-22	
EAA_OL	Sheep and goats	-4	

Numerical example from the Forestry industry

As stated in the introduction to this chapter, the quantity revaluation approach is used to calculate changes in inventories in the Forestry industry. This applies for both inventories of felled timber, as well as inventories for net-growth of standing timber. The information on quantities and prices are collected from the Swedish Forest Agency. Concerning felled timber two separate calculations are performed, one for pulp wood (shown in table 5.11.7.A) and one concerning coniferous sawlogs (shown in table 5.11.7.B).

Table 5.11.7.A Calculation of changes in inventories for the forest industry – with felled Pulp wood as an example

Changes in forest inventories for felled timber, Pulp wood (2021 MSEK).					
Quarter	Quantity of pulpwood*	Changes in quantity of pulpwood*	Prices of coniferous sawlogs	Enumeration factor	Changes in inventories of pulp wood – current prices
2020-Q4	3570				
2021-Q1	3842	272	284	1,125	87
2021-Q2	3268	-574	286	1,125	-185
2021-Q3	2619	-694	288	1,125	-210
2021-Q4	3052	433	297	1,125	145

*1000 of cubic meters solid measurement under bark

In both cases, the change in quantity is adjusted using an Enumeration factor (or factors) to recalculate from solid cubic meter of bark cubic meters of forest.

Table 5.11.7.B Calculation of changes in inventories for the forest industry – with felled Sawlogs as an example

Changes in forest inventories for felled timber, Sawlogs (2021 MSEK).								
Quarter	Quantity of coniferous sawlogs*	Changes in quantity of coniferous sawlogs*	Prices of coniferous sawlogs	Enumeration factor 1	Enumeration factor 2	Weight 1	Weight 2	Changes in inventories of coniferous sawlogs – current prices
2020-Q4	1248							
2021-Q1	1658	410	512	1,3	1,125	0,98	0,02	238
2021-Q2	1103	-555	515	1,3	1,125	0,98	0,02	-323
2021-Q3	1119	16	526	1,3	1,125	0,98	0,02	10
2021-Q4	1451	332	556	1,3	1,125	0,98	0,02	209

*1000 m3 fub (Forest cubic meters)

The calculated changes in million SEK for pulp wood and sawlogs during each quarter are then added together as illustrated in table 5.11.7.C.

Table 5.11.7.C Calculation of changes in inventories for the forest industry – final step

Changes in forest inventories for felled timber, Total (2021 MSEK).			
Quarter	Changes in inventories of pulp wood – current prices	Changes in inventories of coniferous sawlogs – current prices	Total changes in inventories
2021-Q1	87	238	324
2021-Q2	-185	-323	-508
2021-Q3	-210	10	-201
2021-Q4	145	209	354
2021-A1			-31

Where -31 MSEK is the yearly change for inventories of felled timber in the forest industry during 2021.

Concerning the net-growth of standing timber – a similar calculation is performed. To calculate the stock of growing forest, we use the gross growth that we get from SLU, the Swedish Agricultural

University. The gross felling is obtained from the Swedish Forest Agency. The difference between the growth rate and the loss is the growing forest.

Table 5.11.8.A Calculation of changes in inventories for the forest industry, specifically for the net-growth of standing timber.

Changes in forest inventories for net growth of standing timber, Sawlogs and Pulp wood (2021 MSEK).								
Type of delivered wood	Gross growth	Gross forest loss	Forest growth	Average prices at delivery point (sek/m3fub)	Logging cost (m3fub)	Harvested volume	Share of harvested volume	Average prices at delivery point in (sek/m3fub)
Pulpwood				288		31,8	0,447257	
Sawlogs				525		39,3	0,552743	
Total	110,21	97,2	13,01	813	132	71,1	1	419

To calculate the stock of growing forest, we use the gross growth that we get from SLU, the Swedish Agricultural University. The gross felling is obtained from the Swedish Forest Agency. The difference between the growth rate and the loss is the growing forest. The prices and quantities of pulpwood and sawlogs are also obtained from the Swedish Forest Agency. To obtain the average price of delivered wood, the prices are multiplied by the share of harvested volume of pulpwood and sawlogs. To convert from cubic meters under solid bark to forest cubic meters, the enumeration factor is used, both for delivery prices and for logging costs. The root net is obtained by taking the delivery prices minus the costs. The net growth is obtained by multiplying the root nets by the growing forest, as shown in table 5.11.8.B.

Table 5.11.8.B Calculation of changes in inventories for the forest industry, specifically for the net-growth of standing timber.

Changes in forest inventories for net growth of standing timber, Sawlogs and Pulp wood (2021 MSEK).					
Type of delivered wood	Enumeration factor	Average prices at delivery point in	Logging cost (sek/m3fub)	Root net (m3fub)	Net growth in current prices
Total	0,81	339,39	106,92	232,47	3025

Which, as illustrated yields the yearly change in inventories in the forest industry for net-growth of standing timber – which in 2021 was 3025 MSEK.

Numerical example from the Construction and Service industries

For the changes in inventories within the Construction (NACE F) and Service industries (excluding NACE K), no calculations are made to alter the data from the source (the SBS). The only alteration with concern to the source data is performed for the service data (excluding NACE K) and consist of excluding values for sub-industries in the source data with >-75 MSEK and <75 MSEK changes in inventory values. The figures for these two categories can include holding gains, as discussed in the later part of section 5.11.3.

5.12 Acquisitions less disposals of valuables

Table 5.12.1 Process table of acquisitions less disposals of valuables, SEK million, 2021

			Total	
Basis for NA Figures	Surveys & Censuses		0	
	Administrative Records		0	
	Combined Data		0	
	Extrapolation and Models	Benchmark extrapolations		0
		Commodity Flow Model		1 831
		CFC(PIM)		0
		Dwellings - stratification method		0
		FISIM		0
		Insurance		0
		Other E&M		0
		Total Extrap+Models		1 831
	Other		0	
	Total (sources)		1 831	
Adjustments	Data validation		0	
	Conceptual	Allocation of FISIM		0
		Allocation of insurance		0
		Other conceptual		0
		Total conceptual		0
	Exhaustiveness	N1		0
		N2		0
		N3		0
		N4		0
		N5		0
		N6		0
		N7		0
	Total exhaustiveness		0	
Balancing		0		
Total (adjustments)		0		
Final estimate		1 831		

According to ESA 2010 (§ 3.154), valuables are non-financial goods that are not used for production or consumption and are not depreciated over time like other gross fixed capital formation. They represent material assets, but are not calculated as *fixed* capital formation, since they do not meet the relevant definition and purpose. The purpose of this acquisition and/or disposal is to "increase value", or at least "to retain value". This distinguishes this heading from consumption and/or gross fixed capital formation in various products.

Valuables comprise the following types of goods:

- Precious stones and metals, such as diamonds, non-monetary gold, platinum, silver, etc.
- Antiques and other art objects, such as paintings, sculptures, etc.
- Other valuables, such as jewellery fashioned out of precious stones and metals and collectors' items.

The Swedish method relies on calculating assets based on data on new Swedish output, imports, exports and trade margins.

Swedish output of new art has been calculated with the aid of data from the survey "Artists' incomes", carried out by SCB for the government agency *The Swedish Arts Grants Committee* in 2005. The survey is full census. A previous investigation was made by SCB ten years before. It was published in SOU 19978:190. From these reports average artistic income in the 'visual and graphic artists' group and the number of performers in the group was collected. An output value for 2005 was received. Another report was published in 2014, which forms the basis of the current estimate. This benchmark is extrapolated with annual grow rate of the NACE-industry in question.

The data provided on trade consists of information from the largest Swedish enterprises in the industry 'Antique dealers and art dealers', NACE code 47790. These enterprises provide services for trading on the types of goods mentioned above. The types of goods are not separated in the data provided, and

there is no distribution for the types of goods. The trade margin is adjusted downwards to take account of, that a certain share of the objects is exported, estimated at around 20 percent.

A total value for assets in the form of valuables is obtained by aggregating the trade margins, imports and Swedish output. The use is exports and gross capital formation. Gross capital formation is the residual item in the balance. The data on external trade come from the foreign trade statistics. In the foreign trade CN system, these include antiques, 97060000, paintings, 9701100, collectors' pieces, 97050000 and stamps etc., 97040000. According to foreign trade statistics, the highest value belongs to collectors' pieces, the second highest is stamps followed by antiques and paintings.

Finally, VAT is added for Swedish production and trade to get purchasers' prices for the GFCF-estimate.

The total value of SEK 1831 million for 2021 is distributed according to the following:

Table 5.12.2 Valuables broken down by component, SEK million, 2021

Item	SEK million
Swedish new production, incl. VAT	189
Imports, incl. VAT	664
Exports, incl. VAT	-554
Trade margins	1532
Total	1831

5.13 Exports of goods

The main source for the estimates in national accounts is international trade in goods statistics (ITGS). ITGS consists of Intrastat and Extrastat, where information by country is collected. Other data sources used do not have that information. Hence to divide the total export of goods data into intra EU and Extra EU, the shares from Extrastat and Intrastat are used. Additionally, reconciliations are made regularly between BoP and NA. However, there are some minor methodological differences exist, such as BoP and NA having different models for goods sent abroad for processing. The table below shows total exports of goods divided into intra-EU and extra-EU.

Table 5.13.1 Intra-EU and extra-EU exports of goods, SEK million

Export of goods	Intra EU	Extra EU
1825534	992524	833 010

Table 5.13.2 shows the sources and adjustments of exports of goods in the Swedish national accounts.

Table 5.13.2: Excerpt from Process Tables – Exports of goods, SEK million

		Exports goods	
Basis for NA Figures	Surveys & Censuses	886 316	
	Administrative Records	743 872	
	Combined Data	0	
	Extrapolation and Models	Benchmark extrapolations	0
		Commodity Flow Model	0
		CFC(PIM)	0
		Dwellings - stratification method	0
		FISIM	0
		Insurance	0
		Other E&M	-8 499
	Total Extrap+Models	-8 499	
Other	0		
Total (sources)	1 621 689		
Adjustments	Data validation	-3 808	
	Conceptual	Allocation of FISIM	0
		Allocation of insurance	0
		Other conceptual	210 808
		Total conceptual	210 808
	Exhaustiveness	N1	0
		N2	0
		N3	0
		N4	0
		N5	0
		N6	0
		N7	0
	Total exhaustiveness	0	
Balancing	-3 155		
Total (adjustments)	203 845		
Final estimate	1 825 534		

5.13.1 Surveys, censuses and administrative records

The main source is international trade in goods statistics (ITGS). ITGS consists of Intrastat and Extrastat. Extrastat is a census of total record from Swedish Customs and Intrastat is a survey processed at Statistics Sweden. The extra-EU trade data is obtained from the customs office on monthly basis. For the extra-EU trade, non-response is not a significant issue. Intrastat is a census with cut-off value based on the value of arrivals/dispatches from/to other EU countries. Data are collected from all enterprises with total exports of goods to other EU countries to a minimum value of SEK 4 500 000 or imports of goods from other EU countries to a minimum value of SEK 9 000 000. According to the EU legislation, the survey has to cover at least 97 percent of the dispatch value and 93 percent of the arrival value. The surveyed population is determined using the VAT Register of the Swedish Tax Agency. During 2021, approximately 12 000 companies were obliged to provide

information to Intrastat. For the intra-EU trade, the non-response in terms of value is normally a few percent whereas non-response expressed in number of non-respondents is around 8 or 9 percent at the very first dissemination round. Under-coverage and non-response are continuously adjusted for by supplementing data from EU VAT declarations and historical Intrastat data (see section 10.3 on international trade in goods statistics).

Data for both Extrastat and Intrastat are collected according to the Combined Nomenclature (CN) and linked to the product classification applied in the national accounts' product accounts.

ITGS is collecting data regarding goods crossing the border while the NA record exports of goods at change of economic ownership irrespective of corresponding physical movements of goods across borders, see the section 5.13.7 on Steps taken to record exports on a change of ownership basis.

5.13.2 Other Extrapolations and models (other E&M)

According to ESA 2010 imports and exports of goods are to be valued free on board at the border of the exporting country (FOB) for total exports and imports. On the detailed level exports should be valued FOB and imports Cif (Cost, insurance and freight). In the Swedish NA both imports and exports of goods are valued at invoice values at the level of products. A re-valuation to FOB/FOB valuation are then made for total exports and imports. The adjustments made to get from invoice values to FOB valuation are categorized under 5.13.2 Other E&M.

Theoretically a valuation of goods and transport services at invoice value give the same net exports as a FOB/FOB valuation only the division between goods and services of the balance is affected. In practice this is not the case since the source data are compiled at different valuations – Extrastat at statistical values, i.e exports of goods are valued FOB, and Intrastat as well as Trade in Service Statistics at invoice values.

The primary reason to use a valuation in invoice values in the supply and use tables is that this is consistent with the valuation of production, intermediate consumption and-final uses, since these transactions also are valued including freights and insurance if these are not invoiced separately.

The table 5.13.3 shows the difference between FOB values and Invoice values that are adjusted for in NA to get to a FOB valuation for total exports.

Table 5.13.3 Difference between FOB-values and invoice values for exports of goods and freight services, SEK million, 2021

Statistical values	Code	2021
Exports of goods	P6	1 626 417
Adjustments to get freight services aligned to FOB-valuation of exports	P62	5 446
FOB/FOB valuation exports of goods	P6	1 631 863
Invoice values	Code	2021
Exports of goods	P6	1 634 982
Difference invoice valuation - FOB/FOB valuation	P6	3 119

Also categorized under 5.13.2 *Other E&M* is an addition made for a transport company regarding fuel and repairs sold to foreign companies on Swedish territory. The data are received from the company and are processed by the Coordination and Corporate Affairs unit, who has a special responsibility for the activities of large companies. This data is not included in ITGS since there is no cross-border flows.

5.13.3 Data validation

To cover for purchases of fuel by Swedish vessels and supplies abroad an addition is made with data from ITGS.

Product adjustments are made yearly as a part of the reconciliation process to balance the supply and use side. These adjustments are included in *Data validation* and differ from time to time depending on where the inconsistencies occur.

Treatment of transfer prices

Adjustments are made for intra-group transactions within MNEs in the case that these may not reflect market prices, i.e. transfer prices. To some extent we have information on the models applied for MNEs through the work of the Large Case Unit.

5.13.4 Other conceptual adjustments

Conceptual adjustments are made to the ITGS data for the items listed in the table below.

Components		SEK million
ITGS statistical value		1 626 417
Conceptual	Reclassification	15 142
	NA Surveys, censuses and administrative records	20
	Merchanting	158 175
	Company specific adjustments	40 207
	VAT adjustments	-2 736
	Total Conceptual adjustments	210 808
Total ITGS + Conceptual		1 837 225

Reclassification of products

Some products that are captured in international trade in services statistics are treated as goods in the NA and are moved from services to goods. The products are shown in the table below. There are also some CN numbers that are recorded on this basis as exports of services, see section 5.14.

Exports reclassified from services to goods are already excluded in the initial stage of estimation of exports concerning services meaning there is no corresponding deduction recorded under conceptual adjustments in process tables. Similarly, exports reclassified from goods to services are already excluded in the initial stage of NA-compilations of exports concerning goods.

Table 5.13.5 Products registered as goods in NA but services in the Trade in service statistics, SEK million, 2021

Code	Product	SEK million
A016A	Agricultural and animal husbandry services (except veterinary services)	180
B09	Mining support services	33
C108A	Homogenized food preparations and dietetic food and other food products n.e.c.	1135
C14	Wearing apparel	6529
C262	Computers and peripheral equipment	569
C264	Consumer electronics	1135
C267	Optical instruments and photographic equipment	569
C3091	Motorcycles	569
C31	Furniture	1135
C323	Sports goods	569
C329	Manufactured goods n.e.c.	710
E382	Services treatment and disposal services	732
M7312	Media representation services	1277
	Total	15142

Merchanting

The ITGS does not include merchanting. For these transactions information from SBS is used and are further commented under the section on 5.13.7.

5.13.5 Balancing

This refers to adjustments made in the automated balancing process. See section 6.1 for details.

5.13.6 Confrontation of data

Sweden conducts so called Reconciliation Rounds initiated by Eurostat on a regular basis (2009, 2011, 2013 and 2015/2016). Eurostat compiles and supplies data with the largest asymmetries to the Member States and MS chooses which CN8-codes and partner countries they wish to investigate. There have also been a few bilateral studies with Denmark and Finland throughout the year. Comparisons to VAT is also performed.

5.13.7 Steps taken to record exports on a change of ownership basis

The ITGS is collecting data regarding goods crossing the border while the NA is to record exports of goods at change of economic ownership irrespective of corresponding physical movements of goods across borders.

Merchanting

Regarding merchanting separate calculations based on the SBS is carried out to cover this item. The SBS data is not classified in products and hence the values are allocated after the enterprises main production. In case of trading companies, the exports and imports from ITGS are used to determine what product to use.

Data on merchanting are collected both by the ITSS and SBS. The data on merchanting from these sources are validated to ensure consistency between them. The data are then recorded in the national accounts as positive exports (merchanting income) and negative exports (merchanting expenses) and as a trade margin in the valuation of the output of the corresponding industry. The table below shows the positive and negative exports corresponding to merchanting in million SEK, 2021.

Table 5.13.6 Merchanting, SEK million, 2021

Product	Exports	Negative exports	Merchanting margins
Total goods	627 071	- 468 896	158 175

Goods sent abroad for processing

Goods sent abroad for processing must be removed from the international trade in goods in the national accounts, since there is no change of ownership, and there are two types of processors that needs to be accounted for:

- Outward processors: a resident unit sending goods for processing to a non-resident unit.
- Inward processors: a non-resident unit sending goods for processing to a resident unit.

The fee that the processor receives from the principal has to be registered as a service. In the classic case of goods sent abroad for processing, material inputs are sent by the principal in country X to the processor in country Y. After processing, the processor returns the finished goods to the country of the principal. The principal pays the processor a fee for the services provided. To correctly record the goods sent abroad for processing, the ITGS corresponding Nature of Transaction (NoT) codes are used in two ways:

1. First, by removing the value of the goods sent abroad for processing from the ITGS in the national accounts by
 - a) Subtracting both imported un-processed goods and imported processed goods.
 - b) Subtracting both exported processed goods and exported un-processed goods.
2. Estimating the values for the goods sent abroad for processing by the principal in country X to the processor Y by
 - a) In the case of inward processing: subtracting the value of the exported processed good by the value of the imported un-processed good, to arrive at the exported processing fee value.

- b) In the case of outward processing: subtracting the value of the imported processed good by the value of the exported un-processed good, to arrive at the imported processing fee value.

Assuming the transactions are correctly reported in the ITGS, the goods sent abroad for processing can be identified and removed from the ITGS using the corresponding Nature of Transaction (NoT) codes. The (NoT) codes can then also be used to correctly estimate the value of the processing fee, which should be included in the national accounts.

In some cases, the goods may not return to the country of the principal after processing. In that case, the NoT codes in the ITGS cannot be used to estimate the value of the processing fee, since the value of the goods after processing is not included in the ITGS. In such a case, company specific adjustments have to be made to correctly estimate the values of the goods for processing.

Company specific adjustments

Outward processing

Currently, company specific adjustments are made for one large outward processing enterprise concerning goods that are sold directly abroad after processing instead of coming back to Sweden. Adjustments are made to imports of the raw materials bought abroad for the processing abroad (that does not cross the Swedish border) and for the exports of the final goods sent from abroad. The processing service imported are also handled separately for this enterprise. The necessary data are reported in the trade in service statistics on goods processed abroad. Work is ongoing to delineate between merchanting and goods for processing and to change the recording where necessary. However, whether the transactions are recorded as merchanting (net) or goods sent abroad for processing (gross) does not affect the net exports.

Inward processing

Finally, for around 20 inward processing enterprises that have more substantial contract processing for a foreign enterprise, more than 100 SEK million, company specific adjustments are made.

- Imports of raw materials for processing owned by the foreign enterprises and exports the final goods are excluded from NA data.
- Intermediate goods bought in Sweden by the foreign enterprises are included as exports of goods and the final goods that are sold in Sweden (by the foreign enterprise) are included as imports.
- The exports of processing service are based on data on output of processing services according to the Statistics Production of commodities and industrial services (Industrins varuproduktion, IVP)

To identify the units where adjustments are needed the survey on Production of commodities and industrial services (IVP) are used. In IVP the enterprises state if they perform contract processing for a foreign company. To determine which flows to adjust for each enterprise, data for the year the enterprise started the processing activities and data for the year before are compared. This analysis also considers if the enterprise has reported exports and imports on procedural codes for processing.

Factoryless goods production

There are companies with complete factoryless goods production in the Swedish economy, but they are not categorized separately in the statistics. Their transactions are recorded as merchanting.

Non-resident VAT-traders

The so-called non-resident VAT traders, non-resident units with a VAT-number in Sweden, are separately identified in the ITGS through their organisational identification number. However, these

units and their transactions are included in the ITGS and in NA. The project has the aim to address the related reservation placed on all nations.

5.13.8 Other steps taken to ensure the correct scope of exports of goods

In ESA 2010 § 3.163 - 3.164 other aspects of exports and imports of goods with respect to border crossing, than those mentioned above in this section.

According to ESA 2010 § 3.163 a change of economic ownership should be recorded whenever goods are delivered between affiliated enterprises deliveries between affiliated enterprises (branch or subsidiary, or foreign affiliate) if the unit receiving the goods assumes responsibility for making the decisions about the levels of supply and prices at which their output is delivered for the market. The adjustments made to ITGS in NA are the cases discussed under the section on Steps taken to record exports on a change of ownership basis.

The following items for exports and imports of goods are separately mentioned in ESA 2010 § 3.164:

- (a) goods produced by resident units operating in international waters sold directly to non-residents in foreign countries.
- (b) transportation equipment or other movable equipment not tied to a fixed location.
- (c) goods after changing ownership, which are lost or destroyed before they have crossed the frontier of the exporting country.

Regarding point (a) a small addition is made regarding fish that is exported without crossing the Swedish frontier, based on data from the Swedish Agency for Marine and Water Management. Data is collected from the yearly report "Swedish sea-fisheries during year t". Data on "Landings of sea fisheries by coastal district in year t" is used to calculate the addition made in the NA for fish that is exported directly without crossing the Swedish border.

Transportation equipment such as aircrafts and vessels not tied to a fixed location (b) are captured in Specific Movements of Goods in Intrastat and are treated, both in ITGS and NA, based on the of economic ownership and not physically moving between Sweden and other EU countries. Goods that after changing ownership are lost or destroyed before they have crossed the frontier of the exporting country (c) are not captured on a regular basis. For the largest companies this type of information would generally be captured by the Coordination and Corporate Affairs unit and be taken into account. In practice the problems with goods lost or destroyed before crossing the frontier have not been encountered.

In ESA 2010 §3.165 and § 3.166, a number of items to include and exclude are listed to clarify the scope of exports and imports of goods. The items are listed and commented on how they are captured in the ITGS and NA in the tables below.

Table 5.13.8: Treatment of the cases listed in ESA 2010 §3.165 that should be included to ensure the correct scope of exports of goods

a)	non-monetary gold	included in ITGS if goods are passing the border
b)	silver bullion, diamonds and other precious metals and stones included	included in ITGS if passing the border
c)	paper money and coins not in circulation and unissued securities (valued as goods, not at face value)	included in ITGS if passing the border
d)	electricity, gas and watergas	gas is being collected through Specific Movements of Goods and export data regarding electricity comes from Svenska Kraftnät
e)	livestock driven across frontiersnot	not included in ITGS
f)	parcel post	postincluded in Extrastat, included in Intrastat if a parcel is sent from an enterprise but not from a private person
g)	government exports including goods financed by grants and loans	included in ITGS but no information about kind of financing
h)	goods transferred to or from the ownership of a buffer stock organisation	included in ITGS if passing the border
i)	goods delivered by a resident enterprise to its non-resident affiliates, except for goods for processing	included in ITGS if passing the border
j)	goods received by a resident enterprise from its non-resident affiliates, except for goods for processing	included in ITGS if passing the border
k)	smuggled goods or products not reported for taxes like import duties and VAT	not included in ITGS. Included in foreign trade in service statistics as money is exchanged into Swedish currency, then the value of the smuggled goods are caught in the travel item
l)	other unrecorded shipments, such as gifts and those of less than a stated minimum value	not included in ITGS

Table 5.13.9: Treatment of the cases listed in ESA 2010 §3.166 that should be excluded to ensure the correct scope of exports of goods

a)	goods in transit through a country	Goods in transit are not included in the ITGS since the destination country are to be reported but if the goods are declared in Sweden and then sent to another EU-country the exports and imports will be included
b)	goods shipped to or from a country's own embassies, military bases or other enclaves inside the national frontiers of another country	Not included in Intrastat. However, some deliveries to embassies in Sweden are included in the data on imports in Extrastat: - goods that an embassy in Sweden purchase from its corresponding country or other countries through standard shipping are included - goods between the embassy and it's corresponding country through diplomatic mail or couriers is not included. Regarding exported goods in Extrastat, customs declarations are usually not submitted for these transactions. No adjustment are made to the ITGS data in the NA.
c)	transportation equipment and other movable kinds of equipment which leave a country temporarily, without any change of economic ownership, e.g. construction equipment for installation or construction purposes abroad	Goods imported or exported temporarily with the following conditions are not included in the ITGS: - The temporarily movement of the good is not expected to exceed 24 hours - The good is not to be declared as a purchase or sale in the VAT declaration No adjustment are made to the ITGS data in the NA.
d)	equipment and other goods which are sent abroad for processing, maintenance, servicing or repair; this applies also to goods processed to order abroad when a substantial physical change in the goods is involved	Included in ITGS but excluded in the NA (for processing see discussion under section Goods sent abroad for processing)
e)	other goods which leave a country temporarily, being generally returned within a year in their original state and without change of economic ownership	Not included in ITGS
f)	goods on consignment lost or destroyed after crossing a frontier before change of ownership occurs	Included in ITGS, no source to exclude in the NA

5.14 Exports of Services

The primary data source is the International Trade in services survey (ITSS) which is published through the Balance of Payments (BoP) current external balance and as standalone statistics at a more detailed level. The former is harmonized with the National Accounts (NA), while the standalone ITSS publication may differ from BoP and NA. Reconciliations are made quarterly between BoP and NA. However, there are some minor methodological differences exist, such as BoP and NA having different models for goods sent abroad for processing see section 2.3 for more details. The table below is an excerpt from the process table showing the distribution of data by different sources of origin. Moreover, table shows distribution between intra-EU and extra-EU exports of services.

Table 5.14.1 Excerpt from Process Tables – Exports of services, SEK million, 2021

		Exports services	
Basis for NA Figures	Surveys & Censuses	719 769	
	Administrative Records	0	
	Combined Data	0	
	Extrapolation and Models	Benchmark extrapolations	0
		Commodity Flow Model	0
		CFC(PIM)	0
		Dwellings - stratification method	0
		FISIM	10 498
		Insurance	3 997
		Other E&M	8 351
	Total Extrap+Models	22 846	
	Other	0	
	Total (sources)	742 615	
Adjustments	Data validation	7 243	
	Conceptual	Allocation of FISIM	0
		Allocation of insurance	0
		Other conceptual	-4 813
		Total conceptual	-4 813
	Exhaustiveness	N1	0
		N2	0
		N3	0
		N4	0
		N5	0
		N6	0
		N7	0
	Total exhaustiveness	0	
Balancing	2 003		
Total (adjustments)	4 433		
Final estimate	747 048		
Intra-EU	265 307		
Extra-EU	481 741		

5.14.1 Surveys and censuses

5.14.1.1 Trade in Service survey

The national account uses the estimates obtained from the trade in services survey. The survey is done by Statistics Sweden on assignment from the central bank. The survey is the basis for the Balance of Payments Statistics and published quarterly.

The statistics is collected according to Balance of payment manual 6 (BPM 6) on close to 50 different types of services (EBOPS). Almost all information is available by country breakdown from 2012 and onwards and this data is used for the distribution of the total population by intra and extra EU-countries. A correspondence table between EBOPS and CPA is used to get products according to CPA in national accounts.

5.14.1.2 Time of recording

According to ESA the time of recording should be when the services are rendered which is also the time when the services are produced. In the ITSS it is stated that transactions regarding services are to be reported in the quarter when the services were supplied and services continuing over several quarters, such as construction services, insurance services and charges for the use of intellectual property, are reported continuously if they are supplied. Transactions regarding rights, such as R&D, are to be reported in the quarter the change of ownership takes place. Respondents who report credits or delayed payments relating to previous periods are requested to correct their previous reports.

5.14.2 Other E&M

A transport company with multinational ownership is excluded from the data from the current external balance of services since only the Swedish part of the export is to be captured. It is replaced by model-based export data with help from the unit Coordination and Corporate Affairs, who keeps special records of the large Swedish companies.

The model to align freight services and insurances to a FOB valuation of exports and imports of goods, from a valuation of invoice values, are also recorded under Other E&M. The ITSS are responsible for this model to serve both NA and BoP.

5.14.3 Data validation

Data validation mainly refers to foreign branches and travel tour packages. Adjustments are made to exclude exports and imports for a specific branch related to a non-domestic enterprise. It refers to transactions that should not be part of the Swedish economy but are included in the trade in service statistics.

In Balance of payments exports of travel tour packages are recorded net, which is not consistent with ESA. In the national accounts these transactions should be recorded gross, and adjustments are made to the source data to comply with the manual. The adjustments above are made directly in services survey (ITSS).

An Adjustments has been made to exports and imports from 2011 and onwards to take into account the congestion income that is generated in the integrated EU market for electricity has previously only partially been included in the national accounts. In the trade in goods statistics both exports and imports are valued at spot prices for the Swedish market. The adjustments made is to include the congestion income generated for exports of electricity as a transmission service (P.62, CPA D.35). The value of the imports of the good have been lowered to reflect the prices of the selling market and imports of services (P.72, CPA D.35) have been added to include the congestion income generated from imports of electricity.

Table 5.14.2 Impact for congestion income adjustment 2021, million SEK

Product group	SEK million
D35	3551

Another adjustment has been made to a large audiovisual services company due to a reporting error. Furthermore, an adjustment is made for income from the lease of equipment⁵⁶. A model is used to calculate the amounts from the lease, which are deducted from exports and instead recorded as transfers and transactions in financial assets and liabilities. The lease period is long and will continue for a few more years.

5.14.4 Other conceptual adjustments

Conceptual adjustments are made to the ITSS data for the items listed in the table below.

⁵⁶ More information cannot be provided for confidentiality reasons.

Table 5.14.3 Other conceptual adjustments, SEK million, 2021

Components	SEK million
Repairs	3255
Reclassification	4794
Goods for processing	-2914
VAT adjustment	-9948
Total	-4813

Treatment of repairs

Data from international trade in services statistics are used for recording of repairs. The repairs are recorded as export of services for the relevant product.

Reclassification

Other conceptual adjustments essentially consist of certain CN numbers in ITGS that are treated as services in NA. The following items are reclassified:

Code	Product group	SEK million
J581	Publishing services of books, periodicals and other publishing services	2380
J582	Software publishing services	21
J591	Motion picture, video and television programme services	1694
J592	Sound recording and music publishing services	79
M7111	Architectural services	12
R90	Creative, arts and entertainment services	416
R91	Library, archive, museum and other cultural services	192
Total		4794

Exports reclassified from goods to services are already excluded in the initial stage of estimation of exports concerning goods meaning there is no corresponding deduction recorded under conceptual adjustments in process tables. Similarly, exports reclassified from services to goods are already excluded in the initial stage of NA-compilations of exports concerning services.

Goods sent abroad for processing

In case of good sent abroad for processing, the fee that the processor receives from the principal is registered as a service. The principal pays the processor a fee for the services provided. The approach is to make adjustments so that processing services are correctly recorded. The exports of processing service are based on data on output of processing services according to the Statistics Production of commodities and industrial services (Industrins varuproduktion, IVP). For details see section 5.13.7

5.14.5 Balancing

Product adjustments are made yearly as a part of the reconciliation process to balance the supply and use side. These adjustments are caused by product balancing and differ from time to time depending on where the inconsistencies occur. See section 6.1 for details.

5.14.6 Steps taken to ensure the correct scope of exports of services

In ESA 2010 § 3.173, a-i, a few items are listed to ensure the correct scope of exports of services and their treatment is described below. Software services, construction services and the treatment of OSS, covered in other parts of ESA, are also commented in this section.

5.14.6.1 Transport services aligned to a FOB valuation of goods

Exports and imports of freight services are collected at invoice values in the ITSS, i.e freight services that are separately invoiced and not as part of a goods value are recorded as transports. Adjustments must be made to align exports and imports of transport services at invoice values to exports and imports of goods valued FOB at the total aggregated level (see chapter 5.13, table 5.13.3).

The items for adjusting transport services are calculated at the ITSS and the basis for the calculation is a separate survey on Intrastat trade. In the survey information on the value of transports and insurances included in the goods value in the Intrastat trade was collected by partner country. This information is

used to adjust transport services both for Intra-stat and Extra-stat trade. For the Extra-stat trade information of type of transport terms are also input to the model.

5.14.5.2 Transportation of goods and passengers on the territory on behalf of non-residents

Transportation of goods by residents on behalf of non-residents which does not involve imports or exports of the goods (e.g. the transport of goods that do not leave the country as exports or the transport of goods outside the domestic territory) are included as transport services in the ITSS and NA. Passenger transportation on behalf of non-residents by resident carriers are also included.

5.14.5.3 Installation of equipment abroad when a project is of limited duration by its nature

This is gathered in the ITSS survey, and the data is used in the compilation of the national accounts. This includes both installation and construction that has a limited duration.

5.14.5.4 FISIM

Financial services provided by residents to non-residents including both the explicit and implicit service charge, like FISIM. This is discussed in more detail in the separate section about FISIM, see section 3.17.

5.14.5.5 Insurance and pension services

Exports of insurance services and pensions is based on the Balance of payments data which is calculated by International Trade in Services statistics. Allocation of insurance by type (life, non-life, reinsurance) and pensions to non-residents and other direct insurance (this includes among others fire insurance and other property insurance, travel insurance) is done by using Balance of payments data and remaining amount added to intermediate consumption.

Exports of insurance services are then calculated as premiums earned minus claims for all categories of insurances. The exports are added to the output of domestic insurance services to residents to get total output (see section 3.17.2).

5.14.5.6 Expenditure by non-resident tourists and business travellers

The expenditure is classified as services. Information regarding expenditure by non-resident is gathered via notes, checks and card transactions from banks, exchange offices and card companies. These are not fully divided into component products. However, in the tourism satellite account a breakdown is provided on tourism expenditures. The data is collected in the following way:

- from banks - covering Swedish notes and checks sold to the public and Swedish notes sold to banks abroad.
- from exchange offices - covering Swedish notes sold to or bought by the public.
- some travel related services that are invoiced by travel agencies are collected through the ITSS-survey.
- transactions made with credit cards are collected from the card companies.

5.14.5.7 Health and education services

Expenditure by non-residents on health and education services provided by residents; this includes the provision of these services on the domestic territory as well as abroad. The data from ITSS separates these products from the aggregated item for expenditure by non-residents abroad.

5.14.5.8 Services of owner-occupied holidays homes

The costs that arise for non-residents for owning a holiday home in Sweden, like electricity and water are bound to be covered in the item non-residents consumption on the territory since this item is based on credit card information etc. No separate adjustment in the export of services is therefore made for this item. This is discussed in chapter eight (see section 8.4).

5.14.5.9 Royalties and license fees

Royalties and license fees, receipts of which are associated with the authorized use of intellectual property rights, such as patents, copyrights, trademarks, industrial processes, franchises, etc., and with the use through licensing agreements of produced originals or prototypes, such as manuscripts, paintings, etc. paid by non-residents to resident units are covered in the data from the ITSS.

The principle for the economic ownership of the underlying intellectual property assets, e.g. patent, are based on the legal ownership. No adjustments are made to attribute the ownership to the economic owner (main user) of the asset in case this does not align with the legal owner.

5.14.5.10 Software

Regarding the GNI Expert Group recommendations on measurement of GFCF in software (GNIG 026A), the software content of the relevant CN codes is not separately identified in the foreign trade statistics. The exports of software goods are being valued in full and not only of the value of the product. The data is gathered according to the BPM6 manual, and the transactions are identified and categorised accordingly. To identify any payments related to software in the data on computer services, royalties and licence fees, instructions are specifically stated to respondents.

5.14.5.11 Construction services

For construction services abroad exports refers to services sold by a Swedish institutional unit active abroad to a counterpart resident in the compiling economy.

To follow the criteria for residency, ESA 2.09 the instructions in the International Trade in Services Statistics survey clarifies for the reporting enterprises that exports and imports of construction services only apply for activities that lasts less than one year. Larger projects that last longer than a year are generally managed by affiliate abroad.

5.14.5.12 Cross-border services provided under the One-Stop-Shop (OSS) Scheme

Cross-border services provided under the OSS would generally be included in the non-residents' consumption in Sweden and these transactions are mainly based on credit card data. Trading of the services under OSS as well as distance trading within the EU essentially take place by the seller charging the buyer for value-added tax in his/hers home country. This value-added tax (VAT) has excluded in the non-residents' consumption in Sweden and Swedish residents' consumption abroad. In the benchmark revision 2024 adjustments were made in NA as well as ITSS and BOP, to exclude this VAT using an estimation method where the calculation is based on data from ITSS and information on OSS-categories. The adjustment made for 2021 was, – 9948 SEK million (see table 5.14.3).

5.15 Imports of goods

The main source for the estimates in national accounts is international trade in goods statistics (ITGS). ITGS consists of Intrastat and Extrastat, where information by country is collected. Other data sources used do not have that information. Hence to divide the total export of goods data into intra EU and Extra EU, the shares from Extrastat and Intrastat are used. reconciliations are made regularly between BoP and NA. However, there are some minor methodological differences exist, such as BoP and NA having different models for goods sent abroad for processing. The table below shows the imports divided into intra-EU and extra-EU.

Table 5.15.1: Intra-EU and extra-EU imports of goods, SEK million, 2021

Import of goods	Intra EU	Extra EU
1 595 037	1 083 430	511 607

Table 5.15.2 shows the sources and adjustments of import of goods in the Swedish national accounts.

Table 5.15.2: Excerpt from Process Tables – Imports of goods, SEK million, 2021

		Imports goods	
Basis for NA	Surveys & Censuses	1 077 034	
Figures	Administrative Records	508 587	
	Combined Data	0	
	Extrapolation and Models	Benchmark extrapolations	0
		Commodity Flow Model	0
		CFC(PIM)	0
		Dwellings - stratification method	0
		FISIM	0
		Insurance	0
		Other E&M	-35 023
	Total Extrap+Models	-35 023	
	Other	0	
	Total (sources)	1 550 598	
	Adjustments	Data validation	10 451
Conceptual		Allocation of FISIM	0
		Allocation of insurance	0
		Other conceptual	28 961
		Total conceptual	28 961
Exhaustiveness		N1	0
		N2	0
		N3	0
		N4	0
		N5	0
		N6	0
		N7	0
Total exhaustiveness		0	
Balancing	5 027		
Total (adjustments)	44 439		
Final estimate		1 595 037	

5.15.1 Surveys, censuses and administrative records

The main source is international trade in goods statistics (ITGS). ITGS consists of Intrastat and Extrastat. Extrastat is a census of total record from Swedish Customs and Intrastat is a survey processed at Statistics Sweden. The extra-EU trade data is obtained from the customs office on monthly basis. For the extra-EU trade, non-response is not a significant issue (practically non-existent except for criminal movements, i.e. smuggling). Intrastat is a census with cut-off value based on the value of arrivals/dispatches from/to other EU countries. Data are collected from all enterprises with total exports of goods to other EU countries to a minimum value of SEK 4 500 000 or imports of goods from other EU countries to a minimum value of SEK 9 000 000. According to the EU legislation, the survey must cover at least 97 percent of the dispatch value and 93 percent of the arrival value. The surveyed population is determined using the VAT Register of the Swedish Tax Agency. During 2021, approximately 12 000 companies were obliged to provide information to Intrastat. For the intra-EU trade, the non-response in terms of value is normally a few percent whereas non-response expressed in number of non-respondents is around 8 or 9 percent at the very first dissemination round. Under-coverage and non-response are continuously adjusted for by supplementing data from EU VAT declarations and historical Intrastat data (see section 10.3 on international trade in goods statistics).

Data for both Extrastat and Intrastat are collected according to the Combined Nomenclature (CN) and linked to the product classification applied in the national accounts' product accounts.

ITGS is generally collecting data regarding goods crossing the border while the NA is to record exports of goods at change of economic ownership irrespective of corresponding physical movements of goods across borders, see the section on Steps taken to record exports on a change of ownership basis.

5.15.2 Other Extrapolations and models (other E&M)

According to ESA 2010 imports and exports of goods are to be valued free on board at the border of the exporting country (FOB) at a global level. For the individual product groups imports of goods should be valued at the cost-insurance-freight (CIF) price at the border of the importing country.

In the Swedish NA both imports and exports of goods are valued at invoice values at the level of products. A re-valuation to FOB/FOB valuation are made at the global level.

Theoretically a valuation of goods and transport services at invoice value give the same net exports as a FOB/FOB valuation only the division between goods and services of the balance is affected. In practice this is not the case since the source data are compiled at different valuations – Extrastat at statistical values, i.e. imports of goods are valued at cost, freight, insurance (cif) and Intrastat as well as Trade in Service Statistics at invoice values. In table 5.15.3 the adjustment made to the invoice valuation in NA to align to a FOB valuation at a global level are show.

The primary reason to use a valuation in invoice values in the supply and use tables is that this is consistent with the valuation of production, intermediate consumption and-final uses, since these transactions also are valued including freights and insurance if these are not invoiced separately.

The table 5.15.3 shows the difference between FOB values and Invoice values that are adjusted for in NA to get to a FOB valuation for total exports.

Table 5.15.3 Difference between FOB-values and invoice values for imports of goods and freight services, SEK million, 2021

Statistical values	Code	2021
Imports of goods	P7	1 606 571
Adjustments to get freight services aligned to FOB-valuation of imports	P72	18 496
FOB/FOB valuation imports of goods	P6	1 625 067
Invoice values	Code	2021
Imports of goods	P7	1 591 746
Difference FOB/FOB values - Invoice values*	P7	33 321

Also categorized under 5.15.2 *Other E&M* is adjustments made for a transport company regarding fuel and repairs that is bought abroad. The data are received from the company and are processed by the Coordination and Corporate Affairs unit, who has a special responsibility for large companies. This data is not included in ITGS since there is no cross-border flows.

5.15.3 Data validation

To cover for purchases of fuel by Swedish vessels and supplies abroad an addition is made with data from ITGS.

Product adjustments are made yearly as a part of the reconciliation process to balance the supply and use side. These adjustments are included in *Data validation* and differ from time to time depending on where the inconsistencies occur.

5.15.4 Other conceptual adjustments

Conceptual adjustments are made to the ITGS data for the items listed in the table below.

Table 5.15.4 Other conceptual adjustments, SEK million, 2021

Components		SEK million
ITGS statistical value		1 606 571
Conceptual	Company specific adjustments	12 793
	Reclassification	20 292
	VAT adjustments	-4 124
	<i>Total Conceptual adjustments</i>	<i>28 961</i>
Total ITGS + Conceptual		1 635 532

Reclassification of products

Some products that are captured in international trade in services statistics are treated as goods in the NA and are moved from services to goods. The products are shown in the table below. Some CN numbers are recorded on this basis as imports of services, see section 5.16.

Imports reclassified from services to goods are already excluded in the initial stage of estimation of imports concerning services meaning there is no corresponding deduction recorded under conceptual adjustments in process tables. Similarly, imports reclassified from goods to services are already excluded in the initial stage of NA-compilations of imports concerning goods.

Table 5.15.5 Products that are registered as goods in NA but services in the Trade in service statistics, SEK million, 2021

Code	Product	SEK million
A016A	Agricultural and animal husbandry services (except veterinary services)	363
B09	Mining support services	32
C108A	Homogenized food preparations and dietetic food and other food products n.e.c.	1938
C1092	Prepared pet foods	430
C1105	Beer	430
C14	Wearing apparel	4091
C261	Electronic components and boards	2153
C262	Computers and peripheral equipment	863
C264	Consumer electronics	2583
C291X	Used motor vehicles	300
C2932	Other parts and accessories for motor vehicles	430
C329	Manufactured goods n.e.c.	4306
E382	Services treatment and disposal services	217
M7312	Media representation services	2156
	Total	20292

Congestion income adjustment

An Adjustments has been made to imports of goods to take into account the congestion income. The value of the imports of the good have been lowered to reflect the prices of the selling market (P.71, CPA D.35). See detail in section 5.14.3.

5.15.5 Balancing

This refers to adjustments made in the automated balancing process. See section 6.1 for details.

5.15.6 Confrontation of data

Sweden conducts so called Reconciliation Rounds initiated by Eurostat on a regular basis (2009, 2011, 2013 and 2015/2016). Eurostat compiles and supplies data with the largest asymmetries to the Member States and MS chooses which CN8-codes and partner countries they wish to investigate. There have also been a few bilateral studies with Denmark and Finland throughout the year. Comparisons to VAT is also performed.

5.15.7 Steps taken to record exports on a change of ownership basis

The ITGS is collecting data regarding goods crossing the border while the NA is to record exports of goods at change of economic ownership irrespective of corresponding physical movements of goods across borders.

Goods sent abroad for processing

Goods sent abroad for processing must be removed from the international trade in goods in the national accounts, since there is no change of ownership. And the fee that the processor receives from the principal has to be registered as a service. For details see section 5.13.7.

Non-resident VAT-traders

The so-called non-resident VAT traders, non-resident units with a VAT-number in Sweden, are separately identified in the ITGS through their organisational identification number. However, these units and their transactions are included in the ITGS and in NA.

Factoryless goods production

There are companies with complete factoryless goods production in the Swedish economy, but they are not categorized separately in the statistics. Their transactions are recorded as merchanting.

3.15.8 Other steps taken to ensure the correct scope of imports of goods

In ESA 2010 § 3.163 - 3.164 other aspects of exports and imports of goods with respect to border crossing, than those mentioned above in this section.

According to ESA 2010 § 3.163 a change of economic ownership should be recorded whenever goods are delivered between affiliated enterprises deliveries between affiliated enterprises (branch or subsidiary, or foreign affiliate) if the unit receiving the goods assumes responsibility for making the decisions about the levels of supply and prices at which their output is delivered for the market. The adjustments made to ITGS in NA are the cases discussed under the section on Steps taken to record exports on a change of ownership basis.

The following items for exports and imports of goods are separately mentioned in ESA 2010 § 3.164:

- (a) goods produced by resident units operating in international waters sold directly to non-residents in foreign countries.
- (b) transportation equipment or other movable equipment not tied to a fixed location.
- (c) goods after changing ownership, which are lost or destroyed before they have crossed the frontier of the exporting country.

Regarding point (a) a small addition is made regarding procurement of fuel by Swedish vessels, further described below under Data validation. Regarding goods for processing an adjustment is made, separately commented below.

Transportation equipment such as aircrafts and vessels not tied to a fixed location (b) are captured in Specific Movements of Goods in Intrastat and are treated, both in ITGS and NA, based on the of economic ownership and not physically moving between Sweden and other EU countries. Goods that after changing ownership are lost or destroyed before they have crossed the frontier of the exporting country (c) are not captured on a regular basis. For the largest companies this type of information would generally be captured by the Coordination and Corporate Affairs unit and be taken into account. In practice the problems with goods lost or destroyed before crossing the frontier have not been encountered.

Goods that after changing ownership are lost or destroyed before they have crossed the frontier of the exporting country are not captured on a regular basis. For the largest companies this type of information would generally be captured by the Coordination and Corporate Affairs unit corrections concerning the larger companies the information would be considered.

Deliveries between affiliated enterprises are captured in the ITGS irrespective of whether there has been a change in the economic ownership or not, based on when the goods are crossing the frontier.

To follow the change of ownership principle, adjustments are made for goods sent abroad for processing.

In ESA 2010 §3.165 and § 3.166 several items to include and exclude are listed to clarify the scope of exports and imports of goods. The items are listed and commented on how they are captured in the tables below.

Table 5.15.7: Treatment of the cases listed in ESA 2010 §3.165 that should be included to ensure the correct scope of imports of goods

3.165	a)	non-monetary gold	included in ITGS if passing the frontier
	b)	silver bullion, diamonds and other precious metals and stones included	included in ITGS if passing the frontier
	c)	paper money and coins not in circulation and unissued securities (valued as goods, not at face value)	included in ITGS if passing the frontier
	d)	electricity, gas and watergas	gas is being collected through Specific Movements of Goods and export data regarding electricity comes from Svenska Kraftnät
	e)	livestock driven across frontiersnot	not included in ITGS
	f)	parcel post	postincluded in Extrastat, included in Intrastat if a parcel is sent from an enterprise but not from a private person
	g)	government exports including goods financed by grants and loans	included in ITGS but no information about kind of financing
	h)	goods transferred to or from the ownership of a buffer stock organisation	included in ITGS if passing the frontier
	i)	goods delivered by a resident enterprise to its non-resident affiliates, except for goods for processing	included in ITGS if passing the frontier
	j)	goods received by a resident enterprise from its non-resident affiliates, except for goods for processing	included in ITGS if passing the frontier
	k)	smuggled goods or products not reported for taxes like import duties and VAT	not included in ITGS. Included in foreign trade in service statistics as money is exchanged into Swedish currency, then the value of the smuggled goods are caught in the travel item
	l)	other unrecorded shipments, such as gifts and those of less than a stated minimum value	not included in ITGS

Table 5.15.8: Treatment of the cases listed in ESA 2010 §3.166 that should be excluded to ensure the correct scope of imports of goods

3.166	a)	goods in transit through a country	Goods in transit should not be included since the destination country are to be reported but if the goods are declared in Sweden and then sent to another EU-country the exports and imports will be included
	b)	goods shipped to or from a country's own embassies, military bases or other enclaves inside the national frontiers of another country	Not included in Intrastat. However, some deliveries to embassies in Sweden are included in the data on imports in Extrastat: - goods that an embassy in Sweden purchase from its corresponding country or other countries through standard shipping are included - goods between the embassy and it's corresponding country through diplomatic mail or couriers is not included. Regarding exported goods in Extrastat, customs declarations are usually not submitted for these transactions. No adjustment are made to the ITGS data in the NA.
	c)	transportation equipment and other movable kinds of equipment which leave a country temporarily, without any change of economic ownership, e.g. construction equipment for installation or construction purposes abroad	Goods imported or exported temporarily with the following conditions are not included in the ITGS: - The temporarily movement of the good is not expected to exceed 24 hours - The good is not to be declared as a purchase or sale in the VAT declaration No adjustment are made to the ITGS data in the NA
	d)	equipment and other goods which are sent abroad for processing, maintenance, servicing or repair; this applies also to goods processed to order abroad when a substantial physical change in the goods is involved	Included in ITGS but excluded in the NA (for processing see discussion under section Goods sent abroad for processing)
	e)	other goods which leave a country temporarily, being generally returned within a year in their original state and without change of economic ownership	Not included in ITGS
	f)	goods on consignment lost or destroyed after crossing a frontier before change of ownership occurs	Included in ITGS, no source to exclude in the NA

5.16 Imports of Services

The primary data source is the International Trade in services survey (ITSS) which is published through the Balance of Payments (BoP) current external balance and as standalone statistics at a more detailed level. The former is harmonized with the National Accounts (NA), while the standalone ITSS publication may differ from BoP and NA. Reconciliations are made quarterly between BoP and NA. However, there are some minor methodological differences exist, such as BoP and NA having different models for goods sent abroad for processing see section 2.3 for more details. The table below is an excerpt from the process table showing the distribution of data by different sources of origin. Moreover, table shows distribution between intra-EU and extra-EU imports of services.

Table 5.16.1 Excerpt from Process Tables – Imports of services, SEK million, 2021

		Imports services	
Basis for NA Figures	Surveys & Censuses	723 074	
	Administrative Records	0	
	Combined Data	0	
	Extrapolation and Models	Benchmark extrapolations	0
		Commodity Flow Model	0
		CFC(PIM)	0
		Dwellings - stratification method	0
		FISIM	7 221
		Insurance	2 308
		Other E&M	21 197
	Total Extrap+Models	30 726	
Other	0		
Total (sources)	753 800		
Adjustments	Data validation	-4 116	
	Conceptual	Allocation of FISIM	0
		Allocation of insurance	0
		Other conceptual	22 459
		Total conceptual	22 459
	Exhaustiveness	N1	0
		N2	0
		N3	0
		N4	0
		N5	0
		N6	0
N7		0	
Total exhaustiveness	0		
Balancing	-3 628		
Total (adjustments)	14 715		
Final estimate	768 515		
Intra-EU	413 744		
Extra-EU	354 771		

5.16.1 Surveys and censuses

5.16.1.1 Trade in Service survey

The national account uses the estimates obtained from the trade in services survey. The survey is done by Statistics Sweden on assignment from the central bank. The survey is the basis for the Balance of Payments Statistics and is published quarterly through the current external balance. For more information in this regard, see section 5.14 above about exports of services.

5.16.1.2 Time of recording

According to ESA the time of recording should be when the services are rendered which is also the time when the services are produced. For more information in this regard, see section 5.14.1 for more details.

5.16.2 Other E&M

A transport company with multinational ownership is excluded from the data from the current external balance of services since only the Swedish part of the import is to be captured. It is replaced by a model agreed on by the involved countries and based on data reported directly from the company. For more details see section 5.14.2.

Data on imports of port and navigation services are calculated based on statistics covering ships entering and leaving ports etc. The source of this is the current external balance statistics.

5.16.3 Data validation

Adjustment is made to exclude exports and imports for a specific branch related to a non-domestic enterprise. It refers to transactions that should not be part of the Swedish economy but are included in the trade in service statistics.

An adjustment is made to the imports because of fees which Swedes pay to study abroad for less than a year. This is counted as Swedish household consumption and imports. The fee is a Swedish purchase of education. Data has collected from CSN (Swedish Board of Students Finance).

Airlines with branches in Sweden have for a long time reported their sales of airline tickets to Swedish customers as exports, which they have also done in the VAT return. However, the actual production of the air travel takes place in the foreign parent companies, which is why a marginal export of the sales service itself should be attributed to the Swedish branches. In addition, a large part of sales goes to foreign travellers. The model corrections themselves are based on the reported export data of air transport passengers being subtracted with the export transactions that each branch has against foreign cards. What then remains is what is sold to Swedish customers, and this is thus reclassified as import. The calculation is made based on production information, VAT and LAPS (Survey wage sums, employer contributions and preliminary A-tax).

These adjustments are not made directly to national accounts, but these come with trade in services survey (ITSS).

An adjustment has been made to imports of services by excluding congestion income that refers to the exporting country (P.72, CPA D.35). See section 5.14.3 for further details.

Table 5.16.2 Impact for congestion income adjustment 2021, million SEK

Product group	SEK million
D35	670

A further adjustment has been made for an aerospace company following an investigation to correct all of their imports of repair services.

5.16.4 Other conceptual adjustments

Conceptual adjustments are made to the ITSS data for the items listed in the table below.

Table 5.16.3 Other conceptual adjustments, SEK million, 2021

Components	SEK million
Repairs	11539
Reclassification	6125
Goods for processing	6237
VAT adjustment	-1442
Total	22459

Treatment of repairs

Data from international trade in services statistics are used for recording of repairs. The recording is changed to exports and imports of services on the relevant product.

Reclassification

Other conceptual adjustments consist of certain CN numbers in ITGS that are treated as services in NA. The following items are reclassified:

Product group	SEK million
Publishing services of books, periodicals and other publishing services	3594
Software publishing services	50
Motion picture, video and television programme services	1637
Sound recording and music publishing services	78
Architectural services	4
Photographic services	13
Creative, arts and entertainment services	539
Library, archive, museum and other cultural services	180
	6095

Imports reclassified from goods to services are already excluded in the initial stage of estimation of imports concerning goods meaning there is no corresponding deduction recorded under conceptual adjustments in process tables. Similarly, imports reclassified from services to goods are already excluded in the initial stage of NA-compilations of imports concerning services.

Goods sent abroad for processing

In case of good sent abroad for processing, the fee that the processor receives from the principal is registered as a service. The principal pays the processor a fee for the services provided. The approach is to make adjustments so that processing services are correctly recorded. For details see section 5.13.7

5.16.5 Balancing

Product adjustments are made yearly as a part of the reconciliation process to balance the supply and use side. These adjustments are caused by product balancing and differ from time to time depending on where the inconsistencies occur. See section 6.1 for details.

5.16.6 Steps taken to ensure the correct scope of Imports of services

In ESA 2010 § 3.173, a-i, a few items are listed to ensure the correct scope of imports of services and their treatment is described below. Software services, construction services and the treatment of OSS, covered in other parts of ESA, are also commented in this section.

5.16.6.1 Transport services aligned to a FOB valuation of goods

Exports and imports of freight services are collected at invoice values in the ITSS, i.e. freight services that are separately invoiced and not as part of a goods value are recorded as transports. Adjustments must be made to align exports and imports of transport services at invoice values to exports and imports of goods valued FOB at the total aggregated level (see chapter 5.15, table 5.15.3)

Transportation of goods by residents on behalf of non-residents which does not involve imports or exports of the goods (e.g. the transport of goods that do not leave the country as exports or the transport of goods outside the domestic territory) are included as transport services in the ITSS and NA. Passenger transportation on behalf of non-residents by resident carriers are also included.

5.16.6.2 Transportation of imported goods by a non-resident carrier

Transportation of exported goods up to the frontier of the exporting country when provided by a non-resident carrier to offset the transportation value included in the FOB-value of the exported goods.

- 1) from the frontier of the exporting country as a separate transportation service when imported goods are valued FOB
- 2) from the frontier of the importing country as a separate transportation service when imported goods are valued CIF (in this case the value of the transportation service between the frontiers of the exporting and the importing country is already included in the CIF-value of the good)

Included as transport services in the ITSS and NA if separately invoiced otherwise in the goods value in the trade of goods statistics. International or national passenger transportation on behalf of residents by non-resident carriers are also included.

5.16.6.3 Installation of equipment abroad when a project is of limited duration by its nature

This is gathered in the ITSS survey, and the data is used in the compilation of the national accounts. This includes both installation and building that has a limited duration.

5.16.6.4 Services of owner-occupied holiday homes

This is discussed in section 8.4.

5.16.6.5 FISIM

Financial services provided by residents to non-residents including both the explicit and implicit service charge, like FISIM. This is discussed in more detail in the separate section about FISIM, see section 3.17.

5.16.6.6 Insurance and pension services

Imports of insurance services and pensions is based on the Balance of payments data which is calculated by International Trade in Services statistics. Allocation of insurance by type (life, non-life, reinsurance) and pensions to non-residents and other direct insurance (this includes among others fire insurance and other property insurance, travel insurance) is done by using Balance of payments data and remaining amount added to intermediate consumption. (see section 3.17.2).

Imports of insurance services are then calculated as premiums minus claims for all categories of insurance. Imports of reinsurance are compiled using the data source of resident reinsurers ceding reinsurance services from abroad. Numerical details can see in table 3.17.15.

Regarding imports of insurance and pension services for the non-insurance corporations the services based on the premiums paid and data from Insurance Sweden to derive the share of premiums paid that are services. The table below show the shares of premiums that are recorded as services and transfers respectively, by type of insurance for the year 2021.

Types of Insurance	Precent Services	Percent Transfers
Life insurance	13	87
Non-life insurance	20	80
Reinsurance	24	76

5.16.6.7 Expenditure by residents abroad as tourists and business travellers

Imports in respect of direct purchases abroad by residents cover all purchases of goods and services made by residents while travelling abroad. Information regarding expenditure by residents abroad is gathered via notes, checks and card transactions from banks, exchange offices and card companies. This information is not fully divided into component products.

- from banks - covering Swedish notes and checks sold to and bought by the public and Swedish notes sold to banks abroad.
- from exchange offices - covering Swedish notes sold to and bought by the public.
- some travel related services that are invoiced by travel agencies are collected through the ITSS-survey.
- transactions made with credit cards are collected from the card companies.

The total amount of the above is divided into personal and business travel based on data from the tourist database (TDB), which was lastly released in 2014. Two categories must be distinguished because they require different treatment:

- all business-related expenditure by business travellers is intermediate consumption.
- all other expenditure, whether by business travellers or other travellers, are household final consumption expenditure.

5.16.6.8 Software

Regarding the GNI committee (CPNB/313 and GNIC 015-Rev.1) on software measurement, the software content of the relevant CN codes is not separately identified in the foreign trade statistics. The imports of software goods are being valued in full and not only of the value of the product. The data is gathered according to the BPM6 manual, and the transactions are identified and categorized accordingly. To identify any payments related to software in the data on computer services, royalties and licence fees, instructions are specifically stated to respondents.

5.16.6.9 Construction services

For construction services in Sweden, imports refer to services bought by a Swedish institutional unit active abroad from a counterpart resident in the compiling economy.

The criteria for residency, ESA 2.09, is not explicitly monitored for the construction services. To remedy this the instructions in the International Trade in Services Statistics survey were changed to clarify for the reporting enterprises that exports and imports of construction services only apply for activities that lasts less than one year. The changes were implemented in the survey of the first quarter 2020. Larger projects that last longer than a year and are managed by local site offices abroad are not included in the ITSS survey.

5.16.6.10 Freight services

Imports are valued at invoice pricing. Shifting from statistical values to invoice values result in freight services being included in invoice values. See previous section for more information about this. This entails that Sweden does not follow the manual when it comes to the calculation of transportation as stated in ESA 2010 §§3.174 a-c.

5.16.6.11 Cross-border services provided under the One-Stop-Shop (OSS) Scheme

Non-residents' consumption in Sweden and Swedish residents' consumption abroad are mainly based on credit card data. Distance trading within the EU and trading in services within the EU under OSS essentially take place by the seller charging the buyer for value-added tax in his/hers home country. This value-added tax (VAT) has previously not been excluded in the non-residents' consumption in Sweden and Swedish residents' consumption abroad. Adjustments have now been made to exclude this VAT using an estimation method where the calculation is based on data from ITSS and information on OSS-categories. The adjustment made for 2021 was, – 1442 SEK million (see table 5.16.3).

Chapter 6 The balancing or integration procedure, and validation of the estimates

6.0. Introduction

6.0.1. The mechanisms in place to balance

The annual calculations of GDP from the production side and the expenditure side are carried out using a system of supply and use tables (SUT). The SUT are basic tables that are further processed into symmetric input-output tables. The supply and use tables are produced in both current and constant prices simultaneously, and the constant price calculation is carried out in a consistent price index system, which enables the double indicator method (double deflation method) to be applied.

In the calculation of an annual sequence, all data are calculated in accordance with the sources and methods described. These constitute the basis for the supply and use tables. When the first version of the supply and use tables has been produced at both current and constant prices, the actual analysis work is undertaken and can be divided into two stages where the first step is data validation, which may also include some manual balancing, and the second step where the automatic balancing is processed.

Data validation process: In the data validation step the main task is not to reconcile the balances but to examine and quality-check 425 product groups with the help of supply and use tables. Source data is subject to detailed analysis, which may involve returning to the primary statistics to conduct verification and cross-checking of the material. Further, in the data validation step, the information on price changes and volume changes for the different components of supply and use plays an important role. SUT cover several years, and a time series approach to price and volume changes is often fruitful in order to detect strange occurrences in the estimates.

Gathering information from alternative sources, e.g. from the VAT register or from trade organizations, and comparing them with the results of the SUT is another important aspect of data validation. When the data validation step is finished the residuals between supply and use of individual products could have been reduced, enlarged or unchanged. The data validation step also includes the process to determine which products, if any, have a need to be manually balanced. In the case where products are manually balanced, they are not completely balanced, but large imbalances should be solved. Most often manually balanced products are balances that are known to have problems and investigations have been made or are ongoing.

Balancing procedure: The balancing procedure, after the data validation process, is done at every stage using automatic balancing procedures. This is called the SCM model⁵⁷ and ensures an objective balancing process. The aim of the final automatic balancing procedures is to eliminate the residual of each product group, and thus also the total residual. No manual or macroeconomic adjustments are done as a part of the automatic balancing procedure. The assessment is that this balancing method facilitates an improved analysis of imbalances between supply and demand in the economy. The production approach is assessed to be more exhaustive than the expenditure approach. This is also reflected in the total error estimates underlying the automated balancing process where GDP from the production

⁵⁷ The SCM model originates from the work of Stone et al. (1942) (Stone, R., Champernowne, D.G., Meade, J.E. The Precision of National Income Estimates. The Review of Economic Studies, 1942; 9:111–135). A Swedish application of the adapted SCM model can be found on Xie et al. (2018) (Xie, Y., Lennmalm, A., Lennartsson, D., de Groote, A. Uncertainty and Automatic Balancing of National Accounts with a Swedish Application. Statistical Journal of the IAOS, 2018; 34(2):263–269).

approach have a smaller total error compared to GDP from the expenditure approach, see section 6.1.2.9 for further reading.

6.0.2 Balancing production and expenditure approaches

Looking at the GDP production approach, the levels of balancing are 574 SEK million on output of goods and services and -1494 SEK million on intermediate consumption, resulting in an impact of 2068 SEK million on gross value added (see Table 6.0.1). These figures can be found in the Process Table, in the column “Balancing”.

Table: 6.0.1: Balancing, production approach, SEK million 2021

Production approach	Initial estimate	Balancing	Final estimate
Output (+)	9 860 707	574	9 861 281
Intermediate consumption (-)	5 060 699	-1 494	5 059 205
Taxed on product less Subsidies on products	615 684		615 684
GDP	5 415 692	2 068	5 417 760

For the GDP expenditure the levels of balancing are -823 SEK million on total final consumption expenditure (no balancing is done on General Government final consumption expenditure), -879 SEK million on gross capital formation, -1152 SEK million on exports of goods and services and 1399 SEK million on imports of goods and services. The total impact of balancing on the expenditure approach gross domestic product amounts to -4243 SEK million (see Table 6.0.2).

Table: 6.0.2: Balancing, expenditure approach, SEK million 2021

Expenditure approach	Initial estimate	Balancing	Final estimate
Final consumption expenditure (+)	3 840 398	-823	3 839 575
Gross capital formation (+)	1 370 034	-879	1 369 155
Export (+)	2 573 734	-1 152	2 572 582
Import (-)	2 362 153	1 399	2 363 552
GDP	5 422 013	-4 253	5 417 760

For the levels of balancing for the supply and use side, see Table 6.0.3 below.

Table: 6.0.3: Balancing on the supply side and use side, SEK million 2021

Supply	SEK million	Use	SEK million
Output (+)	574	Intermediate consumption (+)	-1494
Import (+)	1399	Final consumption expenditure (-)	-823
		Gross capital formation (+)	-879
		Export (+)	-1152
Total	1973	Total	-4348

Table 6.0.4 illustrates the balance adjustment made for the production approach, by NACE sections, years 2018-2022. The balance adjustments are consistent with the process tables.

Table: 6.0.4 Balancing adjustments for output and intermediate consumption by industry 2018-2022, SEK million

Year	2018		2019		2020		2021		2022	
	Output	IC	Output	IC	Output	IC	Output	IC	Output	IC
NACE Rev.2 Section										
A (Agriculture, forestry, fishing)	-60	48	109	-88	-174	147	83	-167	352	-492
B (Mining and quarrying)	-18	10	37	-19	-56	33	19	-15	403	-12
C (Manufacturing)	-685	556	1237	-1032	-1881	1593	123	-611	535	-477
D (Electricity, gas, steam, air conditioning)	-61	34	118	-66	-185	108	24	-25	86	-85
E (Water supply, sewerage, waste, remediation)	-27	21	47	-40	-79	66	22	-34	90	-103
F (Construction)	-227	152	418	-290	-686	509	75	-255	305	-35
G (Wholesale and retail trade etc)	-282	151	521	-287	-858	475	-454	-155	394	-276
H (Transportation and storage)	-164	127	299	-233	-436	355	87	-125	326	-396
I (Accommodation and food service)	-60	39	107	-72	-134	105	16	-37	106	-89
J (Information and communication)	-211	135	408	-261	-692	446	102	-245	299	-725
K (Financial and insurance activities)	-79	29	146	-58	-265	107	67	-69	258	-59
L (Real estate activities)	-151	120	279	-224	-471	406	111	648	432	1363
<i>of which imputed rents of owner occupied dwellings</i>		45		-82		154		529		1036
M (Professional, scientific and technical activities)	-178	105	329	-199	-545	331	158	-223	737	-709
N (Administrative and support service activities)	-100	54	179	-103	-247	133	49	-74	262	-59
O (Public administration, defence etc)										
P (Education)	-23	10	41	-18	-68	30	6	-21	49	-26
Q (Human health and social work activities)	-55	20	97	-37	-160	63	26	-34	103	-43
R (Arts, entertainment and recreation)	-24	16	44	-29	-60	43	30	-29	142	-113
S (Other service activities)	-20	9	36	-18	-53	28	29	-23	-4	-79
T (Activities of households as employers etc)	-1		1		-3		1		5	
U (Activities of extraterritorial organisations and bodies)										
Total	-2426	1636	4453	-3074	-7053	4978	574	-1494	4880	-2415
Residual		-4062		7527		-12031		2068		7295

6.0.3 Balancing adjustments to each approach

Table 6.0.5 below shows GDP according to each approach, before and after balancing, along with the size of the balancing adjustments applied to each approach years 2018-2022. There is no visible trend during this five-year period.

Table: 6.0.5 GDP according to each approach before and after balancing, 2018-2022, SEK million

Year	2018	2019	2020	2021	2022
GDP production approach					
Before balancing	4 781 899	5 013 855	5 024 886	5 414 335	5 807 546
Residual	-4 062	7 527	-12 031	3 425	8 869
After balancing	4 777 837	5 021 382	5 012 855	5 417 760	5 816 415
GDP expenditure approach					
Before balancing	4 766 232	5 041 269	4 983 392	5 422 003	5 835 031
Residual	11 605	-19 887	29 463	-4 243	-18 616
After balancing	4 777 837	5 021 382	5 012 855	5 417 760	5 816 415
GDP income approach					
Before balancing	4 777 837	5 021 382	5 012 855	5 417 760	5 816 415
After balancing	4 777 837	5 021 382	5 012 855	5 417 760	5 816 415

6.0.4 Largest balancing adjustments

Table 6.0.6 illustrates which industries, by NACE sections, received the largest balancing adjustments in years 2018-2022, i.e. balancing adjustments on output and intermediate consumption in the GDP production approach. The years 2018-2020 have only been balanced at an aggregated level, therefore there is no product dimension. In the benchmark revision, some quality improvements have been made, see section *Measure of uncertainty* below.

Table 6.0.6: The ten largest balancing adjustments for output and intermediate consumption by industry and product group, 2018-2022, SEK million.

Output				Intermediate consumption		
Year	Industry	Product	Balancing	Industry	Product	Balancing
2018	F41_43		-227	F41_43		152
2018	L68B		-151	C29		112
2018	G46		-148	G46		83
2018	C29		-133	L68B		75
2018	J62		-107	J62		61
2018	G47		-93	C28		53
2018	C28		-76	G47		48
2018	M71		-59	C19		46
2018	K64		-52	H52B		46
2018	D351		-45	L68A		45
2019	D351		91	F41_43		-290
2019	K64		95	C29		-201
2019	M71		109	G46		-158
2019	C28		139	L68B		-142
2019	G47		167	J62		-114
2019	J62		209	C28		-101
2019	C29		232	G47		-89
2019	G46		278	H52B		-83
2019	L68B		279	L68A		-82
2019	F41_43		418	C19		-77
2020	F41_43		-686	F41_43		509
2020	L682A		-471	C29		275
2020	G46B		-452	L68B		252
2020	J62A		-358	G46		251
2020	C291A		-311	J62		186
2020	G46B		-281	G47		158
2020	C281		-206	C28		155
2020	M7112		-183	L68A		154
2020	K64A		-176	H52B		135
2020	D351		-142	M71		107
2021	C25B	C256	-4457	L68B	S952	-3757
2021	C30	C303	-3116	G47	L682A	-2568
2021	J62	J62A	-2205	C25B	C241	-2361
2021	Q86	Q86221	-1802	C21	C2014C	-1909
2021	C33	C331A	1799	C19	B061	-1891
2021	Q87	Q87C	1863	H50	H522200A	1976
2021	A02	A022A	1922	J61	J60	2403
2021	C25B	C259	2308	G47	J62A	2936
2021	L68B	L682A	2565	F41_43	H494A	3415
2021	Q86	Q86A	3899	J63	J592	4560
2022	C21	N774	-3751	D351	B062	-5642
2022	C25B	C256	-3722	C21	C2014C	-4855
2022	N79	N79A	-2730	C25B	C241	-4580
2022	C25B	C259	2665	C24B	B0729	-3961
2022	H50	H50A	2669	L68B	S952	-3601
2022	L68B	L682A	2913	H52B	H494A	3471
2022	Q88	Q88102	2991	G46	H5229	3606
2022	A02	A022A	3444	G47	J62A	4111
2022	N79	N7912	3545	J63	J592	4611
2022	Q86	Q86A	4003	F41_43	H494A	7948

Table 6.0.7 below shows the largest balancing adjustments for the expenditure approach, i.e. final consumption expenditure, gross capital formation, export and import by product groups in years 2021-2022.

Table 6.0.7: 10 largest balancing adjustments, expenditure approach by product group year 2021-2022, SEK million

Year	Final consumption expenditure		Gross capital formation		Export		Import	
	Product	Balancing	Product	Balancing	Product	Balancing	Product	Balancing
2021	P855A	-3343	I68C	-2493	M702	-5840	J62A	-6574
2021	K64B	-3026	C291A	-2202	C192000E	-5629	J592	-3625
2021	Q88101	-2126	C262	-2099	N774	-5558	J611	-2943
2021	C2211	-1567	C283	-1934	C291A	-2429	M73A	-2053
2021	Q86221	1212	C281	-1592	M701	-2397	J60	-1784
2021	C139A	1240	R92	-1539	J582	1825	C2932	1784
2021	S9609	1294	J60	1408	J611	2210	M7312	2177
2021	Q87A	2010	C332	1436	C2932	4437	N774	2757
2021	R931	2878	C282A	1729	J62A	8772	B061	3742
2021	K66	3013	J62A	12497	J631	12943	M702	5083
2022	P855A	-3995	C291A	-4537	C291A	-14141	N774	-6675
2022	J591	-3387	C262	-1973	N7912	-5975	J592	-4420
2022	I55A	-2784	C281	-1938	M701	-3877	J62A	-4383
2022	Q88101	-2616	R92	-1642	H511	-3327	H522200A	-4152
2022	K64B	-2251	C31	-1490	M7112	-3238	J60	-2292
2022	C282A	1310	C283	-1477	J582	3411	H50B	2237
2022	K66	2203	C257	-1453	C2932	3525	R92	2291
2022	Q87A	2559	C251	1657	J62A	3749	M7312	3935
2022	I551	2725	J60	1353	N774	4901	J61A	4850
2022	R931	3296	J62A	14869	J631	20068	B061	5526

6.1 GDP balancing procedure

6.1.1 General description of the balancing mechanism

Two methods of estimating GDP are simultaneously applied in the SUT compilation and balancing process. The production approach to GDP and the expenditure approach to GDP are calculated independently. The income approach to GDP is not in all parts independently calculated, thus the gross operation surplus and mixed income is balance of items from the production approach and sector accounts. The estimates and assessments of uncertainty that are used in the SCM model, as explained in section 6.1.2.9, have resulted in GDP being reconciled relatively more on the use side of GDP than on the production side. The basis for the calculation from the production side is overall considered more reliable than the data used for the calculation from the use side.

Within the supply and use tables conceptually balanced items are treated as fully balanced. To clarify further, conceptually balanced items are not specifically handled within the supply and use tables or in the balancing procedure. Instead, they have already been consistently treated in the calculation process (described in chapters 3 and 5) preceding the balancing procedure. FISIM, non-market output of central bank, own account production of research and development and software, self-supply of agricultural goods, and part of insurance have already been fully balanced within the calculation process, and consequently there is no need to deal with them in the balancing procedure.⁵⁸

The exhaustiveness adjustments are introduced independently at an earlier stage in the compilation process, before the balancing in the supply and use tables has started. For illegal activities pre-balanced data are directly included in the SUT. The same approach is taken with respect to exhaustiveness adjustments, i.e. pre-balanced data is presented in the tables. For further reading about conceptual adjustments, see section 3.4 and for exhaustiveness adjustments, see chapter 7.

General government is considered to have exhaustive statistical sources and is therefore not affected by any kind of balancing. Other taxes on products and subsidies as well as custom duties are not affected by balancing. Further, as there is no feedback loop to the consumption of fixed capital, which is estimated using the perpetual inventory method, the gross fixed capital formation for NPISH is not affected by any kind of balancing.

For some product groups, special calculations of complete balances are carried out with all supply and use within that balance. The figures from these balances are then treated in the system as “known” values and are not affected by balancing adjustments except after special consideration and verification. The reason for such a special treatment of a product group is either the access to very detailed source information on the supply and/or use or that there is a substantial interest for the product group in question. Such special balances concern dwelling services, car benefits, construction service abroad, used motor vehicles, ships and floating structures, wholesale, retail and motor vehicles trade margins, pension funding services, Swedes’ expenditure abroad as well as intra-flows within central government.

The final estimates of GDP are totally independent of the preliminary and semi-definitive estimates published previously.

6.1.2 Supply and use tables in the process of annual national account estimates

GDP and GNI are calculated and compiled in the part of the national accounts system known as the goods and services accounts. The annual calculations are carried out in a system of supply and use tables (SUT). The supply and use tables are used to determine the final level of GDP. The SUT are the basic tables that are further processed into symmetric input-output tables. The annual calculations of GDP also include calculations of employment such as average numbers of employees and hours worked

⁵⁸ Balancing procedures will be reviewed with the aim to introduce restrictions that maintain allocated totals for sectors and transactions

per industry/purpose as well as calculations of wages and salaries. The calculation and balancing is carried out both in a product and industry dimension. The final version of the supply and use tables are delivered to Eurostat shortly after the publication of the annual estimates, which is 14 months earlier than Eurostat demands. The most recent version of the annual accounts for year 2022 was published in May 2024, and the supply and use table was transmitted in September 2024.

The level of detail for products and uses in the Swedish system is as follows:

- 425 product groups (SPIN/CPA)
- 96 industries for market producers and producers for own final use (SPIN/NACE)
- 162 purposes for household consumption expenditures (COICOP)
- 84 uses for government consumption expenditures within the dimensions sector, industries and functions (COFOG)
- 238 uses for gross fixed capital formation, within the dimensions sector, industries and functions
- 3 types of taxes and 1 type of subsidy on products
- 4 types of trade and transport margins

Sources and calculation methods for the basic calculations, i.e. the calculations that precede the data validation and balancing procedure, are described in chapters 3-5.

Calculations derived from source statistics are made according to ESA2010 and are exhaustive and consistent with requirements in the SUT. The calculations are done by national accounts experts in specific fields. Each specialist are responsible for the calculations of a particular group of industries or specific selection of expenditure categories. The specialists are responsible for making adjustments in order to assure estimates to comply with national accounts definitions and for adding estimates with respect to exhaustiveness. The compilation is performed with support from national account senior advisors as well as specialists in specific fields, i.e. exhaustiveness specialist, N1-7, VAT specialist and others. Throughout the process, necessary contacts are also made with source statistics, as well as with other authorities such as Swedish National Financial Management Authority and, The Swedish Tax Agency.

In the process of finalizing the annual national accounts estimates, the supply and use tables are continuously updated and are fully integrated into the entire compilation, data validation and balancing process. The SUT are extremely important tools throughout the process. When analyzing and reconciling the SUT, all available sources in the national accounts system are used, and the source data is subject to detailed analysis. As mentioned above, the compilation and balancing are performed at a level of detail of 425 product groups. Any additional information on changed structures is incorporated and applied. Such new information generally consists of data from intermittent surveys or additional information in SBS. The main sources are as follows.

Industrial consumption of purchased goods: The main purpose of the survey is to give a breakdown of intermediate consumption in industrial enterprises. The survey has a rotating sample so that during a three-year period all the industrial sectors (NACE 05-33) will be surveyed.

Structural business statistics: For intermediate consumption of service enterprises there is an additional breakdown of intermediate consumption every fifth year and thus all service sectors (NACE 45-96 excluding 64-66, 84) are completed within five years.

The annual Economic accounts for Agriculture: Annual breakdown of production by product/service and costs by type of cost for agriculture production and forestry.

Further reading about the above inquiries is available in chapter 10.

6.1.2.1 *The supply side*

In the calculation of a year, firstly all basic calculations are performed exhaustively and according to ESA2010 as described in the previous chapters. The information on product breakdown for the supply side is available on yearly basis. The main sources in compiling *output* are Structural Business Statistic, Production of commodities and industrial services, Economic Accounts for Agriculture and Swedish forest agency. The main sources for the central government sector are the Swedish National Financial Management Authority and Annual Accounts collected for the local government sectors. *Imports of goods* are allocated to products in accordance with the Combined Nomenclature in the primary statistics. Bridge tables link them to the product groups used in the national accounts. *Imports of services* are recorded in the balance of payments statistics according to a certain nomenclature (EBOPS), which is converted to the product groups used in the national accounts. Imports is valued at invoice values, i.e. to be better in line with the use side.

Supply, in the form of production, is calculated and classified by industry and product group, as well as the government and NPISH production and sales. Government production and sales are compiled according to COFOG and product groups. All supply, except for imports, is valued at basic prices. Taxes on products are divided into other taxes on products, value added tax (VAT) and custom duties. Data from government administration, other taxes and subsidies on products as well as customs duties, are exhaustive statistical sources and are validated but not affected during the balancing process. The VAT calculated within the supply and use framework is reconciled with the actual VAT collected by government administration. The theoretical VAT is calculated and updated continuously during the process and is finally reconciled one last time when the supply and use tables have been balanced. For a more detailed description on VAT, see chapter 7.1. Trade margins is divided into wholesale, retail and transport margins. Estimates of trade margins are based on supply-based data. All values are calculated in both current prices and constant prices of the previous year (t-1) using relevant price indices for the calculations of constant prices.

6.1.2.2 *The use side*

In the calculation of a year, firstly all basic calculations are performed exhaustively and according to ESA2010 as described in the previous chapters. All use is valued at purchaser's prices.

Household final consumption expenditure (HFCE) is calculated and classified according to product group and COICOP. Hence several product groups can be included in one COICOP purpose. The main sources for *HFCE* are the Household Consumption Statistics, see section 5.7 for further reading. For around 90 percent of the purposes, the benchmark is set on yearly basis. For the remaining share, the benchmark year is older than 5 years, however some of these have been updated in subsequent annual calculations and the rest will be updated continuously in the future to ensure benchmark set on a yearly basis.

For Government consumption (GFCE) the main sources are the annual accounts of local government and the administrative records of central government as well as the Structural Business Statistics (SBS). *GFCE* is calculated as the output value (i.e. the total cost of production) less payments for non-market output, less own-account capital formation, less market output by non-market producers, plus expenditure on products supplied to households via market producers. For more information, see section 5.9. Government consumption is classified according to purpose (COFOG) and product groups. The information on detailed product breakdowns is, for most product groups, older than 5 years.

For intermediate consumption, the main sources are SBS, industrial consumption of purchased goods, Economic Accounts for Agriculture and data from the Swedish Forest Agency. The main sources for the central government sector are the Swedish National Financial Management Authority and Annual

Accounts collected for the local government sectors. Totals are calculated by industries and purposes (COFOG) at current prices on the basis of primary statistics, as described in chapter 3. For those parts in which data on exact product allocation is not available each year the structure of product allocation from the previous year is used as a starting point. The oldest product breakdown that is in use for market producers is t-5 years and for non-market producers the product breakdown is in most cases older than 5 years.

For gross fixed capital formation, the main sources are the SBS and special compilations of dwellings. The sources for central government sector is the Swedish National Financial Management Authority and for the county councils and primary municipalities total investment expenditure is obtained directly from the investment accounts of the annual accounts. For an exhaustive overview of sources, see chapter 5.10. Totals are calculated by industries and purposes (COFOG) at current prices, on the basis of primary statistics, as described in chapter 5. For those parts in which data on exact product allocation is not available each year, i.e. machinery and equipment, the structure of product allocation from the previous year is used as a starting point.

For *changes in inventories* the main source is the Business Inventories Survey, which is complemented by statistics on energy, forest growth and management etc., as described in chapter 5.11. There is information on inventory types and stockholding industries, but very limited information by product. Allocation to product groups is undertaken under the assumption that inventories of work in progress and finished products (finished goods and goods for resale) consist of products typical for the industry. Product allocation of inventories of materials and supplies is assumed to be proportionate to the structure of intermediate consumption in the industry concerned. In such cases, account is taken of the fact that certain products are not suitable for storage. The exception to this concerns trade inventories, which are allocated in the product dimension using information types of trade turnover by product from other surveys, most notably the SBS and IVP.

Exports of goods are allocated to products in accordance with the Combined Nomenclature in the primary statistics. Bridge tables link them to the product groups used in the national accounts. Exports of services are recorded in the balance of payments statistics according to a certain nomenclature (EBOPS), which is converted to the product groups used in the national accounts. The product breakdown is available on yearly basis. Export is valued at invoice values.

Each use has linked to a trade margin rate and the VAT rate applicable. Taxes on products and subsidies on products are also allocated to use. Trade margins are calculated from the production side and the use side are reconciled against the production of trade margins (see section 3.13.4). Taxes on products and subsidies on products are reconciled with the corresponding income and expenditure of general government.

6.1.2.3 Process of constructing the supply and use tables

In the calculation of an annual sequence, all data are calculated in accordance with the sources and methods described. These constitute the basis for the supply and use tables. All data validations and reconciliations are carried out in the SUT system. The supply and use tables are calculated and balanced at both current and constant prices (t-1) simultaneously.

In order to cover changes in relative prices, all uses are reflat and deflated using a price index for domestic supply derived by product (Inhemsk tillgång, IHT). The price index for domestic supply is derived as follows: output + imports + sales by departments and agencies of government and NPISHs + customs duties and other import taxes – exports. The calculation is performed at both current and constant prices and the price index is derived implicitly. The IHT index does not cover changes in tax and margin rates. After reflat/deflating, therefore, corrections are made for changes in taxes on products and subsidies. Such changes affect use at purchasers' prices and thus mean that the IHT index is implicitly adjusted.

6.1.2.4 Calculation of intermediate consumption and gross fixed capital formation

For those parts in which data on detailed product allocation is not available each year, i.e. intermediate consumption and gross fixed capital formation in machinery and equipment, the structure of product allocation from the previous year is used as a starting point. The SUT are adjusted to the calculated totals according to the statistical sources for intermediate consumption and gross fixed capital formation per industry, sector and COFOG. The difference between the initial estimates in the SUT and the calculated totals per use affects each product proportionally.

6.1.2.5 Validation process for supply and use tables

When the first version of the supply and use tables has been produced at both current and constant prices, the actual analysis/data validation and at a later stage the reconciliation work is undertaken. During the calculation of a definitive year, each product has one person assigned who is responsible for the data validation/balancing procedure of that product. The person is selected based on their competence and expertise in the product/business area. Analysis is done in both current and constant prices simultaneously. If there is a residual between the supply and use, a comparison of the growth rates and price index is done. A comparison of how the supply and use sides have developed during the year is also made. If there are substantial differences between supply and use, a comparison of the different sources for the supply and use side takes place to determine which one of the sources is the more reliable. Information from other sources is collected in order to get more input and broader knowledge. Moreover, at this stage of the process, it is determined which products, if any, should be balanced manually.

In the work National Accounts also make use of the Large Cases Unit (LCU) network of contacts within large enterprises as well as their experience. The national accounts may also examine data from individual enterprises in order to be in a better position to interpret the statistics. During the data validation and balancing process, the national accounts cooperate with other departments at Statistics Sweden, such as foreign trade structural business and price statistics.

The data validation procedure involves examination and quality checking of the estimates from the supply side (production, sales of non-market producers, imports, taxes, subsidies on products) and from the use side (intermediate consumption, HFCE, GFCF, changes in inventories, exports). Investigations are made to establish if there is consistency between different sources, going back to the primary statistics to conduct verification and cross checking of the material. For instance, it is useful to check that exports of a product do not exceed its production, and to detect if some products have very volatile changes etc. As this procedure is made simultaneously in current and constant prices with a time series perspective, we can also identify strange movements in price and volume indices.

Any additional information on changed structures is incorporated and applied. Such new information generally consists of data from intermittent inquiries. An example is the annual inquiry on intermediate consumption by product in the manufacturing industry. This inquiry covers one-third of the industries every year, with industries chosen from year to year on a rotating basis. A similar annual inquiry on intermediate consumption by product in the service industries is conducted within the SBS.

At the early stages of data validation and product reconciliation, residuals between the supply and use sides will appear in various product balances. A few product balances are defined and calculated in such a way that residuals should not arise by definition. If a residual appears in one of these product balances, it indicates an error.

Changes in inventories are entered in conjunction with the product reconciliation. The allocation of changes in inventories to detailed product groups is made in accordance with the product information from the calculations on changes in inventories.

The product data reconciliations include a verification of the calculations and structures contained within the system. Working from the supply side, input and investment structures are adjusted according to the product structure of the supply, unless no other specific information is available.

The adjustments may result in discrepancies between the totals of the system for intermediate consumption and investment industries with respect to the totals originally calculated. Adjustment to bring back the totals for intermediate consumption and GFCF in machinery and equipment to the levels originally calculated is carried out continuously during the entire procedure. The discrepancies are distributed on a proportionate basis.

The practical work is an ongoing process with each of the 425 product groups until the system is completely balanced. Throughout the data validation process and the balancing process, updated versions of supply and use tables are stored when changes are made. This makes it possible to compare the data at different stages of the process. On average, during the years 2018-2022, 67 versions of the supply and use tables were stored each year.

6.1.2.6 Industry analysis

At a relatively early stage in the data validation process, analysis by industry with variables such as output, intermediate consumption and value added at current and constant prices is also performed. Other variables in the generation of income account, compensation of employees and other taxes on production and subsidies are analyzed simultaneously at current prices.

6.1.2.7 Simultaneous balancing of industries and products

Thus, in the analysis, data validation process and reconciliation work, products and industries, supply and use, prices and volumes – in which considerable importance is attributed to time-series aspects – are assessed simultaneously in both current and constant prices.

6.1.2.8 Manual balancing

If there is a major discrepancy between supply and demand and no inaccuracies are found during the data validation process, a decision can be made to manually balance the product. Most often, manually balanced products are those known to have balance problems and in some cases excess of supply (demand) of a product and an excess of demand (supply) in a highly related products are the case. Products that are manually balanced, if any, are not balanced completely, the purpose is that well-founded adjustments on large imbalances should be solved before the automatic balancing process starts.

6.1.2.9 The automatic balancing procedure

The balancing procedure, or balancing process, can be divided into two stages:

- The automatic balancing procedure with a weighted least square approach, the SCM model
- The final, automatic balancing procedure with the RAS method

The SCM model is a two-stage model and the mathematical programming package SAS/OR is used to perform the optimization. The method is transparent, objective, fully replicable and new information can easily be accounted for.

With the SCM reconciliation method, the result is obtained in principle as the solution that calculates all supply, uses and product groups, minimizes the sum of the squared adjustments, each of these divided by an uncertainty number, that is needed for all product groups to be balanced. The minimization is done hierarchically in a couple of steps and under a number of additional conditions.

In the first stage, the reconciliation is done on the main aggregates in the SUT i.e. output, intermediate consumption, consumption expenditure, gross capital formation, import and exports. In the second stage, the reconciliation is done for all the values in the SUT that should be balanced with the restriction that the balancing done on each SUT main aggregates (in stage 1) will be unchanged. The reason why the reconciliation is done on the main aggregates in the SUT at a first stage is that the uncertainty estimates for the main aggregate has other variances than an aggregation based on the sum of the uncertainties at a detailed level. For example, the standard error for SBS on total output and intermediate consumption is low compared to other aggregates but relatively high on output and intermediate consumption for certain products.

Measure of uncertainty

The measure of uncertainty, sampling errors as well as non-sampling errors, has been developed for all values that are balanced in the SUT. The estimates of uncertainty include sampling errors as well as non-sampling errors. Sampling errors are estimated by most surveys. Sampling uncertainties have been collected from various surveys to meet the needs in the SCM model. Some adjustments have been made to bring the sampling uncertainties in surveys to the level of detail used in the SUT. The non-sampling errors that are included in the SCM model is model, specification, non-response and frame error. Non-sampling errors can be both random errors and systematic errors. The random errors can be assessed using variance estimates (assessments) while bias is more difficult and must be estimated in another way. The estimates of non-sampling errors are mainly based on judgement by specialists within the various subject area statistics, national accounts, as well as specialists within statistical methodology.

The actual uncertainties (approximated as standard deviations) are included in the minimizing function, rather than squared uncertainties (approximated as variances). These measures of uncertainty are used as weights in the minimizing function. With a linear model, larger variables gain relatively less weight than with a square model in the minimization function. In practice, there is no reason that just because the variable has a larger value implies that it should get a larger share of the residual. It is the uncertainty itself that should be decisive. This linear model is also considered to preserve the unreconciled structures in a better way.

The estimates and assessments of uncertainty that are in use have resulted in GDP to be reconciled relatively more on the expenditure side of GDP, and less on the production side. Approximately 70 percent of the residual are distributed to the expenditure side and 30 percent on the production side. The basis for the calculation from the production side is overall considered more reliable than the data used for the calculation from the use side.

The final stage of the automatic balancing procedure is performed with the use of the well-established iterative procedure RAS method. The aim of the final, mechanical balancing is to eliminate the small remaining residual that still exist on some product groups, and thus also the total residual. Only the intermediate consumption of market producers and producers for own final use is affected. The balancing adjustments figures from the RAS balancing can also be found in the Process Table, in the column "Balancing". The SCM model will be further developed so that all residuals are eliminated, which mean that the RAS method can be phased out.

The model's measures of uncertainty for the year 2021 were updated in the latest benchmark revision in collaboration with the primary statistics and method statisticians. The surveys included in the update are as follows:

- Structural Business Statistic (SBS)
- Industrial production of goods
- Industrial use of purchased goods

- Intermediate consumption of Service enterprises
- Subject Area Design (SAD)
- International trade in goods statistics (ITGS)
- International trade in services statistics (ITSS)
- Business inventories
- Enterprises' IT expenditure
- Statistics on building permits, new construction and conversion

6.1.2.10 Residual items

At the end, when the data validation process is performed, the automatic SCM model and RAS balancing have been executed, all the supply and use tables are fully balanced, i.e. they do not contain any residuals.

6.1.3 Factors that can reduce the adequacy

The estimates of uncertainty, which are used in the SCM model, include sampling errors as well as non-sampling errors. The sampling errors are used as the basis and a direct expert judgment is mainly done for the non-sampling errors. This approach may be arguable. It is nevertheless a first step to tackle this difficult problem.

6.2 Other approaches used to validate GDP

6.2.1 Labour input, productivity trends, trends in earnings

Labour input calculations constitute an integral part of the national accounts and serve as an extra control of the accuracy of the estimates. Data are calculated using the same industrial breakdown and classification as the output calculations. The calculations cover average numbers of employees and hours worked, with a breakdown by business operators and employees. These data are combined with data on output, intermediate consumption, value added, wages and salaries etc., and the industry analysis referred to above is supplemented by an analysis of industry labour productivity trends and trends in earnings for time series. These key estimates are important tools for checking that estimates and developments over time are reasonable. Analysis results in an adjustment of any of the constituent variables. In the course of the analysis discussions are held with representatives of various primary statistics producers regarding the content and quality of the statistics. In the work National Accounts also make use of the Large Cases Unit (LCU) network of contacts within large enterprises as well as their experience. The national accounts may also examine data from individual enterprises in order to be in a better position to interpret the statistics. The analysis carried out by the national accounts sometimes leads to errors being detected in the primary statistics.

6.2.2 Sector accounts

The Swedish National Accounts are complete in the sense that they comprise both the goods and services accounts and sector accounts. The goods and services accounts precede the sector accounts in the calculation process, but the calculation of an annual sequence is not final until also the sector accounts are completed. As explained in Chapter 4, the calculation of the institutional sectors is not entirely dissociated from the product accounts calculation. Total income is determined from GDP. This means that the trend in incomes and their allocation to sectors is an interesting analysis variable, in the same way as the allocation of net lending to sectors. Also, savings and the connection to household and government expenditure add to the quality of the estimates. Large unexplained changes in the household savings rate indicate errors in the estimates of income and/or consumption and/or gross fixed capital formation. In this way the sector accounts act as a support to the overall assessment of the national accounts.

6.2.3 Financial accounts

The Swedish National Accounts division also produces financial accounts, which measure the net lending of sectors. At present, the compilation of the non-financial national accounts (product and sector accounts) and financial accounts is not fully harmonized. This means that comparisons between net lending calculated from the real (non-financial) and financial sides, respectively, cannot provide a support to the balancing process for all sectors. Regarding sources and methods, reconciliation of non-financial and financial accounts is only viable for government sectors.

6.2.4 Various other approaches to increase quality

Large Cases Unit: A unit within Statistics Sweden that keep special records of the 50 main companies in the country. Their reporting in various surveys is of very high importance for the quality of the national accounts estimates. This unit has made a large contribution to increased quality both in source statistics and in national accounts. During the compilation of the annual accounts, as well as for the quarterly accounts, the Large Cases Unit goes through important events concerning these main enterprises and acts as a support in contacts with the enterprises.

Description of delivery agreement: The work with Service level agreements, started in 2004 and has gone on since then. In 2019 the previous SLA were transformed into Description of delivery agreements. Agreements are drawn up between the National Accounts and the Statistics Sweden units for data delivery to NA. The purpose of these agreements is that the input to NA calculations will be

adapted in terms of content and quality and be quality assured according to NA's needs, see also section 1.1.5.3.

Meetings and seminars: In connection with every quarterly release of NA data, the National Accounts Division holds seminars with the most important users of the NA, mainly government authorities. The users of the NA statistics then give their views on the material and also criticize and question the estimates produced. Discussions are held with trade organizations, which often produce their own statistics and also have ideas on the development in their areas/industries.

EDP, VAT, Satellite accounts and Regional accounts contain national accounts data broken down on a more disaggregate level than the original NA. These compilations then help to verify and check the national estimates. The work with all the details in the excessive deficit procedure (EDP) and the work with compilations of the VAT contribute to increased knowledge and quality in other parts of the NA.

Quality management, internal and external quality checks: Statistics Sweden has a long tradition of working with quality issues. Quality reports have been produced for a number of years for all statistical products. Statistics Sweden continuously works towards the standardization of working methods, IT support and methods that serve to increase quality assurance and quality control. The overall guidelines for the work on quality are described in Statistics Sweden's Quality Policy, see also section 1.1.

Chapter 7 Overview of the adjustments for exhaustiveness

7.0 Introduction

7.0.1 Geographical coverage

The economic territory is defined in ESA §2.05-2.07, with respect to the geographical territory and the residency of the institutional units that are active in the economy. Over 10.6 million people live in Sweden (end of 2024). The total land area, including lakes, is a little over 450,000 km².

The Swedish economic territory comprises the area lying within Sweden's borders with the addition of Swedish ships and aeroplanes in international traffic, Swedish fishing boats fishing in international waters and Sweden's embassies and consulates abroad. In 2024 Sweden had 134 authorities abroad. They include embassies, representatives, delegations and consulates. Data for the Swedish authorities abroad are included in the Swedish national accounts since the data concerning them is delivered to Statistics Sweden from the Swedish National Financial Management Authority in Basis of central government net lending (UFS). Conversely the representations of foreign countries in Sweden are counted as foreign territory. They constitute about 160 representations.

The representation of the European Union in Sweden consists of the local office for the European Commission's Representation and the information office for the European Parliament. Since 2005 also The European Centre of Disease Prevention and Control (ECDC) is established in Stockholm. The coverage of GDP and hence GNI, is in accordance with Commission regulation 2021/1947 and ESA 2010. The units need not have the same nationality as the country itself. They may but need not be legal entities. They need not be present within the economic territory of the country at the time they execute a transaction. A unit has a centre of economic interest in Sweden if it is located within the economic territory of Sweden and engages in economic activities and transactions to a significant extent over a period of at least one year.

When it comes to residency of the units active in the economy, as stated in ESA §2.07, taxation and other legal requirements tend to result in the use of a separate legal entity for operations in each legal jurisdiction. The main challenge, stated in the same paragraph, is to identify and separate institutional a unit for statistical purposes where a single legal entity has substantial operations in two or more territories. The common case are branches, but also ownership of land and buildings and multi-territory enterprises are mentioned as examples in ESA.

Multi-territorial enterprises. Sweden has one multi-territorial enterprise, owned by Sweden, Denmark and Norway. The economic flows are recorded based on the share of ownership and the survey to the company (chapter 10, The income and costs of the Scandinavian Airlines (SAS) consortia).

Branches. Branches on the Swedish economic territory belonging to foreign enterprises are included in the Swedish NA and branches abroad belonging to Swedish enterprises are excluded.

Owners of land or buildings: Owning land or buildings will generally qualify as a permanent establishment. According to the Swedish Income Tax Act company's fixed place of business could be a business premises or other location. The usage of the location determines whether it is considered a permanent establishment, i.e. that business activities are carried out there. The same treatment in the statistics apply as described above for branches in general.

7.0.2 General approach to exhaustiveness

Following the Tabular Approach, the general approach for exhaustiveness adjustments in the Swedish NA is to start out on in the production approach of GDP identifying producers and activities that are not covered in the business register or the source statistics. Adjustment for non-exhaustiveness is made by use of several different exhaustiveness methods.

Statistics Sweden's Business Register has an important role in the context of exhaustiveness. It contains all production units relevant for the economic statistics by industry and sector. There are no income or VAT thresholds where economic activities do not need to register for taxation according to the Swedish tax legislation and accordingly no thresholds in the business register on what units that are included. The units are all identified by a unique organization number. The register is updated weekly with information from the Tax Agency registrations and annually from surveys to major industries. Also, information from any other survey or personal contact with companies is used for updating purposes.

The main component for the non-observed economy on the production approach are misreported activities due to misreporting of output and intermediate consumption, N6, where the exhaustiveness adjustments are based on tax audit information (section 7.1.3.2). A separate investigation is made according to the Employment method to validate the existing results and to create international comparability (see section 7.1.3.3). Based on the general coverage of the business statistics and the main source statistics no adjustments are made on the items N4 and N5 that deals with units that are not included in the business register or in the statistics (see section 3.1.1).

On the expenditure side of GDP, the approach to exhaustiveness is to target specific transactions where the source data do not fully cover the transactions. The adjustments made on the expenditure side concern households acting as producers for own final use or in their role as consumers. In 2021, the adjustment is SEK 97,1 billion to a series of components in household final consumption expenditure and SEK 4,9 billion to gross fixed capital formation from production for own final use.

Since GDP from the income side is not compiled independently the exhaustiveness adjustments made on the income side are based on the adjustments made on the production side.

The standardised national accounts models that cover market production for own final use as GFCF (i.e. output of R&D and software for own final use) are not treated as exhaustiveness adjustments in the Swedish accounts but is considered as part of the source data.

Frequency of review of the allowances for exhaustiveness

Reviews of exhaustiveness adjustments are made as part of the benchmark revisions. The latest review was performed as part of the benchmark revision of 2024, in which we were able to update the benchmark with the latest tax audit data from the Swedish Tax Agency. The data became available in early 2020 (see further details in section 7.1.3.2). This intermittent study has been done once before, in 2006, but will likely occur once every five years going forward. The study provides comprehensive information on the shares of hidden income and hidden mixed income in all industries and sectors. Statistics Sweden were also able to update the old benchmark for narcotics with a new approach (see section 7.1.3.1.2). The old benchmarks for smuggled alcohol, tobacco as well as prostitutions remain. For non-benchmark years the exhaustiveness adjustments generally follow the trend of their respective component, i.e. activity or household consumption purpose.

The main approach to GDP

The approach to calculating GDP in Sweden is to compile the production and expenditure approaches of GDP as independently and comprehensively as possible. The detailed data from the supply and use tables, broken down into about 400 product groups, are used as a means of cross-checking the estimates at a more detailed level from the two approaches. In the benchmark revision 2019 the SBS data were introduced for several industries that previously had been based on other source data and the SBS are thereby the main source for all non-financial activities (except owner occupied dwellings). A strength in using the SBS is that total output and intermediate consumption are covered by one main source for all units in the sampling frame. This ensures that errors on coverage due to double counting or missing units will be minimized. The production approach is considered as the most exhaustive approach to GDP. This is also reflected in the total error estimates underlying the automated balancing process where GDP from the production approach have a smaller total error compared to GDP from the expenditure approach (see section 6).

Balancing and exhaustiveness

The exhaustiveness adjustments made to the production, expenditure and income side are mostly kept separate and are not part of the balancing process. Some of the household consumption purposes related to illegal activity may take part of the balancing process but given their size the adjustments made to them due to balancing are marginal. In the exhaustiveness tables we report the adjustments as they are made to each approach with their original, estimated value. The fact that the value of exhaustiveness adjustments relating to the illegal consumption purposes might differ slightly after balancing is not reflected in the tables since we see it more fit to report their original values. The idea is to not include these items in the balancing process in the future, but it is an ongoing work to update our balancing models with this routine.

Valuation of the exhaustiveness adjustments

The benchmark estimates for the main part of the exhaustiveness adjustments (N6) are based on the tax audits that estimates the hidden income, i.e. wages and salaries and operating surplus. The share of hidden income in relation to taxed income has then been applied to the GVA at basic prices for the respective industry to get a valuation at basic prices. With regards to VAT evasion without complicity, it is calculated and added as part of the basic prices.

7.1 Allowances for exhaustiveness in the production approach

The ESA and other document state what production should be included in the National Accounts, i.e. what production should be included within the production boundary. The intermediate consumption related to this production should also be included in the national accounts. Production, intermediate consumption and data on taxes and subsidies on products together make up the production approach to GDP.

There may be several reasons why not all transactions regarding production and intermediate consumption are captured in the compilation of the national accounts. In the next section we describe the areas identified where adjustments have to be made to make the estimations exhaustive.

7.1.1 Identification of types of non-exhaustiveness (for which adjustments are needed)

All possible production activities are made by producers. That is why a division of all productive activities according to their potential for non-exhaustiveness is at the core of comprehensive and systematic assessment of exhaustiveness. For ease of analysis and interpretation, the division is based on a standard set of non-exhaustiveness *types*. The types are labelled N1-N7 below and depend on the characteristics of producers. Within each type there can be several exhaustiveness *elements*. They all relate to areas not directly observed and can be linked to several phenomena. **Absence** from statistical files entails the non-recording in statistical files of economically active units, **evasion** of the payment of taxes and social security premiums entails the submission of figures to tax- or social security authorities which contain omissions or falsifications, and finally **exemption from obligations to submit information** which refers to different phenomena which might lead to non-exhaustiveness, such as exemptions for specific groups or enterprises or minimum thresholds for compulsory registration of certain transactions. Statistics Sweden continuously monitors analyses and reports from various authorities, especially the Swedish Tax Agency, to identify areas that may affect the national accounts' estimates of exhaustiveness.

Estimates and sources for the production approach in the Swedish national accounts are to a large degree based on SBS, which in turn is based on income statements and financial reports from enterprises. The SBS also relies on registers of producers such as Statistics Sweden's Statistical Business Register and the VAT-register.

N1. Producers obliged to register but did not, underground producer

This non-exhaustiveness type includes typically producers that deliberately fail to register as legal entity or as entrepreneurship in order to avoid tax and social security obligations. The only element identified concerning this non-exhaustiveness type is the following:

- Production associated with paid domestic services not otherwise included in the national accounts. We include a production value related to the **caring of children by nursemaids**. The value is added to industry T97-98 as well as to household consumption of COICOP 0562.

Apart from these domestic services and persons engaged in illegal activities, there are no adjustments made for underground producers. In the verification cycle of 2020-2024, the relevance of exhaustiveness adjustment N1 was discussed.⁵⁹ Below, we comment briefly on the main areas where underground producers commonly exist and give reasoning for the immateriality of the issues in a Swedish context.

- **Taxi drivers.** In a report⁶⁰ published by The Swedish Taxi Association (2019), the association investigated the presence of undeclared/unregistered taxi services operating on social media platforms such as Facebook. There are currently around 100 active business-like groups on Facebook which offer undeclared taxi service. The operations are mostly concentrated in northern

⁵⁹ Initially in small issue A10/issue 2, then revisited in action point B.10.

⁶⁰ The Swedish Taxi Association. (2019). *Svarttaxins framfart på Facebook*. (The spread of illegal taxi services on Facebook).

and central Sweden. Passenger transport by undeclared/unregistered taxi services via Facebook is assessed to generate approximately SEK 750 million annually. However, as this report both cover N1 and N6, the value added for N1 activities should be quite small.

- **Private tuition.** In 2013 the four largest enterprises that offer private tuition had a turnover of about 100 million SEK according to an article⁶¹ on the subject. A later article about private tuition shows that the largest companies within this service in year 2022 still have a turnover of around 100 million SEK. Schools can also get government funding for tuition activities after school hours. We believe that N1 activities is of small value for these services.
- **Repair of household machines.** In 2017, the Swedish Tax Authority introduced RUT (Cleaning, Maintenance and Laundry) tax reductions regarding this industry. The value of household consumption value in NA of this product was 504 million SEK (2015). We believe N1 activities for these services should be small.
- **Construction.** Since this is one of the industries with the highest amount of hidden work, in absolute values, and there is a large number of small enterprises and household enterprises this is an industry where underground activity (N1) could be common. However, according to an investigation made by the Tax Authority in 2011, the tax reductions for households (ROT, Repairs, Conversion, Extension, introduced in 2008) have decreased the number of hours of hidden work towards households with about 10 percent.
- **Private accommodation.** In 2016 the Swedish Tax Authority (STA) investigated the effects of the sharing economy on the tax system (Report 131 129 651-16/113). The conclusion from their studies when it comes to dwelling services was that only about 20 percent of the persons that sublet their dwellings have declared it in their tax statements. A recent study from the STA, The Effects of Tax Controls on Compliance in Private Subletting (Report 2024:5), shows that from 150 persons getting their tax statements reviewed, 75 percent declared a surplus from subletting after the review as opposed to 0 before. In the report about half of the value of all observations related to private subletting whereas half stemmed from registered businesses/enterprises. The DAC7 initiative extends EU tax transparency rules to digital platforms and introduces an obligation on platforms such as Airbnb to collect, verify and report specific information that sellers have undertaken on their platforms. It is our understanding that this information should be reported on the Tax Authority's request starting in 2024 for the income year 2023, so perhaps better data is to be expected. What must also be considered, however, is that if someone sublets their home through a digital platform and exceeds the income threshold requiring declaration, this production is already captured in the housing calculation (stratification model). The dwelling is not used by the owner but is instead rented out to someone else, but the dwelling services is accounted for in the housing calculation either way (not taking account for the potential mark-up). In essence, we cover all dwellings/apartments that are registered in the National Apartment Register and already calculate production for these. As of the benchmark revision of 2024, an addition is also made for the under coverage in the apartment register. In Sweden, it is extremely rare for a house to be built without a permit.
- **Targeted control effort for food delivery companies (2023).** The most common errors are unreported income, unreported wages and employer contributions, VAT fraud and lack of bookkeeping. In the report, there are no cases of N1. The companies (four large companies in the industry) use food delivery companies' services that verify whether the company is registered, which reduces the risk of underground producers (N1). However, as the STA points out, these verifications could be improved. Our assessment is that N1, if present at all, involves small values due to the controls still carried out by the buying company.
- **Special inspection of the driving school industry.** Since 2018, the STA has carried out a special inspection including driving schools. The control includes both registered and unregistered companies. The purpose of the control has been to counteract unhealthy competition. When the

⁶¹ [Boom för läxhjälp oroar Skolverket](#)

phenomenon began to be discovered, there were reportedly a few hundred unregistered driving schools spread across the country. Since then, the Swedish Tax Agency, the Swedish Transport Agency, The Swedish Transport Administration and the Swedish Economic Crime Authority have collaborated to prevent this activity. Our best assessment is that even if there were a couple of hundred unregistered driving schools 10-15 years ago, this number have been reduced and the total value for N1 activity is small.

Moreover, since 2010, the STA has been conducting annual surveys for private individuals and companies. The purpose of these surveys is to provide a basis for assessment of how private individuals and companies view, among other things, different forms of undeclared work and unregistered activities. The proportion of people who know someone who worked undeclared in the last year or know someone who hired undeclared labour has fallen during the years 2018-2022. This result indicates, as the STA summarizes, “Generally speaking, the very positive results for the statements linked to honesty and tax cheating indicate a continued high level of tax morale in society.”

N2. Producers obliged to register but did not, illegal producer

This non-exhaustiveness type includes producers that deliberately fails to register as a legal entity or as entrepreneurship because they are involved in illegal activities. Under the ESA regulation, illegal activities must be included in the national accounts. Illegal activities that fit the characteristics of transactions – particularly that there is mutual agreement between the parties – should be treated the same way as legal activities. Certain illegal activities do contribute to output and income in the economy and as such they should be registered accordingly. Additions are made for the following elements:

- A production value is estimated for **prostitution**. This is added to the production value of industry S96. No addition is made to the intermediate consumption. The same amount as the production value is added to household consumption of COICOP 1220.
- A production value is estimated for **home-distilling of alcohol**. This is added to the production value of NACE C11. No addition is made to the intermediate consumption. A value corresponding to the production value is added to household consumption of COICOP 02113.
- A production value is estimated for **illegal gambling**. This is added to the production value of NACE R92. No addition is made to the intermediate consumption. The same amount as the production value is added to household consumption of COICOP 0943.
- A production value, i.e., a trade margin, is added to NACE G47 in order to estimate the trade margin generated for the sale of **smuggled drugs, alcohol, tobacco and various medicines for drug use**. These goods are thought only to be produced abroad and imported to Sweden through smuggling. The import value of the goods is considered to be a part of the item “foreign exchange for travel”. This item is also recorded as Swedish household consumption abroad and thus is included when calculating the total consumption expenditure of households. The trade margins are also added as household consumption of COICOP 0230, 02112, 02122, 02202, 021312 and 02113. It is assumed that some intermediate consumption related to the generation of the trade margin is already included in the national accounts through the regular source statistics, e.g. transport costs. No further additions to intermediate consumption are made.

N3. Producers not obliged to register

This non-exhaustiveness type includes producers that are not required to register because it has no market output or producers that has market output but on such a small scale that it is below the level at which it is expected to register as an entrepreneur.

No additions are made for producers producing at such a small scale that it is below the level at which it is expected to register as an entrepreneur. There are no thresholds for when you are obliged to register for taxation in Sweden that would lead to under coverage in Statistics Sweden’s business register.

The following element is identified however for non-market production of own account goods and additions are made for it:

- **Owners' production/construction and repair of owner occupied dwellings.** A production value is added to industry F41-43. A value for the intermediate consumption related to this production is also added and the production value is also matched by an equal value entry in fixed capital formation of dwellings. For a numerical example on the calculation, see section 5.10.3 and in particular table 5.10.8, the calculation process for household own production in one- or two dwelling buildings.

N.4 Producer registered but not included in surveys - legal person

This non-exhaustiveness type includes producers that are registered as legal persons but is not included in Statistics Sweden's business register or, if the producer is included in the business register, is not included in the surveys for some reason.

The business register at Statistics Sweden is updated every week with information from the Swedish Tax Agency and the Swedish Companies Registration Office, so the register is always up to date. Efforts are also made to make the information in the business register as correct as possible so that the different surveys can include the producers as intended. There have been no recent studies or estimates that quantify the size of these error of coverage in the business register. However, the assessments are that the coverage errors are very small, see also section 3.1.1. Therefore, no additions are made in this non-exhaustiveness type.

The SBS is the most important source with respect to coverage of total gross value added since it covers most industries. Issues concerning coverage in the SBS is briefly discussed at the end of the chapter (see section 7.1.3.6). Adjustments for under-coverage of registered legal person and entrepreneurs are mainly done in the source statistics and commented in chapter 10 in the inventory under each source.

N.5 Producer registered but not included in surveys - Entrepreneur

See N4 above.

N6. Misreporting by the producer

This non-exhaustiveness type includes the production of producers that are administratively registered and also surveyed by various surveys, but the producers are miss-reporting. This non-exhaustiveness type is identified to exist in Sweden and additions are made to the following elements:

- **Hidden production and hidden intermediate consumption.** Gross output is normally under-reported and/or intermediate consumption is over-stated in order to evade income tax, value added tax (VAT) or other taxes, or to avoid paying social security contributions. Accordingly, adjustments to gross output for hidden activities are made as additions, while intermediate consumption is typically adjusted downward. However, in the NACE F and I, intermediate consumption is corrected *upward* for the exhaustiveness type misreporting by the producer. NACE F has the highest share of hidden income in the strata businesses with 1-5 million turnover. The unreported turnover in this industry is substantial and therefore the producer cannot report some of the cost that belong to the unreported turnover, since this would lead to an excessively high input coefficient. One variable that the Swedish Tax Agency studies to detect hidden activity is precisely the relationship between production and input.⁶²

In the restaurant and hotel industry (NACE I) the intermediate consumption is also corrected upward. This is due to the requirement for staff registers by law⁶³ that was introduced in the beginning of 2007 which resulted in an increase in declared wages in the industry. This also

⁶² The adjustment was discussed under direct verification of NACE F in June 2023.

⁶³ See Tax Procedure Act (SFL 2011:1244, ch 39 §11).

affected production and value added, both of which increased. However, intermediate consumption was unaffected. The issue was investigated, and Statistics Sweden could conclude that companies did not state all their costs (IC) in the accounting.

- **VAT evasion without complicity** are added as hidden production to increase the value added. These VAT are included in the theoretical VAT. VAT evasion without complicity occurs when traders actually collect VAT from their clients but never forward it to the Tax Agency.

Adjustment has not been made for:

- **Missing Trader VAT fraud.** In response to the Transversal Reservation on Missing Trader (MT) VAT fraud Statistics Sweden has investigated the issue and its potential impact on National Accounts based on the recommendations from the subgroup. The findings were reported in September 2021. The investigation of the structure and size of VAT fraud was undertaken in close liaison with experts from the Swedish Tax Authorities, The Swedish National Financial Management Authority as well as the Trade and Business Statistics compilers at Statistics Sweden. Information on the size of the VAT fraud were submitted by the Tax authority. The conclusion on the investigation was that no explicit adjustments to cover MT VAT fraud are necessary. Adjustments had already been made in the SBS, Foreign Trade statistics and National Accounts to such extent that any remaining errors in NA due to MT VAT fraud would be minor (non-material).

N7. Other statistical deficiencies

This non-exhaustiveness type includes data that is incomplete, not collected or not directly collectable, as well as data that is incorrectly handled, processed or compiled by statisticians. Examples are handling of non-response, production for own final use by market producers, tips, wages and salaries in kind and secondary activities.

Additions are made in this non-exhaustiveness type for production for own final use by registered market producers. Additions are made to the following elements:

- **Production of own account goods by farmers and forest enterprises.** Only Firewood is included here since all other own account goods are estimated to be included in SBS. It is added on the production side to NACE A02 and correspondingly is part of COICOP 0454 on the expenditure side.
- **Part of car benefits.** See section 4.7.1.

7.1.2 Adjustments made for the different types of non-exhaustiveness

Adjustment for non-exhaustiveness can be made by use of several different **exhaustiveness methods**. The methods are described in section 7.1.3 but below we provide overview tables for output, intermediate consumption and gross value added linking the identified non-exhaustiveness types and elements of non-exhaustiveness described above to the exhaustiveness methods. The table shows the estimated values in million SEK.

The biggest non-exhaustiveness item on both production and intermediate consumption is the hidden activities under N6.

Table 7.1.2.1 Types and elements of non-exhaustiveness by exhaustiveness method – Output (2021)

Types and elements of non-exhaustiveness	Exhaustiveness methods						Total
	Quantity-price	Use of tax audit data – from the fiscal authorities	Special survey	Model	Benchmark extra-polation	Time use surveys	
N1 Producers that should have registered but did not (underground producer)	1 191						1 191
Caring of children by nursemaids	1 191						1 191
N2 Illegal producers that fail to register	5 262						5 262
Prostitution	710						710
Home-distilling of alcohol	145						145
Illegal gambling	577						577
Smuggling of drugs, alcohol, tobacco and various medicines for drug use	3 830						3 830
N3 Producers are not obliged to register						4 896	4 896
Owners' production/construction and repair of owner occupied dwellings						4 896	4 896
N4 Registered legal persons are not included in statistics							
-							
N5 Registered entrepreneurs are not included in statistics							
-							
N6 Mis-reporting by producers		132 159		5 744			137 903
Hidden production and hidden intermediate consumption		132 159					132 159
VAT evasion without complicity				5 744			5 744
N7 Statistical deficiencies i data	529			4 498			5 027
Production of own account goods by farmers and forest enterprices (Firewood)	529						529
Part of car benefits				4 498			4 498
Total per exhaustiveness method	6 982	132 159	0	10 242	0	4 896	154 279
Share from each individual method	4,5%	85,7%	0,0%	6,6%	0,0%	3,2%	100%

Table 7.1.2.2 Types and elements of non-exhaustiveness by exhaustiveness method – Intermediate consumption (2021)

Types and elements of non-exhaustiveness	Exhaustiveness methods						Total
	Quantity-price	Use of tax audit data – from the fiscal authorities	Special survey	Model	Benchmark extra-polation	Time use surveys	
N1 Producers that should have registered but did not (underground producer)							
Caring of children by nursemaids							
N2 Illegal producers that fail to register							
Prostitution							
Home-distilling of alcohol							
Illegal gambling							
Smuggling of drugs, alcohol, tobacco and various medicines for drug use							
N3 Producers are not obliged to register						2 864	2 864
Owners' production/construction and repair of owner occupied dwellings						2 864	2 864
N4 Registered legal persons are not included in statistics							
-							
N5 Registered entrepreneurs are not included in statistics							
-							
N6 Mis-reporting by producers		-23 201					-23 201
Hidden production and hidden intermediate consumption		-23 201					-23 201
VAT evasion without complicity							
N7 Statistical deficiencies i data							
Production of own account goods by farmers and forest enterprices (Firewood)							
Part of car benefits							
Total per exhaustiveness method	0	-23 201	0	0	0	2 864	-20 337
Share from each individual method	0,0%	114,1%	0,0%	0,0%	0,0%	-14,1%	100%

Table 7.1.2.3 Types and elements of non-exhaustiveness by exhaustiveness method – Value added (2021)

Types and elements of non-exhaustiveness	Exhaustiveness methods						Total
	Quantity-price	Use of tax audit data – from the fiscal authorities	Special survey	Model	Benchmark extra-polation	Time use surveys	
N1 Producers that should have registered but did not (underground producer)	1 191						1 191
Caring of children by nursemaids	1 191						1 191
N2 Illegal producers that fail to register	5 262						5 262
Prostitution	710						710
Home-distilling of alcohol	145						145
Illegal gambling	577						577
Smuggling of drugs, alcohol, tobacco and various medicines for drug use	3 830						3 830
N3 Producers are not obliged to register						2 032	2 032
Owners' production/construction and repair of owner occupied dwellings						2 032	2 032
N4 Registered legal persons are not included in statistics							
-							
N5 Registered entrepreneurs are not included in statistics							
-							
N6 Mis-reporting by producers		155 360		5 744			161 104
Hidden production and hidden intermediate consumption		155 360					155 360
VAT evasion without complicity				5 744			5 744
N7 Statistical deficiencies i data	529			4 498			5 027
Production of own account goods by farmers and forest enterprices (Firewood)	529						529
Part of car benefits				4 498			4 498
Total per exhaustiveness method	6 982	155 360	0	10 242	0	2 032	174 616
Share from each individual method	4,0%	89,0%	0,0%	5,9%	0,0%	1,2%	100%

The results in the above tables provide a comprehensive view of the additions to output, intermediate consumption and GVA for each element of non-exhaustiveness within the different exhaustiveness types as well as the totals for each element. Totals for each exhaustiveness type can also be observed in the corresponding rows. Furthermore, the sum value for each exhaustiveness methodology within each type can also be observed, and finally, on the bottom rows, we denote the absolute value per exhaustiveness method as well as its share of the total exhaustiveness adjustments.

The most notable change to the tables is that two previous exhaustiveness elements under N3, “production and processing of various agricultural and forest products for own household consumption” and “wild-eating edible products from the forests” have been removed. In addition to that, one might notice that VAT evasion without complicity has a low estimate compared to the previous documentation. VAT evasion differs greatly from year to year and depends on several factors such as the levels for the actual and the theoretical VAT, see more in section 7.1.3.4.

7.1.3 Exhaustiveness methods

As previously stated, adjustment for non-exhaustiveness can be made utilizing several different **exhaustiveness methods**. In this section, we provide detailed descriptions and numerical evidence of each adjustment method applied to address the identified elements and types of non-exhaustiveness.

7.1.3.1 Quantity times price method

This method is the main method used for the non-exhaustiveness elements described in the upcoming sections.

7.1.3.1.1 Production associated with paid domestic services, caring of children by nursemaids, N1

The estimated output value is based on a model calculation for primarily au pair or other childcare activities. The model takes into consideration the number of persons in the highest income group and an assumption that 5 percent of them employ a person for childcare services. An hourly wage in accordance with payments to underground labour is multiplied with an assessed number of hours worked.

Information on the number of persons in the highest income group, i.e. earning more than SEK 1 million a year, is taken from Statistics Sweden's Income and Tax statistics (HE0110) and it was 147,090 persons in 2021. Of these five percent or 7,355 persons are assumed to employ labour for childcare without reporting to the tax authorities. They are deemed to employ labour for 52 weeks a year and forty hours a week. The hourly wage was estimated to be 75.83 SEK per hour. The estimated value becomes SEK 1,191 million. See also section 3.26.

7.1.3.1.2 Illegal activities, N2

The methods for setting the benchmarks for illegal activities were introduced in the accounts in 2007. These benchmark estimates are described below with supplementing information on more recent information when it has been available to cross-check the existing results in NA. The 2021 values for each item and a summary of the methods and sources used for updating the benchmark values are presented in the table below.

Table 7.1.3.1 Illegal activities 2021 by item and methods for extrapolation

COICOP	Industry	Item	Value	Methods for updating the benchmark estimate	Benchmark year	Source for extrapolation
02112	G47	Smuggling, liquor	65	Volume change according to CAN and relevant price index	2004	CAN, Statistics Sweden
02113	C11	Liquor, home produced	145	Volume change according to CAN and relevant price index	2004	CAN, Statistics Sweden
02122	G47	Smuggling, wine	18	Volume change according to CAN and relevant price index	2004	CAN, Statistics Sweden
021312	G47	Smuggling, strong beer	99	Volume change according to CAN and relevant price index	2004	CAN, Statistics Sweden
02202	G47	Smuggling, tobacco	268	Volume change according to CAN and relevant price index	2004	CAN, Statistics Sweden
0240	G47	Narcotics, new bench	2 077	Extrapolated with population growth persons aged 15-75	2021	Statistics Sweden
0240	G47	Narcotics, old bench	1 303	Extrapolated with population growth persons aged 15-75	2001	Statistics Sweden
0943	R90_92	Gambling, illicit	577	Extrapolation based on legal gambling	2004	The Swedish Gambling Authority
1220	S96	Prostitution	710	Extrapolated with population growth of men in Sweden	2004	Statistics Sweden
		Total	5 262			

The following description of calculations, sources and methods of illegal estimates in the Swedish national accounts are mainly a summary of the report "Illegal activities" describing the methods used for setting the benchmarks for the different activities. The report in full is available from Statistics Sweden.

After the publishing of the first experimental compilations of illegal activities in April 2005, the report was made public on the internet and also sent to a number of people having knowledge within the area. No reactions were received on revising the first compiled estimates. As normal statistical information does not exist, estimates within this area contain a large proportion of uncertainty. As no better information has been revealed the benchmarks from the previous investigations are used for many areas. The chapter on production and trafficking of drugs is however updated with the new benchmark method.

7.1.3.1.2.1 Prostitution

Legislation

On 1 January 1999, the Law prohibiting the purchase of sexual services was adopted in Sweden. The prohibition applies everywhere, irrespective of whether the purchase occurs on the street, in dwellings, in restaurants, in brothels or via the Internet (Law 1998:401). The law makes prostitution a criminal offence only for the purchaser and the offence is deemed to begin as soon as the purchaser contacts the seller/prostitute, e.g., on the street, and offers payment for sexual services. The government has asked the National Board of Health and Welfare, *inter alia*, to constantly monitor and collect information on the scope and development of prostitution.

Sources

Quite a few official investigations have been made within this area over the years. The report *Prostitution in Sweden (Kännedom om prostitution) 1998-1999* gives an initial description of the situation before and after the adoption of the law. The report is based on information collected via surveys of all police authorities and police sectors, all municipalities and a sample of restaurants, hotels and similar businesses as well as the local offices of RFSL (Swedish Federation for Lesbian, Gay, Bisexual and Transgender Rights). Internet sites linked to prostitution were also identified and interviews were conducted with key informants including, *inter alia*, the police, social and health services, and a number of purchasers of sex. A follow-up to this report, *Prostitution in Sweden 2003*, is based primarily on interviews with approximately 35 persons whose workplaces them in close contact with prostitutes. This report presents their knowledge of prostitution – or rather their perceptions and assessments. In spring 2015 a new follow-up report was published.⁶⁴

In the preliminary work on *SOU*⁶⁵ 1995:15 it was estimated that the total number engaged in prostitution in Sweden was about 2 500, of which approximately 650 were engaged in street prostitution. Estimates made after the adoption of the law indicate a total of 425 engaged in street prostitution in 2003. However, it is much more difficult to get a clear view of indoor prostitution. Access to mobile phones and the Internet means that contacts between purchaser and seller can take place in secret. There is information that contacts are initiated at certain restaurants, hotels and dance halls, in connection with conferences and private parties, as well as on the Sweden/Finland ferries. However, this activity is among the most difficult to survey and for this reason no estimate could be made. Experienced analysts of this activity consider that it takes place on a very small scale. In the case of the Internet, estimates vary, the same person may appear in different contexts and the advertisements may be out of date. However, there are a number of reports which indicate that there were about 100 people in Sweden selling sexual services via the Internet in the beginning of the 2000s.

The national police force estimates that there are between 400 and 600 female victims of trafficking each year in Sweden. Most are from the Baltic countries, Eastern Europe or Russia but there are even women from Thailand. These women become prostitutes in brothels and in sex clubs and are isolated from the rest of society. The women are guarded by pimps who often appropriate most of their earnings. The women do not know the language and have no permit to be in the country, so pimps have almost complete control over them. Sexual services are sought primarily via the Internet. Figures for trafficking are not explicitly included in the NA calculations with reference to that these women do not enter into a voluntary agreement regarding the services which they must perform. As mutual agreement is a prerequisite for inclusion figures for such activities should consequently not be included in the national accounts. However, since the Internet is used as a channel for selling sexual services, it is difficult to say

⁶⁴ Prostitutionen i Sverige 2014, en omfattningskartläggning, ISBN 978-91-7281-636-7.

⁶⁵ SOU stands for *Statens Offentliga Utredningar* (Swedish Government Official Reports).

if they are totally excluded or not. Under the section *Recent information*, we discuss some studies on prostitution and human trafficking for sexual purposes.

As is the case with trade margins that arising from smuggling of alcohol and tobacco and illicit drug trafficking, no explicit estimates of intermediate consumption related to prostitution are made. The production of prostitution services is set equal to the consumption value compiled. It is assumed that the intermediate consumption related to these services is already included in the national accounts through the regular source statistics, for example clothing costs or the purchase of mobile phones.

Demand – estimating the output value of prostitution

A potential and very rough effort has been made to estimate demand on the basis of data from an interview survey conducted by the Swedish National Institute of Public Health in 1996, according to which one in eight men in Sweden purchases sex on some occasion during his life. This means that almost 14 percent of Swedish men paid for sexual services at some time. This is equivalent to more than 430,000 men over the age of 18. For the majority, it was limited to one or very few occasions, while a smaller group had had more than 20 contacts with prostitutes. Since the survey concerns the number of purchases during a respondent's life, it is in fact not possible to calculate an annual value on the basis of these data.

Street prostitution

According to the National Board of Health and Welfare report "Prostitution in Sweden 2003", there is street prostitution in Stockholm, Gothenburg and Malmö. Estimations made by the social services prostitution groups in these towns indicated the following involvement as reported in 2003.

Street prostitution in Stockholm: approximately 190 (1998: 280 individuals)

In Gothenburg: fewer than 100 (1998: 286 individuals)

In Malmö: just under 135 (1998: 160 individuals)

This gives a total of approximately 425 individuals.

According to data from informants, those who are active in street prostitution have lived in Sweden for a long time and are not casual visitors. Another statement from the report was that many of the prostitutes were heroin addicts. Based on this information, an effort was made to calculate the level of income necessary to finance an individual's substance abuse. The report SOU 1998:18, *Utredningen om tullens verksamhet* (Report on customs' operations), contains calculations based on various scenarios of what volume of drugs is consumed in Sweden and what quantities are consumed by different consumer groups.

According to the scenarios shown, average consumption by a heavy substance abuser is approximately 134 grams/year. The price of a gram of brown or white heroin is between SEK 900 and SEK 1,300, and of a gram of amphetamines approximately SEK 190. On this basis, own-consumption of heroin costs between SEK 120,000 and SEK 174,000 per year, and own-consumption of amphetamines approximately SEK 25,000 per year.

In another study *SOU 1981:71*, an attempt was made to calculate gross income for the persons engaged in street prostitution at that time. The average income was calculated to approximately almost SEK 45,000. Calculated at 2004 values on the basis of the Consumer Price Index, this is equivalent to an average income of just under SEK 124,000.

Added to these tentative amounts for financing drug abuse are average living costs, which on the basis of various calculations are estimated at between SEK 50,000 and SEK 60,000 per year for a single woman. However, these calculations do not include the costs of rent and holidays. A reasonable

assumption is that such expenditure can be a further SEK 100,000 per year. In such a situation, an income of between SEK 125,000 and SEK 274,000 per year would be necessary. This corresponds well with the illegal earnings of between SEK 10,000 and SEK 20,000 per month that are offered when trying to attract new prostitutes.

Street prostitution as of 2003

Average income per prostitute per year	200000
Number of prostitutes in street prostitution	425
Total output	85000000

(this thus requires 200 occasions per year at SEK 1000)

Internet

Prostitution activity via the Internet is substantially more difficult to estimate than street prostitution.

Sven-Axel Månsson and Peder Söderlind, who have done considerable research on sexual exploitation on the Internet and have also published the book "*Sexindustrin på nätet*" (The sex industry on the net), report that at least 80-100 women market themselves on Swedish websites. The newspaper *Aftonbladet* conducted a survey in 2000 and found that 106 women sold sexual services on the Internet. The prices indicated on the websites varied for different services and in February 2005 ranged between SEK 1 000 and SEK 4 000. An average price of SEK 2 500 for 100 women who have 500 contacts per year amounts to a turnover of SEK 125 million annually, equivalent to SEK 1.25 million per woman.

Internet prostitution as of 2003

Average income per prostitute and occasion	2500
Number of prostitutes via Internet	100
Number of contacts per year per person (assumed)	500
Total output	125 000 000

(Equivalent to an average income per year of SEK 1.25 million per person)

However, this category also includes active women who have spent less than one year in Sweden. Their income should not be included in Swedish output, but it is very difficult to estimate the scale. These women generally have somebody who organises their activities, and who takes a share of the income. Probably the organisers have lived for longer than one year in Sweden in order to create a contact network, and in that case those persons' incomes should be included.

Sex clubs

In 1998, the National Commission on Sex Crimes [*Sexualbrottskommitté*] (2001:14) conducted surveys to the national police authorities and social services in Stockholm, Gothenburg, Malmö and Norrköping in order to obtain information, *inter alia*, on the activity and scope of sex clubs. The surveys related to the situation in the spring of 1999. Replies were supplemented by interviews with representatives of the social services, the public prosecutor's office and police authorities, and by study visits to sex clubs. All the material indicated that there were a total of 13 sex clubs in Sweden.

The visible portion of activities consists of striptease performances on stage, private/personal posing and also the sale, rental and showing of pornographic films. Also in some of the Stockholm clubs there were special rooms for massage and bubble pools, where the client is allowed to bathe together. Generally, there is a price list for the various services offered. Prices varied between SEK 300 and 15,000.

Representatives for sex clubs have been accused of financial crimes and the businesses named in the rulings from the Court of Appeal are included in NACE 96 in the Business Register. It was also shown that many customers had paid for their expenses with business cards. Consequently, some activities are already included in the national accounts, at least as over-reported costs.

Prostitution contacts formed in sex clubs

In connection with the investigation of the sex clubs, it emerged that in one of the smaller clubs the owner might sell prostitution services for SEK 1,000. In another small club it might be possible to pay a total of SEK 1,200 for entrance to the club premises, access to nude performances on stage and for the services of a prostitute who was waiting in an apartment or hotel room. Via contacts with women who have experience of working in sex clubs, the prostitution teams have obtained information that certain women offer prostitution services. The services are provided outside the club's premises, since the club owners take measures to prevent prostitution taking place in the club.

Wages and working conditions

SOU 2001:14 reports that it is reasonable to assume that the total number of women working in sex clubs is at least 500. The majority are active in Stockholm and Gothenburg. A rough calculation gives the following estimate:

Prostitution in connection with sex clubs as of 2003

Average income per prostitute and occasion	5000
Number active in sex clubs	500
Number of contacts per year per person (assumed)	150
Total output	375 000 000

(Gives an average income per year of SEK 750,000 per person)

Summary

To sum up, this very rough benchmark estimate would mean that turnover on prostitution is about SEK 585 million in 2004. However, as pointed out earlier, some of this money probably accrues to people who reside in Sweden for less than one year.

Overview of data:

Number of prostitutes

Street	425
Internet	100
Clubs	500
	1025

Average number of contacts per prostitute and year

Street	250
Internet	500
Clubs	150

Average price per occasion

Street	1000
Internet	2500
Clubs	5000

Prostitutes working in the context of clubs and via the Internet incur certain expenses for premises, travel and working clothes. These could however already be included in some way, although in a different context. With reference also to the total uncertainty of the compilations, no reduction has been made for this.

In *SOU 1981:71*, gross income from prostitution in Sweden was calculated. The total income added up to SEK 120 million. Indexed in line with the CPI at 2004 values, this is equivalent to SEK 334 million. The number of prostitutes was estimated at just under 2,000.

The production value for the year 2004 has since then been extrapolated for the following years by an assumed volume change equal to the population growth of men, an update to the model which was introduced in the benchmark revision of 2016.

Calculation of year 2021 by extrapolation is shown below. We note that extrapolation is not made separately for the number of prostitutes in each type of prostitution, as recommended in GNI/230 Rev.1, but rather on the current price value of the prostitution services in the previous year. This is due to no perfect indicator being available for the volume growth in general, even less so for these variables independently. Prices are then reflatd by a price index for internal demand (IHT-index) which in turn is based on a wage index for industry S96.

Wage index for industry S96 = 100.36.

Current price value 2020 = 702 million SEK.

Volume growth based on population growth of men in 2021 = 1.00724892

Value for year 2021 in previous years prices = 1.00724892 * 702 = 707 million SEK.

Current price value 2021 = 707 * 100.36/100 = 710 million SEK.

Recent information

In 2019 a report from the study from the Public Health Agency was published⁶⁶. The conclusions in the report suggest that the results are in line with previous research studies in this area. In brief, the results from the report states that to pay or reimburse someone in exchange for sex is mainly a male phenomenon and that 9.4 percent of the men (all ages) have paid for sex. This is in line with earlier studies from 1996, 2008, 2011 and 2014 that show ratios between 7.5 and 12.7 percent of the male population.

An official investigation published in 2014⁶⁷ states that there are no notable changes concerning the number of prostitutes. The number of street prostitutes has been reduced somewhat but the number of internet ads have increased. Even though a large number of double registrations of ads have been found, there seems to be indications that the prostitution via internet has increased. Prostitution in sex clubs has probably at least not increased, but prostitution related to massage parlours seems to have increased.

There is significant disharmony in the ways researchers have examined and compiled information regarding prostitution in Sweden over the years. Investigating the issue further during the benchmark revision of 2024, we concluded that the methods used in virtually all population studies since 1996 differ in some, or often, several aspects. This is a problem noted by many who investigate the extent of prostitution, not least the researchers themselves.⁶⁸ Because of this, many different estimates for a new benchmark can be arrived at depending on the methods and sources used. In the Swedish context, extrapolation of some study results point to the fact that internet prostitution could be a growing or even the predominant arena for prostitution services measured in monetary value.⁶⁹ However, distinguishing between mutually agreed services, which should be included in the accounts, and those arising from cases of pressure, coercion or force, which should not, is highly complicated. In the recommendations of

⁶⁶ Sexuell och reproduktiv hälsa och rättigheter i Sverige 2017. Resultat från befolkningsundersökningen SRHR2017.

⁶⁷ Prostitutionen i Sverige 2014, En omfattningskartläggning

⁶⁸ See for example *Omfattningskartläggning av prostitution och människohandel för sexuella ändamål* (Hall & de Cabo 2021, 5–6); *Prostitutionen i Sverige 2014* (Länsstyrelsen i Stockholm 2015, 36–37); *Sälja och köpa sex i Sverige 2011* (Svedin & Priebe 2012, 8).

⁶⁹ Prostitution och människohandel för sexuella ändamål (Länsstyrelserna i Norrbotten, Västerbotten, Västernorrland och Jämtland 2016) and own calculations.

the GNI Committee (GNIC/230 Rev.1) there are no special references as of how to handle internet prostitution but it is reasonable to address it in a similar manner as the other types of prostitution (e.g. with some type of price*quantity approach). Statistics Sweden has made some preliminary calculations with regards to the information available, but these estimations have not been validated with experts in the field and are therefore not included as sources for the official statistics or for the compilations of a new benchmark year.

7.1.3.1.2.2 Illegal gambling

Gambling is a pervasive phenomenon in Swedish society and in many Nordic countries a high proportion of the population is exposed to gambling. In 2005 the Swedish gambling market had an official turnover of nearly SEK 36 billion which corresponded to almost three percent of the households' disposable income. Measured in turnover, gaming machines, followed by betting on horse races, constitute the most popular forms of gambling.

Because of the potential harmful effects of gambling, lotteries have been restricted through Swedish legislation since the 1800's. Today, gambling is regulated through an act of parliament: Gambling Act (Spellag (2018:1138)). Through the Gambling Act virtually all arrangements of lotteries require a permit, and all permits are subject to government control and scrutiny.

Estimation of illegal gambling in 2003

Betting on gaming machines is the most common form of officially registered gambling in Sweden today. According to a number of sources, illegal gaming machines constitute the most prevalent and economically significant form of illicit gambling as well. Gaming machines have, for a long time, been subject to varying degrees of government regulation. In 2003 the National Gaming Board, in cooperation with the National Police Board, did a mapping of the occurrence of illegal gaming machines. The study was the first comprehensive examination of the illegal gaming market in Sweden. The directive that the government gave to the National Gaming Board was to map the market, assess the number of machines and their turnover and provide recommendations on how to address the problem. The government motivated the assignment by referring to illegal gambling's negative societal impact as well as its association with social and economic difficulties for individual gamblers. Furthermore, the government was concerned that the earnings generated by illegal machines benefited organized crime. In the course of their study, the Gaming Board visited over 2000 businesses throughout the country. The businesses were randomly picked and of the type where illegal machines are known to sometimes be placed. The inspections were carried out by anonymous controllers. With the help of the Swedish National Laboratory of Forensic Science (SKL), the seized machines were examined and estimates on turnover and on the ratio of wins to losses were made.

Unregulated machines were found in approximately one third of the businesses that the Gaming Board visited. The highest concentration was found in suburbs to the two largest cities in Sweden, Stockholm and Gothenburg. However, the problem had a wide geographical spread and illegal machines were found to be abundant in smaller communities as well. The dispersion was widespread enough for the Gaming Board to describe the issue as one of national concern. The machines were placed in a multitude of locales with the highest prevalence being in restaurants, coffee shops, candy stores, convenience stores, video rental shops and tobacco shops. Both old and new machines were found; providing typical games such as fruit wheels and poker. Common for the newer machines, is that they allow greater flexibility and the investigators found that settings could be varied in order to maximize profits. The ratio of wins to losses, for example, was in cases found to be lower on the days right after the receipt of monthly salaries.

The study revealed a strong link between illegal gaming machines and organized crime. A typical set-up is that criminal associations own the machines and rent them to business owners for a share in the profits generated. The investigation divulged that the placement of machines often involved coercive

methods and business owners who wished to remove the illegal machines were often threatened into not doing so. There also exists a widespread problem of betting on credit with ensuing debts as a result. What is more, a market for collecting these debts has also emerged. The Gaming Board's study included a questionnaire sent out to all the police districts in Sweden. The survey consisted of eight questions, mainly relating to their knowledge of illegal machines in their district and to the steps taken to address the issue. The results indicated that the knowledge was limited and several answers also revealed that the issue was not particularly prioritized. Many of the answers did, however, lend further support to the link between illegal gaming machines and organized crime.

In 2005, a follow-up survey was conducted. The results disclosed that the situation had by then not improved. The authors emphasize that agents dealing in the business of illicit machines have been very successful in capturing market shares. Considering the large amounts of money at stake they conclude that the problem is not bound to diminish unless more law enforcement is deployed.

With the help of data on different business types from Statistics Sweden, the findings from the Gaming Board's field study were used to produce an estimate of the total number of illegal machines in 2003. The conclusion was that the market in 2003 contained at least 3000 illegal machines.

The machines that were seized in connection to the field study were examined by SKL. According to SKL's estimate the machines had an average turnover of one million SEK per year and machine. Their estimate was that two-thirds of this was returned to the players in the form of winnings and that the remaining third constituted profits to be split between the owner of the machine and the proprietor of the business where the machine was located.

The components of the national accounts system affected by the inclusion of illegal gambling are consumption expenditure within the household sector and production within the non-financial corporations sector. There exists a certain risk of double-counting as the units providing the illegal gaming may already be included in the business register and may want to legitimize some of their illegal earnings. However, the consensus is that these types of earnings are seldom reported. The two necessary ingredients for an estimate of illegal gambling are an estimate of turnover and an estimate of the ratio of wins to losses. With an estimated 3000 machines, an average annual turnover of one million SEK and a wins to losses ratio of two-thirds, the resulting estimate of household consumption expenditure and of value added in production in 2003 is SEK 1 billion.

Time series

Previous studies contain little guidance as to the development of illegal gambling over time. For this reason, simplicity has been favoured and consideration has not been taken to specific circumstances that perhaps should have been allowed to affect the estimates for a given year. The volume growth of officially recorded production of gambling was employed to construct a time series and also as the method for extrapolating recent years.

Calculation of year 2021 by extrapolation:

Growth rate in current prices = $8,521 / 12,077 = 0.7056$

Current price value 2020 = 818 million SEK.

Current price value 2021 = $0.7056 * 818 = 577$ million SEK.

Estimates of illegal gambling SEK million

Year	Value
2003	1000
2011	1029
2015	985
2021	577

The resulting time series corresponds fairly well to the development that experts believe took place during the years in question. Anders Stymne, who has worked with gambling issues at the Swedish National Institute of Public Health, estimated that the illegal market expanded somewhat during the period 1993 to 2003, and then remained relatively unchanged or diminished slightly in more recent years. The relatively low value in 2021 is due to a notably low volume growth between 2020 and 2021. The volume growth for legal gambling and betting activities in NACE R92 was 0.66 in 2021. A steep decline in revenues from this activity started in 2018 but had a recovery during the pandemic, so the growth for 2021 should be interpreted in the light of this.

The above estimates have been incorporated into the national accounts and estimates of illegal gambling form part of the accounts. The premises for the estimations will perhaps need to be modified to accommodate any future developments that may have a bearing on the magnitude of illegal gambling in Sweden. However, there are no new investigations that reveal a different situation. Therefore, the same approach is used as developed in the 2008 report.

7.1.3.1.2.3 *Production and trafficking of drugs*

Narcotics

Sweden has a very restrictive policy towards illicit drugs. All handling and possession of narcotics for private use is forbidden by law.⁷⁰ Drug use prevention programs, interventions aimed at vulnerable groups, information campaigns and participation in a number of international anti-drug fora, are some of the on-going activities. The Swedish National Institute of Public Health coordinates drug preventive efforts. Various private organizations are also active in drug abuse prevention and public information programs. Under Swedish law, individuals who abuse drugs can be sentenced to drug treatment.

Comments on recent development and studies

Statistics Sweden has relied on the original benchmarks for trafficking of drugs for a long time, most of them originating in 2003 with some improvements made during the years when new data to support such improvements have been made available. The estimation models rely on the demand side approach, with consumption being split among heavy and light users, frequency of use and average quantity consumed. In line with GNIC 230 Rev.1, the compilations are stratified by type of drug as well as type of user. The recommendations state that as long as stable consumption patterns can be expected, results for a benchmark year can be extrapolated for a number of years with suitable indicators (R5). They also state that extrapolation of drug prices for a number of years must be justified, since prices for some drugs can vary sharply (R7). Statistics Sweden collect price information annually from CAN (Swedish Council for Information on Alcohol and Other Drugs).

With the COVID-19 pandemic many global industries were profoundly impacted in various ways, and global illicit drug trade is no exception. First, we note that disruptions in drug supply chains affect both producers through lockdowns and restrictions in the major drug-producing countries, as well as traffickers and transporters through border closures, reduced flying and stricter custom controls. Second, following the initial disruptions caused by the COVID-19 pandemic, transport and shipping costs began raising significantly during the second half of 2020. These increases in logistics costs made trafficking more expensive, which in turn would imply higher street prices for drugs and potentially reduced purity as traffickers dilute more to maintain profits.⁷¹ This is supported as well by a worldwide survey from the

⁷⁰ SFS 1968:64, Act on Penal Law on Narcotics.

⁷¹ UNODC. (2020). COVID-19 and the drug supply chain: from production and trafficking to use. *UNODC Research*, p. 33.

International Society of Addiction Medicine (ISAM) network, conducted during a 5-week period around 5 months into the pandemic.⁷²

The challenge with new benchmarks and new studies to support the updating of the illegal activities is, obviously, the scarcity and reliability of data. During the period leading up to the benchmark revision of 2024 Statistics Sweden gathered material from authorities and universities etc. to assess the possibility of updating the benchmark. First, all sources relating to the conventional price*quantity method were exhaustively considered. For the number of heavy addicts, it could be concluded that calculations already were up to date with the most recent study several years ago.⁷³ Since 2010, no updated study on the number of heavy addicts has been observed. There is one study made by the Public Health Agency of Sweden which estimates the number of people with problem drug use, but the results are not comparable with current estimates in the NA since the studies have been conducted using different methods.⁷⁴

Another challenge is that the division of heavy (and light) users among different drug types is a big source for potential estimation error. The estimates today are based on the distribution in *Det tunga narkotikamissbrukets omfattning i Sverige 1998* (Olsson, Adamsson Wahren & Byqvist 2001). In Swedish Government Official Reports (2011:6) a different allocation emerges, see the comparison in the table below. In the more recent study, data on 14,000 Swedish substance use clients and 11 different substances were analyzed. Table 5 in the report (p. 113) presents the distribution of the 8,869 individuals who reported use within the past 30 days – referred here to as heavy users – across the various substances. The main findings indicate a notable decline in the number of heroin users, accompanied by a corresponding increase in frequent cannabis use.

Comparison of the distribution of heavy users

2001 (1998)	Number	%	2011 (2008)	Number	%
Amphetamine	12742	46%	Amphetamine+cocaine	10620	36%
Heroin (opiates)	10891	39%	Heroin (opiates)	3540	12%
Cannabis	3195	11%	Cannabis	9440	32%
Narcotic medicines	1172	4%	Narcotic medicines	5900	20%

2001: n = 3918, extrapolated to 28000 (Olsson, Adamsson Wahren & Byqvist 2001)

2011: n = 8869, extrapolated to 29500 (Swedish Government Official Reports 2011:6)

Given that the number of substances, definitions and the methodology in 2011 differ slightly from the ones used in the 2001 distribution, the tables above are not perfectly comparable. For example, some own calculations had to be made to exclude Subutex, Methadone and other opiates from the table to the right, and in the table to the left there is no heavy cocaine users included. However, cocaine users account for only one-third of the entries in the second table. The overall picture still reflects a substantial shift between the reports.⁷⁵ With regard to drug purity, new dilution factors are observed in the Police seizure statistics. These are used in the new estimation model and are described below. The above-mentioned global changes together with the theoretical reasoning about what data material has been available indicate that the assumptions in recommendations 5 and 7 of the GNIC 230 Rev.1 on the estimates of the production and trafficking of drugs might no longer hold. Therefore, Statistics Sweden,

⁷² Farhoudian et al. (2020). A Global Survey on Changes in the Supply, Price, and Use of Illicit Drugs and Alcohol, and Related Complications During the 2020 COVID-19 Pandemic. *Frontiers in Psychiatry*.

⁷³ Svensson, D. & Arvidsson, O. (2010). Skattning av problematisk narkotikaanvändning 2007.

⁷⁴ See The Public Health Agency. (2023). Problematiskt narkotikabruk i Sverige 2007-2020. Summary in english on p. 9.

⁷⁵ In the report itself, the estimates are compared with Eriksson, A., Palm, J. & Storbjörn, J. (2003). Kvinnor och män i svensk missbruksbehandling. Compared with that study, the shift mentioned is less tangible. However, that study is smaller in scale than Olsson, Adamsson Wahren & Byqvist 2001.

as part of the benchmark revision of 2024, considered and implemented a new method to estimate the trafficking of drugs.

Main estimation model for trafficking of drugs

Wastewater-based epidemiology and wastewater analysis as a scientific method has gained international validity in recent years. It gives a new opportunity to assess consumption of drugs. The analytical methodology employed utilizes LC-MS/MS, a method that enables the quantitative determination of drugs and drug metabolites in wastewater. The amount of narcotics and their metabolites, through concentration measurement, is used as a proxy for consumption. For the conversion, a metabolic conversion factor as well as EMCDDA standard doses are used. By normalizing the data per day and per number of individuals connected to the wastewater treatment plant, comparison can be made over time and across regions.

Compared to the conventional estimates it is no longer necessary in all respects to divide narcotics users into heavy and light users, nor to rely on estimates of the annual number of users in each group. Other assumptions, such as number of usage days per year and the size of a normal dose for each user group can also be dismissed, in favour of using the annual consumption volume of narcotics, dilution and prices as the basis for compilation. The number of estimation errors can be assumed to decrease, but it should also be noted that wastewater analysis involves its own methodological challenges. For example, drug metabolites in wastewater are relatively small and not all narcotics can be detected reliably. However, wastewater analysis has been going on for several years in Sweden with the longest commitment in Gävleborg County which has performed 58 measurements during the years 2013-2021. The regional stratification overall is good, as the involved regions stretch from Västernorrland in the mid-north to Halland in the south.⁷⁶ Many of the regions are members of the SCORE-network.

The main results from Gävleborg County (and other regions) confirm that cannabis is a narcotic which continued its rising trend in Sweden during the years 2013-2019 with a clear peak in 2019 and a distinct decrease in the year of the pandemic. That special trend is taken into account when constructing the time series. As mentioned, not all narcotics can be detected reliably. In the Swedish wastewater measurements, cannabis, cocaine, amphetamine, methamphetamine, ecstasy/MDMA and tramadol are all included in the analyses with respect to illicit drugs relevant for the NA. Not all results are however used. Heroin and other opiates are to some extent measured in the regions but are not even presented in all the reports since the results are considered instable and unreliable.⁷⁷ Statistics Sweden adopts the same cautionary principle with regard to the new estimates, and the previous benchmark is kept for heroin in the Swedish NA. This is also the case for ecstasy/MDMA and tramadol, because they showed a decline in the wastewater studies compared to the old benchmarks, which is not expected when consulting other sources. However, ecstasy and tramadol had a combined trade margin of SEK 24 million in 2021, so updating to the new benchmark would have a very small effect on the consumption of drugs in total.

Since the extrapolation method for all drugs is the same for the subsequent years, this simply means that the value for 2021 based on the old estimation models are used for heroin, ecstasy and tramadol together with the new estimates for cannabis, cocaine and amphetamines. The share of the drugs calculated with the new benchmark year of 2021 is 61 percent. The drugs are introduced into their respective product

⁷⁶ The regions and/or municipalities involved are Håbo-Bålsta, Gävleborg, Halland, Söderhamn, Västernorrland and Östergötland. Some are on the higher level of Swedish administrative division and operate many testing-sites. Halland, for example, is best conceptualized as a region but its testing results come from 4 municipalities and an aggregate of 23 wastewater plants.

⁷⁷ Gustavsson, J. & Persson, S. (2021). Hur mycket narkotika finns det i Gävles avloppsvatten? pp. 36–37.

groups and the distribution is as follows: A0116 (cannabis), C211 (cocaine & heroin) and C212 (amphetamines, ecstasy and tramadol).

Calculation process of the benchmark year 2021

The data is based on the analysis reports from the six regions. These include information on the date of testing, waterflow in m³ per 24 hours and number of residents connected to the wastewater plants. The samples are analysed by LC-MS/MS methods and the calculation of number of doses per 1000 inhabitants is done by the regions and is the main variable reported. Routine laboratory methods for urine have been adapted for the analysis of wastewater. To get the best measurement results, the peak hour consumption is entered into the calculations. As will be shown in the steps below, this estimate is then adjusted downward to the lowest 24-hour consumption in the wastewater analysis, derived from measurements during normal weekdays.⁷⁸

The time frames for which measurements have been made vary across regions. It is a general trend that cannabis, cocaine and amphetamine have been part of the analyses for a longer period of time. During the years 2017-2020 there is best coverage and almost all regions can present consumption values for all drugs during these years. The estimates on number of normal doses per 1000 inhabitants per 24 hours that enter NA calculations are based on averages from between two up to four measurements in each region each year, which accounts for seasonal differences. In some regions, the reports include measurements from several wastewater plants in municipalities within the region. In those cases, a regional average across the wastewater plants is calculated first and subsequently the yearly average is obtained.

Normal doses/1000 inhabitants/24 hours during different measurements, Håbo-Bålsta

	Normal doses/1000 inhabitants/24h			
	2019-04-01	2019-06-30	2019-10-06	
Cannabis	102.7	77.4	69.2	
Cocaine	2.5	4.3	4.7	
Amphetamine	8.8	5.5	6.8	
	NA estimate year 2019			
Cannabis	83.11			= (102.7+77.4+69.2)/3
Cocaine	3.83			= (2.5+4.3+4.7)/3
Amphetamine	7.01			= (8.8+5.5+6.8)/3

Below, the calculation steps to arrive at the trade margin for the above drugs in Håbo-Bålsta municipality are presented. The calculations are made exactly the same way for all six regions and drug types, to determine their respective trade margins.⁷⁹

Step 1: Data is converted to number of normal doses per 24 hours.

	2019	
Inhabitants connected to plant	21749	
Thousand inhabitants	1000	
Normal doses/24 hours		
Cannabis	1807.6	= (21749/1000*83.11)
Cocaine	83.4	= (21749/1000*3.83)
Amphetamine	152.4	= (21749/1000*7.01)

⁷⁸ Weekly average consumption is presented for each drug in Gustavsson, J & Persson, S (2021). On the basis of this, we made assumptions for the low-end consumption as proportion of peak consumption and used these assumptions for each region. Assumptions were always lower than the weekly average consumption per drug.

⁷⁹ In the verification cycle 2020-2024, as an attachment to our answers on Questions for chapter 1 and 2, an excel file where the comprehensive calculation was sent to Eurostat.

Step 2: Multiplying with normal dose size gives (max) consumption in kg per 24 hours.

"Normal doses" in kg (EMCDDA)			
Cannabis	0.000125		
Cocaine	0.000100		
Amphetamines	0.000030		
Consumption in kg/24h, 2019			
Cannabis	0.226	= (1807.6*0.000125)	
Cocaine	0.008	= (83.4*0.0001)	
Amphetamines	0.005	= (152.4*0.00003)	

Step 3: Correcting consumption to (min) consumption in kg, converting from 24hr (day) to year and extrapolating to the population.

Low-end 24hr consumption (as a proportion of peak consumption)					
Cannabis	Cocaine	Amphetamine	Days in a year	Population, 2019	Pop Håbo-Bålsta
0.7	0.5	0.6	365	10 327 589	21 749
Consumption in kg, 2019					
Cannabis	27413.7 = (0.226*0.7*365*(10327589/21749))				
Cocaine	722.5 = (0.008*0.5*365*(10327589/21749))				
Amphetamines	271.37 = (0.005*0.6*365*(10327589/21749))*0.57 ^x				

x The measured consumption of amphetamines is corrected downward based on volumes of legally prescribed amphetamines.

Step 4: The true import quantity of pure drug is derived by adjusting for purity levels based on data from seized materials. An underlying assumption is that all imported substances are ultimately consumed.

	Actual drug purity in siezed materials	Implied dilution ratio
Cocaine	65	1.54
Amphetamine	31	3.23
Source: NFC Report 2021-05: Drug purity in seized materials 2020 (Swedish Police)		
Imports in kg, 2019		
Cannabis	27413.7	
Cocaine	469.6 = (722.5/1.54)	
Amphetamines	84.1 = (271.37/3.23)	

Step 5: Multiplying volumes with prices and calculating the trade margin (shown as example of the full calculation for non-benchmark years). For the benchmark estimate, see step 6-9.

	Cannabis [*]		Cocaine		Amphetamines	
Street price, SEK	103437		895000		200000	
Import price, SEK	37292		360000		55000	
Consumption, SEK million	2836	= (27413*103437/1000000)	647	= (722*895000/1000000)	54	= (271*200000/1000000)
Imports, SEK million	1022	= (27413*37292/1000000)	169	= (469*360000/1000000)	5	= (84*55000/1000000)
Trade margin, 2019, mnkr	1813	= (2836-1022)	478	= (647-169)	50	= (54-5)
Source for prices: The Swedish Council for Information on Alcohol and Other Drugs, CAN Report 210						
x Prices are measured for hasch and marijuana. We estimate a weighted average price based on customs' seizures.						

The above steps are compiled for each region, and the results are evaluated. Based on the completeness of data, we then chose the years 2017-2020 to constitute the base for the benchmark of 2021. With careful assessment of the sources, each of the regions were given a weight based on the completeness and coverage of the data. The benchmark year is then arrived at by the following process, which involves these straightforward steps:

Step 6: The consumption and import volumes (steps 3&4) based on extrapolations of the population each year in each region and for each drug, for the years 2017-2020, are extrapolated to the population count of 2021.

Step 7: The consumption and import volumes derived in step 6 are weighted together to an average for Sweden, each year 2017-2020.

Step 8: New consumption base for 2021 is equal to the average of the four weighted years.

Step 9: The consumption and import volumes are multiplied with street and import prices, respectively, and the trade margin is calculated.

The benchmark values for all the drugs, following the above steps for year 2021, are presented below in SEK million. The trade margins equal output, and GVA, since IC is not explicitly estimated for the drug trafficking industry (see discussion in the section *Intermediate consumption and imports*).

	Drug sales, current prices	Import value, current prices	Trade margin = GVA
Cannabis	2747	1250	1497
Cocaine	516	136	380
Amphetamines	216	16	200
Ecstasy/MDMA	17	3	14
Tramadol	23	13	10
Heroin	1689	410	1279
New benchmark estimates for 2021.			

Extrapolation from the benchmark year

We note that the estimates for the benchmark year are constituted by a demand-side consumption-based approach. At this point it is unlikely that we will be able to collect and assemble data with maintained quality on the basis of wastewater analysis annually. Therefore, a model for extrapolation is set up.

To our knowledge, there are no expert estimates that could indicate the consumption volume growth of each drug each year, and therefore population growth is used as a proxy.⁸⁰ It is assumed that the population using drugs is generally somewhere between 15-75 years old. Extrapolating is done by multiplying the consumption in current prices with the assumed volume growth, which gives the consumption in last year's prices. The respective indicators, i.e. drug sales and import value, are then independently reflat with the price changes per drug. The price data is obtained from the Swedish Council for Information on Alcohol and Other Drugs (CAN), who conduct annual surveys on both street prices and wholesale prices. After sales and imports have been independently estimated, a trade margin is calculated.

Intermediate consumption and imports

Since domestic output consists only of the trade margins which accrue before the drug reaches the final consumer, intermediate consumption should be very low. Intermediate consumption may consist of rental costs of premises, the purchase of mobile phones and transport costs. However, it is probable that these costs are already included to some extent in the national accounts, although they may be in the wrong sector. Therefore, no estimate of intermediate consumption is made.

This applies to imports as well through the item "foreign exchange for travel", which includes all currency conversions. Conversions to foreign currency by households are recorded as Swedish household consumption abroad and conversion to Swedish currency are recorded as foreign consumption in Sweden. These items are included when calculating the total consumption expenditure of households, with Swedish household consumption abroad thus contributing positively to total

⁸⁰ The Public Health Agency of Sweden conducts the annual survey *Health on equal terms* which addresses many topics concerning public health. In the survey, there are questions on cannabis use in the last twelve months which could be a better indicator than the now chosen proxy for that specific drug. CAN also presents some surveys on consumption of drugs in the population but these are not annual nor specific enough.

consumption, while foreign consumption in Sweden is excluded. There is inadequate knowledge of how transactions are arranged when importing drugs, but for the moment it is assumed that all imports are covered by foreign exchange for travel. Introduction of drugs into the Swedish national accounts therefore have an impact only on household consumption expenditure and on output from the margins on resale.

Areas for improvement

According to the Public Health Agency, controlled narcotic substances such as amphetamines and alprazolam, but also opioids such as oxycodone, are becoming a larger part of the illicit drug market.⁸¹ Viewed from the supply-side, narcotic drugs make up about 25 percent of the customs' seizures. This prevalence was not detected in the demand-based approach, and a discrepancy could indicate that something might be missing. However, the old estimation model for trafficking of drugs also fails to capture this, so it seems that some new approach would be needed to account for this.

Furthermore, it would be of great value to update the benchmark for heroin. Opiates has been on a downward trend in Sweden, where 0.1 percent of the population report using opioids (including heroin) in the last twelve months in 2021 compared to 0.2 in 2017.⁸² In the case that there is indeed a shift going on from heroin use to increasing use of opioids in the form of narcotic drugs, this strengthens the theory that heroin plays a part in the overall decline in opioid use in Sweden. Specific studies over heroin use are however very rare in Sweden, especially in recent years.

For the benchmark revision, we implemented the population growth as a proxy volume indicator for the overall trade margin in drug trafficking (previously it was only applied to the group "other users", i.e. those not classified as heavy users). It is duly noted that using population growth might be somewhat blunt, and the search for better indicators is an ongoing matter.

The most accurate estimate is achieved by integrating data from multiple sources. It would be desirable to be able to estimate output, imports and consumption separately and then reconcile availability and use of drugs, in accordance with the usual method of compiling the accounts. However, this being a sensitive phenomenon, where incentive to report prices accurately may vary, and given due concern about the sufficiency of some of the biomarkers, all estimates should be interpreted with a proper degree of cautiousness with focus being directed at the bigger trends. Despite the uncertainty, the revised estimates are considered to fulfil their main purpose in this context – enhancing the statistical coverage of the National Accounts.

Estimation model for trafficking of drugs with old benchmarks

Since there are still a part of the calculations for drugs that include old benchmarks, a review of the older source material which is used for the old benchmarks is presented below. As described in the introduction for the new approach, the old benchmarks regard heroin, ecstasy and tramadol. The value of COICOP 0240⁸³ that still relies on the old benchmark year is SEK 1303 million or 39 percent in 2021.

The basic premise is that all narcotics used are consumed by households. The estimations on total consumption are based primarily on assumptions regarding the number of addicts and their average consumption. A similar model was previously adopted in the national accounts for all drug types, with data on the number of addicts, prices, average dose and days of abuse as input. For the reference year

⁸¹ Den svenska narkotikasituationen [The narcotics situation in Sweden], 2024.

⁸² CAN. (2022). Användning och beroendeproblem av alkohol, narkotika och tobak [Use of and addiction to the substances alcohol, narcotics and tobacco], p. 44.

⁸³ As defined by COICOP-2018.

2021, only a part of the exhaustiveness adjustments relating to illicit drug trade is calculated with this method. The model is constructed as follows:

Household final consumption expenditure per substance = Price (SEK/gram) × number of addicts × average dose (grams per day of abuse) × number of days of abuse.

Drug abuse encompasses everything from brief or on-off experiments to daily abuse. In calculating household final consumption expenditure on drugs, it is therefore relevant to make a distinction between heavy abuse and other abuse. “Heavy abuse” is, in this context, defined as including all abuse via injection, irrespective of the substance and frequency, and all daily or almost daily use of drugs, irrespective of the method of intake. In the case of heavy abuse, a number of surveys and estimates have been made of the number of abusers and their consumption.

The group denoted “other abusers” consist of users who are not classified into the above category. This includes in part those who engage in occasional/experimental use and in part those who are at a stage between occasional use and heavy abuse.

Other (light) abusers and their consumption

The category “other abuse” covers all abuse which is not classified as heavy, i.e., everything from brief/experimental use to more regular use which is not daily or almost daily. These users do exist and presumably make up a substantial amount of the total users in Sweden. However, since the new estimation model relies on total consumed quantity, only the old estimation model takes into account the distinction between heavy and other users. The other users, in this regard, constitute a very small part of the old benchmark calculations. The information available for calculating the light abusers comes from various interviews and questionnaires.

When the benchmark for drug consumption by other users/abusers were set, some assumptions needed to be made. It was assumed that the direct interviews of the total population reflect use which is not classified as heavy abuse. The assumption of the calculation of drug abuse by the category “other users” is that slightly more than 1% of the population aged between 15-75 years should be in this group.⁸⁴ had used drugs in the previous year.

For the drugs with an old benchmark, only ecstasy and narcotic medicines have the user category “other abusers”. The trade margin associated with this type of use total 18 million SEK or 1.3 percent of the trade margins calculated with old benchmarks in 2021. Heroin use accounts for the remaining 98.7 percent of the old benchmark.

Heavy abusers and their consumption

The major portion of drug consumption is attributable to the heavy users, i.e., more regular abusers. To estimate the consumption of this group, data is needed on the number of heavy abusers, the prices of different drugs, information on which substances are consumed and how often the abuse occurs, i.e., the number of days of active abuse.

Number of heavy addicts

Since the year 2010, NA has used the figure 29,500 heavy users, which is taken from Swedish Government Official Reports⁸⁵. The distribution among drugs, however, is still based on the shares in the table below, based on Olsson, Adamsson Wahren and Byqvist, showing number of users per

⁸⁴ Slightly more than 1 percent in that age group reported that they had “used drugs at least once during the past 12-month period”.

⁸⁵ Research Annex of the Swedish Government Inquiry into Substance Abuse. In Swedish, ”Missbruket, Kunskapen, Vården” (2011).

substance. Since only heroin, ecstasy and narcotic medicines are calculated with the old benchmark, the number of heavy users are only used in the estimations for heroin and narcotic medicines. In the old benchmarks we do not acknowledge any heavy users of ecstasy (only light/brief/experimental users).

Data have been streamlined so that the number of abusers in 2001 is broken down only by amphetamines (central stimulants are assumed to consist primarily of amphetamines), heroin (opiates are assumed to consist primarily of heroin), cannabis and narcotic medicines (tablets are assumed to consist primarily of narcotic classified medicines such as benzodiazepines and prescription opiates, for example tramadol).

According to Olsson, Adamsson Wahren and Byqvist (2001), central stimulants were the dominant substance among 1,783 addicts, opiates among 1,524, cannabis among 447 and various narcotic medicines in the form of tablets among 164 individuals. Calculated as a percentage, this gives the following breakdown: 46% central stimulants (here interpreted as amphetamines), 39% opiates (here interpreted as heroin), 11% cannabis and 4% tablets (here interpreted as narcotic medicines). This breakdown applies to the number of abusers in 2001.

Substance	Abusers	Proportion
Amphetamines	12742	0,46
Heroin	10891	0,39
Cannabis	3195	0,11
Narc. Medicines.	1172	0,04
Total	28000	1

Street and import prices are available annually from CAN for all drug types.

Output

Output arises through both domestic output and through the trade margins on imported quantities which are sold to consumers. In the case of heroin and cocaine, there is no indication that they are manufactured in Sweden. There is a certain degree of limited home cultivation of cannabis plants, but the effect on total supply is considered small. In the case of synthetic drugs, the manufacture of ecstasy is considered almost non-existent and the manufacture of amphetamines as very small. Output is therefore best conceptualized as the value of the trade margins created, regardless if the old or new benchmarks are in question.

Corrections have to be made when calculating the trade margin, since the degree of purity of a substance can differ at the import and street stage. Of the drugs with the old benchmark, only heroin is assumed to be diluted. The calculation process is similar to the one described for the new benchmarks, and the dilution factor is 2.2⁸⁶. A numerical example of how the trade margin (= the output) in 2021 was calculated for heroin, which makes up 98 percent of the old benchmark, is shown below. Household final consumption expenditure consists of the combined consumption of heavy users and other users, though for heroin only heavy users are recognized.

⁸⁶Swedish Customs etc., “Measuring the social benefit of public sector activities”, 2000.

Heroin calculation for year 2021 with old benchmark

	Amphetamines	Heroin	Cannabis	Narcotic medicines	Total
Year 2001 heavy users	12742	10891	3195	1172	28000
Year 2021 heavy users	13425	11474	3366	1235	29500
Heavy users yearly consumption gram/person		160			
Median street price (20% white, 80% brown heroin), SEK per gram		920			
Import price UNODC (extrapolated with CAN recent years), SEK thousand per kg		491			
Dilution factor heroin		2.2			
Yearly consumption for heavy users of heroin, kg		1836	$=(11474*160)/1000$		
Yearly consumption of heavy users, SEK million		1689	$=(1836*920)/1000$		
Imported quantity (assumption that everything imported is consumed)		1836			
Actual imported quantity, prior to dilution		835	$=(1836/2.2)$		
Wholesale value of imports, SEK million		410	$=(835*491)$		
Trade margin, SEK million		1279	$=(1689-410)$		

Summary of the 2021 estimates

Sweden has updated its benchmark year for the production and trafficking of drugs and 61 percent of the value of the illicit drug trade has now been calculated with a new benchmark year of 2021. The substances with a new benchmark value are cannabis, cocaine and amphetamines.

Previously, the basic model for trafficking of drugs as presented in the *Handbook on the compilation of statistics on illegal economic activities* was the only and main method. This method is still used to some extent but is now supplemented by the new methodology. The new methodology that sets the benchmark year is based on consumption volumes derived from wastewater analysis.

Compared to the previous estimates, the aggregated estimates now rely less on the division of users into heavy or other users as well as on estimates of the annual number of users in each substance category. Other assumptions linked to potential estimation errors, such as number of usage days per year, are also dismissed, in favour of using annual consumption volumes and prices as the basis for compilation.

7.1.3.1.2.4 Estimates of smuggling of alcohol and tobacco products, home distilling of alcohol**Background**

Alcohol and tobacco smuggling is an illegal activity in Sweden. However, it is legal to import specified amounts of alcohol and tobacco for personal use into Sweden as well as additional amounts if the items are declared and taxes are paid. It is also legal to use alcohol and tobacco – in contrast to drugs, for example.

Alcohol and tobacco smuggling is probably rather wide-spread in Sweden since the taxes are high (excise duties and VAT) and consequently the prices too. If prices are significantly lower in, for instance, Finland or Poland, it can be quite profitable for a smuggler, who would presumably have a high margin but low transport costs, to choose adjacent countries for smuggling to – e.g. Sweden.

Home-production of spirits is illegal and an attempt to calculate the economic value of illegal own-production of alcohol is also made.

The Centre for Social Research on Alcohol and Drugs, SoRAD at Stockholm University was established in 1999 as a national centre to strengthen social research on alcohol and drugs in Sweden. SoRAD conducts a monthly survey directed at the adult section of the Swedish population. These surveys include questions on travel imports, smuggling and home-production of spirits, wine and beer. Since 2001, questions have covered alcohol consumption and as of 2003 questions have also been introduced on the consumption and import of tobacco products. The surveys are conducted at the end of each

month and in each case 1,500 persons are interviewed. These surveys⁸⁷ can provide data on quantities relating to household consumption. Annual and quarterly changes of consumption are also presented. It should be added that in SoRAD's surveys, a distinction is made between registered alcohol consumption which is covered by statistics and taxed in Sweden and unregistered consumption, which is not covered by any other statistics and not taxed in Sweden.

The purchase of alcohol at *Systembolaget*⁸⁸, in restaurants and food stores constitutes registered quantities, while travel imports, smuggling and home-production are unregistered. The table below indicates that unregistered consumption accounts for 10 percent of total consumption.

Total consumption of alcohol in 2003 by way of acquisition, 100 percent alcohol

Systembolaget	49
Restaurants	11
Food stores (light/medium beer)	8
Travel imports	22
Smuggling	6
Home-production	4
Total consumption	100

The principles governing the calculations

Calculations are made separately for spirits, wine, beer and cigarettes. The year 2003 is chosen as a benchmark. Estimates are calculated for final consumption of households, imports and value added respectively. In the national accounts, the supply side has to be in balance with the demand side. The consumption expenditures of households are calculated as: street price \times quantity purchased.

Smuggling of alcohol

The calculations are broken down into spirits, wine and beer, but also by country of origin. According to a report from the National Criminal Investigation and Swedish Customs⁸⁹, the major share of alcohol smuggled to Sweden especially to Skåne, the most southern part of Sweden, originates in Germany and Denmark. This also coincides with the picture of travel imports presented by SoRAD.

By using the country breakdown of the origin of alcohol at the time of purchase, it is possible to break down the smuggling by country and product. To complete the formula "final consumption expenditure of households = street price \times quantity purchased", street prices also have to be determined. However, price data proved difficult to obtain. Several conceivable sources were contacted – e.g., Swedish Customs, Swedish Tax Office, SoRAD, CAN⁹⁰, National Institute of Public Health, Systembolaget, police, as well as journalists and the media, etc. However, only the Malmö police were able to provide data regarding the street prices for illegal alcohol and tobacco.

Below, calculations for smuggled spirits, smuggled wine and smuggled beer are shown in separate tables, based on SoRADs quantities and the Malmö police data on street prices. According to the Malmö police, there are data on street prices for alcohol smuggled in from Poland and on street prices for alcohol smuggled in from other countries. Since Poland was not in the EU in 2003, the calculation is simplified, and it is assumed that "non-EU" is equivalent to Poland.

⁸⁷ Alcohol consumption by the Swedish population in 2003, Nina-Katri Gustafsson and Björn Trolldal, SoRAD, Stockholm 2004, *Forskningsrapport* [research report] No 26. www.sorad.su.se.

⁸⁸ The monopoly which provides for all sales of alcoholic drinks in Sweden.

⁸⁹ A criminal intelligence-based survey of alcohol related crime, Niki Ekman etc., National Criminal Investigation Department and Swedish Customs, 2004.

⁹⁰ CAN = Central Association for Alcohol and Drug Information.

In the three following tables, quantity = 1,000 litres by volume, price = SEK per litre and value = SEK million in 2003. Totals may not fully tally due to rounding.

Household purchases of smuggled spirits

Spirits	EU	Non EU	Total
Quantity	2488	702	3 190
Price	150	200	
Value	373	140	514

Source: Own calculation.

Household purchases of smuggled wine

Wine	EU	Non EU	Total
Quantity	5274	278	5 550
Price	30	30	
Value	158	8	167

Source: Own calculation.

Household purchases of smuggled beer

Beer	EU	Non EU	Total
Quantity	50876	4 424	55 300
Price	19	20	
Value	967	88	1 055

Source: Own calculation.

According to these calculations, consumption expenditure of households is SEK 514 million for smuggled spirits, SEK 167 million for smuggled wine and SEK 1,055 million for smuggled beer, or a total of SEK 1,736 million for smuggled alcohol purchased by households.

Imports

It is more difficult to estimate the value of imports. As stated above, SoRAD conducts a survey directed at consumers (households). There is no equivalent overall view of imports – for instance there is, for obvious reasons, no interview survey of importers/sellers. What is available are Swedish Customs seizure statistics⁹¹, broken down by cigarettes, strong beer and alcoholic liquor.

The Monitor-project at SoRAD has compared the Customs seizure statistics of alcohol with the estimates based on their surveys for the period 2002-2006. According to this material, seizures account only for a minimal share of all the smuggled alcohol sold in Sweden. It is estimated to account for at the most 0.4 percent for the period in question⁹². Except for wine, the development trends over the years are not in accordance with each other either. Customs-seizure statistics cannot be used to calculate imports. Instead, quantity data from SoRAD reports have been used.

Imports are calculated as: import price × smuggled quantity, where import price = legal price in the country of origin. It is important to bear in mind that: import price < street price < legal resale price in Sweden. In practice, it would therefore be possible to use price data from the country where the smuggled goods originate.

Price data from the Purchasing Price Parity survey (PPP) by SCB⁹³ was used. This material contains unit prices for the different products. They are average prices for 2003, including VAT, and are expressed as average prices for the respective country in that country's currency. To convert unit prices in foreign

⁹¹ See www.tull.se.

⁹² SoRAD, Report no. 49, p.21

⁹³ Purchasing Price Parity survey, SCB, Unit for economic statistics, The price unit, www.scb.se.

currencies to Swedish crowns, the average exchange rates for 2003 are used for the respective currencies, from Eurostat's database New Cronos.

In this report, detailed unit prices are used for spirits, wine, beer and cigarettes. Since the Malmö police consider that vodka is generally sold illegally on the street, an average price from the vodka prices included in the PPP measurements is used in the calculations of smuggled spirits. For wine, red wine of standard table–wine quality is used. For beer, domestic beer of normal quality is used.

Germany's legal unit prices have been used for all countries and products apart from Poland. Poland's legal unit prices at the time Poland was a non-EU country is used for non-EU spirits and beer. This original Polish unit price is then extrapolated with relevant CPI to cover the unit prices of the non-EU countries in later years. Thus, a pragmatic approach is adopted. This is in line with the GNI committee's recommendations which say that it is possible to use data from the country where the goods generally originate.

Below is presented equivalent calculations of the import value as for households above. They are based on the same country breakdown and smuggled volume of the respective product groups as in the case of households. In the tables, quantity = 1,000 litres by volume, price = SEK per litre, and value = SEK million in 2003. Totals may not fully tally due to rounding.

Import of smuggled spirits

Spirits	EU	Non EU	Total
Quantity	2 488	702	3 190
Price	124	95	
Value	309	67	375

Source: Own calculation.

Import of smuggled wine

Wine	EU	Non EU	Total
Quantity	5 274	278	5 550
Price	16	16	
Value	84	4	89

Source: Own calculation.

Import of smuggled beer

Beer	EU	Non- EU	Total
Quantity	50 876	4 424	55 300
Price	10	11	
Value	509	49	557

Source: Own calculation.

Home-production of alcohol

Home-produced alcohol concerns spirits and wine. The consumption of home-produced strong beer in 2003 was barely significant and is therefore not considered. Home-produced spirits and wine accounted for about 6 percent each of their respective totals of consumption in 2003.⁹⁴

As stated above, it is difficult to obtain data on the street prices of illegal alcohol. A report from the Ministry of Finance⁹⁵ considers that a litre of home-produced alcohol costs about SEK 100. This is assumed to apply to 1999 when the report was written. By extrapolating 1999 prices on the basis of the CPI-increase for alcoholic liquor⁹⁶ between 2003 and 1999, the price for home-produced spirits comes

⁹⁴ Alcohol consumption by the Swedish population in 2003, Nina-Katri Gustafsson and Björn Trolldal, SoRAD, Stockholm 2004, *Forskningsrapport* No 26. www.sorad.su.se.

⁹⁵ *Bostad sökes* [Looking for a home] – an ESO report on the homeless in Sweden, *Ds 1999:46*, Stefan Fölster and Per Säfsbäck, Ministry of Finance, Stockholm 1999.

⁹⁶ Consumer price index, annual mean value, product group 02.1.1 alcoholic liquor, www.scb.se.

out at SEK 104 per litre in 2003. The price of wine is calculated using the same relation between smuggled and home-produced as for alcoholic liquor. The following table shows figures of home-production.

Household consumption of home-produced alcohol in 1000 litres by volume, SEK per litres and SEK million, 2003

	Home-pro duced spirits	Home-pro duced wine
Quantity	2 810	14 800
Price	104	20
Value	292	296

Source: SoRAD and own calculation.

According to these calculations, the consumption expenditure of households is SEK 292 million on home-produced spirits and SEK 296 million on home produced wine, or a total of SEK 588 million for home-produced alcohol purchased/used by households. This includes both sales to households and production for own final use. Regarding home-production of wine, however, it is doubtful if the quality is good enough for sale and this item has therefore been considered as consumption for own final use.

Output, intermediate consumption and value added

Swedish output of smuggled alcohol is made up of the trade margins that the smuggled quantities generate. These are calculated as street price minus import price \times quantity sold. According to the above calculations this gives SEK 1,736 million – SEK 1,022 million = SEK 714 million for alcohol in 2003.

Any intermediate consumption in the smuggling sector is probably primarily made up of transport costs. However, it is probable that these costs are already included in the national accounts, although they may be in the wrong sector. Here it is assumed that intermediate consumption which may not already be covered in the national accounts is very low, and therefore no estimate is made. Output is therefore equal to value added.

The output value for home-produced alcohol is equal to the sales value, equivalent to the consumption expenditure of households on home-produced alcohol if we assume that all home-produced alcohol is purchased/used by the household. Thus, the output value is SEK 292 million according to the calculations presented. As no reduction for intermediate consumption is made, this is also the value added.

Retail trade and restaurants

It remains uncertain whether some illegal alcohol and tobacco products should be accounted for as intermediate consumption in certain industries, for instance, as inputs in retail trade activities such as those in the restaurant sector. According to information on the matter provided by the Restaurant Commission, a former authority within the police that operated in the Stockholm restaurant milieu until 2014, the sale of illegal alcohol in the catering sector was however reported to occur on a relatively small scale so no such adjustment is made.

The yearbook of tax statistics raises the question of the purchase of illegal alcohol by restaurants. In the past, the general view has been that restaurants represented a major distribution channel for illegal alcohol. However, in a study (Ds 1997:8), the Ministry of Health and Social Affairs concluded that the role of restaurants is exaggerated. This view was mainly based on the fact that restaurants run a relatively high risk when handling illegal alcohol. If discovered, there is a great likelihood that the business would be shut down.

The Stockholm County Administration is responsible for monitoring restaurants and alcohol sales in restaurants in Stockholm, an activity, which comes under the heading “restaurant clean-up” (operation Krogsanering). According to this, there is currently no proof that illegal alcohol is sold in restaurants in Stockholm.

Intensified actions by the National Tax Agency and regional actors during recent years, due to the introduction of new tools that help the authorities to check the activities better, most likely contribute to some reduction of illegal handling in this area.

Nevertheless, the Skåne County Administration has made most progress in mapping sales of illegal alcohol in restaurants. The ISAK project was launched there in 2004 and found that 16 restaurants in Malmö had sold illegal alcoholic drinks. Often it is alcohol bought by a private person in Germany or Denmark which is then sold illegally in restaurants in Malmö. According to the Malmö police, as many as half of the smaller convenience stores in Malmö sell smuggled alcohol and smuggled cigarettes. However, there are no quantitative data on the overall volumes involved.

The above sources give a somewhat fragmented picture of the extent of sales of illegal alcohol and tobacco in the retail and catering trade. In any event there appear to be some sales, primarily in the retail trade.

Summary of the 2021 estimates on alcoholic beverages

The text describes how benchmark values were obtained. For the years after the benchmark year, annual reports from SoRAD have been used for extrapolation. For later years, the values are extrapolated with changes in consumption volumes per alcoholic beverage according to CAN. The reports and surveys, which go under the name *Monitormätningarna*, are obtained annually. They estimate the total alcohol consumption in Sweden for both the registered and unregistered part. The unregistered part consists of alcohol brought into the country during travel, home production and smuggling. It is mapped through surveys directed at a representative sample of the population aged 17 to 84. Thus, a reliable indicator of volume growth is used in lack of data for an updated benchmark. Constant prices are reflat with relevant price indexes per alcoholic beverage.

A numerical example for the extrapolation in 2021 for smuggled beer is provided below. The principle is the same for all alcoholic beverages.

Smuggling of strong beer 2020, current prices, SEK million	126	
Price index COICOP 021312 PG C1105, 2021	100.643	
Purchases of smuggled strong beer, million volume litres, 2020	24,9	
Purchases of smuggled strong beer, million volume litres, 2021	19,3	
Volume change	0.78	=(19.3/24.9)
Smuggling of strong beer 2021, constant prices, SEK million	98	=(126*0.78)
Smuggling of strong beer 2021, current prices, SEK million	99	=(98*100.643)/100

Given the calculation methods on which the national accounts are based, purchases abroad by Swedes are already included. These purchases are included in the “foreign currency” item, which is calculated with the aid of data from currency exchange and credit-card transactions. The introduction of illegal items into the Swedish national accounts therefore has an impact only on the final consumption expenditure of households, output and value added.

Smuggling of tobacco

A SoRAD survey was introduced starting in 2003. Other sources were therefore used for previous experimental estimates.

The price of cigarettes is high in Sweden compared with other countries. This makes smuggling to Sweden attractive. Since cigarettes are bulky the transport volume is relatively large, and organised smuggling with lorries therefore dominates. A large long-distance lorry with smuggled cigarettes could generate a profit of between SEK 5 million and SEK 10 million on the wholesale market in Sweden in the beginning of the 2000s.⁹⁷

Organised crime accounts for a large proportion of the smuggling of alcohol and tobacco. For this, transport, storage and distribution channels are necessary. The smuggled cigarettes come primarily from Estonia, Latvia, Lithuania and Poland. Smuggled cigarettes transit to Norway where the prices are among the highest in Europe.

For imports of cigarettes, Poland's legal unit price is used. Other countries' legal unit prices for cigarettes based on the PPP values are often higher than the Swedish street prices, according to Malmö police data.

The SoRAD surveys had preliminary figures for 2003 and 2004, which were 480 and 377 million cigarettes respectively. By assuming the import and "street" prices mentioned above the Swedish production, equal to the trade margin, was estimated to SEK 240 million in 2003. This estimate was introduced into the national accounts.

Summary of the 2021 estimates on smuggling of tobacco

The text describes how benchmark values were obtained. For the years after the benchmark year, annual reports from SoRAD were used for extrapolation. For later years, the values are extrapolated with changes in consumption volumes of smuggled tobacco as well as of unregistered traveller imports according to CAN. Questions on unregistered tobacco consumption are also part of the *Monitormätningarna* and obtained annually.

A numerical example for the extrapolation in 2021 is provided below.

Smuggling of tobacco 2020, current prices, SEK million	383	
Price index COICOP 02202 PG C12, 2021	102.457	
Number of smuggled cigarettes, 2020, million	162	
Number of unregistered travel imports, 2020, million	166	
sum unregistered 2020	328	=(162+166)
Number of smuggled cigarettes, 2021, million	103	
Number of unregistered travel imports, 2021, million	121	
sum unregistered 2021	224	=(103+121)
Volume change	0.68	=(224/328)
Smuggling of tobacco 2021, constant prices, SEK million	262	=(383*0.68)
Smuggling of tobacco 2021, current prices, SEK million	268	=(262*102.457)/100

7.1.3.1.3 Statistical deficiencies in data, N7

7.1.3.1.3.1 Production of own account goods by farmers and forest enterprises (Firewood).

See section 3.7: Output of firewood for own final use is calculated in the model for firewood output, sources are quantities from the annual Energy statistics for one and two dwelling buildings from the Swedish Energy Agency in combination with purchasers' price information (cubic meters of birch pulpwood) from the Swedish Forestry Data Center/National Board of Forestry.

⁹⁷ *Skattestatistisk årsbok* (Yearbook of tax statistics), Chapter 10 "Fel och fusk", Swedish Tax Authority Stockholm 2003.

7.1.3.2 Use of fiscal audits

This method is the main method used for the following non-exhaustiveness element.

Hidden production and hidden intermediate consumption

The underreporting of turnover and the over reporting of intermediate consumption are the main contributors to exhaustiveness items in the Swedish economy. The current levels of under- and over-reporting adjustments (N6) in the Swedish national accounts are mainly based on the report that the Swedish Tax Authority published in 2020 named “Svarta arbetsinkomster”, described below as STA report 2020.

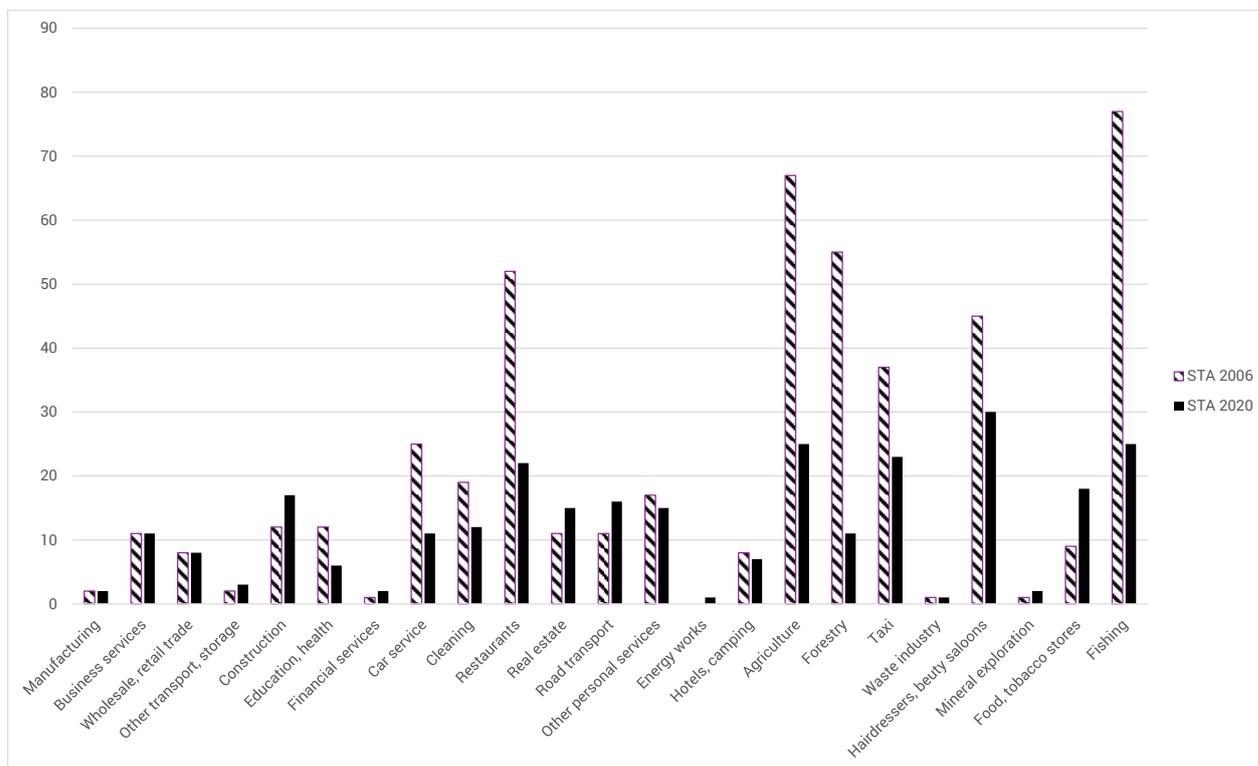
In the beginning of 2020, The Swedish Tax Agency released a new comprehensive study on the hidden production in Sweden, based on fiscal audits and using similar methods as in the 2006 study. The report from 2020 estimated that the hidden income for the whole economy was SEK 91 billion per year on average for the years 2010-2016, of which SEK 79 billion constitutes hidden income from employment, corresponding to 6 percent of total income and 2,3 percent of GDP for the years. This benchmark for hidden salaries, with small modifications, was then set for the middle year 2013. From there, the data was extrapolated with official wages to the new benchmark year 2021. As one can note, it is not possible to achieve a recent benchmark year for the exhaustiveness adjustments according to tax audits, since the reports often lag the years audited by several years. The consecutiveness of these audit studies is however expected to stabilize, with a new report being released as recently as December of 2024. These results were however not in time to be incorporated in the benchmark revision of 2024. In the new study, the years audited were 2017-2022, indicating a slightly faster process from auditing to available data.

In comparison to the 2020 study, the previous report from 2006 estimated that the hidden income for the whole economy was SEK 71 billion per year on average for the years 1995-2003, corresponding to 7 percent of total income and 3,2 percent of GDP for the years. However, the levels are fairly similar taking wage inflation into account. If the average level of undeclared income estimated for 2006 had increased at a nominal annual growth rate of 2.5 percent, it would have reached approximately SEK 98 billion by the midpoint year used in the 2020 report—closely corresponding to the actual average of SEK 91 billion reported.

The difference in results is in part due to different methods for grossing up the results of the audit to the total population of enterprises. The methods used in the report from 2020 are better at producing accurate results, particularly by a new method of correcting for the cases when the wage sum or the surpluses and deficits among the audited companies are not representative within their stratum. This could happen, for instance, if the audited companies differ substantially in size—either larger or smaller—compared to those not audited. A comparison is made where the results are extrapolated with the same method as in 2006. The result from this exercise concludes that the change in methodology explains 59 percent of the differences in results. However, for sole proprietors and partners in general partnerships the change in method results in a *decrease* of hidden income as part of total income in that group. For small corporations, defined as companies with wage sums between SEK 1-5 million, the change in method results in an *increase* of hidden income as part of total income. It remains unclear to what extent this is attributable to the new methodology versus structural changes in the business population, notably the significant shift between 2006 and 2020 toward limited companies over sole proprietorships. Taking into account all this and considering the main findings of the report, it concludes that the share of hidden work in Sweden has not increased and may have slightly decreased, although the evidence is not conclusive.

The new report finds that a large part of the hidden work is performed within small corporations, i.e. with wage sums between SEK 1-5 million, which is now the group that accounts for the largest individual share of undeclared income. According to the previous report hidden work was to a larger

extent performed by self-employed entrepreneurs. The shift toward small corporations is supported by many factors, such as reduction of the minimum share capital requirement for starting a limited company (2010), several tax and legal incentives over the years as well as general data trends on company registrations and the number of sole proprietorships. This is further discussed under *Comprehensive audit study*. The new report also states that the share of hidden work has decreased in activities where reform for better compliance has been implemented by the government, while it has increased in some industries where no such reform has been implemented. In the figure below the shares of hidden work can be seen in the reports from 2006 and 2020 respectively.



Audits by the Swedish Tax Agency

Over the years, the NA is revised and updated. The STA and other authorities, e.g. The Swedish National Council for Crime Prevention (Brottsförebyggande rådet) and Swedish Customs, cooperate and on their initiatives new regulations and laws may be proposed and introduced by the Government. This is the case for example regarding claims on staff registers and cash receipts in activities with widely spread cash payments.

Reverse tax payment obligation has been introduced within construction (from 2007), within waste activities (from 2013) and for transactions with foreign countries. This means that the buyer instead of the seller is obliged to pay VAT and any other duties. The aim is to obstruct misuse of the VAT-system in cheating and economic crimes. The results of these new regulations are continuously followed up and new available information is incorporated into the NA estimates. The NA has a continuous cooperation and exchange of information especially with the STA.

Materials produced by the Swedish Tax Agency in various audits, analyses, investigations and information campaigns are used to a large extent. The process is not, however, always to directly apply the shares of hidden income in the tax audit study. Some consideration is also given to the existing levels of hidden production which have been introduced to the national accounts over the years through many different sources and expert knowledge. The discrepancies that occur in the compilations are

analysed and remedied as far as possible, while keeping the total level of hidden income in the economy equal to the new information from the tax audits.

Comprehensive audit study, STA report 2020

Information from fiscal audits has been used in the national accounts to increase exhaustiveness. The most recent comprehensive study incorporated in the NA was published in 2020 by the STA. This study covered audits in respect of income tax during the period 2010 and 2016. Calculations are based on 28,173 audits, of which 21,810 focused on wages and 6,363 on income. The estimation of hidden income from work represents 716,000 active enterprises in the STA register at the time when the audits took place.

There are changes in methodology between the new and the previous report, discussed above. If the same methodology as in STA 2006:4 is applied, the total undeclared income becomes higher, but its share of GDP remains the same, approximately 3 percent. Thus, it can be concluded that undeclared income has increased in absolute terms, but the relative development is difficult to assess based on the results, even though the results indicate that undeclared income has at least not increased as a share of GDP or labor income. According to the Tax Agency's attitude surveys, acceptance of undeclared work decreased significantly between 2006 and 2012, after which the level has remained relatively stable over time.

Undeclared work in Sweden, as a share of GDP, appears to be relatively low in an international comparison. Although a direct comparison between the estimate of 2.3 percent of GDP (2020) and other estimates for Sweden is not feasible due to methodological differences, it is likely that 2.3 percent would still be considered low in an international comparison using similar methods.

Even though the reports differ methodologically, some aspects remain consistent. The new report reveals certain structural changes that cannot be explained by methodological choices. What remains consistent is the share of declared income across different types of companies. Self-employed persons and corporations with wage sums between 1 and 5 million SEK contribute roughly the same percentage to total declared income, regardless of methodology. Therefore, no structural change has occurred at this level of the economy that could explain the results. Major industries remain the largest contributors: at the industry level, the same four industries account for over 60 percent of declared income during both measurement periods. These industries are manufacturing, legal and support services, wholesale and retail trade and other transportation, storage and communication. The contributions from other sectors have not varied significantly either. It can also be noted that the distribution of undeclared income as a share of declared income has not changed significantly, with a few exceptions. The sectors with the highest share of undeclared income still have the highest share today, and the same applies to those with the lowest share.

Compared to the Tax Agency's previous report from 2006, we can see that the most undeclared income, which was previously found among self-employed persons and partners in trading partnerships, is now found within corporations with total wages up to SEK 5 million SEK—particularly those with wage sums between SEK 1 and 5 million. These types of companies are the single largest contributor to undeclared labor income, accounting for 43 percent of the total undeclared income. In STA 2006:4, self-employed persons and trading partnership partners accounted for 52 percent of undeclared income, but now account for only 13 percent. Possible explanations for the shift in distribution include the Tax Agency's efforts to combat fraud, which may have had a greater effect among individuals and less among medium-sized companies. Reductions in corporate tax and more favorable rules for closely held

companies may also have contributed to increased incorporation. Additionally, the introduction of ROT and RUT⁹⁸ tax deductions may have had a greater impact on compliance among individuals.

The industries with the largest share of total undeclared income are legal and support services as well as construction, with 20 and 22 percent of the total, respectively. While the share has remained relatively unchanged for legal and support services, the development in construction sector is notable (it previously accounted for about 9 percent of hidden income). The same trend is reported in the Tax Agency's Business Survey, which notes a negative development regarding the presence of undeclared labor in the construction industry.

Where appropriate, the shares of hidden income from the STA have been used directly in the national accounts estimates. In other cases, assessments have been made on the basis of expert judgements and the reliability of already incorporated levels of hidden production and intermediate consumption which are in part based on other sources, most notably for the construction industry. However, as a rule, for each NACE activity additions or subtractions have been made based on the audit results. As an example, for NACE A01 the STA findings have been used in the following manner. The STA findings suggest that the level of hidden income in the NA should be halved according to the new report, from about SEK 4 billion to SEK 2 billion, of which SEK 1 billion constitutes hidden income from employment. This resonates well with the level of hidden production and intermediate consumption in the NA, even though the level of income is not in parity. According to the new findings, hidden wages, hidden production and intermediate consumption are consolidated to SEK 2 billion for the industry, of which SEK 1 billion is attributed to hidden mixed income. Hidden mixed income need to be accounted for on the production side since it can be obtained residually as part of the income accounts (c.f. table 7.3.1 in chapter 7.3).

Other actions taken by the Swedish Tax Agency

The STA continuously works with audits of certain activities. They are often based on where hidden activities are believed or proved to be found. Special checks are also made in areas where certain tax reductions are in effect. This concerns e.g., reconstruction works and household services up to a specified expenditure level. The results referred to of the projects and studies below are all taken from various reports and press releases published by the Swedish Tax Agency⁹⁹.

The requirement for staff registers

The requirement on companies in certain industries to use staff registers came into effect 1 January 2007. The proposal was initially restricted to restaurants and hairdressers. Since 1 April 2013, the requirement also applies to launderettes and from 1 January 2016 construction activities are also included. The new regulations imply that the companies in question are obliged to register information on a daily basis on individuals working for the company including the exact time that each person start and finishes work. The reform also authorised the STA to use a new control instrument – check visits.

The aim of the new regulations was to reduce tax evasion by making it more difficult to use unregistered labour. An evaluation investigated both the initial effect of the new rules during the months following their introduction, and the long-term effects, a couple of years later. The conclusion was that the requirement for staff registers had had a significant effect on wage reporting in restaurants. The results also suggested that the effect had increased gradually over the first two years following the introduction

⁹⁸ The ROT program is a stimulus initiative for the construction industry in Sweden, provided in the form of tax relief. The RUT deduction refers to the reform that allows tax deductions for household-related services in Sweden.

⁹⁹ See webpage <https://www.skatteverket.se/funktioner/sok/sok.4.64a656d113f4c7597011b3.html?query=rapporter>

of the requirement. All in all, the investigation assessed that the long-term effect on reported wages in the industry was an increase of between 5 and 11 percent, i.e. between

3,000 and 6,000 annual work units. Based on certain assumptions regarding average monthly wage and current tax rates this corresponds to a reduction in the tax gap of between SEK 400 million and SEK 700 million. For the hairdressing sector, the effect was an increase of between 2 and 7 percent of the reported wages.

The requirement for cash registers

The requirement for cash registers in the cash trading industries took effect on 1 January 2010. The requirements imply that firms selling goods or services for payment in cash must have a certified cash register and report the cash register to the STA.

A follow-up was made during spring 2015 and the results show that reported turnover increased by almost 10 percent on average for all firms in the months after they had reported their possession of a cash register to the STA compared to the months before. Wages increased by around 6 percent for the same population.

Reduced VAT for restaurants and catering

On 1 January 2012, VAT on restaurant and catering services was reduced from 25 to 12 per cent. Prior to the VAT reduction, meals served in the restaurant were taxed with the normal 25 percent tax rate, whilst take-away was taxed as foodstuffs, at a rate of 12 percent. Prior to the reform, restaurant and catering businesses reported 33 per cent of their total turnover at 12 per cent VAT. After the reduced VAT was introduced, a questionnaire survey was sent to a random selection of 400 restaurants. Based on the responses to this question, take-away food was estimated to account for about 26 per cent of total sales. This means that about 7 percent of turnover previously has been declared with only 12 percent VAT and SEK 700 million per year have been lost in tax payments.

International exchange of information and information campaigns

Transactions with actors abroad and with so called tax paradises are also examined. The Swedish Tax Agency exchanges information with foreign countries according to tax treaties, and new treaties have continuously been negotiated. As of 2016, Sweden has agreements with all tax paradises on openness of bank accounts in these countries. The STA has made it possible to self-report and reveal to the Tax Authority previously hidden savings abroad.

About SEK 7 billion have been self-reported and revealed for taxation. Only the latest five years are open for taxation. 9,800 persons have made self-corrections and this has contributed to an extra SEK 1.8 billion of wealth taxes paid. The STA has distributed these amounts on the years in question.

The STA every year announces which activities they will check that year. This has a preventive effect. In 2013 e.g., the following list was communicated:

Web shops, Poker games, Internet traffic, Real Estate Agents, Dentists, Forest sales, Sales of properties and cooperative dwellings, Rentals of secondary dwellings, Taxis, Illegal trade with alcohol and tobacco, Unregistered workers, Cooperation activities between different authorities, e.g., sick leave, unemployment compensations, other social compensations.

In 2015 emphasis was laid on cash trading industries, health and social care activities, VAT fraud in connection with border transactions, preferably within electronic trade and construction and repairs of dwellings and certain home service activities with special tax reductions.

Since 2018, the STA has carried out special inspections of the driving school industry. Furthermore, private accommodation has been revisited since the DAC7 initiative, and in 2023 there were targeted

controls for food delivery companies. More about these and other initiatives to identify potentially underground producers can be read in section 7.1.1

7.1.3.3 Employment method

The employment method is not used directly for making exhaustiveness adjustments in the Swedish GNI. It is used to validate existing adjustments made. The employment method is updated every GNI verification cycle and was last updated in 2019 for reference year 2011. The national accounts changed the source for the number of employed in the economy to BAS (Population by labour market status) in May 2024 for the reference period 1993-2022. BAS has time series from 2020 and onwards and for the years before 2020 the new estimates were linked to the old estimates within NA. BAS is a statistical product that, using administrative data, describes the labour force supply in Sweden. The statistics include, among other things, the number of employed, unemployed, and people outside the labour force for the registered population aged 15–89 years. At the same time as the number of persons employed revised a new method for hours worked was introduced.

In accordance with Article 9 and 10 and ANNEX VI. of 94/168/EC the employment data in the sources used for GNI should be validated to demographic employment sources as a method to validate the exhaustiveness of GNI. Employment data from BAS has been compared with the Labour force survey (LFS). Hours worked from NA has been compared with LFS. Finally, the number of full-time employees in BAS and LFS is compared to SBS (table 7.1.3).

Sources for number of persons employed

Population by Labour market status (BAS)

The national accounts changed the source for the number of employed in the economy in May 2024, as mentioned earlier. BAS provides information on the supply of labour in Sweden on a monthly, quarterly and annual basis and is based on employer declarations at individual level (PAYE) to the tax authority. BAS disseminates statistics on, among other things, the number of employed, unemployed and persons outside the labour force for the registered population aged 15 to 89. BAS is based solely on administrative data from various authorities and also have data for population aged 75-89 year which was introduced in NA in the benchmark revision.

BAS can be used to describe the current status as well as developments over time. It highlights the whole population as well as smaller groups, such as detailed age groups at municipal level. For the most part, BAS is built around data sourced from administrative systems, primarily created for administrative purposes. The fact that data are not created for statistical purposes means that units and variables may change values, disappear or be added. Regulations and administrative procedures are normally beyond the control of Statistics Sweden. The statistics can be seen as a census survey and cover both domestic and national concept of employment.

Labour Force Survey (LFS)

The Labour Force Survey, LFS, is an individually based sample survey covering all persons in the population register aged 15 to 89. The purpose of the LFS is to describe the current employment situation and to provide information on trends in the labour market. The sample consists of three separate samples, one for each month in the quarter.

Deficiencies in coverage are partly due to the undercoverage that arises when people residing in Sweden are missing from the frame, and partly due to overcoverage that arises for instance when people in the frame are no longer included in the population. The undercoverage that exists is mainly explained by immigrants (immigrants and people returning to Sweden) enter the Total Population Register with a certain lag.

The following table shows the connections between BAS, LFS and the published figures in NA.

More persons employed in BAS than in LFS

Number of persons employed, 1000s, 2021

	2021	
LFS (15–74 year) – Total number of employed Swedes	5 044	Published by LFS
Swedes working abroad according to LFS	-43	
LFS (15–74 year) – Total number of employed Swedes in Sweden	5 001	LFS delivered to NA
Less employees in BAS	-2	
More self-employed persons in BAS	88	
BAS (15–74 year) – Total number of employed Swedes in Sweden	5 088	
Foreign persons working in Swedish enterprises and authorities	49	
Employed persons in age 75–89 year	79	
BAS (15–89 year) – Total number of employed in Swedish enterprises and authorities	5 216	
Conscripts	2	
NA (15–89 year) – Total number of employed in Swedish enterprises and authorities	5 218	Published by NA

Source: Labour force survey, Population by labour market status and National accounts (SCB)

Sources for hours worked

Hours worked is a difficult variable to measure and is not covered in so many surveys. There are four surveys that are used for the calculations of hours worked. The main sources are LFS and BAS but also the Employment survey and SBS are used for detailed activities and institutional sectors.

For the yearly calculations of hours worked in NA the average hours worked in LFS is used at an aggregated sector level. This applies to the entire economy, public authorities, business employees and household non-profit organizations. The average working hours is multiplied with the number of persons employed in NA, which is based on BAS. The hours worked for self-employed persons is calculated as a residual. To calculate hours worked for sub-sectors and activities average working hours is used from the Employment survey and SBS.

Similar to the number of employed, the level of hours worked is higher in the newly revised time series in the NA compared to the previous version. This is because the number of employed is higher in BAS than in the LFS, but also because the age range for when someone can be counted as employed in the NA has been raised from 74 year to 89 year. In addition, the labor force contribution in the NA will include hidden work, which affects the hours worked. Reports from The Swedish Tax Agency, investigating the hidden economy, is the main source for exhaustiveness adjustments. The hours worked estimated for the hidden economy has also been revised upwards in the general review.

Employments (ANST)

The purpose of ANST is to create a monthly register-based statistics that corresponds to the EU-regulation within Short-term statistics (STS). ANST consists of two parts. One part is register-based and is based on employer declarations at individual level (PAYE) from the Swedish Tax Agency and reports monthly employment data on the labour market broken down by gender, sector, industry and region, as well as wage amounts, etc. The second part consists of the sample survey concerning hours worked.

One might expect the term “employees” to have the same meaning as in BAS, but that is not the case. “Number of employees” in ANST is used to describe ongoing employments with each employer. The information includes the number of individuals having obtained a salary which constitutes the basis for employer contributions that has been reported in PAYE for each individual month per legal unit

(employer). This means that an individual who works for various employers during the same month is counted several times.

The Structural Business Statistics (SBS)

The Structural Business Statistics, SBS, are a full census. The inquiry constitutes the basis for the national accounts output calculations and provides information on the structure of industry, for example, with respect to employment, profitability, growth, trends, financing and output.

The largest enterprises are surveyed in total and checked very carefully. For the remaining enterprises, administrative records are used from the National Tax Agency supplemented by sample surveys, some model estimates and data from other sources. To be included in the frame population the enterprise must be deemed to have engaged in activity during the year, i.e. have been active. An enterprise is considered active in the Business Register if it is registered as an employer, is in the VAT register or is registered for corporate tax (F-skatt). The population includes all enterprises, which are active during the reference year, excluding financial corporations. SBS records the number of enterprises, number of employees and economic variables on enterprises and their activity units.

In the following table you can see the connections between the LFS and the published figures of hours worked in NA.

Hours worked, LFS and NA, 10 000s, year 2021

	2021	
LFS (15–74 year) – Total hours worked for Swedes	787 610	LFS delivered to NA
Hours for Swedes working abroad according to LFS	-6 819	
LFS (15–74 year) – Total number of hours worked for Swedes in Sweden	780 791	LFS used in NA
More employed persons in BAS	13 304	
NA (15–74 year) – Total number of hours worked for Swedes in Sweden	794 095	
Foreign persons working in Swedish enterprises and authorities	7 580	
Employed persons in age 75–89 year	5 350	
Hidden economy	22 327	
Conscripts	288	
NA (15–89 year) – Total number of hours worked in Swedish enterprises and authorities	829 640	Published by NA

Source: Labour force survey, Population by labour market status and National accounts (SCB)

Comparison between BAS and SBS

In order, to compare a demographic source and employment underlying GDP/GNI estimates following the recommendation for the employment method, BAS and SBS is compared. The comparison refers to year 2021. A comparison has also been made between LFS and SBS for analytical purposes, which is also shown in table 7.3.1.

The hybrid approach is used for comparing the sources, analysing the labour gap at the level of both the total economy and 1-digit NACE industry. However, the comparison between the BAS and SBS is most reliable for the total private sector which is discussed below.

The comparison is made based on the number of full-time equivalents for employees in the non-financial enterprises. This information is collected in the SBS based on the enterprise's annual reports where information on full time equivalents is reported. For BAS, the calculations are based on total hours worked and average annual working time for full time employees, as follows (see table 7.1.3):

In the comparison between LFS and SBS, some adjustments are made to LFS to get the populations more aligned:

- The LFS includes non-profit institutions serving households (NPISH), whereas the SBS does not. The number of persons employed in NPISH according to LFS was 117,300 persons in 2021. Deductions of NPISH have only been done on an aggregated level since the LFS don't have estimates of NPISH by industry. Deductions from the LFS are shown in the tables.
-
- The LFS does not include non-residents working in Sweden in its employment estimates. For comparison these employees, 46,500 in the private sector, are added to the LFS estimates based on data from BAS.

There is no need of adjustments in BAS. BAS does not include NPISH and includes non-residents working in Sweden, which is in line with SBS.

Table 7.1.3.3.1 Comparison between BAS and SBS, and LFS and SBS year 2021. Number of full-time equivalents for employees in the non-financial corporation sector, 1000s of employees

NACE	BAS total hours worked, including secondary activity (10 000 hours)	LFS annual working time for full time employees	BAS number of full time equivalents 1000 persons (row 1/2*10)	LFS number of full time equivalents 1000 persons	SBS full tim equivalents	Difference between BAS and SBS full time equivalents (row 3-5)	Difference BAS and SBS in per cent	Difference between LFS and SBS full time equivalents (row 4-5)	Difference LFS and SBS in per cent
A	7 430	1 803	41.2	48.6	41.6	-0.4	-1.0%	7.0	16.9%
B,C	97 806	1 700	575.3	502.6	526.1	49.2	9.4%	-23.5	-4.5%
D,E	9 089	1 638	55.5	53.1	51.9	3.6	6.9%	1.2	2.5%
F	59 737	1 721	347.1	325.4	343.5	3.6	1.0%	-18.1	-5.3%
G	90 290	1 597	565.1	512.0	511.1	54.4	10.6%	0.9	0.2%
H	32 791	1 718	190.9	194.7	202.3	-11.4	5.6%	-7.6	-3.7%
I	20 254	1 569	129.1	109.6	125.7	3.4	2.7%	-16.1	-12.8%
J	36 951	1 646	224.5	281.8	215.7	8.8	4.1%	66.1	30.7%
L	12 623	1 379	91.6	84.5	66.7	24.9	37.3%	17.8	26.6%
M	42 288	1 670	253.2	425.4	283.6	-30.4	-10.7%	141.8	50.0%
N	40 028	1 667	240.1	193.7	217.4	22.7	10.5%	-23.7	-10.9%
P	11 457	1 524	75.2	110.0	78.6	-3.4	-4.3%	31.4	40.0%
Q	29 982	1 612	186.0	178.2	179.4	6.6	3.7%	-1.2	-0.7%
R	1 668	1 573	10.6	52.3	33.4	-22.8	68.3%	18.9	56.7%
S	5 738	1 900	30.2	81.3	35.8	-5.6	-15.6%	45.5	127.2%
Total	498 132	1 648	3023.0	3021.6	2912.8	110.3	3.8%	108.8	3.7%

Results

Altogether, full-time equivalents in BAS, in the industries compared, are approximately 110,300 higher in 2021 than in the SBS, or, in percentage terms, 3.8 percent higher. The result on an aggregated level is almost the same, 3.7 percent, comparing LFS to SBS. The difference between the results of BAS and SBS is higher on an industry level and the difference between LFS and SBS on an industry level is much higher.

Put together with the exhaustiveness adjustments of hours worked in NA of 3.8 per cent this is broadly in line with the exhaustiveness adjustments of GVA for market producers and producers for own final use, at 4.0 per cent. The results of the employment method confirm the audit data of the Swedish Tax

Agency and together with other estimations, they provide a comprehensive picture of the hidden economy, hence justifying no subsequent exhaustiveness adjustments due to the derived labour gap.

7.1.3.4 Model

Part of car benefits

A special model is used to calculate the part of car benefits classified under N7. See section 4.7.1 under *Taxable benefits* for a description of the method used.

Non-collected VAT due to fraud without complicity

Non-collected VAT includes fraud without complicity and non-collected VAT due to insolvency. VAT fraud without complicity refers to VAT on transactions where the seller does not report the revenue/VAT to the tax authority. Non-collected VAT due to insolvency is VAT on transactions where the seller reports the revenue/VAT but later goes bankrupt and cannot pay their VAT.

In the national accounts the following general formula, given in Commission Implementing Regulation 2023/2493, is used to calculate non-collected VAT.

Non-collected VAT = Theoretical VAT receipts less actual VAT receipts less missing revenue (due to evasion ‘with complicity’)

The actual VAT receipts are recorded as taxes D.211 as laid down in ESA 2010 paragraphs 4.26 – 4.28. The assessed amounts for actual VAT are neither adjusted by a coefficient nor recorded as a capital transfer corresponding to tax unlikely to be collected, or time adjusted cash receipts. The VAT calculations are based on taxes actually collected. This is described in detail under 3.28 *Tax amounts unlikely to be collected*.

Table 7.1.3.4.1 Theoretical, actual and non-collected VAT, SEK million 2021

VAT	2021
Theoretical VAT	+ 525917
Actual VAT	- 499361
Missing revenue due to evasion with complicity	- 9824
Non-collected VAT	= 16732
Non-collected VAT due to insolvency	10988
Non-collected VAT due to evasion without complicity	5744

In the following text, the calculations of the theoretical VAT, missing revenue due to evasion with complicity and non-collected VAT are described.

Theoretical VAT receipts are calculated by identifying all categories of transactions, on the use side of the economy, where non-deductible VAT is to be included. These have been identified through a detailed analysis using information from the Swedish Tax Agency and the Swedish Financial Management Agency. For some transactions a ‘pro-rata of non-deductibility’ is applied to account for the fact that only parts of the relevant expenditure of the given institutional sector or activity are subject to non-deductible VAT. That is, the share on which the VAT is to be calculated. Thereafter the adequate VAT rates, obtained from the Swedish Tax Agency, are applied to the transactions. The calculation on theoretical VAT is based on the most disaggregated national accounts data available.

For market producers and producers for own final use for all institutional sectors some industries have been identified as subject to non-deductible VAT. These include transport services, postal services, financial and insurance services, real estate activities, travel services, education, health and medical care, culture, gaming services, activities of membership organisations. A pro-rata of non-deductibility is calculated for intermediate consumption and gross fixed capital formation in these industries. When calculating the pro-rata of non-deductibility the following points are taken to account:

- Within postal services, postage costs for households are exempt from VAT.
- Transport products are divided into domestic and international travel where only domestic travel is subjected to VAT.
- In financial services, only a portion of commission income is taxable, as are finance companies.
- For rental of premises, an estimate is made of the proportion that is non-deductible using assumptions based on the Voluntary Tax Liability Act. Here, it is assumed that the voluntary tax liability has been fully utilized.
- Own-account construction of dwellings by households is treated as subject to non-deductible VAT.
- The margin scheme for tour operators where only the margin of tour operators is taxed to the final consumer.
- Goods produced for own account are not included in the VAT calculation.
- The input of exempt small firms is not considered in the calculations of the theoretical VAT.

The treatment of VAT in the government sector distributed on intermediate consumption, gross fixed capital formation and social transfers in kind is compiled in the following way. For the intermediate consumption and gross fixed capital formation a pro-rata of non-deductibility and adequate VAT rates has been applied. VAT rates has also been applied for the social transfers. The Swedish National Financial Management Authority (ESV) provides NA with information from the Swedish Tax Agency on VAT repayments to government units. This amount corresponds to the non-deductible VAT for the government sector, however it differs from the calculated theoretical VAT. To arrive at the actual VAT for the government sector adjustments are made to the intermediate consumption. These adjustments are distributed in accordance with the structure that exists after calculating the theoretical VAT.

The calculations for the pro rata of non-detachability are carried out annually for all areas except the government sector as well as NPISH. These were calculated for 2021, the years following have retained the VAT shares from the previous year.

The category that constitutes the largest share in the theoretical VAT is household final consumption expenditure, where the domestic concept is used. HFCE is treated as wholly subject to non-deductible VAT. However, there are adjustments made to reflect some special VAT schemes applicable to certain products.

- Used cars should only be subject to VAT on the margin.
- Within postal services, postage costs for households shall be exempt from VAT.
- Transport products are divided into domestic and international travel where only domestic travel is subjected to VAT.
- The margin scheme for tour operators where only the margin of tour operators is taxed to the final consumer.
- Art and antiques may be exempt from VAT depending on who sells them and for what amount.
- Goods produced for own account are not included in the VAT calculation.
- The input of exempt small firms is not considered in the calculations of the theoretical VAT.

The theoretically calculated VAT is made on an annual basis and compares with actual VAT collected. The actual VAT are recorded on an accrual basis and are described in detail under 3.28 *Taxes on products, including VAT*.

Missing revenue (due to evasion 'with complicity') refers to transactions where the seller and the buyer agrees to not add VAT. The buyer, often a household, does not pay VAT to the seller and the seller does not report anything to the tax authority. In this case, the user's markets price is exclusive of VAT, but VAT accounts for in the theoretical VAT. The sellers' output is added as hidden output in basic prices

based on tax audit data. Some outputs are identified in the accounts as agreed as sold without VAT and added on household consumption. A small part also refers to private use of registered (white) intermediate consumption and is based on assumptions. This part is moved from intermediate consumption to household consumption. A few examples are construction work, repair services, cleaning services, nanny services and retailers who take home groceries. Illegal activities, smuggling and prostitution, are also other transactions that are subject to VAT fraud with complicity. Sources for illegal activities can be found earlier in this chapter. The calculation of VAT fraud with complicity is carried out in accordance with what is described in the Annex to Commission Implementing Regulation 2023/2493.

Non-collected VAT (due to insolvency) is delivered by The Swedish Financial Management Authority, which compare the declared VAT with the paid VAT and the difference gives the insolvency. The VAT on insolvencies is distributed by activity using the statistics on bankruptcies by activity. In the case of insolvency, there has been reported outputs to the tax authority and to the statistical authority. The calculated VAT is thus added to the output and deducted on the expenditure side.

Non-collected VAT (due to evasion without complicity) is calculated by deducting VAT due to insolvency from the total of non-collected VAT. The calculated VAT on fraud without complicity is distributed by activity using hidden output by activity. This calculated VAT is added to the output and deducted on the expenditure side.

The following table contains values of theoretical, actual and non-collected VAT and the adjustments made, broken down into components of GDP. The output- and the total expenditure-value for non-collected VAT should add respectively subtract the same value. However, the non-collected VAT due to insolvency includes an error. The adjustment on output should be 11 637 SEK respectively -11 637 SEK for the total expenditure. This means that the calculation of non-collected VAT due to evasion without complicity is based on the wrong value, 10,988 SEK.

Table 7.1.3.4.2 Theoretical, actual, non-collected VAT and adjustments by components, SEK million 2021

VAT	Output	IC	HFCE	GFCE	GFCF	Valubals	Total expenditure
Theoretical VAT		142 854	267 478	3 535	111 709	341	525917
Actual VAT		139 073	249 825	3 535	106 587	341	499361
Missing revenue due to evasion with complicity		-2 200	-7 624				9824
Non-collected VAT	17 470	-1 581	-10 029		-5 122		- 16732
Non-collected VAT due to insolvency	11 726	-1 493	-6 721		-2 774		-10 988
Non-collected VAT due to evasion without complicity	5 744	-88	-3 308		-2 348		-5 744

7.1.3.5 Time use survey

Owners' production/construction and repair of owner-occupied dwellings

Construction and extensions to dwellings. See section 5.10.3 for descriptions of the methods used.

7.1.3.6 Compliance with the various GNI Expert Group recommendations

Plausibility checks of the exhaustiveness adjustments are continuously made not only by confronting the methods described in this chapter, but also in meetings with other authorities such as the Tax Agency and the Swedish Police in order to identify possible weaknesses with the current methods for identification as well as comparing estimates and finding potential improvements.

Several other validation and consistency checks, related to exhaustiveness, are performed to obtain reliable estimates. As suggested in GNIG 180 Rev.1 annex 2 on Distribution, the balancing process includes validating output against VAT registers and Statistics Sweden's Restaurant index, accommodation statistics and the household consumption of hotel services and other overnight accommodation. Data sources on accommodation are compared in order to check for any underreporting. Concerning rental apartments, however, the underreporting of household rental income is assessed as significant. Currently, NA assess that the accommodation services provided by households is non-material. However, as this is a growing phenomenon this issue is under investigation. A detailed description of the investigation is found under section 3.15.3.

Independent estimates from the demand and supply side are produced for all distributive trades, including motor vehicles repairs, and confronted with each other for validation purposes with the help of supply and use tables, see sections 3.13.3 and 3.13.4. Turnover statistics in trade industries and Household Final Consumption Expenditure (HFCE) are compared as a part of the compilation process for HFCE. Trade activities inside non-commercial organizations are estimated and included in the output of distributive trades.

A specific recommendation is also put forward for repairs of household goods (NACE S95). In the Swedish National Accounts, production within NACE S95 is set in the standard compilation procedure outlined in section 3.1, the primary source of which is the SBS. Output and expenditure for repairs of household goods are however validated against each other in the balancing of supply and use in the SUT framework, as described in 3.25.1.

The construction sector constitutes a special sector with high levels of hidden work compared to other sectors. As such, Statistics Sweden validate the construction sector thoroughly with respect to exhaustiveness as well as general cross-checking of sources. Compliance with the GNI Expert Group on Construction (GNIG/179 Rev.1) is assured with several approaches, such as basing the calculations upon at least two methodologies and collecting revenue and expenditure for subcontracting activities within the construction sector. How these data are assessed and applied can be read about in section 3.12. According to ESA §2.09(b) a distinction should be made between construction carried out abroad for a period of less (domestic output) or more (foreign trade) than a year. In the International Trade in services survey (ITSS) it is stated that transactions regarding services are to be reported in the quarter when the services were supplied whereas services continuing over several quarters – such as construction – are reported continuously if they are supplied (see also 5.14.1.2). A further distinction is made, namely that the data on construction in the ITSS concerns installations abroad when projects are of a *limited duration by their nature*, and it therefore follows that these transactions constitute domestic output (see also 5.14.5.3). In the Swedish National Accounts, production of construction services abroad is therefore derived from the foreign trade statistics and set equal to exports (see more on the compilation process and how consistency with the SBS is achieved in section 3.12.3.2).

Furthermore, data on repairs and improvement to dwellings from households is estimated in order to complement production-based estimates, this is outlined in section 5.10.3 with a numerical example in table 5.10.8 on own production in one- or two dwelling buildings.

Regarding the Household Budget Survey (GNIG/182 Rev. 1) most of the recommendations are no longer directly applicable to the compilation of Household consumption statistics following the introduction of a new source and updated methodologies, see more in 5.7.2.2 and 10.3. When the new survey *Household consumption* was produced for reference year 2020 and 2021, data was compared with the old estimates in NA and with the results from HBS for 2021. These comparisons can be seen in 10.3. As shares of the total consumption on 2-digit level of Coicop the results were quite similar. Even the level of the total consumption was compared. On a more detailed level of Coicop the results were compared with the old estimates in NA. In some cases there were differences which lead to more editing

of the survey *Household consumption*. The HBS in Sweden is today mainly used for comparison within NA and CPI.

Confronting the Business Register as a basis for SBS with other sources

Since the SBS is such an important source statistic for the estimates from the production side in the national accounts, it is interesting to evaluate the SBS by comparing it with other sources. This can lead to a better view of the magnitude of non-exhaustiveness in the estimates.

The Business Register, an important base for the SBS, is continuously updated with information from several administrative sources, the main ones being the Swedish Tax Agency, the Swedish Companies Registration Office and the national change of address recording service. In addition, there is the annual BR survey to multiple establishment enterprises. The November version of the Swedish Business Register is serving as the main sampling frame for annual statistics. This frame contains the enterprises that are active in November the reference year and is used by for example the SBS. Checks are made in relation to the tax data population and the VAT registrations. However, the number of objects dealt with in this way is limited.

Coverage in the BR and SBS

Several studies have been carried out to evaluate coverage problems in the BR as well as in the SBS. The basic approach in these studies is to use other administrative sources available in order to determine whether or not a unit is active during the year and should be part of the statistical frame in BR and in the SBS population.

In 2012 Laitila, Wallgren and Wallgren made a study on behalf of the European Commission 7th framework program (Quality Assessment of Administrative Data Source Quality). In this study, among other things, methods to detect coverage issues in the BR were discussed. The register “Gross pay and preliminary tax” based on statements of income was used to look at the under coverage in the BR for November 2009. The results showed that the under coverage in the Business Register as fractions of gross annual pay was 0.7 percent.

Table 7.1.3.6.1 Under-coverage and over-coverage in the Business Register, non-financial enterprises

	Undercoverage SEK millions	Total gross pay SEK millions	Under- coverage, %
Non-financial enterprises	5 872	816 939	0.7

In the same study, the coverage in SBS was also investigated using the register Gross pay and preliminary tax (YGD) as well as the Gross pay, payroll taxes and preliminary tax from employers’ monthly tax returns. The conclusion was that the SBS survey suffers from both over coverage and under coverage. There were 21,392 legal units with gross pay equal to SEK 5.4 billion that were not in the SBS and 145,993 units in the SBS that had no gross pay according to YGD, equal to SEK 3.4 billion, and were over coverage in the SBS. The net effect in terms of gross pay was 0.7 per cent. These coverage errors in the SBS arise because the population for SBS 2009 was created during November 2009 and the YGP 2009 is based on more complete information in September 2010.

The BR has a central role as a sampling frame and coordination instrument for statistical production within Statistics Sweden. In year 2025, a quality study was initiated with the aim to studying over- and under-coverage in the sampling frames. The study will contribute to increased knowledge about the quality of coverage in economic statistics. The results of the study will also be used to develop improvement proposals to increase the quality of the sampling frames.

Total survey error in SBS

Another study was made on 2011 data in the SBS in connection to the ASPIRE project (read more about recently evaluated statistical products in section 1.1.4.5). The 2011 study tried to measure the Total Survey Error regarding Value Added. The value added is almost entirely based on the tax data register except for the 600 largest enterprises that are surveyed. The error components taken into account in the estimate were the *standard error* from *non-response* in the tax data and *bias* from over coverage in the SBS population. To calculate the bias from over coverage in the SBS population a method from Berg 2006¹⁰⁰ was used. The result indicates an overall total Relative Mean Squared Error of about one percent, which should be considered a small error.

¹⁰⁰ Berg, Stefan. (2006). *Addressing coverage and measurement errors using multiple administrative data sources*. Statistics Sweden.

7.2 Allowances for exhaustiveness in the expenditure approach

The majority (92 percent) of the exhaustiveness adjustments in the expenditure approach are made on the household expenditures. In addition to HFCE an adjustment is also made on gross fixed capital formation. The non-exhaustive types N1, N2 and N3 correspond to the adjustments made on the production side. For estimates relating to N6 (misreporting) the new survey on household consumption excludes all hidden consumption by design. The exhaustiveness adjustment for this exhaustiveness type refers to consumption where VAT fraud occurs. For N7 farmers withdrawals of goods are added on the expenditure approach but is covered in the source data for output and thus not part of N7 on the production approach.

7.2.1 Identification of types of non-exhaustiveness (for which adjustments are needed)

N1. Producers that should have registered but did not (underground producer)

This non-exhaustiveness type includes household consumption expenditure associated with paid domestic services not otherwise included in the national accounts. We include a household final consumption value related to the caring of children by nursemaids.

N2. Producers obliged to register but did not, illegal producer

Household consumption expenditure of illegal produced products. See section 7.1.1.

N3. Producers are not obliged to register

The household consumption expenditure associated with producers not obliged to register is owners' production/construction and repair of owner-occupied dwellings. See section 7.1.1 for sources.

N6. Misreporting by producers

The household consumption expenditure included under this heading refers to consumption where VAT fraud occurs. One part where the buyer and the seller have agreed not to add VAT. This first part consists of both hidden production pointed out as sold without VAT to households, as well as private use of registered (white) intermediate consumption. This private use is added to household consumption and reflected in lower intermediate consumption. The second part of VAT fraud relates to transactions where the buyer is unaware that VAT fraud is occurring.

N7. Statistical deficiencies in data

Under this exhaustiveness type, we find farmers' withdrawals of goods, not included in the statistics. A part of car benefits as well as production of own account goods (firewood) are also included under N7 and correspond to the adjustments in the production approach.

7.2.2 Adjustments made for the different types of non-exhaustiveness

A breakdown of exhaustiveness into household consumption as well as into gross fixed capital formation is shown in the following tables and the different types are commented on in the above sections.

Table 7.2.1 Types and elements of non-exhaustiveness by exhaustiveness method – Household consumption expenditure 2021

Types and elements of non-exhaustiveness	Exhaustiveness methods					Total
	Quantity price	Use of tax audit data – from the fiscal authorities	Special survey	Model	Benchmark extrapolation	
N1 Producers that should have registered but did not (underground producer)	1191					1191
Paid domestic services	1191					1191
N2 Illegal producers that fail to register	5262					5262
Prostitution	710					710
Home-distilling of alcohol	145					145
Illegal gambling	577					577
Smuggling of drugs, alcohol, tobacco and various medicines for drug use	3830					3830
N6 Mis-reporting by producers		83961				83961
Hidden production, agreed to exclude VAT		31054				31054
Hidden intermeditate consumption, agreed to exclude VAT		2457				2457
Hidden production, without agreement to exclude VAT		50450				50450
N7 Statistical deficiencies in data	529	1700			4498	6727
Farmers withdrawals of goods		1700				1700
Firewood, own-account	529					529
Car benefit, part of					4498	4498
Total	6 982	85 661	0	0	4 498	97 141
%	7%	88%	0%	0%	5%	100%

Table 7.2.2 Types and elements of non-exhaustiveness by exhaustiveness method – Gross fixed capital formation 2021

Types and elements of non-exhaustiveness	Exhaustiveness methods	Total
	Time use surveys	
N3 Producers are not obliged to register		
Owners' production/construction and repair of owner occupied dwellings	4896	4896
Total	4896	4896
%	100%	100%

Construction and extensions to dwellings by households (do it yourself) are added to production as P12 and to GFCF. The GFCF includes three parts: one- and two-family houses, multi-dwelling buildings and secondary residences.

7.2.3 Exhaustiveness methods

7.2.3.1 Quantity times price method

The quantity price method is used for N1, Paid domestic services, N2, Illegal consumption and N7, Firewood, own-account. See section 7.1.3.1 for descriptions of the methods used.

7.2.3.2 Use of data from fiscal audits

Data from fiscal audits have been used for N6 hidden production with VAT fraud and corresponds to the adjustment on the production side. Hidden intermediate consumption is based on assumptions, see section 7.2.1.

The production of N7 Farmers' withdrawal of goods is compiled by using several sources i.e. the Swedish Food Agency, the Swedish Board of Agriculture and the Swedish University of Agricultural Sciences (SLU). These values have since been extrapolated with information from EAA. For the exhaustiveness adjustment that is added on the expenditure side VAT is added to the production values of the products included.

7.2.3.3 Model

A special model is used to calculate the part of car benefits classified under N7. See Section 4.7.1 under Taxable benefits for a description of the method used.

7.2.3.4 Time use survey

For gross fixed capital formation only one addition is made to get exhaustiveness, Construction and extensions to dwellings. See section 5.10.3 for descriptions of the methods used.

Table 7.2.3 Comparison between production/IC and household consumption by type and COICOP-1999, million SEK, 2021

Type	Description	Output	Intermediate consumption	COICOP 99	HFCE	of which: VAT	Difference P/IC-HFCE
N1	Paid domestic services	1191		05	1191		0
N2	Illegal	3975		02	3975		0
N2	Illegal	577		09	577		0
N2	Illegal	710		12	710		0
N6	Hidden production, agreed to exclude VAT	8689		01	8689		0
N6	Hidden production, agreed to exclude VAT	1069		02	1069		0
N6	Hidden production, agreed to exclude VAT	6679		03	6679		0
N6	Hidden production, agreed to exclude VAT	3660		05	3660		0
N6	Hidden production, agreed to exclude VAT	2247		05	2247		0
N6	Hidden production, agreed to exclude VAT	8710		07	8710		0
N6	Hidden IC, agreed to exclude VAT		-1925	01	1925		0
N6	Hidden IC, agreed to exclude VAT		-532	08	532		0
N6	Hidden production, without agreement to exclude VAT	1393		01	1561	168	0
N6	Hidden production, without agreement to exclude VAT	156		03	195	39	0
N6	Hidden production, without agreement to exclude VAT	126		04	158	32	0
N6	Hidden production, without agreement to exclude VAT	3464		05	4330	866	0
N6	Hidden production, without agreement to exclude VAT	2288		06	2322	34	0
N6	Hidden production, without agreement to exclude VAT	4763		07	5313	550	0
N6	Hidden production, without agreement to exclude VAT	693		08	813	120	0
N6	Hidden production, without agreement to exclude VAT	10189		09	12258	2069	0
N6	Hidden production, without agreement to exclude VAT	6042		11	6920	878	0
N6	Hidden production, without agreement to exclude VAT	13753		12	16580	2827	0
N7	Farmers withdrawals of goods	1640		01	1700	182	-122
N7	Firewood, own-account	529		04	529		0
N7	Car benefit, part of	4498		07	4498		0
	Total	87041	-2457		97141	7765	-122

The table above shows for the household consumption expenditure by COICOP-1999 and exhaustiveness type where additions have been made to get exhaustiveness. For each type and element of non-exhaustiveness, the corresponding production/intermediate consumption and any VAT are also shown. The total differences amount to 122 million SEK.

7.3 Allowances for exhaustiveness for the income approach

GDP by the income approach is not independently measured and the exhaustiveness adjustments for the income approach are aligned to the adjustments in the production approach, as described under section 7.1. Most exhaustiveness adjustments are allocated to compensation of employees, 116 billion SEK and to gross mixed income, SEK 69 billion.

7.3.1 Identification of types of non-exhaustiveness (for which adjustments are needed)

Since no independent method is applied to the income side, the same identification approach used for the production side is referenced. Absence, evasion and exemption are all factors that relate to non-exhaustiveness in the context of National Accounts, see a more detailed outline in section 7.1.1.

These factors can be used to identify the standard types of non-exhaustiveness. Most of the non-exhaustiveness types for the income approach are linked to the adjustments in the production approach.

N1 refers to care of children by non-registered nursemaids. This is recorded as mixed income on the income side.

N2 refers to illegal activities, and since these activities are assumed to be fully produced by households, it is classified as mixed income.

N3 covers production and intermediate consumption for construction work in owner-occupied dwellings, added to industry F41-43. Value added for this activity is recorded as gross operating surplus in the household sector.

N6 adjustments covers the over-reporting of intermediate consumption and/or under-reporting of output. See section 7.1.1 for deviations from this definition. The adjustments for N6 constitutes both compensation of employees in corporations and household businesses, as well as gross operating surplus in corporations and mixed income in household businesses. VAT evasion without complicity is also added to the output and value added for these mis-reported activities.

Under **N7** adjustments of car benefits are recorded. This is further discussed in section 4.7.1 under *Taxable benefits*. The benefit is a compensation to the employees and paying these benefits reduces the operating surplus in non-financial and financial enterprises, and as a result, this adjustment has no impact on the total. Production of own-account goods by farmers and forest enterprises are also part of N7 and is recorded as mixed income.

7.3.2 Adjustments made for the different typer of non-exhaustiveness

The majority of exhaustiveness adjustments are allocated to compensation of employees and to gross mixed income. The values have been aligned to the adjustments in the production approach.

Table 7.3.1 exhaustiveness adjustments, income approach, by type of non-exhaustiveness element and method, SEK million, 2021

Item	Type of exhaustiveness adjustment						
	N1	N2	N3	N6	N7	Total exhaustive -ness	%
Compensation of employees				111 604	4 498	116 102	
Non-Financial Corporations				99 900	4 355	104 255	
Financial Corporations				2 776	121	2 897	
General Government							
Households				8 928		8 928	
NPISH					22	22	
Gross operating surplus			1 947	-2 686	391	-348	
Non-Financial Corporations			1 947	-720	385	1 612	
Financial Corporations				-1 966	28	-1 938	
General Government							
Households							
NPISH					-22	-22	
Mixed income	1 191	5 262	85	52 186	138	58 862	
Taxes on production and imports							
Subsidies							
Total	1 191	5 262	2 032	161 104	5 027	174 616	
By exhaustiveness method							
Quantity-price	1 191	5 262			529	6 982	4%
Use of tax audit data – from the fiscal authorities				155 360		155 360	89%
Special survey						0	0%
Model				5 744	4 498	10 242	6%
Benchmark extrapolation						0	0%
Time use surveys			2 032			2 032	1%
Total	1 191	5 262	2 032	161 104	5 027	174 616	100%

Exhaustiveness adjustment N2 refers to illegal activities and constitutes mixed income. The illegal activities constitute mixed income and concern several illegal activities, namely prostitution, home-distilling of alcohol, illegal gambling and smuggling of drugs, alcohol, tobacco and various medicines for drug use (see table 7.1.2.3 for explicit estimates of each activity). Exhaustiveness adjustment N6 contains both over-reporting of intermediate consumption, under-reporting of output as well as a smaller part VAT evasion corresponding to the adjustment in the production approach. VAT evasion consists of both compensation of employees and mixed income, but the parts are not distinguishable. In table 7.3.1, they are reported under title “By exhaustiveness method” in the category “Model”. Exhaustiveness adjustment N7 is mainly constituted of a part of car benefits. These are divided among sectors according to the same sector distribution retrieved from total car benefits. The part relating to production of own-account goods by farmers and forest enterprises is recorded as mixed income and refer to own-account production of firewood.

7.3.3 Exhaustiveness methods

Since the calculations are not independently made from the income side, reference is made to section 7.1.3. A detailed description of the exhaustiveness methods including numerical evidence can be found there.

7.2.3.1 Quantity times price method

The quantity price method is used for N1, Paid domestic services, N2, Illegal consumption and N7, Firewood, own-account. See 7.1.3.1 for detailed descriptions.

7.2.3.2 Use of data from fiscal audits

Data from fiscal audits have been used for N6. See 7.1.3.2.

7.2.3.3 Model

A model is used to calculate the part of car benefits classified under N7. See section 4.7.1 under Taxable benefits for a description of the method used for this model. For the part in N6, model refers to the non-collected VAT due to fraud without complicity, see more under 7.1.3.4.

7.2.3.4 Time use survey

Refers to owners' production/construction and repair of owner-occupied dwellings. See 5.10.3 for descriptions of the methods used and a numerical example.

Chapter 8 The transition from GDP to GNI

8.0 Introduction

This chapter outlines the transition from GDP to GNI (ESA2010). Gross national income GNI is an income concept and is calculated from the gross domestic product (GDP). In the Swedish system of accounts, GNI is calculated by adjusting GDP for primary income to and from the rest of the world. Primary income consists of tax and subsidy transactions to and from the EU and compensation of employees, interests, dividends, reinvested profits from direct investment in the rest of the world, property income attributed to insurance policyholders and quasi-corporations and rents.

The Balance of Payments (BoP) is the main data source for compilation of primary income from/to the rest-of-the-world. All concepts in BPM6 are implemented in the Swedish Balance of Payments. Statistics Sweden collects the bulk of the source material on commission by the Riksbank, the Swedish Central Bank. To get gross accrual figures on taxes to and subsidies from EU data from the Swedish Financial Management Authority (Ekonomistyrningsverket ESV) is used.

A close cooperation between Statistics Sweden, the Swedish National Financial Management Authority (ESV) and the Swedish central Bank is maintained through continuous contacts and meetings.

Compensation of employees from the RoW to Sweden is estimated with a benchmark method where information from income statements provides the benchmark and data on hours worked and wage indices are used for extrapolation the benchmark value from 2015. For residents working in foreign embassies a specific supplement is made for embassies where a benchmark value from 2013 have been extrapolated with wages and salaries for the Nordic countries. When it comes to non-residents working on Swedish embassies, a specific supplement is made for embassies where a benchmark value from 2015 have been extrapolated. Regarding property income received/paid there is also an outdated benchmark 2013 concerning holiday homes owned by Swedish citizens abroad.

Table 8.0.1 Transition from GDP to GNI of each item, 2021, SEK million

Gross domestic product (ESA2010)	B1*G	5 417 760
Compensation of employees received from the rest of the world	D1	24 922
Compensation of employees paid to the rest of the world	D1	27 444
Taxes on production and imports paid to the institutions of the EU	D2	7 339
Subsidies received from the institutions of the EU	D3	9 019
Property income received from the rest of the world	D4	592 980
Interest	D41	52 507
Dividends	D42	300 065
Reinvested earnings	D43	188 021
Other investment income	D44	52 387
Property income paid to the rest of the world	D4	387 333
Interest	D41	61 374
Dividends	D42	240 038
Reinvested earnings	D43	81 883
Other investment income	D44	4 038
Gross national income (ESA2010)	B5*G	5622565

Table 8.0.2 Excerpt from Process Tables –Gross National Income 2021, SEK million

		Compensation to employees		Taxes on production and imports paid to EU	Subsidies granted by EU	Property income		
		Received from RoW	Paid to RoW			Received from RoW	Paid to RoW	
Basis for NA Figures	Surveys & Censuses	0	0	0	8 010	0	0	
	Administrative Records	0	0	7 339	1 009	0	0	
	Combined Data	0	0	0	0	0	0	
	Extrapolation and Models	Benchmark extrapolations	0	0	0	0	0	0
		Commodity Flow Model	0	0	0	0	0	0
		CFC(PIM)	0	0	0	0	0	0
		Dwellings - stratification method	0	0	0	0	0	0
		FISIM	0	0	0	0	0	0
		Insurance	0	0	0	0	0	0
		Other E&M	24 922	27 444	0	0	592 959	384 035
		Total Extrap+Models	24 922	27 444	0	0	592 959	384 035
	Other	0	0	0	0	0	0	
	Total (sources)	24 922	27 444	7 339	9 019	592 959	384 035	
Adjustments	Data validation	0	0	0	0	0	0	
	Conceptual	Allocation of FISIM	0	0	0	0	21	3 298
		Allocation of insurance	0	0	0	0	0	0
		Other conceptual	0	0	0	0	0	0
		Total conceptual	0	0	0	0	21	3 298
	Exhaustiveness	N1	0	0	0	0	0	0
		N2	0	0	0	0	0	0
		N3	0	0	0	0	0	0
		N4	0	0	0	0	0	0
		N5	0	0	0	0	0	0
		N6	0	0	0	0	0	0
		N7	0	0	0	0	0	0
	Total exhaustiveness	0	0	0	0	0	0	
Balancing	0	0	0	0	0	0		
Total (adjustments)	0	0	0	0	21	3 298		
Final estimate		24 922	27 444	7 339	9 019	592 980	387 333	

Survey and census

The main source of subsidies granted by the Institutions of the EU is Swedish National Financial Management Authority (ESV) (Section 8.3).

Administrative Records

Administrative records for subsidies refer to subsidies on products (Section 8.3) and corresponding information could also be read in chapter 4.9. Whereas data on taxes refers to data from the Swedish National Financial Management Authority (ESV) and consist of customs duties and sugar levies (Section 8.2).

Extrapolation and Models

Other E&M for Compensation of employees (Section 8.1) refers to data obtained from income statements for individuals. The main sources of property income are survey on Balance Statistics for non-financial companies (BAST) and annual survey measuring foreign direct investment (FDI) (Section 8.4).

Conceptual adjustments

Conceptual adjustments refer to FISIM (Section 8.4). For detail information about the FISIM calculations, see chapter 3.

8.1 Compensation of employees

The estimates for compensation of employees (D1) exchanged with the rest of the world are mainly based on detailed information from income statements for individuals. This method was introduced in connection with the ESA 2010 introduction and was elaborated in cooperation between National Accounts, Trade of Service statistics, Balance of payments (BoP) and the statistics on Income Statements. For wages and salaries or other forms of compensations paid, a cash principle applies as wages and salaries are paid during the period in which the work is done. More details are to be found in section 4.7.

8.1.1 Wages and salaries from the rest of the world

Annual data on compensation for Swedish residents working abroad are available through the PAYE-tax return, individual statement from Income and Tax statistics. The Income and Tax statistics are based on different administrative registers and the cooperation between the Nordic Tax agencies have made wages and salaries from other Nordic countries available. From the reference year 2015 and onwards this data source for compensation of employees from rest of the world is used in National Accounts and Balance of Payments.

For wages and salaries for the rest of the EU-countries the trend for the Nordic countries have been used for extrapolating the benchmark value from 2015. The benchmark value is based on information on compensation of employees to Sweden from the other EU-countries (except the Nordic countries) according to the Eurostat, Balance of Payments Statistics Database. Wages and salaries for the rest of the world is based on addition of 5 per cent to the total EU wages and salaries.

A specific supplement is made for embassies where a benchmark value from 2013 have been extrapolated with wages and salaries for the Nordic countries. No additions are made for other extra-territorial organizations.

All Social contributions (D12) are regarded cross-border transaction and based on the social contribution rate in respective country applied on the wages and salaries. Income taxes D.51 is also derived from the wages and salaries, also based on the income tax rates.

Table 8.1.1 Wages and salaries (D11) and social contributions (D12) 2021 from the rest of the world, SEK million

No	Item	2021
1	Total Wages and Salaries from Rest of the World (2+6)	22 426
2	Extrapolation of total wages and salaries including Rest of the world for the year 2021 (value year 2020 * growth rate)*	22 055
3	Wages and Salaries from Nordisk countries	17 039
4	Wages and Salaries from Rest of EU	671
5	Wages and Salaries from the Rest of the World ((3+4)*0.05)	886
6	Wages and salaries, Embassies	371
7	Social contributions**	2 496

*Numeric example $23\,721 * 0.92977 = 22\,055$ SEK million

**It is based on following shares used for each land or region (Norway 26.2 %, Denmark 1.8 %, EU 25% and RoW 10%)

8.1.2 Wages and salaries to the rest of the world

For the non-residents working in Sweden, quarterly data is available through the information from income statements where wages to non-residents are distinguishable separately.

A specific supplement is made for embassies¹⁰¹ where a benchmark value from 2015 have been extrapolated with wages and salaries to the rest of the world. All Social contributions (D12) are regarded cross-border transaction and based on the proportion of social contributions to total domestic wages according to national accounts data.

Table 8.1.2 Wages and salaries (D11) and social contributions (D12) 2021 to the rest of the world. SEK million

No	Item	2021
1	Total Wages and Salaries to Rest of the World	22 766
2	Wages and Salaries to Rest of world exclusiv embessies	22 377
3	Wages and salaries, Embassies	389
4	Social contributions	4 678

¹⁰¹ It has been found that the data on income statements from the Ministry of Foreign Affairs already contains information about embassies and this will be corrected in the GNI reporting 2026. Time series will be revised with the next benchmark revision in 2029. However, the value is relatively small and non-material (389 SEK million for 2021).

8.2 Taxes on production and imports paid to the Institutions of the EU

Taxes on production and imports paid to institutions of the EU include taxes collected by national governments on behalf of the institutions of the EU. The data are obtained directly from the Swedish National Financial Management Authority (ESV) and consist of customs duties and sugar levies. These make up parts of Sweden's dues or contributions to the EU and are recorded as transactions which affect directly taxes on production and imports. The GNI levy, which is the biggest part of Sweden's contributions to the EU, is recorded instead as a current transfer. After introduction of ESA 2010 the recording of VAT is the same as for the GNI levy, i.e., recorded as current transfer from central government to the EU. The revenue referring to VAT is at the same time recorded as central government tax revenue.

At present, as well as in year 2021, only import duties (D.2121) is recorded in Sweden.

The recording is on an accrual basis. This information is also presented on a regular basis in the Swedish National Tax List (ESA Transmission Table 0999) distributed to Eurostat.

Table 8.2.1 Tax on production and import paid to the institutions of the EU, SEK million 2021

Tax on production and imports paid to the institutions of the EU (D.21)	Total amount, SEK million 2021
Import duties (D.2121)	7 339
Other excise duties (D.214A)	0
Total	7 339

Data is obtained directly from the ESV. The Swedish calculations for taxes on production and imports are based on the records kept by ESV and the data source is information from the income of departments and agencies of central government by revenue headings, which are entered each month. Concerning taxes, information from the Swedish Tax Agency is sent to ESV and then from ESV to Statistics Sweden.

8.3 Subsidies granted by the Institutions of the EU

The data on subsidies apply to both subsidies on products and other subsidies on production from the EU and therefore only affect the inflow side. It is mainly a question of subsidies for agriculture. These data are obtained from the Swedish National Financial Management Authority (ESV), who delivers the basis of central government net lending/net borrowing. The material also comprises the part of the activity of central government, which is not recorded in the national budget. The national budget records the subsidies, which departments and agencies of government pay out, but which are financed by EU funds. The departments and agencies are obliged to record types of expenditure under budget headings. This enables the ESV to determine how payments are distributed between subsidies and other expenditure. Concerning more complex subsidies, as subsidies for agriculture, where the same appropriation could be partly central government financed and partly EU financed, supplementary information is collected directly from the Swedish Board of Agriculture.

From the Swedish Board of Agriculture supplementary information about agriculture subsidies are collected which enable a correct split between government and EU subsidies, a split between subsidies on products and other subsidies on production as well as an accrual based recording for agricultural subsidies. Concerning other subsidies, no specific information is available for the period to which the expenditures belong, i.e., no adjustments are made to obtain recording at accrual basis for these transactions in national accounts. However, a significant part refers to government or EU subsidies for agricultural activities.

The information from the different data sources is very detailed which makes it possible to distinguish subsidies on production from social contributions to households, investment grants, other miscellaneous transfers, capital injections into public corporations etc. The data sources regarding payments from government, as well as from the EU, are detailed and divided by type of item/transfer, counterpart, split by appropriation, related to quantities of products and merchandises (D.31) or referring to production (D.39) etc. Corresponding information could also be read in chapter 4.9.

Table 8.3.1: Subsidies granted by the institutions of the EU, SEK million 2021

Subsidies granted by the institutions of the EU (D.3)	Total amount, SEK million 2021
Subsidies on products (D.31)	1 009
To agriculture activities	880
To other activities	129
Other subsidies on production (D.39)	8 010
To agriculture activities	7 741
To other activities	269
Total	9 019

8.4 Cross-border property income

Returns on financial assets and debts include interests and dividends. Cross-border property receipts/payments meet the ESA 2010 recommendations. Concepts relating to financial returns and sources is explained in below sections. Interest data are recorded on an accrual basis while dividends are recorded when they are payable. Recording on an accrual basis means that the interest has been entered in the company's profit and loss accounts and the general accounting standards are that interest should be recorded on accrual basis. This also applies mainly to other interest flows, with effect from the fourth quarter of 1997 when the Central Bank of Sweden (Riksbank) implemented the BPM5 and Eurostat's application of the IMF recommendations. For earlier years (before 1997), recording is mainly on a payment basis. FISIM correction is included in interest received from and paid to the rest of the world. For more information about the FISIM calculations, see chapter 3.

8.4.1 Interest

Returns on financial assets and debts include interest. Interest flows in the Balance of Payments (BOP) statistics are reported or calculated on an accrual basis and are structured according to the functional categories in the BOP financial balance:

- Foreign Direct Investment
- Other Investment
- Reserve assets
- Portfolio Investment

Interest flows from Foreign Direct Investment

Interest on debt positions within direct investment relationships is reported on an accrual basis by the respondents in the monthly FDI survey.

Interest flows from Financial Derivatives

Interests from swaps and forward rate agreements are excluded from cross border property income and treated as transactions in financial derivatives in the financial account.

Interest flows from Other Investment

Interest flows on loans, deposits, etc. related to the Balance of Payments functional category *Other investment* has been reported mainly on an accrual basis since October 1997. Prior to that, the compilation was made on a payment basis.

All the major banks report interests flow by country. Estimates for other monetary financial institutes are calculated based on the reports from the banks. Other investment interest flows from non-financial enterprises are covered by the survey on Balance Statistics for non-financial companies (BAST). Adjustment to interest from Other investment debt positions is made to account for estimated interest flows defined as FISIM (see chapter 3 for more details).

Interest flows from Reserve assets

All earnings on foreign exchange reserves and related transactions with the IMF are reported by the Riksbank to Statistics Sweden. The Riksbank receives interest on its holdings of Special Drawing Rights (SDR) and other remuneration from IMF. Income from investment in foreign currency, deposits and securities is derived monthly.

Grants for interest relief.

Grants for interest relief are recorded as subsidies given that they exist.

Interest flows from Portfolio Investment

These comprise interest on bonds and money market instruments, which are recorded, specified by resident sectors, rest of the world and in Swedish kronor and foreign currency. Interest on Swedish bond issued in foreign currency abroad is recorded as accrued interest. To obtain accrued interest in respect of interest on stocks, which arises mainly through trade, e.g., securities issued by the State and housing institutions and securities issued abroad, the Riksbank carries out separate calculations.

*D41 Interest on Swedish debt securities***Stocks in Swedish debt securities denominated in SEK**

As from reference period first quarter 2019 Non-resident holdings of Swedish securities in SEK are collected from the Swedish database on securities holdings (VINN) and from the Swedish securities database (SVDB) on debt securities issued by Swedish issuers. Non-resident holdings are estimated as a residual when Swedish holdings in Swedish debt securities are subtracted from total stock issued.

Stocks in Swedish debt securities denominated in foreign currency

As from reference period first quarter 2019 Non-resident holdings of Swedish securities in foreign currency are obtained by information from the Swedish database on debt securities (SVDB) issued by Swedish issuers as well as holdings from the database on Swedish securities holding statistics (VINN). Non-resident holdings are estimated as a residual when Swedish holdings in Swedish debt securities are subtracted from total stock issued.

Basic theory

The model relates the different interest rates on the total stock of government sectors, housing credit institutions and non-financial companies. Non-financial companies include all other sectors. The interest rate on government bonds is estimated by using reported data from the National Debt Office for their outstanding stock and accrued interest. For the housing credit institutions sector a moving average of an index from Nasdaq OMX are used and for the other sectors the 10-year swap rate is used which is added to the interest rate for government bonds. Accrued interest is calculated on the total volume. Same model calculating accrued interest applies on collected stocks up until 2018 as well as on estimated stocks from Swedish databases on issuers and holdings from 2019.

Table 8.4.1.1 Formula interest on Swedish debt securities

Interest rate sector	Long- term debt securities
S1311 Central government (r_s)	$\frac{\text{Accrued interest}}{\text{Outstanding nominal debt}}$
S1223 Housing credit institutions (r_b)	b_t
S11 Non-financial corporations included in Other (r_i)	$b_t + i_t$
	Short- term debt securities
S1311 Central government (r_s)	s_s
S1223 Housing (r_b)	$\frac{(bs_{t-1} + bs_t - 0,001)}{12} + ((bs_{t-1} - bs_t) * ds_t) + s_s$
S11 Non-financial corporations included in Other(r_i)	$\frac{(is_{t-1} + is_t)}{12} + ((is_{t-1} - is_t) * ds_t) + r_b$

Accrued Interest / (outstanding nominal debt)

b_t Yield Sweden, Fixed Income Indices, Nasdaq OMX, OMRX Mortgage Bond All Index, Yield, Moving average 5 years

i_t = Sweden, ("Swap Rates, SEK, Mid Government Benchmarks, Yield"), 10 Year

s_s = Sweden, Government Benchmarks, 3 Month, Yield, End of Period

b_s = Sweden, Fixed Income Indices, (Mortgage-Government)/100, Index, 1-3 Year, Yield

i_s = Sweden, ("Swap Rates, SEK STINA, Ask"- "Government Benchmarks, Yield")/100, 6 Month

d_t = Sweden, Fixed Income Indices, Treasury Bills, Index, All Maturities, Duration

The income on money market instruments is calculated in a similar way as for bonds.

Interest on securities = $r \times \text{stock}$

Table 8.4.1.2 Example on estimated monthly interest on Swedish debt securities denominated in SEK, SEK million

Interest rate sector	Long- term debt securities		
	Stocks	Interest rate sector	Interest on securities
S1311 Central government (r_s)	195 584	0,99%	161,5
S1223 Housing credit institutions (r_s)	194 788	0,22%	35,7
S11 Non-financial corporations included in Other (r_i)	151 972	0,61%	76,6
Short- term debt securities			
S1311 Central government. (r_s)	20 650	-0,17%	-2,87
S1223 Housing (r_s)	0	-	0
S11 Non-financial corporations included in Other(r_i)	26 241	-0,15%	-3,24

D41 Interest on foreign debt securities

As from reference period first quarter 2019 holdings in foreign debt securities are obtained from the Swedish database on securities holdings (VINN). Supplementary data are collected semi-annually, intended to capture resident holdings stored abroad, which are not captured by VINN. In between the collection of supplementary holdings, a forecast is done. Stock data from VINN plus the semi-annually supplementary collected data are reported to IMF twice a year in the Coordinated Portfolio Investment Survey, CPIS, and the results of the survey are used in the IIP, International Investment Position.

Income on reserve assets is reported quarterly by the Riksbank.

Returns on foreign bonds and foreign debt securities:

Interest on securities = $r * \text{stock}$

r corresponds to a country-specific return index for each maturity (short/long maturity). Country specific interest is estimated for the 20 countries with largest portfolio investments. Total stock is weighted by country specific weights and interest is estimated only for these countries and international organizations.

Table 8.4.1.3 Example on Estimated monthly interest on foreign long – term debt securities, SEK million

Interest rate country specific	Long- term debt securities			
	Stocks	Country weight	Interest rate	Interest on securities
Australia	17 446	1,31%	1,93%	28,1
Austria	1 386	0,10%	0,25	0,29
Belgium	4 129	0,31%	0,33	1,14
USA	326 964	24,55%	1,99%	541,6
..
Total	1 331 594	100%		1 067

The same model is applied on foreign short-term debt securities.

Debtor approach is used for the calculation of cross border flows of accrued interest on Swedish debt securities. The creditor approach is used for foreign debt securities. No taxes are calculated on interest rates. Same model applies from reference period first quarter 2019 on stocks from Swedish database on holdings. As for index-linked securities, the returns that arise from market valuation fluctuations are not considered. Interest on debt securities is estimated using the same model regardless of security and no special consideration is taken to the index-linked debt securities. However, according to the Financial Sector Accounts, based on data from OMX, the largest stock market in Sweden, which covers nearly the entire Swedish stock market, index-linked securities represent only a small share.

In connection with the publication of reference period third quarter 2025 the plan is to transition to new data sources and methods of compiling interest on Swedish and foreign debt securities. As from reference period first quarter 2019 interest on debt securities will be based on security-by-security information from the database on securities holdings (VINN), and the Swedish securities database (SVDB) on debt securities issued by Swedish issuers.

D41 Interest on loans, deposits, etc., including interest on financial derivatives

The data are collected mainly by direct reporting by transactors who have stocks of assets or debt vis-à-vis the rest of the world involving large amounts; a guide value, but however not an absolute limit, is approximately SEK 200 million. All the major banks report information on interests by country. Estimates for other monetary financial institutes are calculated based on the reports from the banks. Non-financial enterprises are covered by the survey on Balance Statistics for non-financial companies (BAST).

Financial derivatives or financial leasing is recorded as loans and the interests from financial leasing are included in cross border flows of interest.

8.4.2 Distributed income of corporations

The revenue concept, in addition to interest, also covers dividends on shares in portfolio investments as well as dividends taken and reinvested earnings from direct investments. Returns on portfolio shares comprise dividends on holdings amounting to less than 10 per cent of voting rights. The distribution is recorded on an accrual basis. The data are obtained for debt securities by direct reporting while earnings on equity securities are based on calculations.

Dividends on shares in a direct investment enterprise are recorded in accordance with accounting principles meaning that dividends are recorded at the time the dividend (paid or anticipated) is recorded in the books of the FDI enterprise/investor (as of the date they are declared payable).

Returns on direct investment are calculated as the net amount of financial income and costs. The data are obtained from the annual accounts of the group to which the enterprises belong (consolidated figures) and are recorded before deduction of withholding taxes on distributed earnings. Depreciation, capital gains and capital losses are also not included. Dividends within FDI relationships are reported in a monthly (cut-off) survey which includes the largest corporations. This monthly survey is complemented by the annual FDI survey (larger sample survey) where additional dividends are reported.

*8.4.2.1 Portfolio Investment dividends**Dividends on foreign shares D421*

The balances as from reference period first quarter 2019 are collected from the database on securities holdings (VINN).

Index series of MSCI are updated monthly. When the stock has been collected, it is redistributed in accordance with holder sector as registered in the CPIS.

Stock UB = closing balance each quarter from VINN

By relating a price index to a return index, we can get information about the return rate;

$$U_{\%t} = \left(\frac{\text{Total return}_t}{\text{Total return}_{t-1}} - 1 \right) - \left(\frac{\text{Price return}_t}{\text{Price return}_{t-1}} - 1 \right)$$

The foreign shares' return, U_t is calculated as

$$U_t = U_{\%t} \times \text{Stock}_{UBt} \times \text{country weight}$$

Where:

$U_{\%t}$ = yield rate during the period by country

Total return = Country-specific return index (MSCI Country gross index, (exchange rate)

Price return = Country-specific price indices (MSCI country index standard, (exchange rate)

($Stock_{UBt}$) broken down by country is calculated by the help of the CPIS data. Country weights are based on the CPIS survey. Since the dividends are reinvested, offsetting entries must be made in the financial account. The entire dividends are booked as reinvested.

Table 8.4.2.1 Example on estimated monthly Dividends on foreign shares D421

Country specific dividends	Stocks	Country weight	Dividend rate (U%)	Dividend
Australia	45 817	1,02%	0,19%	88,8
Austria	3 164	0,07%	1,08%	34,2
Belgium	9 506	0,21%	0,50%	48,2
USA	2 066 781	46,20%	0,13%	2 778
..
Total	4 473 520			8 522

Dividends on Swedish shares D421

As from reference period first quarter 2020 the Shareholding statistics survey is collected on a quarterly basis by the National account's units. The same unit produces estimates on dividends on Swedish shares as input to the Balance of Payments.

Dividends on Swedish shares are calculated on a sector level on a quarterly basis. The primary sources used are the Shareholding statistics and the Swedish securities database (SVDB) both compiled at Statistics Sweden. Shareholding statistics is used to see which sector owns which stock. Stock data was up until 2020 collected on a semi-annual basis but are now collected on a quarterly basis. Swedish securities database (SVDB) is used for the dividend per company.

The dividend is then calculated at a microlevel per company as holdings per sector multiplied by the dividend for that company. As we do not know the exact holdings at the time of the dividends, we use the holdings at the end of the last quarter.

The dividend on Swedish shares is calculated as: $Ut*(St-1)$

Table 8.4.2.2 Example on Dividends on Swedish shares D421

1. Dividends on Swedish shares	2. Stocks	3. Dividend rate (U%)	4. Dividend
5. Total	6. 3 200 808	7. 0,25 %	8. 8 120

D421 FDI dividends

Cross-border flows of dividends within FDI relationships are reported in a monthly (cut-off) survey which includes the largest corporations. This monthly survey is complemented by the annual FDI survey (larger sample survey) where additional dividends are reported. Dividends within FDI relationships are recorded in accordance with accounting principles. This means that dividends are recorded at the time the dividend (paid or anticipated) is recorded in the books of the FDI enterprise/investor (as of the date they are declared payable).

For the treatment of super-dividends Statistics Sweden do comply with the ESA 2010 paragraph 4.55:

The ratio of dividends to distributable income over the recent past is used to assess the plausibility of the current level of dividends. If the level of dividends declared is greatly in excess, the dividends causing the excess are treated as financial transactions and classified as 'super-dividends'. Such super-dividends are treated as the withdrawal of owners' equity from the corporation.

8.4.2.2 Withdrawals from the income of quasi-corporations

According to the ESA guidelines households cannot own property abroad. If a household owns a second home in another country, this property is assumed to be a ‘quasi-corporation’ or a notional unit, which is a separate institutional unit that is resident in the economy of the property. Therefore, any income streams associated with these second homes are treated as ‘withdrawals of income from quasi-corporations’, which are recorded as property income in the National Accounts.

As an owner-occupier of a property, the occupier is consuming dwelling services. For second homes in Sweden, owned by foreign residents, owner occupation leads to the recording of production and operating surplus in Sweden and the export of housing services (inward imputed rental). For second homes abroad owned by Swedish residents, owner occupation leads to household final consumption expenditure in Sweden by the Swedish household and the import of housing services (outward imputed rental). Production capital situated in a country different from where the owner is resident is in the NA and BoP always transformed by imputation into a financial asset representing a claim of the owner on the rest of the world, according to ESA2010, §4.60.

In accordance with ESA, the rental value of the owner-occupied dwellings abroad is registered as imports of services (in the Travel item of BoP and on the Rest of the World account) and household expenditures in the country where the owner is resident and the corresponding net operating surplus as property income received from the rest of the world.

The rental value of the owner-occupied dwellings belonging to non-residents is registered as export of services (in the Travel item of BoP and on the Rest of the World account and the corresponding net operating surplus as property income paid to the rest of the world.

According to the Balance of Payments Manual (BPM6), property income payable to the non-resident shareholders should be recorded gross of any withholding taxes. These taxes are deemed paid by the recipient and are transferred to the country of the direct investment enterprise and recorded under transfers. There is also an ESA provision saying that property income should be recorded gross, i.e. before deduction of taxes levied on them (ESA2010, 4.58). And in the case when data on property income is obtained on net basis, an adjustment for taxes levied at the source should be done to arrive from net to gross figures and thus to comply with the ESA requirement of gross recording. Normally, the Balance of Payments statistics conform to these requirements.

Holiday homes in Sweden owned by non-residents

To estimate the total stock of foreign holiday homes in Sweden information from the Swedish Register of Real estate is processed by Statistics Sweden. As all owners are registered it is possible to sort out those with addresses abroad. Stock values of second homes owned by non-residents in Sweden were around 112,0 SEK billion in 2021. They constitute 6.3 percent of the total stock in 2021. With help of the Swedish unique personal identification numbers, it is also possible to note the number of previous Swedish residents within this group. They constitute about one third of the total share of foreign owned second homes in Sweden.

Information on market values of second homes is available in sales statistics. Prices broken down by NUTS2- regions are used as there are big differences between e.g., coastal and inland regions.

From this information stock values have been compiled for the period from 2007 and onwards. Up to and covering 2002 the bank settlements statistics of Riksbanken was used in the BoP compilations. Therefore, data for the period before 2003 is based on these data. The period 2003 to 2007 is interpolated.

D422 Property income to the rest of the world

Dwellings located in Sweden and owned by non-residents generate flows of imputed property income from Sweden to the rest of the world. The estimation of these flows is based on using the same rate of return to this dwelling stock as the one used for the total dwelling stock in the Swedish National accounts. This rate is 2.5 percent. Furthermore, the average time spent in the second home is set to 15 percent of a year. The short summer and the high share of previous Swedish residents now living and working abroad and therefore not having long holidays are considered for this occupancy rate. A study on Danish second homeowners in Sweden indicates that they spend 43 nights a year in their Swedish holiday homes. This is almost 12 percent of a year. Another small study indicates that Norwegian second homes owners living close to the border spend about 70 nights a year in their second homes in Sweden. So, an occupancy rate of 15 percent is considered a proper figure as an average.

The flows of property income (I_t) are calculated by multiplying the stock value (St) by the rate of return (rt) and by an occupancy rate (O_t): $I_t = St * rt * O_t$

The following estimates of property income to the rest of the world are received, in million SEK

Table 8.4.2.3 Property income to the rest of the world, SEK million

	2021
Stock $V * 2,5\% * 15\%$	400

Non-residents' consumption of dwellings services in Sweden, inward rental value

Non-residents consumption expenditures in Sweden are gathered in total in the Travel item of BoP covering also the dwelling services from holiday homes. For the period 2002 and onwards, rental values are included in the travel item, based on the share of foreign ownership of the total population of second homes in Sweden.

V_t = Imputed rental value of all second homes in Sweden

S_f = Share of foreign owned second homes in Sweden

Rental value = $V_t * S_f$.

Holiday homes abroad owned by Swedish residents

The estimates for holiday homes owned by Swedish citizens abroad are based on information from two surveys published by a Swedish real estate agent concerning ownership of holiday homes abroad. They are "Fritidshusundersökning drömmar" from May 2014 and FAB "semesterboende" (holiday living) from 2013. The surveys contain questions on ownership and location of the dwelling. Based on the results from these surveys a model has been set up. The total number of second homes abroad has been calculated to 134 149 for 2012, which is set as the benchmark year. In addition, some information from the Swedish Tax Agency has been used. Since no survey information on ownership for any other years is available, the annual changes are assumed to be equal to the increase of foreign second homes in Sweden¹⁰².

Spain is the most popular country for second home properties owned by Swedish residents, and the total share of the second homes located in Spain is around 30 percent. Second home ownership data is estimated specifically for France, Italy, Turkey, Thailand and then an estimation is made for rest of the world. The total calculated stock value for 2021 is 259,3 SEK billion.

¹⁰² This issue has been investigated in the verification cycle 2020-2024 but no new source/data has been found.

D422 Property income from abroad

Imputed property income from abroad, generated by Swedish-owned second homes abroad, is compiled using the same rate of return on the dwelling stock abroad as the one used in the Swedish second homes compilation, which is 2.5 percent. It is assumed that the income received from abroad and generated through the ownership abroad is in the same proportion to the stock value abroad as the ratio between operating surplus generated in the Swedish dwelling compilations and the stock value of dwellings in Sweden.

It is only possible to spend less than half year abroad in order to stay registered in the Swedish Population Register. Average holiday length in Sweden is 5 weeks. However, as retired people have the possibility to spend more time away from home and avoid part of the dark and cold winter months, the average time spent in the second home is set to 25 percent of a year.

The flows of property income (Ia) are calculated by multiplying the stock value (Sa) by the rate of return (rt) and by an occupancy rate (Oa): $Ia = Sa * rt * Oa$

Table 8.4.2.4 Property income from the rest of the world, SEK million

	2021
Stock V*2,5%*15%	1 580

Swedish consumption of dwellings services abroad, outward rental value

The final consumption of dwelling services by Swedes from owner-occupied second homes abroad include an assumption about the same relation between services consumed and the stock value for dwellings owned by Swedes abroad as owner-occupied second homes in Sweden owned by non-residents.

$$Va = (Vt * Sa) / St$$

Va = Outward rental value of second homes owned by Swedes abroad

Sa = Stock value of second homes owned by Swedes abroad

Vt = Inward rental value of second homes owned by non-residents in Sweden

St = Stock value of second homes owned by non-residents in Sweden

8.4.3 Reinvested earnings (RIE) of foreign direct investment (FDI)

Statistics Sweden is responsible for compiling data on RIE of FDI as a part of the production of Balance of Payments (BoP) and International Investment Position (IIP) statistics.

Definition of a direct investment enterprise

A direct investment enterprise is an enterprise resident in one economy and in which an investor resident in another economy owns, either directly or indirectly 10% or more of its voting power if it is incorporated, or the equivalent for an unincorporated enterprise.

Method to capture indirect links within big company groups (multinationals)

Direct and indirect ownership links are measured in the annual Foreign Direct Investment survey, both for inward and outward FDI. Income according to the Current Operating Performance Concept is collected along the whole ownership chain and is consolidated for each of the countries where the direct investment enterprises reside.

For Swedish FDI abroad, the survey respondents specify how the direct investment enterprises in the counterpart country are owned. The reporters must state information whether the enterprises in country X are directly owned from Sweden or if they are held via foreign subsidiaries.

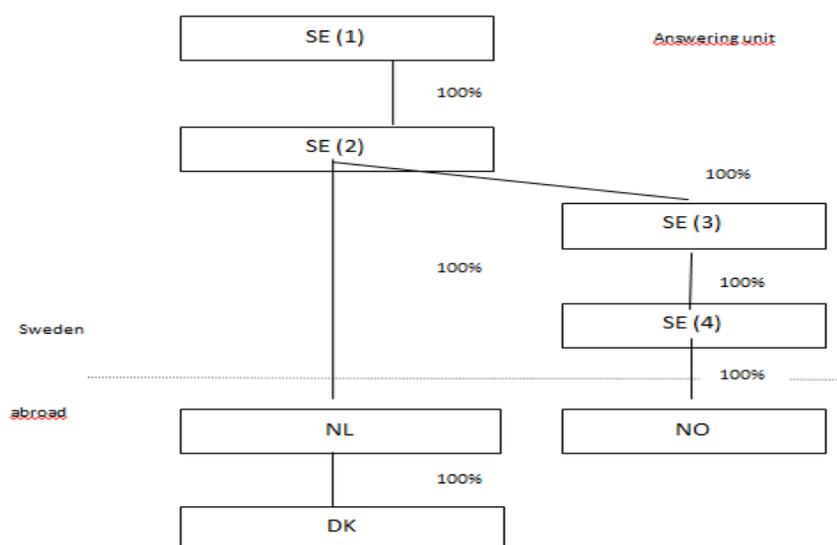
Below are the instructions given to the respondents of the survey Swedish Direct Investments abroad:

“The aim of this survey is to calculate Sweden’s total direct investment assets and income abroad.

A direct investment relationship exists when a Swedish company, organisation or private person owns 10 per cent or more of the votes in a foreign company or commercial property.

Swedish parent companies should report data for their own ownership abroad, as well as for the ownership abroad of all their Swedish subsidiaries.

Figure 8.4.3.1. Example of the definitions used in this survey to facilitate reporting



In this example SE (1) is the reporting unit.

Parent company is SE (1)

Data on foreign subsidiaries and associated companies broken down by country

A Swedish parent company shall report information and also include all Swedish subsidiaries’ ownership abroad. Both direct and indirect ownership shall be reported, i.e., also sub-subsidiaries abroad. In the example above SE (1) shall give information on parent ownership abroad, i.e., foreign units in NL, DK and NO, which are owned through the units SE (2) and SE (4).

The data for the country relates to: (Enter the type of ownership that your company has the company / companies in the country for which the data relates to). In the example above, the SE (1) does not itself directly own any foreign company and therefore "Directly owned holdings abroad" should not be filled in. Units NE and NL are owned directly by the Swedish subsidiaries of the reporting entity, SE (1) and thus they should be recorded as 'Swedish subsidiary holdings abroad ". The company DK is owned by the subsidiary NL and ownership structure of the company DK therefore should be "Foreign subsidiaries' holdings abroad”.

Details of foreign subsidiaries and associated companies abroad broken down by country

Swedish group parents should also include all Swedish subsidiaries’ ownership abroad in the reported data. Both direct and indirect ownership in foreign companies should be reported, i.e., sub-subsidiary companies should also be included. If a foreign subsidiary is the parent company of a foreign subgroup the reporting should include all subsidiaries and interests where the ownership is over 10 percent. Income statement items and shareholders’ equity is collected from the foreign companies’ accounts (alternatively the foreign sub-group’s reports) and details should be consolidated and divided per

country. Eliminations between the foreign companies should already be done. Details concerning associated companies should only show the part of the income statement and balance items of the foreign companies, i.e., if you own 40 percent, only 40 percent of stockholders' equity and income should be reported. The reported figures should be divided per country.”

Reinvested earnings (RIE) are calculated as direct investment income of earnings on equity according to the Current Operating Performance Concept (COPC) in the direct investment enterprise, less the dividends (distributed earnings) to the direct investor.

Direct investment income on equity as defined under the Current Operating Performance Concept (COPC) covers the sum of Net Operating Surplus (NOS), plus *net* interest receivable plus dividend income receivable plus reinvested earnings receivable plus *net* current transfers receivable. It does not include any realised or unrealised holding gains or losses arising from valuation changes, exchange rate changes, write-offs, etc

Earnings on equity and distributed earnings are both obtained, on individual enterprise level, from monthly and annual FDI surveys.

Whereas dividends are recorded when they are payable, reinvested earnings are attributed to the reference period for which the company declared their earnings on equity.

Example of compiling RIE of FDI in Sweden, Simple one subsidiary, direct investor's ownership participation is 100 %:

Reinvested earnings on direct investment equals the direct investment income on equity as defined under the Current Operating Performance Concept (COPC), multiplied with the direct investors share of the direct investment enterprise's equity (or the equivalent)

=

Reinvested earnings payable

Table 8.4.3.1 Example reinvested earnings payable

Net Profit/loss for the year	2 000		
Write-offs (write down) +	250		
Capital gains -	100		
Capital losses +	500	Income according to COPC	2 050
Tax -	600	Dividends to the owner	1 000
Income according to COPC	2 050	RIE	1050

To align the concept of COCP to the concept of net operating surplus for RIE, COCP should be adjusted with the following items; expenses on purchased intellectual property products (such as R&D, software, mineral exploration or originals) recorded as Gross Fixed Capital Formation (GFCF) and not as intermediate consumption; inclusion of output and GFCF from own-account R&D; and consumption of fixed capital (CFC) are taken into account. The alignment of COCP to net operating surplus was addressed in the transversal reservation IV Reinvested earnings on foreign direct investment (September 2021).

R&D impact of cross-border flows of RIE on FDI

Sweden has reviewed sources and methods used in the compilation of reinvested earnings (RIE) on foreign direct investment (FDI). In Sweden, potential impact on RIE on FDI can originate from Research and Development (R&D), software, mineral exploration and originals. New sources and methods have been incorporated to align the estimates to ESA2010. However, in some cases, due to

lack of information, a more pragmatic approach has been used to address the reservation which also Eurostat suggested as a way forward.

The Swedish Agency for Growth Policy Analysis (Growth Analysis) conducts a survey on the expenditures of both international and Swedish companies on research and development (R&D) activities in Sweden and abroad. Growth Analysis has been instructed by the Swedish Government to analyse and evaluate Swedish growth policy. The survey, R&D in international enterprises, is conducted every two years in collaboration with Statistics Sweden, and aims at examining the extent of, and changes in, the R&D conducted by Swedish companies abroad and by international companies in Sweden.

Own account R&D

Output and GFCF are calculated using the expenditure incurred on R&D from the survey mentioned above (R&D in international enterprises). The years that are not surveyed are back casted with the output of R&D performed in Sweden. A mark-up is estimated and added as to account for consumption of fixed capital and return to capital¹⁰³. The estimation gives the output of own account R&D. However, there is no information on how much of the R&D output that is for use within the same enterprise. Some of this output will most certainly be sold and should be recorded as acquisition of R&D products, and thus as Gross Fixed Capital Formation (GFCF) by the buyer.

Statistics Sweden has no information about the above-mentioned uncertainties. Therefore, as a pragmatic solution, the ratio between total output of R&D and sold R&D in Sweden is used as an approximation.

Adjustment of Intermediate consumption

Due to the differences between business accounting and the National Accounts the intermediate consumption for R&D should be adjusted, i.e. the intermediate consumption should be lowered by the amount of purchased R&D¹⁰⁴. However, in the survey conducted by Growth Analysis there is no information about purchased R&D. Therefore, the best information about the distribution between own account R&D and purchased R&D is to make use of calculations on the distribution for R&D performed in Sweden. The source for R&D performed in Sweden is the Frascati survey. Information on purchased R&D is collected from the Structural Business Statistics (SBS).

Consumption of fixed assets

The calculations of consumptions of fixed assets for foreign affiliates in Sweden as well as for Swedish affiliates abroad use the year 1993 as starting point. The calculation of the net stock of assets and the value of capital consumption is performed by use of the Perpetual Inventory Method (PIM model). A geometric function, which describes how the value of the assets decreases over time, is used. For research and development, a single average service life of 10 years is used with a declining balance rate of 1.65. The opening balance of the year 1993 is assumed to have the same relation between the starting balance and GFCF as in the ordinary National Accounts calculations for R&D.

The R&D net impact of cross-border flows of RIE on FDI is shown in table below.

Table 8.4.3.2 Net impact of cross-border flows of RIE on FDI R&D year 2016-2021, million SEK

Item	2016	2017	2018	2019	2020	2021
Income received from the rest of the world	-11 026	-10 152	5 682	-9 062	316	-2 221
Income paid to the rest of the world	-1 469	-2 243	5 680	-10 418	-1 811	-3 994

¹⁰³ The mark-up is the same as for R&D performed in Sweden and is about 15 percent.

¹⁰⁴ Not applicable for the R&D industry.

Due to varying reasons, but especially lack of data, Statistics Sweden take the standpoint that only R&D should be allowed to affect the calculations of reinvested earnings (RIE) on foreign direct investment (FDI) at this point.

Measures taken to exclude holding gains and losses from direct investment income

Income on equity according to the COPC concept is reported in the annual FDI survey, where respondents report the following items for the direct investment enterprises /local enterprise groups:

$$\text{COPC} = r + n + rf - rv - s$$

Where:

r = result after net financial items in the direct investment enterprise / local enterprise group

n = impairment (net) included in r

rf = holding losses included in r

rv = holding gains included in r

s = corporate tax

This method is used for both financial and non-financial corporations.

Data sources for outward and inward direct investment flows

The source for inward and outward direct investment financial flows is a monthly FDI survey, which consist of a cut off sample of the largest FDI enterprise and FDI investor groups in Sweden. If a respondent enterprise reports large values in the annual direct investment survey, that enterprise is then added as a monthly direct reporter.

In the monthly reporting, intra-group debt positions are collected, and the corresponding financial flows are calculated from these reported stocks. The transaction calculation includes adjustment for potential impairment losses/reversals as well as for exchange rate changes.

Interest on debt positions is also reported in the monthly survey. Interest accrued but not yet paid for a reference period also has a corresponding entry in the financial flows account.

Transaction flows in equity as well as dividends are also reported in the monthly survey form.

Information on enterprise group structures is used to allocate FDI debt instruments positions and flows according to the directional principle.

The FDI register includes companies and branches that have foreign direct investors and companies that have foreign affiliates, associates and branches. This information comes from the corporate group structures register within the Business Register at Statistics Sweden. The FDI register is also complemented by data from more recent ad hoc transactions registered in the BOP production system, as well as by data from previous FDI surveys.

The FDI register includes all types of companies - holding companies, treasury companies, etc.

Special Purpose Entities (SPEs). SPEs are identified based on the specific criteria described in the manuals. This identification process requires a manual assessment of the balance sheets to capture factors that cannot be identified automatically.

Data reported in the annual FDI survey is primarily validated, at the enterprise level, with data in annual reports. If the reporting enterprise also reports FDI data in the monthly survey, a reconciliation check is made between changes in annual equity/debt positions and the corresponding monthly flows.

In the monthly survey, reported FDI debt positions and other large equity flows can in many cases be validated with data reported in the Balance statistics survey, which measures positions and transactions

in the financial assets and liabilities of non-financial corporations. The Balance statistic survey is conducted quarterly.

Larger FDI flows and positions data are also reconciled bilaterally on a microdata level via Eurostat's FDI Network. Other sources of information are commercial databases, news articles etc.

Normally there is no imputation for non-response in the monthly cut-off survey. Occasionally, reported data from the previous reference period is used partly or in full.

In the annual sample survey non-response is compensated by adjusted enumeration. However, in fully surveyed strata, Statistics Sweden aims to get a 100 % response rate due to the size and specific country and industry allocations for those large FDI enterprises.

In Swedish FDI statistics, there is no imputation made for financial or interest flows to account for FDI enterprises below the threshold set for inclusion in the monthly cut-off FDI survey. The annual sample survey frame includes all FDI enterprises in the FDI population, regardless of size. Thus, in the annual survey, all FDI enterprises are accounted for regarding FDI positions and RIE flows.

Whereas dividends are recorded when they are declared payable, reinvested earnings are attributed to the reference year for which the FDI enterprise declared their earnings (according to the Current Operating Performance Concept (COPC)).

No adjustments to account for intra-group transfer pricing is made in Swedish FDI statistics.

8.4.4 Other investment income

8.4.4.1 Investment income attributable to insurance policy holders

Cross-border flows of investment income attributable to insurance policy holders are included in the Statistics Sweden Trade of Services quarterly survey.

Statistics Sweden is not able to distinguish resident and non-resident insurance policy holders in the domestic data sources and for the time being there are no plans for developing a method.

Data on resident insurance policy holders abroad is not included in the collected data because the survey is only addressed to the direct reporters and major reporters in Sweden.

8.4.4.2 Investment income payable on pension entitlements

The Swedish Pensions Agency reports pensions paid from the Swedish pension system to Swedes living abroad quarterly, but Statistics Sweden has currently no information on cross-border flows of investment income payable on pension entitlements.

8.4.4.3 Investment income attributable to collective investment fund shareholders

Dividends on foreign investment funds

The balances as from reference period first quarter 2019 are collected from the database on securities holdings (VINN).

Index series of MSCI are updated monthly. When the stock has been collected, it is redistributed in accordance with holder sector as registered in the CPIS.

Stock UB = closing balance each quarter from VINN

By relating a price index to a return index, we can get information about the return rate;

$$U_{\%t} = \left(\frac{\text{Total return}_t}{\text{Total return}_{t-1}} - 1 \right) - \left(\frac{\text{Price return}_t}{\text{Price return}_{t-1}} - 1 \right)$$

The foreign funds' return, U_t is calculated as:

$$U_t = U_{\%t} \times \text{Stock}_{UBt} \times \text{country weight}$$

Where,

$U_{\%t}$ = yield rate during the period by country

Total return = Country-specific return index (MSCI Country gross index, (exchange rate))

Price return = Country-specific price indices (MSCI country index standard, (exchange rate))

(Stock_{UBt}) broken down by country is calculated by the help of the CPIS data. Country weights are based on the CPIS survey. Since the dividends are reinvested, offsetting entries must be made in the financial account. The entire dividends are booked as reinvested.

Example Reinvested Earnings on Foreign Funds (D443)

The foreign funds' return, U_t , for a specific country =

$$U_t = 0.14\% \times 1\,035\,655 \times 10.73\% = 156 \text{ MSEK}$$

$$U_{\%t} = \left(\frac{6275}{6074} - 1 \right) - \left(\frac{1611}{1562} - 1 \right) = 0.14\%$$

Country weight = 10,733 % from CPIS survey.

Sources and procedures used to identify and cover cross-border flows of investment income attributable to foreign shareholders of domestic collective investment funds (broken down by dividends attributable to collective investment funds' shareholders and retained earnings attributable to collective investment funds' shareholders).

Dividends distributed by mutual funds to their shareholders are included in cross-border property income flows. However, only retained earnings are calculated and reported as return on capital. Thus, distributed dividends and capitalized profits are not distinguished separately in compilation practice.

Dividends on Swedish investment funds

Stock data is collected on a quarterly basis in the Investment fund survey compiled by the financial market statistics unit at Statistics Sweden.

As from reference period second quarter 2021 reinvested earnings on Swedish funds are estimated by the National account's unit on a quarterly basis. The quarterly estimation is based on an annually survey for the investment fund compiled by the financial market statistics unit at Statistics Sweden and the annually survey is focused on the total dividends of the Swedish funds including the rest of the world sector. Total reinvested earnings are calculated as net dividends received plus net interest received for Swedish investments funds. Reinvested earnings from dividends are distributed to counterpart sectors with weights mainly in equity funds, and reinvested earnings from interest with weights mainly from interest funds. The weight of the dividends from the Swedish funds to the rest of the world is based on the stock data of the Swedish funds which come from the financial accounts at Statistics Sweden.

Since the dividends are reinvested, offsetting entries must be made in the financial account. The entire dividends are booked as reinvested.

Example Reinvested Earnings from Swedish Funds

$$D.4432 \text{ S.2 received} = (\text{Net dividends received by S.124}) * \text{S.2 weight in equity funds} \\ + (\text{Net interest received by S.124}) * \text{S.2 weight in interest funds}$$

Eg. 2021 Q4 (in MNAC)

$$D.4432 \text{ S.2 received} = (16\,120 * 0,03826)$$

$$+ (2\,896 * 0,04769)$$

$$= 755$$

8.4.4.4 Rent on land and sub-soil assets

Cross-border flows of rent on land receivable by the landowner, including owners of inland waters and rivers are collected through the quarterly survey on Trade in services. The item in the survey is defined as: rental of land for the extraction of natural resources includes the amounts to be paid for the use of land, extracting mineral deposits and other mineral resources, fisheries, agriculture, forestry and grazing rights. The regular payments made by the lessees for the lease of natural resources are often recorded as royalties and are not recorded as rents in accordance with ESA §4,74.

The collected data refers to rents that are payable in the quarter that is surveyed. For the reference year of 2021, the sum of reported imports was only SEK 0,9 million and exports amounted to SEK 7,6 million.

Chapter 9 Main classifications used

9.1 Classifications used for the production approach

Production broken down by industry classification, NACE 2007 Rev 2

NA divisions	NACE divisions*	Description
A01	01	Crop and animal production, hunting and related service activities
A02	02	Forestry and logging
A03	03	Fishing and aquaculture
B05-B06	05 + 06	Mining of coal and lignite and extraction of crude petroleum and natural gas
B07	07	Mining of metal ores
B08-B09	08 + 09	Other mining and quarrying and mining support service activities
C101	10.1	Processing and preserving of meat and production of meat products
C10A	10.2-3	Processing and preserving of fish, crustaceans, mollusks, fruit and vegetables
C10B	10.4-5	Manufacture of vegetable and animal oils and fats and dairy products
C10C	10.6-7	Manufacture of grain mill products, starches and starch-, bakery- and farinaceous products
C10D	10.8-9	Manufacture of other food products and prepared animal feeds
C11	11	Manufacture of beverages
C12	12	Manufacture of tobacco products
C13-C15	13 + 14 + 15	Manufacture of textiles, wearing apparel, leather and related products
C161	16.1	Sawmilling and planing of wood
C162	16.2	Manufacture of products of wood, cork, straw and plaiting materials
C1711	17.11	Manufacture of pulp
C1712	17.12	Manufacture of paper and paperboard
C172	17.2	Manufacture of articles of paper and paperboard
C18	18	Printing and reproduction of recorded media
C19	19	Manufacture of coke and refined petroleum products
C20	20	Manufacture of chemicals and chemical products
C21	21	Manufacture of basic pharmaceutical products and pharmaceutical preparations
C22	22	Manufacture of rubber and plastic products
C23	23	Manufacture of other non-metallic mineral products
C241	24.1	Manufacture of basic iron and steel and of ferro-alloys
C24A	24.2-3	Manufacture of tubes, pipes, hollow profiles and related fittings, of steel and other products of first processing of steel
C24B	24.4-5	Manufacture of basic precious, other non-ferrous metals and casting of metals
C25A	25.1-4	Manufacture of structural metal products, tanks, reservoirs and containers of metal, steam generators except central heating and hot water boilers; weapons and ammunition
C25B	25.5-9	Forging, pressing, stamping and roll-forming of metal; powder metallurgy. Treatment and coating of metals; machining. Manufacture of cutlery, tools and general hardware and other fabricated metal products
C26A	26.1-4	Manufacture of electronic components and boards, computers and peripheral equipment, communications equipment and consumer electronics
C26B	26.5-8	Manufacture of instruments and appliances for measuring, testing and navigation; watches and clocks, irradiation, electro medical and electrotherapeutic equipment, optical instruments and photographic equipment and magnetic and optical media

NA divisions	NACE divisions*	Description
C27A	27.1-4 + 27.9	Manufacture of electric motors, generators, transformers and electricity distribution and control apparatus, batteries and accumulators, wiring and wiring devices, electric lighting equipment and other electrical equipment
C275	27.5	Manufacture of domestic appliances
C28	28	Manufacture of machinery and equipment n.e.c.
C29	29	Manufacture of motor vehicles, trailers and semi-trailers
C30	30	Manufacture of other transport equipment
C31	31	Manufacture of furniture
C32A	32.1-4 + 32.9	Manufacture of jewellery, bijouterie and related articles, musical instruments, sports goods, games and toys and other manufacturing n.e.c.
C325	32.5	Manufacture of medical and dental instruments and supplies
C33	33	Repair and installation of machinery and equipment
D351	35.1	Electric power generation, transmission and distribution
D352	35.2	Manufacture of gas; distribution of gaseous fuels through mains
D353	35.3	Steam and air conditioning supply
E36	36	Water collection, treatment and supply
E37_39	37 + 38 + 39	Sewerage, Waste collection, treatment and disposal activities; materials recovery and remediation activities and other waste management services
F41_43	41 + 42 + 43	Construction
G45	45	Wholesale and retail trade and repair of motor vehicles and motorcycles
G46	46	Wholesale trade, except of motor vehicles and motorcycles
G47	47	Retail trade, except of motor vehicles and motorcycles
H49A	49.1-2	Passenger rail transport, interurban and freight rail transport
H49B	49.31 + 49.39	Urban and suburban passenger land transport and other passenger land transport n.e.c.
H49C	49.32	Taxi operation
H49D	49.4-5	Freight transport by road and removal services and transport via pipeline
H50	50	Water transport
H51	51	Air transport
H52A	52.1-24	Warehousing and storage and support activities for transportation excl. support activities
H52B	52.29	Other transportation support activities
H53	53	Postal and courier activities
I55	55	Accommodation
I56	56	Food and beverage service activities
J58	58	Publishing activities
J59	59	Motion picture, video and television programme production, sound recording and music publishing activities
J60	60	Programming and broadcasting activities
J61	61	Telecommunications
J62	62	Computer programming, consultancy and related activities
J63	63	Information service activities
K64	64	Financial service activities, except insurance and pension funding
K65	65	Insurance, reinsurance and pension funding, except compulsory social security
K66	66	Activities auxiliary to financial services and insurance activities
L68A	part of 68.2	Owner-occupied dwellings and secondary residences

NA divisions	NACE divisions*	Description
L68B	68.1, 68.3 part of 68.2	Other real estate activities
M69	69	Legal and accounting activities
M70	70	Activities of head offices; management consultancy activities
M71	71	Architectural and engineering activities; technical testing and analysis
M72	72	Scientific research and development
M73	73	Advertising and market research
M74	74	Other professional, scientific and technical activities
M75	75	Veterinary activities
N77	77	Rental and leasing activities
N78	78	Employment activities
N79	79	Travel agency, tour operator reservation service and related activities
N80	80	Security and investigation activities
N81	81	Services to buildings and landscape activities
N82A	82	Office administrative, office support and other business support activities
N82SAM	82	Office administrative, office support and other business support activities for Samhall**
O84	84	Public administration and defense; compulsory social security
P85	85	Education
Q86	86	Human health activities
Q87	87	Residential care activities
Q88	88	Social work activities without accommodation
R90_92	90 + 91 + 92	Creative, arts, entertainment, libraries, archives, museums, other cultural, gambling and sports activities
R93	93	Sports activities and amusement and recreation activities
S94	94	Activities of membership organisations
S95	95	Repair of computers and personal and household goods
S96	96	Other personal service activities
T97_98	97 + 98	Activities of households as employers of domestic personnel and undifferentiated goods- and service-producing activities of private households for own use
U99	99	Activities of extraterritorial organizations and bodies
*NACE revision 2. ** Samhall is a state-owned company with a mandate to create work that furthers the development of people with functional impairment causing reduced working capacity.		

Classifications used for the production approach broken down by product

SPIN 2015 is the Swedish application of EU product classification, classification of products by Activity (CPA) whose revised version is named as CPA Ver. 2.1. The code structure of SPIN 2015 is adapted to the CPA structure. SPIN has a hierarchical classification with six levels (six first numbers in the SPIN-code). The first four levels of SPIN2015 are consistent with first four levels of the CPA. SPIN:s fifth level, fifth number in the SPIN-code, and following levels are not consistent with CPA.

Production broken down by product classification

Product Groups	SPIN 2015	Description
A0111A	0111001 - 0111010	Cereals
A0113001	0113001	Potatoes
A01130EG	0113001	Potatoes for home consumption
A0113A	0113 excl. 0113001 - 0113002	Vegetables, melons, roots and tubers excl. potatoes and sugar beet
A0115	0115000	Raw tobacco
A0116	0116001 - 0116003	Fiber crops
A0119	01190	Other non-perennial crops
A011A	0111011 - 0112	Leguminous crops, oil seeds and rice, not husked
A011B	0113002, 0114000	Sugar beet and sugar cane
A0127	0127	Beverage crops
A012A	0121 - 0126	Fruits, berries and nuts
A0146	0146	Swine
A01471	01471	Poultry eggs
A01471EG	01471	Poultry eggs for home consumption
A01472	01472	Poultry for slaughtering
A01491	01491	Reindeers for slaughtering
A01492	01492	Pet animals
A0149A	01499 excl. 0149903	Other farmed animals and products excl. raw milk
A014A	0141002, 0145003 - 0145004, 0149903	Raw milk
A014AEG	0141002, 0145003 - 0145004, 0149903	Milk for home consumption
A014B	0141 - 0142 excl. 0141002	Cattle
A014C	0143 - 0144	Horses, camels
A014D	0145 excl. 0145003 - 0145004	Sheep, goats
A014E	part of 014	Livestock for breeding and dairy cattle
A016A	016	Agricultural and animal husbandry services (except veterinary services)
A017	0170000	Hunting and trapping and related services
A01A	0128 - 0130	Spices, planting material and other perennial crops
A01HPEA	A01	NPISH production for own final consumption
A02101	02101	Forest trees
A02102A	part of 02102	Forest drainage
A02102S	part of 02102	Forest management and logging (public sector internal)
A02109A	part of 02109	Energy crops
A0210A	part of 02102, part of 02109	Forestry services, seedling and seeds
A0220004	0220004	Fuel wood
A022A	part of 02200	Pulpwood
A022B	part of 02200	Saw timber
A022C	part of 02200	Unprocessed wood fuels
A023	02300	Wild-growing non-wood products
A024	02400	Support services to forestry
A02HPEA	02	NPISH production for own final consumption
A03	03	Fish and other fishing products; aquaculture products; support services
B05	05	Coal and lignite

Product Groups	SPIN 2015	Description
B061	06100	Crude petroleum
B062	06200	Natural gas
B071	07100	Iron ores
B0721	0721	Uranium and thorium ores
B0729	0729	Other non-ferrous metal
B0811	08110	Ornamental and building stone, limestone, gypsum, chalk and slate
B0812	08120	Gravel, sand, clays and kaolin
B0891	08910	Chemical and fertiliser minerals
B0892	08920	Peat
B0893	08930	Salt and pure sodium chloride; sea water
B0899	08990	Other mining and quarrying products n.e.c.
B09	09	Mining support services
C1011	1011	Processed and preserved meat
C1012	10120	Processed and preserved poultry meat
C1013	10130	Meat and poultry meat products
C102	10200	Processed and preserved fish, crustaceans and mollusks
C103	103	Processed and preserved fruit and vegetables
C1041	10410	Oils and fats
C1042	10420	Margarine and similar edible fats
C10511	10511	Cheese and curd
C10519	10519	Other dairy products than cheese
C1052	10520	Ice cream
C1061	1061	Grain mill products
C1062	10620	Starches and starch products
C107	107	Bakery and farinaceous products
C1081	10810	Sugar
C1082	1082	Cocoa, chocolate and sugar confectionery
C1083	10830	Processed tea and coffee
C1084	10840	Condiments and seasonings
C1085	10850	Prepared meals and dishes
C108A	10860, 10890	Homogenized food preparations and dietetic food and other food products n.e.c.
C1091	10910	Prepared animal feeds
C1092	10920	Prepared pet foods
C1101	11010	Distilled alcoholic beverages
C1105	11050	Beer
C1106	11060	Malt
C1107	11070	Soft drink, mineral water and other bottled waters
C110A	11020, 11030, 11040	Wine from grapes, cider and other fruit wines, other non-distilled fermented beverages
C12	12000	Tobacco products
C133	13300	Textile finishing services
C139A	1391 -1393	Knitted fabrics, made-up textile articles except apparel, carpets and rugs
C139B	1394 - 1399	Technical fabrics and other textiles
C13A	131, 132	Yarn and thread, woven textiles
C14	14	Wearing apparel
C1511	15110	Tanned and dressed leather; dressed and dyed fur
C1512	15120	Luggage, handbags, saddlery and harness etc.
C152	15200	Footwear
C161	16101 - 16103	Sawn or planed wood and impregnated wood products and services
C16231	16231	Prefabricated wooden buildings
C1623A	16232, 16233, 16239	Builders' carpentry and joinery
C1624	16240	Wooden containers
C16291	16291	Wood fuels
C1629A	16292, 16293	Other products of wood, product of cork, straw and plaiting materials
C162A	16210, 16220	Veneer sheets and wood-based panels, assembled parquet flooring
C17111	17111	Mechanical or semi-chemical pulp
C1711A	17112, 17113	Sulfate pulp and sulfite pulp

Product Groups	SPIN 2015	Description
C17121	17121	Newsprint
C17122	17122	Other printing paper
C17123	17123	Kraft paper and paperboard
C17129	17129	Other paper and paperboard
C1721	1721	Corrugated paper and paperboard and containers of paper and paperboard
C1722	17220	Household and sanitary goods and toilet requisites
C1724	17240	Wallpaper
C172A	17230, 17290	Other articles of paper or paperboard incl. paper stationery
C181	181	Printing services and services related to printing
C182	18200	Reproduction services of recorded media
C1910004	1910004	Sub-contracted operations as part of manufacturing of coke oven products
C191000A	1910002, 1910003	Mineral tars, pitch and pitch coke
C1920003	1920003	Briquettes and similar solid fuels manufactured from peat
C192000B	part of 1920004	Motor gasoline excluding aviation gasoline
C192000C	part of 1920004, 1920005, 1920008	Spirit type (gasoline type) jet fuel, aviation gasoline and kerosene-type jet fuel
C192000D	1920006, 1920007, 1920010	Kerosene (excl. jet fuel), light oils and other medium oils
C192000E	part of 1920009	Diesel oil
C192000F	part of 1920009	Light fuel oil
C1920011	1920011	Fuel oils n.e.c.
C1920012	1920012	Lubricating petroleum oils; heavy preparations n.e.c.
C1920013	1920013	Propane and butane, liquefied
C1920014	1920014	Ethylene, propylene, butylene, butadiene and other petroleum gases or gaseous hydrocarbons, except natural gas
C1920015	1920015	Petroleum jelly; paraffin wax; petroleum and other waxes
C1920016	1920016	Petroleum coke; petroleum bitumen and other residues of petroleum oils
C1920017	1920017	Sub-contracted operations as part of manufacturing of refined petroleum products
C19A	1910001, 1920001 - 1920002	Coke, briquettes from coal and lignite
C2011	20110	Industrial gases
C2012	20120	Dyes and pigments
C2013A	2013001 - 2013004	Uranium and other radioactive substances
C2013B	2013005 - 2013025	Other basic inorganic chemicals (excluding radioactive)
C2014A	part of 20140	Tall oil, charcoal, black liquor from pulp production from wood
C2014B	part of 20140	Ethanol and other spirits denatured
C2014C	part of 20140	Other basic organic chemicals
C2015	20150	Fertilizers and nitrogen compounds
C2016	20160	Plastics in primary forms
C2017	20170	Synthetic rubber in primary forms
C202	20200	Pesticides and other agrochemical products
C203	20300	Paints, varnishes and similar coatings, printing ink and mastics
C204	204	Soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations
C205	205	Other chemical products
C206	20600	Man-made fibres
C211	21100	Basic pharmaceutical products
C212	21200	Pharmaceutical preparations
C2211	22110	Rubber tires and tubes; retreading and rebuilding of rubber tires
C2219	22190	Other rubber products
C2222	22220	Plastic packing goods
C2223	22230	Builders' ware of plastic
C222A	22210, 22290	Other plastic products
C2313	23130	Hollow glass
C2314	23140	Glass fibres
C2319	23190	Other processed glass, including technical glassware
C231A	23110, 23120	Flat glass incl. shaped and processed
C234	234	Other porcelain and ceramic products

Product Groups	SPIN 2015	Description
C235	235	Cement, lime and plaster
C236	236	Articles of concrete, cement and plaster
C237	2370	Cut, shaped and finished stone
C239	239	Other non-metallic mineral products
C23A	232, 233	Refractory products, clay building material
C241	24100	Basic iron and steel and ferroalloys
C242	24200	Tubes, pipes, hollow profiles and related fittings, of steel
C243	243	Other products of first processing of steel
C2441	24410	Precious metals
C2442	24420	Aluminium
C2443	24430	Lead, zinc and tin
C2444	24440	Copper
C2445	24450	Other non-ferrous metal
C2446	24460	Processed nuclear fuel
C245	245	Casting services of metals
C251	251	Structural metal products
C252	252	Tanks, reservoirs and containers of metal
C253	25300	Steam generators, except central heating hot water boilers
C254	25400	Weapons and ammunition
C255	25500	Forging, pressing, stamping and roll forming of metal; powder metallurgy
C256	256	Treatment and coating services of metals; machining
C257	257	Cutlery, tools and general hardware
C259	259	Other fabricated metal products
C261	261	Electronic components and boards
C262	262	Computers and peripheral equipment
C263	263	Communication equipment
C264	264	Consumer electronics
C2651	26510	Measuring, testing and navigating equipment
C2652	26520	Watches and clocks
C266	26600	Irradiation, electro medical and electrotherapeutic equipment
C267	26700	Optical instruments and photographic equipment
C268	26800	Magnetic and optical media
C2711	27110	Electric motors, generators and transformers
C2712	27120	Electricity distribution and control apparatus
C272	27200	Batteries and accumulators
C273	27310-27330	Wiring and wiring devices
C274	27400	Electric lighting equipment
C2751A	part of 27510	Refrigeration and freezers, washing machines and other white goods
C2751B	part of 27510	Electric domestic appliances n.e.c.
C2752	27520	Non-electric domestic appliances
C279	27900	Other electrical equipment
C281	281110-28150	General-purpose machinery
C2822	28220	Lifting and handling equipment
C2823	28230	Office machinery and equipment (except computers and peripheral equipment)
C282A	28210, 28240-28290	Other general-purpose machinery n.e.c
C283	28300	Agricultural and forestry machinery
C284	28410-28490	Metal forming machinery and machine tools
C2891	28910	Machinery for metallurgy
C2892	28920	Machinery for mining, quarrying and construction
C2893	28930	Machinery for food, beverages, tobacco processing
C2894	28940	Machinery for textile, apparel and leather production
C2895	28950	Machinery for paper and paperboard production
C2896	28960	Plastics and rubber machinery
C2899	28990	Other special-purpose machinery n.e.c.

Product Groups	SPIN 2015	Description
C291A	part of 29101-29102	Motor vehicles
C291X	part of 29101-29102	Used motor vehicles
C292	29200	Bodies (coachwork) for motor vehicles; trailers and semi-trailers
C2931	29310	Electrical and electronic equipment for motor vehicles
C2932	29320	Other parts and accessories for motor vehicles
C3011	part of 30110	Ships and floating structures
C3011X	Part of 30110	Used ships and floating structures
C3012	30120	Pleasure and sporting boats
C302	30200	Railway locomotives and rolling stock
C303	30300	Air and spacecraft and related machinery
C304	30400	Military fighting vehicles
C3091	30910	Motorcycles
C3092	30920	Bicycles and invalid carriages
C3099	30990	Other transport equipment n.e.c.
C31	31000-31090	Furniture
C323	32300	Sports goods
C324	32400	Games and toys
C32501	32501	Medical and dental instruments and supplies
C32502	32502	Artificial teeth, dentures, dental plates etc.
C329	32910-32990	Manufactured goods n.e.c.
C32A	32110-32130, 32200	Jewelry, bijouterie and related articles, musical instruments
C3311	33110	Repair services of fabricated metal products
C3313	33130	Repair services of electronic and optical equipment
C3314	33140	Repair services of electrical equipment
C3315	33150	Repair and maintenance services of ships and boats
C3316	33160	Repair and maintenance services of aircraft and spacecraft
C3317	3317001, 3317002	Repair and maintenance services of other transport equipment
C331A	33120, 33190	Repair services of machinery and of other equipment
C332	33200	Installation services of industrial machinery and equipment
D351	351 excl. 3514	Electricity, transmission and distribution services
D351HPEA	351	NPISH production for own final consumption
D352	352 excl. 3523	Manufactured gas, distribution services of gaseous fuels through mains
D353	353	Steam and air conditioning supply services
D35A	3514,3523	Trade margins
E36	36	Natural water; water treatment and supply services
E37	37	Sewerage services; sewage sludge
E3739HPEA	37_39	NPISH production for own final consumption
E381A	part of 381	Waste collection services
E381X	part of 381	Waste of iron and steel
E381Y	part of 381	Waste of metals other than iron and steel
E382	382	Services treatment and disposal services
E3831	3831	Dismantling services of wrecks
E38320A	3832001, 3832003 - 3832009	Sorted metal materials recovery services; Secondary raw material of metals
E38320B	3832002, 3832010 - 3832015	Sorted non-metal materials recovery services; Secondary raw material of non-metal
E38320X	3832	Recycling of trash
E39	39	Remediation services and other waste management services
F41_43	41-43	Constructions and construction works
G45A	4520, 4540005	Maintenance and repair services of motor vehicles incl. motorcycles
G45B	part of 45	Commissions, motor vehicles
G45D	45 excl. 45.2	Trade margins motor vehicles
G45HPEA	part of 45	NPISH production for own final consumption, retail trade excl. motor vehicles
G46B	part of 45, part of 46	Commissions, Swedish products
G46C	part of 45, part of 46	Commissions, imported products

Product Groups	SPIN 2015	Description
G46D	46	Wholesale trade margins
G47D	47	Retail trade margins
G47HPEA	47	NPISH production for own final consumption, retail trade
H491A	part of 49100	Passenger rail transport services
H491B	part of 49100	Passenger rail transport services, contract
H492	49200	Freight rail transport services
H4932	49320	Taxi operation services
H493A	4931, 4939	Other passenger land transport services n.e.c.
H493B	49	
H4942001	4942001	Removal services for households
H494A	4941, 4942002	Freight transport services by road; Other removal services
H50A	part of 501, part of 503	Water transport services, passengers
H50B	part of 502, part of 504	Water transport services, goods
H50C	part of 50	Rental services of vessels with crew
H511	5110	Passenger air transport services
H512	512	Freight air transport and space transport services
H521	52100	Warehousing and storage services
H5221906	5221906	Parking lot services
H5221907	5221907	Taxi operation services incidental to road transportation
H52219A	5221904 - 5221905	Highway operation services; Bridges and tunnel operation services
H5221A	52211, 5221901 - 5221903, 5221908 - 5221909	Other services incidental to land transportation
H522200A	5222001 - 5222002, 5222005 - 5222007	Other services incidental to water transportation
H522200B	5222003 - 5222004	Pilotage and berthing services
H5223	52230	Services incidental to air transportation
H5224	52240	Cargo handling services
H5229	52290	Other transportation support services
H522OPEA	52219	Public production for own final consumption. Other services incidental to land transportation
H52AHPEA	52	NPISH production for own final consumption
H53	53	Other transportation support services n.e.c.
I551	5510	Hotel and similar accommodation services
I55A	552 - 559	Other accommodation services
I55HPEA	55	NPISH production for own final consumption
I562A	5621, 56292 - 56299	Event catering services & other food serving services excl. canteen services
I56A	561, 56291, 563	Restaurant and mobile food serving services; canteen services; beverage serving services
I56HPEA	56	NPISH production for own final consumption
J581	581	Publishing services of books, periodicals and other publishing services
J582	582	Software publishing services
J58HPEA	58	NPISH production for own final consumption
J591	591	Motion picture, video and television program services
J592	59200	Sound recording and music publishing services
J59HPEA	59	NPISH production for own final consumption
J59OPEA	59	Public production for own final consumption
J60OPEA0	60	Public production for own final consumption
J60	60	Radio and TV broadcasting
J611	61100	Wired telecommunications services
J612	61200	Wireless telecommunications services
J61A	6130, 6190	Services of satellite and other telecommunications
J62A	6201, 6202001, 6202002	Computer programming services; IT design and development services
J62AEG	6201, 6202001, 6202002	Computer programming services; IT design and development services produced on own account
J62B	6202003, 6203, 6209	IT technical support services; Computer facilities management services; Other information technology and computer services
J631	631	Data processing, hosting and related services; web portals
J639	639	Other information services

Product Groups	SPIN 2015	Description
J63HPEA	63	NPISH production for own final consumption
K6411	64110	Central banking services
K64A	part of 64	FISIM
K64B	64 excl. 6411 and FISIM	Financial services, except insurance and pension funding excl. central banking services and FISIM
K64HPEA	64	NPISH production for own final consumption
K6511	6511	Life insurance services
K6512	6512	Non-life insurance services
K652	652	Reinsurance services
K653	653	Pension funding services
K65OPEA	65	Public production for own final consumption. Insurance
K66	66	Services auxiliary to financial services and insurance services
L68201A	part of 68201	Imputed rentals for owner-occupiers
L68201B	part of 68201	Imputed rentals for secondary residences
L68201C	part of 68201	Actual rentals paid by tenants
L682A	68202 - 68209	Other real estate letting
L682HPEA	68	NPISH production for own final consumption. Other real estate letting
L682L	68	Other real estate letting (public sector internal)
L682PK	68	Other real estate letting (public sector internal)
L682S	68	Other real estate letting (public sector internal)
L68C	681, 683	Buying and selling services of own real estate; Real estate services on a fee or contract basis
M691	6910	Legal services
M692	6920	Accounting, bookkeeping and auditing services; tax consulting services
M69S	69	Legal and accounting services (public sector internal)
M69HPEA	69	NPISH production for own final consumption
M701	70100	Services of head offices
M702	702	Management consulting services
M70HPEA	70	NPISH production for own final consumption
M7111	71110	Architectural services
M7112	7112	Engineering services and related technical consulting services
M711A	part of 711	Construction services abroad
M711S	711	Architectural and engineering services and related technical consulting services (public sector internal)
M712	712	Technical testing and analysis services
M712S	712	Technical testing and analysis services, (public sector internal)
M72	72	Scientific research and development services
M72EG	72	Scientific research and development services, produced on own account
M72HPEA	72	NPISH production for own final consumption. R&D
M72OPEA	72	Public production for own final consumption. R&D
M72S	72	Scientific research and development services (public sector internal)
M7312	73120	Media representation services
M73A	73110, 73200	Other advertising and market research services
M73HPEA	73	NPISH production for own final consumption
M741	7410	Specialised design services
M742	7420	Photographic services
M74A	7430, 74900	Translation and interpretation services; Other professional, scientific and technical services n.e.c.
M74HPEA	74	NPISH production for own final consumption
M75	75	Veterinary services
N7710	77110	Car benefits
N7711	77100A	Rental and leasing services of cars and light motor vehicles
N7712	77120	Rental and leasing services of trucks
N772	772	Rental and leasing services of personal and household goods
N773	773	Rental and leasing services other machinery, equipment and tangible goods
N774	77400	Licensing services for the right to use intellectual property and similar products, except copyrighted works

Product Groups	SPIN 2015	Description
N78	78	Employment services
N78HPEA	78	NPISH production for own final consumption
N7912	79120	Tour operator services
N79A	79110, 79900	Travel agency services and other reservation services and related services
N79AOPEA	79110, 79900	Public production for own final consumption. Travel agency services and other reservation services and related services
N79HPEA	79	NPISH production for own final consumption
N80	80	Security and investigation services
N811	81100	Combined facilities support services
N812	812	Cleaning services
N813	81300	Landscape services
N82	82	Office administrative and support services
N82AOPEA	82	Public production for own final consumption
O84A	8411, 8421	General public administration and foreign affair services
O84B	841 excl. 8411	Administration services of the State and the economic and social policy of the community excl. general public administration
O84BPK	841 excl. 8411	Administration services of the State and the economic and social policy of the community excl. general public administration, (public sector internal)
O84BS	841 excl. 8411	Administration services of the State and the economic and social policy of the community excl. general public administration, (public sector internal)
O84C	842 excl. 8421	Provision of services to the community as a whole excl. foreign affair services
O84CS	842 excl. 8421	Provision of services to the community as a whole excl. foreign affair services, (public sector internal)
O84OPEA	84	Public production for own final consumption. Public administration and defense services; compulsory social security services
P851	85100	Pre-primary education services
P852	85200	Primary education services
P853	853	Secondary education services
P854	854	Higher education services
P854S	854	Higher education services and other post-secondary programs (public sector internal)
P8553	8553	Driving school services
P8559A	part of 8559	Other education services; employment training
P855A	8551, 8552, 85592, 85993, 85594, 85599	Sports and recreation education services; cultural education services; other education services
P855AS	855	Sports and recreation education services; cultural education services; other education services, (public sector internal)
P856	85600	Educational support services
P85HPEA	85	NPISH production for own final consumption. Education services
P85OPEA	85	Public production for own final consumption. Education services
Q861	86101-86103	Hospital services
Q8621201	8621201	Occupational health services
Q862120S	8621201	General medical practice services, (public sector internal)
Q86221	86221	Specialist medical practice services, at hospitals
Q862A	86211, 86222	General primary medical practice services and specialist medical practice services, not at hospitals
Q86901	86901	Medical laboratory services etc.
Q86902	86902	Ambulance services
Q86A	86230, 86904	Dental practice and dental hygiene services
Q86B	8621202, 86903, 86905, 86909	Other general care without doctors
Q86HPEA	86	NPISH production for own final consumption. Healthcare
Q86OPEA	86	Public production for own final consumption. Healthcare
Q87A	871, 87301	Residential nursing care services and residential care services for the elderly
Q87B	87201, 87302	Residential care services for disabled suffering from mental retardation, mental health illnesses and substance abuse and residential care services for the disabled
Q87C	87202, 87901	Residential care services for children suffering from mental retardation, mental health illnesses and substance abuse and other social work services with accommodation for children and young people

Product Groups	SPIN 2015	Description
Q87D	87203, 87902	Residential care services for adults suffering from mental retardation, mental health illnesses and substance abuse and other social work services with accommodation for adults
Q87HPEA	87	NPISH production for own final consumption. Care with accommodation
Q87OPEA	87	Public production for own final consumption. Care with accommodation
Q88101	88101	Social work services without accommodation for the elderly
Q88102	88102	Social work services without accommodation for the disabled
Q8891	88910	Child day-care services
Q88991	88991	Guidance and counselling services n.e.c. related to children and young people
Q8899A	88992 - 88995	Social work for adults and operation services pf refugee camps
Q88HPEA	88	NPISH production for own final consumption. Social work services without accommodation
Q88OPEA	88	Public production for own final consumption. Social work services without accommodation
R90	90	Creative, arts and entertainment services
R90HPEA	90	NPISH production for own final consumption. Culture
R90OPEA	90	Public production for own final consumption. Culture and libraries
R91	91	Library, archive, museum and other cultural services
R91HPEA	91	NPISH production for own final consumption
R91S	91	Library, archive, museum and other cultural services, (public sector internal)
R92	92	Gambling and betting services
R92HPEA	92	NPISH production for own final consumption
R931	931	Sporting services
R932	932	Amusement and recreation services
R93HPEA	93	NPISH production for own final consumption. Sporting services and amusement and recreation services
R93OPEA	93	Public production for own final consumption. Sporting services and amusement and recreation services
S941	9411, 9412	Services furnished by business, employers and professional membership organizations
S942	942	Services furnished by trade unions
S9491	9491	Services furnished by religious organizations
S949A	9492, 9499	Services furnished by political and other membership organizations
S94HPEA	94	NPISH production for own final consumption. Services furnished by membership organizations
S94OPEA	94	Public production for own final consumption. Services furnished by membership organizations
S951	951	Repair services of computers and communication equipment
S952	952	Repair services of personal and household goods
S9601	9601	Washing and (dry-)cleaning services of textile and fur products
S9602	9602	Hairdressing and other beauty treatment services
S9603	9603	Funeral and related services
S9604	9604	Physical well-being services
S9609	9609	Other personal services n.e.c.
S96HPEA	96	NPISH production for own final consumption
T97	97	Services of households as employers of domestic personnel
T98	98	Undifferentiated goods and services produced by private households for own use
U99	99	Services provided by extraterritorial organizations and bodies
X9901		Swedes' expenditure abroad
X9902		Foreigners' expenditure in Sweden
X99A		Unspecified foreign trade
X99B		Statistical value
X99C		CIF-component

9.2 Classifications used for the income approach

The classifications of wages and salaries are broken down by industry in the same way as GDP from production approach

9.3 Classifications used for the expenditure approach

Capital formation broken down by type of assets.

Type of capital	ESA2010	Description
11	AN.1151	Livestock for breeding and dairy cattle
12	AN.1151	Trotting horses and draught animals
14	AN.1152	Other forest management measures
22	AN.113	Machinery and equipment
221	AN.1132	Computer hardware
222	AN.1132	Telecommunications
23	AN.1139	1-2 year investments
26	AN.114	Weapon systems machinery
28	AN.1139	Machine leasing
311	AN.11311	Cars, trucks, buses and trailers
32	AN.113	Railway machines
331	AN.11312	Ships and boats including fishing vessels
332	AN.11313	Second-hand ships and boats
34	AN.1131	Off-shore
35	AN.1131	Aircrafts
36	AN:11420	Weapons systems and vehicles
37	AN.1131	Vehicles leasing
41	AN.111	Newly built multiple-occupancy buildings
42	AN.111	Newly built one- and two- family dwellings
43	AN.111	Reconstruction and extension of multiple-occupancy buildings
44	AN.111	Reconstruction and extension of one- and two- family dwellings
51	AN.1122	Roads
52	AN.112	Drainage
53	AN.11150	Holiday/weekend homes
54	AN.1121	Buildings financed by insurance
56	AN.114	Weapons systems within buildings
59	AN.1121	Other buildings and structures
61	AN.11160	Cost of ownership transfers
62	AN.1172	Mineral exploration
631	AN.11731	Computer software, purchased
632	AN.11732	Computer software, produced on own account
641	AN.1174	Film
642	AN.1174	Entertainment, literary and artistic originals
671	AN.1171	R&D, purchased
672	AN.1171	R&D, own production

Household consumption broken down by COICOP-1999-classification.

COICOP	Description
01	Food and non-alcoholic beverages
011	Food
0111	Bread and cereals
0112	Meat
0113	Fish
0114	Milk, cheese and eggs
0115	Oils and fats
0116	Fruit
0117	Vegetables
0118	Sweets, ice-cream, jams, marmalades and confectionery
0119	Salt, spices, sauces and homogenized baby food
012	Non-alcoholic beverages
0121	Coffee, tea and drinking chocolate
0122	Soft drinks, fruit and vegetable juices and mineral waters
02	Alcoholic beverages, tobacco and narcotics
0211	Spirits
0212	Wine
0213	Beer
022	Tobacco
023	Narcotics
03	Clothing and footwear
031	Clothing
0311	Clothing materials
0312	Garments
0313	Clothing accessories, sewing requisites and yarn
0314	Mending, hire and dry-cleaning/laundrying of clothing
032	Footwear
0321	Shoes
0322	Repair and hire of footwear
04	Housing, water, electricity, gas and other fuels
041	Actual rentals for housing
0411	Actual rents paid by tenants, unheated rental
0412	Tenant-ownership right, utility value (unheated rental)
042	Imputed rentals for housing
0421	Individual house, utility value (unheated rental)
0422	Holiday home, utility value (unheated rental)
043	Maintenance and repair of the dwelling
0431	Materials for the maintenance and repair of the dwelling
0432	Services for the maintenance and repair of the dwelling
045	Electricity, gas and other fuels
0451	Electricity
0452	Gas

COICOP	Description
0453	Liquid fuels; oil, kerosene and LPG
0454	Solid fuels; wood, coal, pellets and woodchips
0455	District heating
05	Furnishings, household equipment and routine household maintenance
051	Furniture and furnishings, carpets and other floor coverings
0511	Furniture, fittings, furnishings and pictures
0512	Carpets, including fitted floor coverings
0513	Furniture repairs
052	Household textiles
053	Household appliances
0531	Major household appliances as additional equipment
0532	Smaller household electric appliances
0533	Repair of household appliances
054	Glassware, tableware and household utensils
055	Tools and equipment for house and garden
0551	Major motorized tools and equipment
0552	Hand tools, garden tools, fittings, batteries and lamps
056	Goods and services for routine household maintenance
0561	Non-durable household goods and cleaning products
0562	Domestic and household services; household cleaning, dry-cleaning, laundering and hire of household furnishings
06	Health
061	Medical products, appliances and equipment
0611	Medicines and vitamins
0612	Other medical products
0613	Spectacles, lenses, etc
062	Outpatient services
0621	Out-patient medical services, patient charges
0622	Dental treatment, patient charges
0623	Gymnastic therapy, chiropractors, physiotherapists, etc.; patient charges
063	Hospital services
07	Transport
071	Purchase of vehicles
0711	Cars
0712	Motorcycles, scooters, mopeds and motocross
0713	Bicycles
072	Operation of personal transport equipment
0721	Spare parts and accessories
0722	Fuels and lubricants; petrol, diesel, oil, glycol and mentholated spirit
0723	Maintenance and repair
0724	Other vehicle services; parking, driving license and concessionary car
073	Transport services
0731	Railway transport

COICOP	Description
0732	Road transport; taxi and long-distance bus transport
0733	Air transport
0734	Sea transport
0735	Combined passenger transport
0736	Other transport services; removals
08	Communication
081	Postal services; Telephone and telefax equipment and -services
0811	Postal services
0812	Telephone and telefax equipment
0813	Telephone and telefax services
09	Recreation and culture
091	Audio-visual, photographic and information processing equipment
0911	Equipment for the reception, recording and reproduction of sound and pictures; television, radio etc.
0912	Cameras, other photographic equipment and optical instruments
0913	IT equipment; PCs, printers, accessories and calculators, typewriters.
0914	Film, CDs, cassettes; pre-recorded and unrecorded
0915	Repair of audiovisual, photographic and IT equipment
092	Other major durables for recreation and culture
0921	Major durables for recreation and culture; caravans, boats and sporting equipment
0922	Musical instruments and equipment for indoor activities
0923	Repair and maintenance of major durables for recreation
093	Other recreational items and equipment, gardens and pets
0931	Toys, games, Christmas decorations, fireworks and accessories and hobby items
0932	Sports, fishing and camping equipment etc.
0933	Flowers, garden plants, Christmas trees, soils, fertilizers and pots
0934	Pets, pet food and equipment for animals
0935	Veterinary and other services for animals; animal boarding etc
094	Recreational and cultural services
0941	Sporting and recreational services; hire of equipment, participants' fees
0942	Cultural services; cinemas, museums, television licenses, photography and film processing
0943	Gaming; net amount of stake less winnings paid out
095	Newspapers, books and stationery
0951	Books incl. textbooks, excl. stamp albums
0952	Newspapers and magazines
0953	Other printed matter
0954	Stationery
096	Package holidays
10	Education
101	Pre-primary education and out-of-school charges, Higher education examinations
1011	Pre-primary education and out-of-school charges
1014	Higher education examinations
11	Restaurants and hotels

COICOP	Description
1111	Catering services
112	Accommodation services
12	Miscellaneous goods and services
121	Personal care
1211	Hairdressing and personal grooming
1212	Electric appliances for personal care
1213	Other products for personal grooming and beauty care
122	Prostitution
123	Personal effects n.e.c.
1231	Jewelry, clocks and watches incl. repairs
1232	Other personal effects, such as bags, baby carriages, baby chairs and miscellaneous accessories
124	Social protection
125	Insurance
1251	Life insurance
1252	Home insurance
1253	Health insurance
1254	Motor insurance
1255	Other insurance
126	Financial services n.e.c.
1261	FISIM
1262	Other financial services; e.g. bank and postal charges
127	Other services n.e.c.
15	Consumption of Swedes abroad, not classified
16	Consumption of foreign visitors in Sweden, not classified
	Non-profit institutions serving households
	Total consumption expenditure

Household consumption broken down by COICOP-2018-classification

COICOP	Description
01	Food and non-alcoholic beverages
011	Food
0111	Cereals and cereal products
0112	Live animals, and meat and other parts of slaughtered land animals
0113	Fish and other seafood
0114	Milk, other dairy products and eggs
0115	Oils and fats
0116	Fruits and nuts
0117	Vegetables, tubers, plantains, cooking bananas and pulses
0118	Sugar, confectionery and desserts
0119	Ready-made food and other food products
012	Non-alcoholic beverages
0123	Tea, maté and other plant-derived products for infusion
0124	Cocoa drinks
0125	Water
0126	Soft drinks
0129	Other non-alcoholic beverages
013	Services for processing primary goods for food and non-alcoholic beverages
02	Alcoholic beverages, tobacco and narcotics
021	Alcoholic beverages
0211	Spirits and liquors
0212	Wine
0213	Beer
0219	Other alcoholic beverages
022	Alcohol production services
023	Tobacco
024	Narcotics
03	Clothing and footwear
031	Clothing
0311	Clothing materials
0312	Garments
0313	Other articles of clothing and clothing accessories
0314	Cleaning, repair, tailoring and hire of clothing
0321	Shoes and other footwear
0322	Cleaning, repair and hire of footwear
04	Housing, water, electricity, gas and other fuels
041	Actual rental payments made for housing
0411	Actual rental payments made by tenants for main residence
0412	Other actual rental payments
042	Imputed rental payments for housing
0421	Imputed rental payments of owner-occupiers for their main residence
043	Maintenance, repair and security of the dwelling
0431	Security equipment and materials for dwelling maintenance and repair

COICOP	Description
0432	Services for the maintenance, repair and security of the dwelling
044	Water supply and miscellaneous services relating to the dwelling
0441	Water supply
0442	Refuse collection
0443	Sewage collection
0444	Other services related to the dwelling
045	Electricity, gas and other fuels
0451	Electricity
0452	Gas
0453	Liquid fuels
0454	Solid fuels
0455	Other energy for heating and cooling
05	Furnishings, household equipment and routine household maintenance
051	Furniture, furnishings, and loose carpets
0511	Furniture, furnishings and loose carpets
0512	Repair, installation and hire of furniture, furnishings and loose carpets
052	Household textiles
0521	Household textiles
0522	Repair, hire and sewing services of household textiles
053	Household appliances
0531	Major electric and other household appliances
0532	Small household appliances
0533	Repair, installation and hire of household appliances
054	Glassware, tableware and household utensils
055	Tools and equipment for house and garden
0551	Motorized tools and equipment
0552	Non-motorized tools and miscellaneous accessories
056	Goods and services for routine household maintenance
0561	Non-durable household goods
0562	Domestic services and household services
06	Health
061	Medicines and health products
0611	Medicines
0612	Medical products
0613	Assistive products
0614	Repair, rental and maintenance of medical and assistive products
062	Outpatient care services
0621	Preventive care services
0622	Outpatient dental services
0623	Other outpatient care services
063	Inpatient care services
0631	Inpatient curative and rehabilitative services
0632	Inpatient long-term care services
064	Other health services

COICOP	Description
0641	Diagnostic imaging services and medical laboratory services
0642	Patient emergency transportation and emergency rescue services
07	Transport
071	Purchase of vehicles
0711	Motor cars
0712	Motorcycles
0713	Bicycles
0714	Animal-drawn vehicles
072	Operation of personal transport equipment
0721	Parts and accessories for personal transport equipment
0722	Fuels and lubricants for personal transport equipment
0723	Maintenance and repair of personal transport equipment
0724	Other services related to personal transport equipment
073	Passenger transport services
0731	Passenger transport by railway
0732	Passenger transport by road
0733	Passenger transport by air
0734	Passenger transport by sea and inland waterway
0735	Combined passenger transport
0736	Other passenger transport services
074	Transport services for goods
0741	Postal and courier services
0749	Other transport of goods
08	Information and communication
081	Information and communication equipment
0811	Fixed telephone equipment
0812	Mobile telephone equipment
0813	Information processing equipment
0814	Equipment for the reception, recording and reproduction of sound and vision
0815	Unrecorded recording media
0819	Other information and communication equipment and accessories
082	Software, excluding games
083	Information and communication services
0831	Fixed communication services
0832	Mobile communication services
0833	Internet access provision services and online storage services
0834	Bundled telecommunication services
0835	Repair and rental of information and communication equipment
0839	Other information and communication services
09	Recreation, sport and culture
091	Recreational durables
0911	Photographic and cinematographic equipment and optical instruments
0912	Major recreational durables
092	Other recreational goods

COICOP	Description
0921	Games, toys and hobby-related articles
0922	Sporting, camping and open-air recreation equipment
093	Garden products and pets
0931	Garden products, plants and flowers
0932	Pets and pet products
094	Recreational services
0941	Hire and repair of photographic and cinematographic equipment and optical instruments
0942	Hire, maintenance and repair of major recreational durables
0943	Hire and repair of games, toys and hobby-related articles
0944	Hire and repair of sporting, camping and open-air recreational equipment
0945	Veterinary and other services for pets
0946	Recreational and sporting services
0947	Games of chance
095	Cultural goods
0951	Musical instruments
0952	Audiovisual media
096	Cultural services
0961	Services provided by cinemas, theatres and concert venues
0962	Services provided by museums, libraries and cultural sites
0963	Photographic services
0964	Other cultural services
097	Newspapers, books and stationery
0971	Books
0972	Newspapers and periodicals
0973	Miscellaneous printed matter
0974	Stationery and drawing materials
098	Package holidays
0980	Package holidays
10	Education services
101	Early childhood and primary education
102	Secondary education
103	Post-secondary non-tertiary education
104	Tertiary education
105	Education not defined by level
11	Restaurants and accommodation services
111	Food and beverage serving services
112	Accommodation services
12	Insurance and financial services
121	Insurance
1211	Life and accident insurance
1212	Insurance connected with health
1213	Insurance connected with dwellings
1214	Insurance connected with transport
1219	Other insurance

COICOP	Description
122	Financial services
1221	Financial intermediation services indirectly measured
1222	Explicit charges by deposit-taking corporations
1229	Other financial services
13	Personal care, social protection and miscellaneous goods and services
131	Personal care
1311	Electric appliances for personal care
1312	Other appliances, articles and products for personal care
1313	Hairdressing salons and personal grooming establishments
132	Other personal effects
1321	Jewellery and watches
1322	Devotional articles and articles for religious and ritual celebrations
1329	Other personal effects n.e.c.
133	Social protection
1330	Social protection
139	Other services
1390	Other services
15	Consumption of Swedes abroad, not classified
16	Consumption of foreign visitors in Sweden, not classified
	Non-profit institutions serving households
	Total consumption expenditure

Changes in inventories broken down by type of inventory

Type of Inventory	Name	ESA2010 categories
LT310	Materials and supplies for the mining and manufacturing industries	Materials and supplies
LT321	Work in progress, mining and manufacturing industries	Work in progress
LT322	Finished goods, mining and manufacturing industries	Finished goods
LT323	Goods for resale, mining and manufacturing industries	Finished goods
LT330	Goods for resale, trade industries	Finished goods
LT339	Public inventories	Finished goods
LT340	Materials and supplies for electricity, gas and water industry	Materials and supplies
LT350	Work in progress, agriculture	Work in progress
LT361	Finished goods, forestry industries felled timber	Finished goods
LT362	Work in progress, forestry industries, net growing of standing timber	Work in progress
LT370	Materials and supplies for construction industries	Materials and supplies
LT380	Work in progress, services industries	Work in progress
LT395	Others, not specified	Finished goods

Government consumption broken down by COFOG-classification.

COFOG - Swedish	Description	COFOG - ESA	ESA Description
01	General public services	01	01 - General public services
0111	Executive and legislative organs	01.1	01.1 - Executive and legislative organs, financial and fiscal affairs, external affairs
0112	Financial and fiscal affairs	01.1	01.1 - Executive and legislative organs, financial and fiscal affairs, external affairs
0113	External affairs	01.1	01.1 - Executive and legislative organs, financial and fiscal affairs, external affairs
0119	Executive and legislative organs, financial and fiscal affairs, external affairs n.e.c	01.1	01.1 - Executive and legislative organs, financial and fiscal affairs, external affairs
0121	Economic aid to developing countries and countries in transition	01.2	01.2 - Foreign economic aid
0122	Economic aid routed through international organizations	01.2	01.2 - Foreign economic aid
0129	Foreign economic aid n.e.c	01.2	01.2 - Foreign economic aid
0131	General personnel services	01.3	01.3 - General services
0132	Overall planning and statistical services	01.3	01.3 - General services
0133	Other general services	01.3	01.3 - General services
0139	General services n.e.c	01.3	01.3 - General services
0140	Basic research	01.4	01.4 - Basic research
0150	R&D General public services	01.5	01.5 - R&D General public services
0160	General public services n.e.c.	01.6	01.6 - General public services n.e.c.
0170	Public debt transactions	01.7	01.7 - Public debt transactions
0180	Transfers of a general character between different levels of government	01.8	01.8 - Transfers of a general character between different levels of government
02	Defence	02	02 - Defence
0210	Military defence	02.1	02.1 - Military defence
0220	Civil defence	02.2	02.2 - Civil defence
0230	Foreign military aid	02.3	02.3 - Foreign military aid
0240	R&D Defence	02.4	02.4 - R&D Defence
0250	Defence n.e.c.	02.5	02.5 - Defence n.e.c.
03	Public order and safety	03	03 - Public order and safety
0310	Police services	03.1	03.1 - Police services
0320	Fire-protection services	03.2	03.2 - Fire-protection services
0330	Law courts	03.3	03.3 - Law courts
0340	Prisons	03.4	03.4 - Prisons
0350	R&D Public order and safety	03.5	03.5 - R&D Public order and safety
0360	Public order and safety n.e.c.	03.6	03.6 - Public order and safety n.e.c.
04	Economic affairs	04	04 - Economic affairs
0411	General economic and commercial affairs	04.1	04.1 - General economic, commercial and labour affairs
0412	General labour affairs	04.1	04.1 - General economic, commercial and labour affairs
0419	General economic, commercial and labour affairs n.e.c	04.1	04.1 - General economic, commercial and labour affairs
0421	Agriculture	04.2	04.2 - Agriculture, forestry, fishing and hunting
0422	Forestry	04.2	04.2 - Agriculture, forestry, fishing and hunting
0423	Fishing and hunting	04.2	04.2 - Agriculture, forestry, fishing and hunting

COFOG - Swedish	Description	COFOG - ESA	ESA Description
0429	Agriculture, forestry, fishing and hunting n.e.c	04.2	04.2 - Agriculture, forestry, fishing and hunting
0431	Coal and other solid mineral fuels	04.3	04.3 - Fuel and energy
0432	Petroleum and natural gas	04.3	04.3 - Fuel and energy
0433	Nuclear fuel	04.3	04.3 - Fuel and energy
0434	Other fuels	04.3	04.3 - Fuel and energy
0435	Electricity	04.3	04.3 - Fuel and energy
04352	Electricity and heating plants	04.3	04.3 - Fuel and energy
043521	Generators	04.3	04.3 - Fuel and energy
0436	Non-electric energy	04.3	04.3 - Fuel and energy
04362	Gasworks	04.3	04.3 - Fuel and energy
04363	Heating plant	04.3	04.3 - Fuel and energy
0439	Fuel and energy n.e.c	04.3	04.3 - Fuel and energy
0441	Mining of mineral resources other than mineral fuels	04.4	04.4 - Mining, manufacturing and construction
0442	Manufacturing	04.4	04.4 - Mining, manufacturing and construction
0443	Construction	04.4	04.4 - Mining, manufacturing and construction
04432	Construction	04.4	04.4 - Mining, manufacturing and construction
0449	Mining, manufacturing and construction n.e.c	04.4	04.4 - Mining, manufacturing and construction
0451	Road transport	04.5	04.5 - Transport
04512	Public transport	04.5	04.5 - Transport
04513	Freight terminal, storage	04.5	04.5 - Transport
0452	Water transport	04.5	04.5 - Transport
04522	Shipping companies	04.5	04.5 - Transport
04523	Support services water transport	04.5	04.5 - Transport
0453	Railway transport	04.5	04.5 - Transport
0454	Air transport	04.5	04.5 - Transport
04542	Airports	04.5	04.5 - Transport
0455	Pipeline and other transport	04.5	04.5 - Transport
0459	Transport n.e.c	04.5	04.5 - Transport
0460	Communication	04.6	04.6 - Communication
0471	Distributive trades, storage and warehousing	04.7	04.7 - Other industries
04712	Wholesale and retail trade	04.7	04.7 - Other industries
04713	Other motor vehicle trade	04.7	04.7 - Other industries
04714	Wholesale trade	04.7	04.7 - Other industries
04715	Retail trade	04.7	04.7 - Other industries
0472	Hotels and restaurants	04.7	04.7 - Other industries
0473	Tourism	04.7	04.7 - Other industries
0474	Multi-purpose development projects	04.7	04.7 - Other industries

COFOG - Swedish	Description	COFOG - ESA	ESA Description
0479	Other industries n.e.c	04.7	04.7 - Other industries
0481	R&D General economic, commercial and labour affairs	04.8	04.8 - R&D Economic affairs
0482	R&D Agriculture, forestry, fishing and hunting	04.8	04.8 - R&D Economic affairs
0483	R&D Fuel and energy	04.8	04.8 - R&D Economic affairs
0484	R&D Mining, manufacturing and construction	04.8	04.8 - R&D Economic affairs
0485	R&D Transport	04.8	04.8 - R&D Economic affairs
04851	R&D Transport	04.8	04.8 - R&D Economic affairs
04852	Other R&D Transport	04.8	04.8 - R&D Economic affairs
0486	R&D Communication	04.8	04.8 - R&D Economic affairs
0487	R&D Other industries	04.8	04.8 - R&D Economic affairs
0489	R&D Economic affairs n.e.c	04.8	04.8 - R&D Economic affairs
0490	Economic affairs n.e.c	04.9	04.9 - Economic affairs n.e.c.
0492	Insurance	04.9	04.9 - Economic affairs n.e.c.
0493	Legal and economic services	04.9	04.9 - Economic affairs n.e.c.
0494	Real estate	04.9	04.9 - Economic affairs n.e.c.
05	Environmental protection	05	05 - Environmental protection
0510	Waste management	05.1	05.1 - Waste management
0512	Waste management, garbage and cleaning	05.1	05.1 - Waste management
0520	Waste water management	05.2	05.2 - Waste water management
0522	Waste water management	05.2	05.2 - Waste water management
0530	Pollution abatement	05.3	05.3 - Pollution abatement
0540	Protection of biodiversity and landscape	05.4	05.4 - Protection of biodiversity and landscape
0550	R&D Environmental protection	05.5	05.5 - R&D Environmental protection
0560	Environmental protection n.e.c.	05.6	05.6 - Environmental protection n.e.c.
06	Housing and community amenities	06	06 - Housing and community amenities
0610	Housing and community amenities	06.1	06.1 - Housing development
0612	Apartments	06.1	06.1 - Housing development
0620	Community development	06.2	06.2 - Community development
0630	Water supply	06.3	06.3 - Water supply
0632	Water and wastewater treatment plants	06.3	06.3 - Water supply
0640	Street lighting	06.4	06.4 - Street lighting
0650	R&D Housing and community amenities	06.5	06.5 - R&D Housing and community amenities
0651	R&D Housing and community amenities	06.5	06.5 - R&D Housing and community amenities
0652	Other R&D Housing and community amenities	06.5	06.5 - R&D Housing and community amenities
0660	Housing and community amenities n.e.c.	06.6	06.6 - Housing and community amenities n.e.c.
07	Health	07	07 - Health
0711	Pharmaceutical products	07.1	07.1 - Medical products, appliances and equipment
07111	Pharmaceutical products	07.1	07.1 - Medical products, appliances and equipment

COFOG - Swedish	Description	COFOG - ESA	ESA Description
07112	Administrative pharmaceutical products	07.1	07.1 - Medical products, appliances and equipment
0712	Other medical products	07.1	07.1 - Medical products, appliances and equipment
0713	Therapeutic aids	07.1	07.1 - Medical products, appliances and equipment
0719	Medical products, appliances and equipment n.e.c	07.1	07.1 - Medical products, appliances and equipment
0721	General medical services	07.2	07.2 - Outpatient services
0722	Specialized medical services	07.2	07.2 - Outpatient services
0723	Dental services	07.2	07.2 - Outpatient services
0724	Paramedical services	07.2	07.2 - Outpatient services
0729	Outpatient services n.e.c	07.2	07.2 - Outpatient services
0731	General hospital services	07.3	07.3 - Hospital services
0732	Specialized hospital services	07.3	07.3 - Hospital services
07321	Specialized hospital services	07.3	07.3 - Hospital services
07322	Administrative specialized hospital services	07.3	07.3 - Hospital services
0733	Medical and maternity center services	07.3	07.3 - Hospital services
0734	Nursing and convalescent home services	07.3	07.3 - Hospital services
0739	Hospital services n.e.c	07.3	07.3 - Hospital services
0740	Public health services	07.4	07.4 - Public health services
0741	Public health services	07.4	07.4 - Public health services
0742	Administrative public health services	07.4	07.4 - Public health services
0750	R&D health	07.5	07.5 - R&D Health
0751	R&D health	07.5	07.5 - R&D Health
0752	Administrative R&D health	07.5	07.5 - R&D Health
0760	Health n.e.c.	07.6	07.6 - Health n.e.c.
0761	Health n.e.c.	07.6	07.6 - Health n.e.c.
0762	Administrative health n.e.c.	07.6	07.6 - Health n.e.c.
08	Recreation, culture and religion	08	08 - Recreation, culture and religion
0810	Recreational and sporting services	08.1	08.1 - Recreational and sporting services
0820	Cultural services	08.2	08.2 - Cultural services
0830	Broadcasting and publishing services	08.3	08.3 - Broadcasting and publishing services
0831	Broadcasting and publishing services	08.3	08.3 - Broadcasting and publishing services
0832	Broadcasting and publishing services	08.3	08.3 - Broadcasting and publishing services
0833	Broadcasting and publishing services	08.3	08.3 - Broadcasting and publishing services
0840	Religious and other community services	08.4	08.4 - Religious and other community services
0850	R&D Recreation, culture and religion	08.5	08.5 - R&D Recreation, culture and religion
0851	R&D Recreation, culture and religion	08.5	08.5 - R&D Recreation, culture and religion
0852	Other R&D Recreation, culture and religion	08.5	08.5 - R&D Recreation, culture and religion
0860	Recreation, culture and religion n.e.c	08.6	08.6 - Recreation, culture and religion n.e.c.
09	Education	09	09 - Education
0911	Pre-primary education	09.1	09.1 - Pre-primary and primary education
09121	Primary education, elementary school	09.1	09.1 - Pre-primary and primary education

COFOG - Swedish	Description	COFOG - ESA	ESA Description
09122	Primary education, special school	09.1	09.1 - Pre-primary and primary education
09123	Primary education, adult education	09.1	09.1 - Pre-primary and primary education
0919	Pre-primary and primary education n.e.c	09.1	09.1 - Pre-primary and primary education
09221	Upper secondary school	09.2	09.2 - Secondary education
09222	Upper secondary special school	09.2	09.2 - Secondary education
09223	Upper secondary adult education school	09.2	09.2 - Secondary education
0929	Secondary education n.e.c	09.2	09.2 - Secondary education
0930	Post-secondary non-tertiary education	09.3	09.3 - Post-secondary non-tertiary education
0941	First stage of tertiary education	09.4	09.4 - Tertiary education
0942	Second stage of tertiary education	09.4	09.4 - Tertiary education
0949	Tertiary education n.e.c	09.4	09.4 - Tertiary education
0950	Education not definable by level	09.5	09.5 - Education not definable by level
0960	Subsidiary services to education	09.6	09.6 - Subsidiary services to education
0970	R&D Education	09.7	09.7 - R&D Education
0980	Education n.e.c.	09.8	09.8 - Education n.e.c.
0981	Education n.e.c.	09.8	09.8 - Education n.e.c.
0982	Administrative education n.e.c.	09.8	09.8 - Education n.e.c.
10	Social protection	10	10 - Social protection
1011	Sickness	10.1	10.1 - Sickness and disability
1012	Disability	10.1	10.1 - Sickness and disability
1019	Sickness and disability n.e.c	10.1	10.1 - Sickness and disability
1020	Old age	10.2	10.2 - Old age
1021	Old age	10.2	10.2 - Old age
1022	Administrative old age	10.2	10.2 - Old age
1030	Survivors	10.3	10.3 - Survivors
1041	Child care	10.4	10.4 - Family and children
1042	Child care 7/24	10.4	10.4 - Family and children
1043	Open children and youth care	10.4	10.4 - Family and children
1044	Preschool	10.4	10.4 - Family and children
1049	Family and children n.e.c	10.4	10.4 - Family and children
1050	Unemployment	10.5	10.5 - Unemployment
1060	Housing	10.6	10.6 - Housing
1071	Adult and refugee assistance	10.7	10.7 - Social exclusion n.e.c.
1072	Substance abuse treatment for adults	10.7	10.7 - Social exclusion n.e.c.
1073	Other individual and family care	10.7	10.7 - Social exclusion n.e.c.
1078	Legal aid	10.7	10.7 - Social exclusion n.e.c.

COFOG - Swedish	Description	COFOG - ESA	ESA Description
1079	Social exclusion n.e.c.	10.7	10.7 - Social exclusion n.e.c.
1080	R&D Social protection	10.8	10.8 - R&D Social protection
1081	R&D Social protection	10.8	10.8 - R&D Social protection
1082	Other R&D Social protection	10.8	10.8 - R&D Social protection
1090	Social protection n.e.c.	10.9	10.9 - Social protection n.e.c.
1091	Social protection n.e.c.	10.9	10.9 - Social protection n.e.c.
1092	Administrative social protection n.e.c.	10.9	10.9 - Social protection n.e.c.

Chapter 10 Main data sources used

Table 10.0 Statistical Business register and VAT register

Organisation	Data Source
Statistics Sweden	Statistics Sweden's Statistical Business Register
Swedish Tax Agency	The VAT Register - Administrative data

Table 10.1 Statistical surveys and other data sources used for the production approach

Organisation	Data Source
Statistics Sweden	Structural Business Statistics (SBS)
Swedish Board of Agriculture	Economic Accounts for Agriculture, EAA
Swedish Forest Agency	Activities/operations in large-scale and small-scale forestry
Swedish Forest Agency	Felling volumes in forestry and wood measurement
Swedish Forest Agency	Statistics on costs in large scale forestry
Swedish Forest Agency	Prices on roundwood
Statistics Sweden	Production of commodities and industrial services, IVP
Swedish Financial Supervisory Authority	Financial enterprises, annual financial data
Swedish Financial Supervisory Authority	Insurance companies, annual financial data
Riksbanken (Sweden's central bank)	Riksbank's Financial Market Statistics

Table 10.2 Statistical surveys and other data sources used for the income approach

Organisation	Data Source
Statistics Sweden	Gross pay based on administrative sources
Statistics Sweden	Structural Business Statistics (SBS)
Swedish National Financial Management Authority	Basis of central government net lending, UFS
Statistics Sweden	Annual accounts for municipalities and county councils
Swedish Financial Supervisory Authority	Financial enterprises, annual financial data

Table 10.3 Statistical surveys and other data sources used for the expenditure approach

Organisation	Data Source
Statistics Sweden	Household consumption statistics
Statistics Sweden	Food sales
Statistics Sweden	Revenues and expenditure survey for multi-dwelling buildings
Statistics Sweden	Survey of rents for dwellings
Statistics Sweden	Housing costs
Swedish National Financial Management Authority	Basis of central government net lending, UFS
Statistics Sweden	Annual accounts for municipalities and county councils
Statistics Sweden	Non-Profit Institutions Serving Households
Statistics Sweden	Economic report Church of Sweden
Statistics Sweden	International trade statistics in goods (Intrastat)
Swedish Customs	International trade statistics in goods (Extrastat)
Statistics Sweden	External trade in services
Statistics Sweden	The income and costs of the SAS consortia
Statistics Sweden	Research and Development (R&D) - Frascati Manual
Statistics Sweden	Statistical register for vehicles
Statistics Sweden	Investment survey
Statistics Sweden	Enterprises IT expenditure
Statistics Sweden	Business inventories
Statistics Sweden	Monthly fuel and gas statistics
Statistics Sweden	Quarterly fuel statistics
Statistics Sweden	New construction of residential buildings
Statistics Sweden	National apartment register

Table 10.4 Statistical surveys and other data sources used for the transition from GDP to GNI

Organisation	Data Source
Statistics Sweden	Foreign Direct Investments - assets and income
Statistics Sweden	Balance statistics for non-financial companies, incl. Balance of payment

10.0 Statistical Business Register and VAT Register

Statistics Sweden's Statistical Business Register

Purpose and history

By decision of Parliament in 1963, Statistics Sweden was instructed to maintain a central business register (CFR). The register was gradually expanded until, by the beginning of the 1980s, it was fairly comprehensive, even as regards the local units of enterprises. It was then called the Central register of enterprises and local units (CFAR). Under the regulation on the general business register (SFS 1984:692) facilities for maintaining the register were substantially improved by the granting of authority to make use of a number of other administrative registers.

After Sweden became a member of the European Community (EU) there was a process of adaptation to EU regulations on economic statistics and business registers for statistical purposes. The content of the register was thus also expanded to include several new types of units. The register was renamed again in order to take account of this additional content and is now called Statistical Business Register (SBR).

The SBR provides the sampling frame for statistics produced by Statistics Sweden. This applies in particular to economic statistics. All statistics intended to provide information on the Swedish economy, regardless of level, call for coordination of definitions of units to be surveyed, industries, size categories etc. This in turn requires a register of high quality to serve as an instrument of coordination. The register covers all Swedish enterprises, departments and agencies of government, organisations, their local units and kind of activity units. With the aid of the SBR, populations are demarcated for statistical inquiries as regards coverage, activities and size groups. The register serves as a source for name and address data for the enterprises, local units and other units to be covered by various inquiries. The SBR is one of the basic registers in the register-based system at Statistics Sweden. There is a link to the Enterprise group register as well as to the EuroGroups Register (EGR). The latter is maintained continuously and coordinated between Eurostat and the member states.

Users and areas of use

The SBR is a cornerstone of Statistics Sweden's economic statistics but is also used as a sampling frame for statistical inquiries in other areas conducted within and outside Statistics Sweden. Certain statistics are produced with only the register as a basis. The register is continuously updated with information from administrative sources, a SBR survey to multiple-establishment enterprises, and feedback from other statistical surveys at Statistics Sweden.

Obligation to supply data

Under the regulation on the general business register (SFS 1984:692), the registers of the Swedish Tax Agency and Swedish Companies Registration Office can be used as sources. Supply of data for the SBR survey to multiple-establishment enterprises is mandatory as specified in the regulation for Official Statistics (2001:100).

EU regulation

The content of the SBR is regulated by Regulation (EU) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 legal acts in the field of business statistics. Council Regulation (EEC) No 696/93 lays down the statistical units to be used for the observation and analysis of the production system in the Community. Most of these have also been included in the SBR.

Structure of the inquiry

The SBR is continuously updated with information from several administrative sources, the main ones being the Swedish Tax Agency, the Swedish Companies Registration Office. In addition, there is the yearly SBR survey to multiple-establishment enterprises. Feedback from other statistical surveys at Statistics Sweden is also used to update information in the SBR.

Content: statistical magnitudes, unit groups, population

Enterprise group	FG
Enterprise unit	FE
Legal unit	JE
Local unit	AE
Kind-of-activity unit	VE
Local kind-of-activity unit	LVE
Firm	FIRMA
AST unit	AST

Outflow: statistics and micro data

Yearly results on number of enterprises by activity and size class are published in the statistical database which is accessed from Statistics Sweden's web. Population frames are produced four times a year and micro data is saved.

Timetables

The register is continuously updated. Population frames are produced in March, May, August and November each year.

Frame and frame procedure

The SBR provides frames for statistical inquiries. The register comprises all organisations pursuing some form of economic activity as an enterprise, department or agency of government, State corporations, organisation of the Swedish Church, non-profit institutions, estates of deceased persons etc.

Measuring instruments

Data capture takes place mainly indirectly via administrative sources. The bulk of the information – data on the status (active, inactive, closed down), size and activity of FEs and AEs – are obtained from different registers at the Swedish Tax Agency. The Tax Agency collects information by way of forms for different kinds of taxes, income statements, Value Added Tax (VAT) declarations etc., or from the Swedish Companies Registration Office. Data on addresses are also obtained from the Tax Agency.

Under the Act concerning AST-identities and related matters (SFS 1984:533), Statistics Sweden is obliged to notify enterprises with more than one AE once a year of the AST-identities assigned to the firm's various AEs by the authority concerned. Anticipating this process, the yearly SBR survey is sent to the enterprises in question, in which the registered data are recorded and in which the enterprises are requested to make any additions necessary or correct errors.

Collection procedure

The register is continuously updated on a weekly basis with information from administrative sources, mainly the Tax Agency and the Companies Registration Office. All known multiple-establishment enterprises are surveyed directly once a year. Other important sources of information are feedback from other statistical surveys at Statistics Sweden and via direct contacts with the enterprises.

Where other administrative sources are used and there is a delay before the data are recorded, a total time-lag of up to six weeks may be expected between the actual event and the time the data relating to it are present in the SBR. For the number of employees and annual turnover, however, the time-lag may be more than a year because of the sources used (income statements and VAT records).

Data preparation

The various information sources are assigned values with respect to one another in accordance with a prioritisation procedure. In cases of doubt or in more complicated cases the enterprises are contacted directly. The resulting indications are checked by a machine-aided procedure and are corrected before the actual updating takes place. Updating is carried out every week. As of 2021, editing tools for both survey responses and administrative data have been implemented and thereby support an all-digital editing process.

The register records the number of employees. This indication is calculated in most cases by means of a special model using income statements from the Tax Agency. Since the income statements only cover wage and salary-earning employees, the number of employees is lower than the number of persons actually employed, at least for a proportion of enterprises.

The activity code is in most cases set by the local service offices of the Tax Agency for the locality in which the enterprise is established. Partial non-response in respect of activity codes can be high for enterprises without employees, while most (>99%) with employees have an activity code. The quality for activity codes is studied in special inquiries (the latest from 2008) or indirectly through feedback from other statistical inquiries and is documented in a special quality report. Sector assignment is established by a machine-aided procedure from data on the ownership category and legal form of the enterprises. For financial institutions, however, the sector is manually coded and based on information from subject matter areas at Statistics Sweden.

All legal units with more than one local unit in the BR are surveyed once a year in order to update the information on its local units and variables such as the number of employees, activity codes, and location addresses.

Observation register

The target and observation units of the SBR fall into seven categories: enterprise groups (FG), enterprise units (FE), legal units (JE), local units (AE), kind-of-activity units (VE), Local kind-of-activity units (LVE), firms and AST units.

An **enterprise group** (FG) consists of one or more FE and is an association of enterprises bound together by legal and/or financial links. A group of enterprises can have more than one decision making centre, especially for policy on production, sales and profits. It may centralize certain aspects of financial management and taxation. It constitutes an economic entity, which is empowered to make choices, particularly concerning the units, which it comprises.

An **enterprise unit** (FE) consists of one or more JE and conducts one or more activities at one or more places. The FE is usually the smallest unit for which both profit and loss account and balance sheet data are available. For reasons of coordination in certain cases it moves up to a higher level. It may include JEs, which have the status “inactive” in the SBR but are active, for example, in administrative registers. There are survival criteria for FEs relative to JEs (for example, a FE unit with one

establishment and activity unchanged on a change of corporate identification number survives; specification of the criteria is required). In a measurable number of cases, the FE is an ancillary unit serving several business units (divergence from the EU definition).

A **legal unit** (JE) is a legal or natural person pursuing or intending to pursue some form of business activity.

The practical demarcation used for a JE is:

- All legal persons (excluding estates of deceased persons)
- Natural persons who meet at least one of the criteria below
 - Are VAT-registered
 - Are registered employers
 - Have (at least) one registered firm
 - Are registered for Business Tax
- Estates of deceased persons that are
 - VAT-registered and/or are
 - Registered employers

All legal units that are deregistered (and hence have been active in the SBR) are stored for two years before they are removed from the SBR.

A **Local Unit** (AE) comprises every address, property or group of adjacent properties in which a JE pursues an activity. All active JEs have at least one AE. For the registration of an AE in the SBR a number of conditions must be met:

- Some form of activity must be pursued at the AE
- There must be a place at which the activity is pursued (geographically localised unit = address)
- The activity must be pursued over a long period (not transient)
- At least one employee with a payroll total above a certain basic amount

For JEs with geographically separate units, each unit is registered as a separate AE. For JEs which are locally cohesive (e.g., enclosed by perimeter fencing or in adjoining buildings) and which consist of several units (production, service units etc.) normally only have one AE registered.

In certain special cases specific criteria are used for the demarcation of AEs. Examples of this are power stations and concrete mixing plants of major economic importance.

There are cases in which an AE with multiple activities have been divided into several AEs with separate activity (NACE) codes, but with the same address. This procedure will have taken place in agreement with Statistics Sweden.

For municipalities, a demarcation of AEs based on the various administrations of the municipalities in accordance with the Local Government Act was found suitable. Each administration is recorded at the addresses at which the activity is permanently pursued. Each address within the administration is thus an AE. This means that several local government AEs may be present at one and the same address. "Normal ancillary activity", such as office cleaning and caretaking services, on the other hand, does not constitute An AE of the administration itself.

For regions an AE demarcation based on the various administrations/boards of the county council is applied. Each administration has to record each address at which the administration pursues permanent activity as a separate AE. This means that regions too may have several AEs at one and the same address.

The following are not considered as AE:

- (i) mobile activities, e.g., taxis, haulage,
- (ii) temporary operating sites, e.g., construction,
- (iii) movable operating sites, e.g., mobile crushing plants,
- (iv) the home, e.g., weather monitoring, home dressmaking.

In cases (i) - (iv) the activity is assigned to the establishment from which it is effectively administered. The home address is the location address if the JE only has one establishment, and the activity is of type (i) – (iv).

Examples of what are not AEs:

- Timber felling
- Mobile crushing plants set up for a period shorter than one year
- Extraction of gravel and sand without fixed installations and buildings and without manning
- Power stations <100 kW for public use, and <400 kW for other use
- Construction sites irrespective of the period of construction and stores, workshops etc. which only exist for the time construction is in progress
- Branches of the Swedish Alcohol Retailing Monopoly housed in the premises of another business and served by the ordinary staff of that business
- Staff canteens at an establishment with a different activity serving its own staff and operated by its own staff
- Camping sites, outdoor swimming pools, ski slopes without special installations of major economic significance
- Outlets of newspaper distribution firms for newspapers sold, for example, at kiosks, filling stations and the like
- Ships and boats are assigned to the establishment from which they are managed; shipboard personnel on vessels plying foreign trade are not counted in the number of employees
- Cleaning companies performing cleaning work at the premises of other enterprises are not normally registered as AEs
- Educational activities of workers' education associations on rented premises (which are not at the same time used as offices or administrative facilities)
- Enterprise health and medical services of normal scope
- Summer kiosks, summer sales outlets
- Truck drivers seconded by haulage firms to other larger haulage firms and forwarding firms
- Croupiers, cloakroom attendants employed by separate enterprises housed in restaurants

- Lottery stands sited in department stores, on city squares and the like

The **kind-of-activity unit (VE)** groups together parts of an FE which contributes to the performance of an activity on a particular NACE level. The VEs represents a complete subdivision of the FE. In a few cases the VE is an ancillary unit, which could not be assigned to other VEs. The subdivision of the FE should give VEs, which fall more or less entirely within a single industry. Compromises are necessary to take account of the capacity to provide data. The classification reflects the wishes of the data provider, which is why in individual cases several VEs can be present within a FE with the same industry classification. For reasons of coordination, a VE must not change over time without good reason. If the disruption to the statistics, overestimation and underestimation in the industries in question, becomes unacceptable, the FE is divided up into VEs.

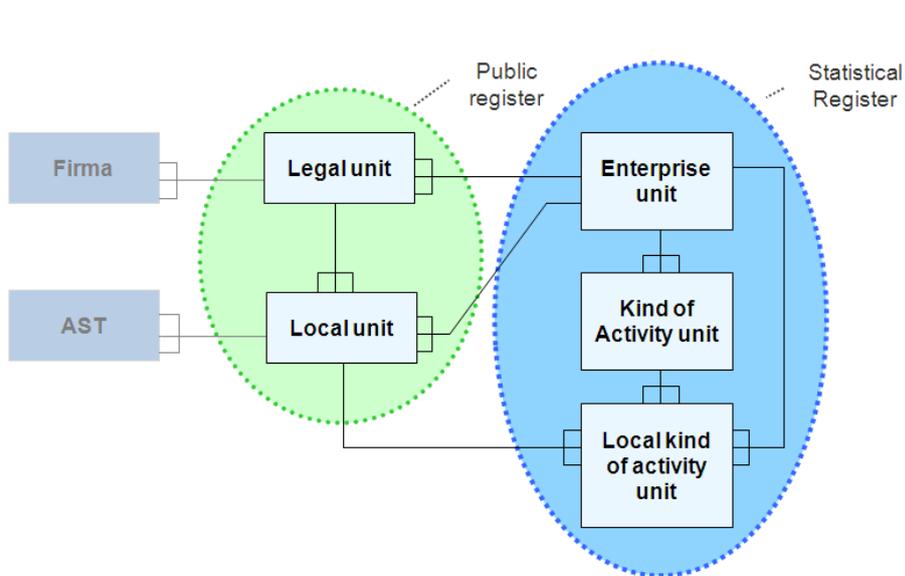
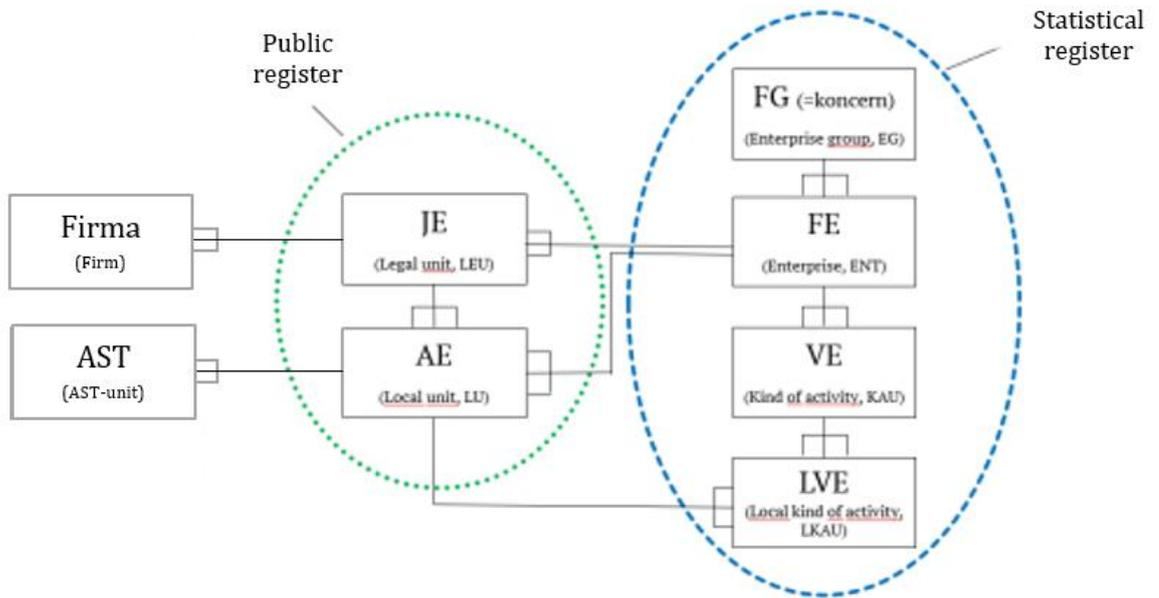
The **local kind-of-activity unit (LVE)** is that part of a VE which functions within an AE. It may also take account of the wishes of data providers regarding subdivision by areas of business and the like. Hence in individual cases several LVEs may exist within an establishment with the same NACE code. A LVE may have secondary activities. The NACE code is the national version of NACE Rev. 2 on 5-digit level.

A LVE – hence also a VE – with an activity extending beyond that included in its industry contributes a little too much to that industry in the statistics, and at the same time the activity disappears from one or more or other recording groups. The aim is that interference from these “surpluses and shortfalls” should be negligible in the statistics.

The **firm unit** is related to a natural person. A natural person can have one or more registered firms (i.e. registered names representing different activities of the business). In those cases, no administrative source is available to decide which of the firms are active.

The **AST unit** is separate from the FE but linked to the AE and to the JE as well. AST is represented by one or more identities that resemble a subdivision of the AE. The main purpose for the AST unit is to match employees to business data and business register characteristics such as NACE, region etc. AST units exist for JEs with more than one AE. The actual link is made in the income statements and the AST makes it possible to connect an employee to the correct AE in the SBR.

The relationships between unit types are shown in the figure below:



The VAT Register - Administrative data (2021)

Purpose and history

The VAT register contains data on value-added tax paid for all enterprises. The register is built up from the VAT declaration data of the Swedish Tax Agency.

Statistics Sweden has used data from the VAT declarations since 1972. Until 1992 they were solely used in order to produce the regional turnover statistics for service industries.

In Sweden, one must be VAT-registered if the VAT-liable sales exceed SEK 30,000 (excluding VAT) per year. If the sales subject to VAT do not exceed SEK 30,000 excluding VAT, and the sales made are considered traded within the country and are covered by the exemption, registration is not required. In order to be exempt from VAT, sales subject to VAT must not exceed SEK 30,000 at any time during the two immediately preceding years. If there is a VAT exemption, one may still need to register, for example, in cases when the buyer is obliged to report and pay VAT for the purchase. If an enterprise is VAT-registered they must submit a VAT declaration for each accounting period, even if there is no VAT to report.

Statistics Sweden receives data on a daily basis from the VAT register. The lag is four weeks for the companies with the largest turnover, up to six weeks for those with lower turnover, while the smallest companies submit a VAT return annually.

Users and areas of use

The National Accounts use the data as additional information in calculating household consumption expenditure. Because there is a lower rate of VAT on food, food sales can be recorded for different industries. The Statistical Business Register (SBR) uses VAT as one of the variables to determine whether an enterprise is active or has ceased trading. REGO is produced by matching the SBR with the VAT Register. From the year 2000 and onwards VAT data is used for the production of the yearly food sales statistics. Between the years 2000-2007, VAT data was used for the official turnover statistics for the service sector and, since 2015, the data is once again used, for the official turnover statistics for services and the manufacturing sector.

Turnover data are used as an allocation variable in a number of samples in the system for co-ordination of surveys and samples from the Business Register at Statistics Sweden (SAMU) system, especially in inquiries in which turnover and changes to turnover are measured. Thanks to this, it has been possible to make the samples smaller while maintaining precision. In these samples the VAT data are used as an auxiliary variable in calculating the turnover in question, as well as in adjusting for non-response.

In a number of other branches of statistics, not primarily measuring turnover, turnover data are collected for selected enterprises and as a total for certain industries. The data are used partly as a control variable and partly as an aid to the management of non-response. The data provides an indication of the extent of an enterprise's activity.

Obligation to supply data

All VAT-registered enterprises are obliged to supply data on value-added tax in a separate tax declaration to the tax administration. Statistics Sweden does not collect the data directly.

EU regulation

There is no EU regulation for the VAT Register.

Structure of the inquiry

The VAT register is a register-based compilation of VAT declarations for enterprises. The aim of the register is to produce records of taxes and turnover for users.

Entities of different sizes have to deliver data at different frequencies. Entities with a turnover lower than 1 million SEK are only required to provide data annually. Entities with a turnover between 1 and 40 million SEK have to deliver data quarterly. All other entities are required to deliver data monthly.

Population

The population includes all enterprises and organisations that are registered for VAT with the Swedish Tax Agency.

Recording groups

Unit group		Variable	Measurement
Population	Subdivision by recording groups		
Enterprise	Industry assignment, region, institutional code, size	Turnover data, tax, exports in SEK 1000	Total

Variables recorded

Turnover – Turnover is obtained from the VAT declarations of the enterprises. Taxable turnover is calculated from tax recorded; tax-free amounts and exports are covered in their original form. The data are subjected to a general form of scrutiny, in the course of which obvious keying errors are corrected.

Number of enterprises – The data on numbers includes all entities that pursued an activity at some time during the year and that submitted a VAT declaration. An enterprise that is reorganised during the year is counted as two enterprises. In the same way, enterprises that record VAT through their parent company, or an affiliated company, are not included.

Number of employees – This is the number of employees (not persons employed) registered in the enterprise that supplied a VAT declaration. Self-employed persons or partners in a partnership are not included in the number of employees. The figures for these enterprises are obtained from Statistics Sweden's business register.

Timetable

Continuously as supplied by the Swedish Tax Agency. The time-lag is four weeks for the companies with the largest turnover, six weeks for those with lower turnover. The smallest companies submit a VAT return annually.

Frame and frame procedure

The VAT Register of the Swedish Tax Agency (STA) is the frame. Enterprise name, industry, municipality and number of employees are matched from Statistics Sweden's business register with the aid of corporate identification numbers. Unmatched items from the STA are included without this auxiliary information.

Sampling procedure

Full census.

Measuring instrument

The VAT declaration submitted by enterprises to the STA.

Collection procedure

Data are obtained electronically from the STA. Transfer takes place on daily basis.

Data preparation, registration, scrutiny and correction

The register is updated continuously with new/changed data from STA for all taxable entities affected. During the updating process some variables on the VAT return are subject to scrutiny; these can include output VAT on sales or self-supply, input VAT to deduct, sales or self-supply liable to VAT, sales etc. that are exempt from VAT including sales of goods and services outside the EU and sales to traders in another EU country and calculated total turnover. Logical errors and missing values are then corrected. Total turnover for the most recent period is compared with the previous period in order to find enterprises with an unreasonable deviation in turnover between the two periods, in order to identify if this is due to a faulty value somewhere in the VAT return.

Target units

All VAT-registered enterprises in Sweden that have supplied data on VAT paid during the year.

Observation units

All taxable entities affected. All VAT-registered enterprises in Sweden, according to the Statistic Sweden's business register

Experience, problems

Enterprises in a group may record turnover as a total amount for several companies. This of course becomes problematic if the companies operate in different industries. Definitions of turnover, especially export turnover, may differ considerably from other inquiries. For example, all sales of inventories are counted as turnover, not only possible capital gains. Property income on the other hand is not included at all.

Estimates: assumptions and calculation formulae

Estimates do not arise. Taxable turnover is compiled as output VAT on sales or self-supply divided by the tax rate applicable.

Total turnover is compiled as the sum of sales or self-supply liable to VAT (exclusive of VAT) and sales etc. that are exempt from VAT.

10.1 Statistical surveys and other data sources used for the production approach

Structural Business Statistics (SBS) 2021

Link to surveys undertaken at the European level

The Structural Business Statistics are the main source for the statistics covered at EU level by Council Regulation EU 2019/2152 on European business statistics and has therefore been adapted to that regulation. The statistics are produced by Statistics Sweden. The Swedish SBS also include the agriculture section A, education section P, human health and social work section Q, arts, entertainment and recreation R and other service activities section S to facilitate the needs of NA.

Reporting unit

The target population includes all enterprises which engaged in an activity during the reference year, excluding financial and insurance activities in section K and public administration and defence, and compulsory social security in section O. There are three target populations:

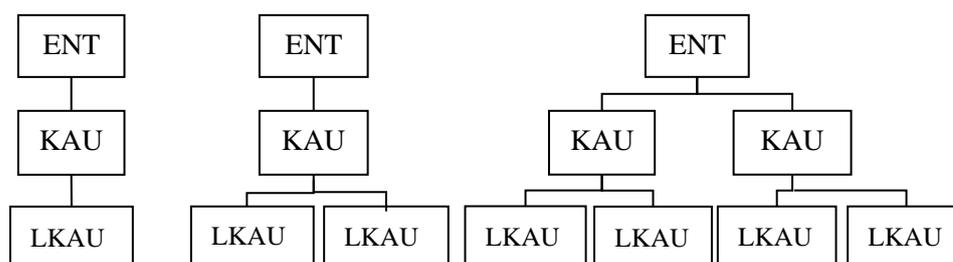
- 1) Institutional: The amount of all non-financial Swedish enterprises that, in the reference year, conducted their main activities as indicated in sections A-S, excluding K and O, according to the Swedish Standard for Industrial Classification, SNI 2007.
- 2) Functional: The amount of all Swedish activities that, in the reference year, conducted activities as indicated in sections A-S, excluding K and O, according to the Swedish Standard for Industrial Classification, SNI 2007.
- 3) Regional (and functional): The amount of all Swedish regional activities that, in the reference year, conducted activities as indicated in section A-S, excluding K and O, according to the Swedish Standard for Industrial Classification, SNI 2007.

The three target populations have different main purposes. The institutional target population aims to describe the structure (for example, the number of enterprises), and financial position, such as the balance and income statement. The functional and regional target populations, on the other hand, aim to serve as a basis for economic assessments for different industries, and provide a description of the make-up of the business sector, which can serve as a basis for regional policy decisions.

The entity surveyed is the enterprise unit (ENT), which in most cases coincides with the legal unit or the accounting unit. In exceptional cases, collection may be undertaken at the level of a group of companies or some other consolidation of several legal persons. The term enterprise covers the following legal forms: company limited by shares, incorporated and unincorporated partnership, self-employed trader, incorporated association/cooperative society and certain other legal forms which engage in trading activity.

Major ENTs are divided into different kind-of-activity units (KAU) in those cases where the enterprise has more than one activity and is able to provide economic data to Statistics Sweden at that level. If the enterprise conducts activities in many different geographical areas, the enterprise is divided into local kind-of-activity units (LKAU) according to the geographical distribution. This subdivision facilitates coverage at institutional level (enterprise), functional level (industry) and regional level (geographic localization). The division into KAUs and LKAUs is currently used mainly for manufacturing enterprises (NACE Rev 2.0 C-D).

Overview of different enterprise structures



ENT = Enterprise unit

KAU = Kind of activity unit

LKAU = Local activity unit

Periodicity

The data refer to a calendar year. However, for enterprises surveyed using the so-called complete form and which have a split financial year, the reporting period is used, including the annual figures for 1 May of the current calendar year to 30 April of the next calendar year. For financial years that cover a shorter or longer period than 12 months, the flow figures are recalculated to refer to 12 months. For other surveyed sample enterprises, and for enterprises that are based on administrative material and that have different financial years, the data refer to the reporting period that ends in the calendar year. However, even in these cases, the flow data need to be recalculated to refer to 12 months.

Time of availability of results

The final results of the survey shall be published and sent to Eurostat within 18 months after the close of the reference year. Preliminary results of the survey shall be sent to Eurostat within 10 months after reference year and published within 12 months after the reference year. Delivery to the National Accounts takes place 13 months after the close of the reference year.

Sampling frame

The sampling frame is based on the Statistical Business Register (SBR), kept at Statistics Sweden. The frame consists of all ENTs (and attached KAUs), which are active in November of the reference year. The sampling frame serves as the common population for different surveys conducted within the Swedish SBS system. In the SBS system there are four different major surveys; the Complete form survey, on basic variables, the Specification survey on income and costs (SpecRR), the Specification survey on Investments (SpecI) and the Specification survey on shares and assets (SpecA). A brief description of the sampling design for each of these four surveys is given below. The sections agriculture, forestry and fishing are excluded from the sampling frame.

Survey is compulsory or voluntary?

The part of the survey where information is directly collected from enterprises involves a legal obligation to submit information to Statistics Sweden. The Swedish Code of Statistics (SFS 2001:99 and 2001:100) states that participation in statistical data collection is obligatory. Specific provisions regarding the Structural Business Statistics are published in Statistics Sweden's Code of Statutes (SCB-FS 2009:13).

The other part of the survey is based on administrative records consisting of tax declaration information from enterprises that are required to submit the information to the National Tax Agency for taxation purposes.

Main features of survey methodology

The SBS is conducted annually and should be regarded as a system of different statistical surveys rather than as a separate statistical survey. Data from many sources are collected inside and outside of Statistics Sweden and are combined to produce all the statistics reported regarding Structural Business Statistics target variables. The administrative material (Standardized accounting statements) is the basis for the survey and is subsequently supplemented with material as needed.

The unifying elements of this system consist in part of the common population for all target variables, and in part of the variables within the variable area "base variables" (see below). In order to better describe the SBS in general, and the quality of the statistics in particular, the target variables are divided into a number of different variable areas. A description of the sources used for the different types of variables is given below.

Data sources for the variable area

Basic: The main source for basic variables is the administrative material, standardized accounting statements (SRU), collected from the Swedish Tax Agency, which is the information submitted by enterprises in an appendix to their income tax declaration. However, SRU is not used for the approximately 500 largest enterprises. Instead, for these, the data is collected directly through the complete form.

Basic, employment: With the exception of a number of variables retrieved in the complete form, no direct collection is carried out within the framework of the Structural Business Statistics. These variables are instead retrieved from already existing sources. The internal sources used are Short-term business statistics on wages and salaries in the private sector, Structural earnings statistics, and Register-based labour market statistics. In addition, data are purchased from a private company.

Income statement: The main variables in the income statement are retrieved from SRU, but with regard to the variables that comprise a specification of these, direct collection is used on a sample basis via the SpecRR survey. The complete form also contains the income statement variables.

Balance sheet: The variables are retrieved from the standardised accounting statements and the complete form, but specifications of investments and inventories are collected as follows:

- **Investments:** Investment data is retrieved primarily from the Investment Survey, which is Statistics Sweden's short term statistics on investments. However, this data is supplemented with a direct data collection from additional enterprises using the SpecI survey. The complete form also contains the investment variables.
- **Inventories:** Data on inventories is included as part of the complete form. Concerning other enterprises, inventories data is retrieved from the SpecRR survey.

Population size

The population of interest consists of all Swedish units that carried out market activities in the relevant reference year. In 2021 the population amounted to little over 1 200 000 enterprise units.

Sample size

The two specification surveys SpecRR and SpecI are all beset with sampling uncertainties. Since the designs of the samples differ for the two surveys, a brief individual description is presented below.

SpecRR: The SpecRR sample consists of about 16 400 enterprises. The sample is stratified by type of industry into about 290 strata. Within each stratum, a random sample is drawn where the probability of inclusion for an enterprise is proportional to its size, i.e., a large enterprise is given a higher probability of being included in the sample than a smaller enterprise. Estimates for the variables are calculated using separate group ratio estimators, where the base variables are used as known totals.

SpecI: The gross version of the sampling frame for SpecI consists of all enterprises that have invested at least SEK 5 million according to the tax data. Enterprises covered by the survey Investment questionnaire are not surveyed again instead the already collected data is used. From the remainder of the frame, the net frame, a stratified simple random sample is drawn. For 2021 the sample size amounted to around 3 000 units. For those enterprises not part of either SpecI or the Investment questionnaire imputation is used.

Survey response rate:

Non-response in the respective sources

Source	Number of surveyed enterprises	Of which non- response	Share of imputed enterprises, %	Share of non-response in % of	
				Number of employees	Net turnover excluding excise taxes
Standardised accounting statements	1 200 791	184 018	15,3	4	5,3
Complete form	433	9	2,1	0,4	0,6
SpecRR	16 804	2 820	16,8	16,3	13,8
SpecI	3 005	531	17,7	16,6	15 ¹

¹ Non-response share of total investments.

Method used to impute for missing data

Imputation for the part of the survey carried out with questionnaires concerns only some of the variables, as most can be retrieved from the administrative material or the official annual reports.

Imputation for those variables that cannot be collected in such a way has primarily been done with help from the structure of the enterprise values submitted in the previous year. If neither of these methods is available, so-called mean value imputation is used. A five-digit SNI (Swedish Standard Industrial Classification) level is primarily used as the basis for imputation. A basic condition has been that at least three enterprises must be included in the group that forms the basis of the imputation. If there has not been a sufficient number of enterprises in a group, a broader SNI level has been used and, when required, a merging of the two-digit SNI level.

Other imputation methods have been used for some variables. An example is the breakdown of net turnover by activity, where data are retrieved, if possible, from the survey Production of commodities and industrial services (IVP), provided that the enterprise belongs to the manufacturing industry. Data for certain cost items have been collected from the survey Industrial use of purchased goods and services (INFI), if they are included in this survey. This survey annually includes one-third of the manufacturing industry, which means that auxiliary information is not available for all enterprises

included in the SBS. A third example is the number of employees, which has been distributed with the help of the Business Register, in cases when there is no information at the local activity unit level.

In most cases, mean value imputation has been used also for the administrative material; however, the groups which form the basis for imputation have been divided in a different way. Here, the legal form, branch and size category are used to determine the basis for imputation. Imputation of the administrative material refers to the entire enterprise. In the first stage, the five-digit SNI level has been used together with a particular legal form and size category as a basis. The condition has been that there should be at least twenty enterprises in each group. If there is not a sufficient number, work is undertaken to reach broader SNI classifications.

Variable used to impute for missing data

See description above.

Variable used for grossing-up to the population

See description above.

Sample coverage

The sampling coverage varies among the four surveys. Strictly speaking, the Survey on basic variables does not have any sample errors since no sampling takes place. But since there is non-response in the Tax data there are non-response errors. Taking this into account, the Tax data together with Statistic Sweden's own data collection from the 500 largest enterprises cover around 96 per cent of the estimated total for Value added.

In the SpecRR-survey the sample coverage amounts to 69 per cent with respect to Turnover. If non-response is taken into account, the coverage rate drops to 65 per cent.

Main variables collected

The Structural Business Statistics cover about 1 000 variables, but the variables included in the final publication of the Structural Business Statistics survey, commencing with reference year 2007, consists of a total of 95 variables. The institutional level (enterprise level) contains 64 variables divided into base facts, income statement items (with specifications), and balance sheet items. The functional level (kind-of-activity level) contains 20 variables, divided into base facts, income and costs. The regional level contains 11 variables, divided into base facts and investment items. The survey also contains detailed income and cost variables. These are not published but are used primarily in the National Accounts for the calculation of gross domestic product, GDP.

The following list contains the main variables included in the report of the Structural Business Statistics.

Basic data, enterprise level

Number of enterprises

Number of employees

Net turnover

Production value

Value added

Total assets

Gross investment

Net investment

Income statement items, enterprise level

Net turnover

Change in inventory of products in process, finished goods and ongoing work on behalf of others

Other operating income

Raw materials, commodity costs

Other external costs

Salary costs

Social insurance contributions and other personnel costs

Total personnel costs

Other operating costs

Total of depreciation and write-downs

Operating profit

Income from financial investments

Operating profit after financial items

Extraordinary income and costs

Appropriations

Taxes on the year's profits

Profit/loss for the year

Balance sheet items, enterprise level

Total intangible assets

Buildings, land improvements and land

Machinery and equipment

Advances regarding tangible fixed assets and fixed assets under construction

Sum of tangible fixed assets

Shares and participations (fixed assets)

Other financial fixed assets

Total financial fixed assets

Total fixed assets

Inventory etc.

Accounts receivable

Other receivables

Prepaid expenses and accrued income
Total current receivables
Total current investment
Cash and bank balances
Sum of current assets
Total assets
Share capital
Other restricted equity
Profit/loss brought forward
Net profit/loss for the year
Equity in trading enterprises, limited partnerships and sole proprietorships
Total equity
Tax allocation reserves
Accumulated excess depreciation
Other untaxed reserves
Total untaxed reserves
Provisions for pensions
Other provisions
Total provisions
Sum of long-term liabilities
Advances from customers
Accounts payable - suppliers
Tax liabilities
Accrued costs and deferred income
Other current liabilities
Total current liabilities
Total equity and liabilities

Basic data, kind-of-activity unit level
Number of employees
Net turnover
Production value
Value added

Gross investment

Net investment

Income, kind-of-activity unit level

Income from industrial production

Income from trade

Income from other activities

Other operating income

Changes in inventories

Activated work for internal accounting

Total operating income

Costs, kind-of-activity unit level

Raw material costs

Cost of goods for resale

Salary costs

Other personnel costs

Other external costs

Other operating costs

Total operating costs

Regional basic data, local kind-of-activity unit level

Number of establishments

Number of employees

Production value

Consumption value

Value added

Total income

Total costs

Regional investment items local kind-of activity unit level

Gross investment, machinery and equipment

Net investment, machinery and equipment

Gross investment, buildings and land

Net investment, buildings and land

Further adjustments made to the survey data

The variables recorded are presented in the form of total data and certain ratios. A large number of assumptions arise in the inquiry, which are not covered by the above headings. An example of such model assumptions concerns those enterprises that are not covered by the administrative material. We assume that these enterprises are exclusive to one industry and only consist of one activity unit. Therefore, the situation does not arise in which an enterprise is subdivided into different activity units in the administrative material. Further model assumptions are made in the calculation of investment for enterprises in the administrative material and in recording at the regional level.

Finally, alternative estimates of Production value, Intermediate consumption and Value added are calculated through adjustment of the basic data estimates, using data from the sample survey on income and cost on kind of activity level. In most cases these adjusted values are close to the unadjusted versions. Since the sample survey does not cover Section A, no adjustments can be made for this section.

Economic Accounts for Agriculture (EAA) 2021

Link to surveys undertaken at the European level

Regulation (EC) No 138/2004 of the European Parliament and of the Council of 5 December 2003 on the Economic Accounts for agriculture in the Community.

The agency responsible for the statistics is the Swedish Board of Agriculture.

Reporting units

Enterprises belonging to the agricultural sector.

Periodicity

Annual.

Time of availability of results

The material is produced continuously throughout the year. Publication is three times per year: in December (forecast for the current calendar year), in February (preliminary result for previous calendar year) and in October (final results for the previous calendar year).

Sampling frame

The sector calculations are built up from data drawn from different sources such as The Swedish farm register (LBR), estimates for harvest, statistics of slaughter, statistics on milk delivered to dairies, price statistics (output prices), index and retail prices for foodstuffs according to Consumer Price Index and accounts, as well as bookkeeping data for estimation of costs for intermediate consumption. The EAA also regard leaseholds and costs of depreciation for machines and tools.

Survey is compulsory or voluntary?

Supply of data on agriculture is compulsory under the following statutory provisions: SFS 2001:99, SFS 2001:100, SFS2019:908.

Main features of survey methodology

Economic trends in the agricultural sector are monitored by the Swedish Board of Agriculture. The total income and costs of the sector and the operating surplus, representing the difference between the two, are calculated. The calculations should only include income from agricultural production proper and costs associated with it. The income of farmers from other industries, e.g. forestry, is not included. This means that the operating surplus in the sector calculations is not a measure of the total income of farmers, as many farmers also, for example, are forest owners.

The calculation seeks to show total economic trends in the agricultural sector. The calculation is used as a basis for agricultural policy assessments of changes in the agricultural sector. The data recorded cover not only values but also volumes (applicable to the income side and to certain items on the expenditure side). The latter data are sometimes used in isolation in order to assess production changes in agriculture.

Population size

The units and population are made up of the enterprises included in the agricultural sector in accordance with the EU definition of this sector. The population is consistent with that in the Swedish farm register, which amounted to 58 754 units in 2021.

Sample size and survey response rate

The sector calculations are built up from data drawn from different sources. It is thus not possible to provide a generally applicable indication of sample size or response rate; certain data are based on large samples, others on smaller samples.

Method used to impute for missing data

For some cost items there are only data for certain sections of the farming population. For the remainder, certain systematic assumptions are made.

Variable used for grossing-up to the population

The statistics are based on estimates of totals and quotas. The estimates of totals are:

- Production value per product.
- Agricultural subsidy per product.
- Cost per type of cost.

The estimates of quotas are indexes of volume, price and value.

Sample coverage

It is difficult to give a measure of confidence for the data recorded, since they are based on statistics from a multiplicity of different sources, mainly price and production data, yield estimates and economic statistics for agriculture on a micro-statistical level. On the income side, certainty is high since the data is based on reliable macro-statistics. On the cost side, however, it is more difficult to assess certainty, since a number of cost items are based on systematic assumptions. Estimates for the different types of costs are based on aggregated accountings from about 6000 units. Uncertainty in the forecasts and preliminary calculations is considerable, and the final calculations recorded later may diverge significantly from the forecast values. On the cost side, there is under-coverage for certain items.

Main variables collected

Primary material is not included within the framework of this statistical product, apart from the horticultural side (which in the EU perspective forms part of agriculture) and costs for pesticides, fertilisers and machinery and equipment. Apart from this, the sector calculation is based on compilations and processing of other statistical material.

Variables

Operating surplus for the agricultural sector, together with income, costs and output values for the products and services that leave the agricultural sector or are purchased by it.

In the final results for the latest calendar year, published in October, the following variables are reported:

- Yearly value of production by product/service in both current and fixed prices.
- Yearly costs by type of cost for agriculture production in both current and fixed prices.
- Yearly benefit by agricultural subsidies.
- Yearly value added by processing and value of other measures of result.

The prognosis and preliminary results consist of development as compared to the previous year. For groups of products, types of costs and results, the following three indexes are reported:

- Volume index
- Price index
- Value index

Groups of accountings

The prognosis and preliminary results consist of the following groups of products, other types of incomes and types of costs:

- Grain, industry crops, fodder-plants, garden- and nursery plants, potatoes, fruit, berries and other plants and vegetable products.
- Animals and animal products.
- Agricultural services.
- Secondary non-agricultural activities.
- Agricultural subsidies.
- Intermediate consumption
- Consumption of fixed capital
- Wages and collective fees.
- Leasehold- and rental costs.
- Interest charges and incomes from interest.

The final results are accounted at more detailed levels:

Examples of income items

Autumn wheat, Spring wheat, Rye, Total cereals (excluding feed grain), Barley, Oats, Cooking peas, Total other grains, Table potatoes, Processing potatoes, Sugar beet, Total potatoes and sugar beet, Feed for leisure horses, Export of hay, Oil crops, Kitchen vegetables, Milk for dairy production, Milk other than for dairy production, Milk for home consumption, Eggs, Slaughter of poultry, Mature cattle, Large calves, Smaller calves, Horses, Sheep, Pigs, Residual payments, Wool and sheepskin, Export of live animals, Low income action (includes money for stand-in schemes and social security), Residual payments from farmers' union, Compensation for crop damage, Direct disbursements.

Changes in livestock

Examples of cost items:

Motor fuels and lubricants, Fertiliser, Lime, Purchased feeds, Miscellaneous requisites, Electricity, Freight, Drying costs, Inspection costs, Insemination costs, Hire of machinery, Trade and processing margins, Personal transport, Other services, Insurance, Stand-in services.

Depreciation: Buildings, Ground installations, Machinery

Maintenance: Buildings, Ground installations, Machinery

Interest charges, Interest income, Net interest costs, Hired labour

Measures of result

The measures of result in EAA in basic prices are calculated as follows:

- + Value of production of vegetables
- + Value of animal production
- + Revenues from agricultural services
- + Revenues from secondary non-agricultural activities
- = Total value of production
- Costs for intermediate consumption
- = Gross value added by processing in basic price
- Consumption of fixed capital
- = Net value added by processing in basic price
- + Other so-called production subsidies.
- = Factor income
- Wages and collective fees
- = Net operating surplus
- Leasehold- and rental costs.
- Net interest costs
- = Incomes from enterprises

Statistics on activities/operations in large-scale and small-scale forestry (2021)

The statistics are produced in two separate inquiries known as “Statistics on operations in large-scale forestry” and “Statistics on operations and employment in small-scale forestry”.

Link to surveys undertaken at the European level

There is no EU regulation or reporting, only second hand through the National Accounts and the European forest accounts.

The inquiry on large-scale and small-scale forestry is produced by the Swedish Forest Agency (SFA).

Reporting units

Large-scale forestry (more than 5 000 hectares): contacted via e-mail or telephone and are asked to fill in data in a premade excel file, which is sent to the Swedish Forest Agency. Each enterprise questioned decides for itself what level in the enterprise that should respond to the survey. As a rule, the questionnaire is answered at the management level. The data requested are normally readily available in the internal systems of the enterprises.

Small-scale forestry (between 6 and 5 000 hectares): Contact is made through postal letters and the inquiry is conducted either by telephone interviews or by web questionnaire. In the case of a telephone interview, the inquiry is performed by the personnel of Swedish Forest Agency who work close to the location of the landowners’ property. Landowners are given prior notice of the interview and of the questions, 1-3 weeks in advance.

Periodicity

Annual.

Time of availability of results

Ten months.

Sampling frame

All forestry owners in the forestry data register of the National Board of Forestry.

Survey is compulsory or voluntary?

There is no obligation to supply data.

Main features of survey methodology

The Swedish Forest Agency has published statistics on forestry operations since the 1940s. The methods have varied but the aim is to quantify the extent of the main silviculture operations in Swedish forestry.

Normally, different routines are used for large and small forestry enterprises. Inquiries on large-scale forestry are conducted and the data recorded jointly with the inquiries on small-scale forestry. Together the two inquiries cover forestry as a whole. The present procedure for statistics on operations in large-scale forestry has been applied since 1983. The comparability of the statistics over time is considered very good.

Population size

Large-scale forestry: all forestry enterprises in large-scale forestry.

Small-scale forestry: the population consists of all economic units which are not included in large-scale forestry and which have more than 5 hectares of forest land. These consist of approximately 172 000 units.

Sample size

Large-scale forestry: All enterprises with over 5 000 hectares of forest land are included in the inquiry.

Small-scale forestry: stratified samples by counties and size categories according to area of forest land are conducted. The sample is approximately 2 240 economic units out of a total of 172 000 in the sampling frame.

Survey response rate

Large-scale forestry: the statistics are a full census. This included 10 million hectares in 2021. The non-response consisted of an approximate 250 000 hectares, as such the attrition was 2.5%, which is considered low.

Small-scale forestry: the non-response rate is approximately 40 %, which is unusual for this questionnaire.

Method used to impute for missing data

To account for missing data for small-scale forestry, multiple imputation and predictive mean matching is used.

Variable used for grossing-up to the population

The variable used for grossing to population level is the population in relation to the number of responses received per stratum.

Sample coverage

Altogether the inquiries provide a complete picture of operations performed in timber felling and silviculture.

Main variables collected

The main variables are areas and volumes of timber felled, area of forestry operations performed and share of activity on own account in timber felling and silviculture.

Timber felling:

Area of regeneration felling

Area of thinning

Volume of regeneration felling

Volume of thinning,

Volume of other felling

Volume and area of removal of branches and tops for energy purposes in regeneration felling,

Volume and area of removal of branches and tops for energy purposes in thinning.

Silviculture operations:

Mechanical soil preparation

Controlled burning

Protective drainage

Planting

Sowing

Supplemental planting and replanting

Pinus contorta planting

Pinus contorta sowing

Cleaning-thinning

Forest fertilisation

Other:

Drainage

Forest road construction

Forest road maintenance

Felling volumes in forestry (2021)

The annual estimates of the gross felling for the entire country are produced by the Swedish Forest Agency (SFI). The estimates are calculated using a model developed by the SFI. The model, described below, forms the main basis for the National Accounts calculations of felling volumes in forestry. Felling statistics are also produced by a stump survey carried out by the Swedish National Forest Inventory (NFI), described in the next section.

Link to surveys undertaken at the European level

Removals of roundwood are reported every year by the SFI in the Joint Forest Sector Questionnaire (JFSQ). The JFSQ is a cooperation between four international organizations: the United Nations Economic Commission for Europe (UNECE), the Food and Agriculture Organization (FAO), Eurostat and the International Tropical Timber Organization (ITTO).

Every five years, felling statistics are also supplied by the SFI and NFI to FOREST EUROPE, UNECE and FAO in the Joint questionnaire on pan-European Indicators for Sustainable Forest Management.

Reporting units

The model is based on input data from several different surveys. The reporting units in these surveys are mainly enterprises and to a small extent households.

Periodicity

Annual.

Time of availability of results

In August, preliminary results for the previous year are published. Final statistics are published in August of the following year.

Sampling frame

All enterprises within pulp- and sawmills industry.

Survey is compulsory or voluntary?

There is no obligation to supply data on carried out felling in Sweden. However, in some of the surveys used as input data to the model, the respondents are obliged to supply data. This obligation applies to foreign trade statistics and energy statistics.

Main features of survey methodology

SFA's model is an input-output model and is mainly based on annual domestic consumption of roundwood, roundwood stocks changes and import and export of roundwood. In addition, data on felled trees left in the forest are used to calculate gross felling.

The annual consumption of roundwood in sawmills, pulp industries and board industries is collected by Biometria (Swedish wood measurements association) and the consumption of roundwood for energy purposes is collected by the Swedish energy agency (SEA). Other consumption of roundwood (small scale poles production, charcoal wood etc) is estimated by the SFI. The consumption of roundwood for the previous year is not available in August and for this reason the statistics are first reported as preliminary and as final after an additional year. Final felling statistics are used for the National Accounts.

The total domestic roundwood consumption is calculated from the consumption surveys and adjusted by data on foreign trade from Statistics Sweden (SCB) and stock changes of roundwood from the SFI

to get the annual removal. The gross felling is finally computed by adding the volumes of cut whole trees left in the forest from the NFI.

Sample size

Full census.

Survey response rate

The data sources to the Swedish Forest Agency's gross felling model are only marginally affected by non-response.

Method used to impute for missing data

Not performed due to marginal effect of missing data.

Main variables collected

The model calculates annual gross felled volumes and annual removals. The removals are broken down as follows:

- Sawlogs and veneer logs, coniferous
- Sawlogs and veneer logs, non-coniferous
- Stem wood for the paper pulp and fibreboard industry
- Stem wood for fuel
- Other stem wood

Statistics on costs in large scale forestry (2021)

Skogforsk and the Swedish Forest Agency have been collecting data with the joint survey of forestry costs and revenues in the large-scale forestry since 1996.

Link to surveys undertaken at the European level

There is no EU regulation or reporting, only second hand through the National Accounts and the European forest accounts.

Reporting units

Statistics on costs in large-scale forestry are volume-weighted or area-weighted means costs and are in current prices.

Periodicity

Annual.

Time of availability of results

Six months.

Sampling frame

The sampling frame consists of all forestry owners owning more than 16,000 ha forest land or an annual felling of more than 50,000 m³, as provided by the forestry data register of the Swedish Forest Agency.

Survey is compulsory or voluntary?

There is no obligation to supply data.

Main features of survey methodology

Cost data refers to logging and silviculture measures in large-scale forestry. The data are based on response to the questionnaire survey regarding their own land. Logging costs are divided into regeneration and thinning. Silviculture is divided into scarification, planting, sowing and cost for beeting.

Population size

Roughly the 80 largest forest owning organizations in Sweden.

Sample size

It is a complete population census of forestry owners owning more than 16,000 ha forest land or an annual felling of more than 50,000 m³.

Survey response rate

Because all estimations are weighted by volume or area it is relevant to use a weighted response rate, which is about 91 percent of the surveyed area of forest land included in the population.

Method used to impute for missing data

Since most data is reported per harvested volume, per hectare, or per meter, scaling factors are not used to compensate for loss or similar variations. The estimates are weighted by volume or hectare, which means that the loss of actors at the lower end of large-scale forestry has little impact on the statistics

Variable used for grossing-up to the population

Weighted averages of costs in relation to area or volume.

Main variables collected

The main variables are costs, areas and volumes of logging and silvicultural activities.

- Regeneration felling
- Thinning
- Cleaning
- Scarification
- Planting
- Sowing
- Beeting
- Precommercial thinning
- Forest fertilization and liming
- Prescribed clearcut burn
- Undergrowth clearing
- Felling due to natural disasters

Prices on roundwood (2021)

The statistics are collected by Biometria and is produced by the Swedish Forest Agency (SFA).

Link to surveys undertaken at the European level

There is no EU regulation or reporting, only second hand through the National Accounts and the European forest accounts.

Reporting units

The statistics cover average prices for delivery logs and is based on quantities and market values of roundwood.

Periodicity

Quarterly and annual.

Time of availability of results

Quarterly statistics are published a couple of weeks after the end of each quarter. Annual statistics for T-1 are published in January, year T.

Sampling frame

Total census based on register data.

Survey is compulsory or voluntary?

There is no obligation to supply data.

Main features of survey methodology

The statistics are based on quantities and market values of roundwood, as calculated with the so-called VIOL system by Biometria (SDC). The selection criteria for these statistics include only the original purchase, i.e. the transaction between forest owners and initial purchaser, prices of delivery logs for which all quality classes are included, with the exception of refused logs.

The stated quantities are based on measurement at industry. Among the methods used are measurement of individual logs, measurement of stacked logs and random sampling. The figures on prices refer to the basic price including additions and deductions.

To reflect the long-term relative development of timber prices, the reliability is assessed as relatively good since the vast majority of the harvested timber in Sweden is priced by Biometria.

Population size

The population consists of delivery timber transactions in the first stage of purchase (between purchasing organizations and landowners) in Sweden.

Sample size

Prices of delivery timber are collected, which represent less than 10 percent of total volume.

Survey response rate

Total census.

Method used to impute for missing data

No method is used since delivery timber not included in the census is not analyzed.

Variable used for grossing-up to the population

Averages of prices in relation to volume.

Main variables collected

Roundwood prices with volumes for sawlogs and pulpwood, distributed by tree species and regions.

Production of commodities and industrial services (IVP) (2021)

Link to surveys undertaken at the European level

The statistics have been produced since 1996, in line with EU requirements, in a special inquiry separate from the industry-by-industry statistics. The statistics form part of a coordinated EU inquiry, PRODCOM (Production Statistics in the Community). A goods classification in accordance with the EU Combined Nomenclature (CN), which is also used for the international trade statistics, is used to report the production data. The inquiry is regulated by the EU in accordance with

- Regulation (EU) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 legal acts in the field of business statistics
- Commission Implementing Regulation (EU) 2020/1197 of 30 July 2020 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council on European business statistics repealing 10 legal acts in the field of business statistics
- Commission Regulation (EU) 2019/1933 of 6 November 2019 establishing the ‘Prodcom list’ of industrial products referred to in Council Regulation (EEC) No 3924/91

Reporting units

Reporting units are kind of activity units (KAU) belonging to industrial enterprises. For some large KAUs, local units (LU) are reporting.

Periodicity

The periodicity is annual.

Time of availability of results

The first preliminary data are published six months after the close of the reference period. The final results are published 16 months after the close of the reference period.

Sampling frame

The survey makes use of two frames, both based on Statistics Sweden’s business register. The first is created from a frozen version of the business register in November the reference year. All enterprises within the non-financial business or household sectors (using the Standard Classification by Institutional Sector, INSEKT) and a primary activity in NACE 05-33 with a turnover exceeding 75 million SEK or more than 20 employees are included. For firms in NACE 08, 20.150, 23.5, 23.6, 23.7 and 23.9 a lower employee cut-off of 10 is used.

A small number of LUs classified within NACE 05-33 belonging to an enterprise with a NACE code not in 05-33 are also included in the frame. All the enterprises above the threshold are surveyed.

A second frame is created from a frozen version of the business register in May the following year. This includes all firms within the non-financial business or household sectors with primary activity in NACE 05-33 that have not been included in the first. This second frame thus cover all industrial firms with any activity during the reference year that fall under the turnover and employee cut-offs of the first.

While all units in the first frame is surveyed output for the second “sub cut-of” population is taken from turnover in Tax Agency standardized accounting statements (SRU). Together the two frames cover the whole target population of units in the non-financial business or household sectors with a primary activity in NACE 05-33 that have been active in the reference year.

Taken together the two frames include all units in covered sectors and industries that have been active in the measured calendar year.

Compulsory or voluntary?

Supply of data on industrial goods production is compulsory under the following statutory provisions: Official Statistics Act (SFS 2001: 99), Official Statistics Ordinance (SFS 2001:100) and Statistics Sweden SCB's regulation (SCB-FS 2021:33). The obligation to provide information applies according to the Official Statistics Act (2001:99), the Official Statistics Ordinance (2001:100) and Statistics Sweden's regulation (SCB-FS 2021:33) on companies' obligation to provide information to statistics on industrial production.

Main features of survey methodology

IVP is collected by web questionnaire. The statistics are intended to provide information annually on the distribution of goods in Swedish industrial production. The production of both goods and industrial services is covered by the statistics.

The following are included in industrial services:

- Repairs and maintenance for third parties
- Assembly and installation on site for third parties
- Other processing of products, e.g. bleaching, dyeing, grinding, printing, gilding, etching, painting and varnishing.

The statistics must provide a high level of detail and indicate quantities produced during the year and their market value. Because of the lack of scope for respondents to report production values, data are collected on products sold during the year, i.e. also products manufactured prior to the reference year in question. Reporting for periods, which do not coincide with a calendar year, a "split" accounting year is accepted.

For recording at detailed goods level, enterprises report according to CN used in the EU trade statistics. In order to satisfy the PRODCOM requirements, all codes can be aggregated to the PRODCOM list of products. For national purposes, subdivisions have been introduced to the eight-digit code in accordance with the CN for goods and supplements to the industrial services contained in the PRODCOM list.

Data must in principle refer to the calendar year. A number of enterprises, however, have an accounting year, which covers a different period. This is accepted in the statistics.

Population size

The population in IVP consists of enterprises within NACE 05-33 who were active during the reference year. A small number of LUs classified within NACE 05-33 belonging to an enterprise with a primary NACE code not in 05-33 is also include in the population. The population size in 2021 was about 46 000 enterprises.

Sample size

All the enterprises above the threshold (read the section on sampling frame) are included in the sample. The sample size is about 3700 enterprises divided up in about 3900 surveyed KAUs and local KAUs.

Survey response rate

The unweight non-response is approximately 13 percent and weighted non-response, where the company's production value is taken into account is approximately 7 percent.

Method used to impute for missing data

Item non-response can occur in the survey. That means that information is missing for the quantity variable for one or several CN codes for an enterprise. The variable sales value is not accepted as a missing data in the data collection. Missing quantities are imputed by a unit value approach. Unit value for a CN code is calculated from different sources and used hierarchically. The first source is unit value from recent years for an individual enterprise. The second source is unit value calculated from enterprises in IVP which has reported production on the specific CN code. The third source is unit value from enterprises in the foreign trade statistics.

No non-response compensation is done if an enterprise has missed to report one or several CN codes (because it is difficult to identify this type of non-response).

For unit non-response, which means that an enterprise has not reported any information at all, the imputation is done at the enterprise level. For each enterprise the following three steps are executed. First step is to impute the enterprises total sales value (derived from administrative registers). The second step is to distribute the total sales value on CN codes, by using a distribution key (containing "representative goods" based on some characteristics for the specific enterprise). The third step is to impute the quantity variable.

Variable used for grossing-up to the population

For the group of enterprises below the threshold (cut-off population) a mass imputation is done. That means that for each enterprise a full imputation is executed in the same way as for the unit non-response (read the section Method used to impute for missing data). The parameters, for example total sales value for a PRODCOM code, are then estimated by simply summing sales value over all the surveyed enterprises (above the threshold) and the enterprises belonging to the cut-off population. Therefore, the final estimates cover the whole population.

Sample coverage, as per cent in terms of variable used for grossing-up

The surveyed enterprises cover about 90 percent of the total sales value in the population. However, the coverage rate varies between different NACE's and different PRODCOM codes.

Main variables collected

Sales values and quantities (totals produced and delivered) per type of CN code are collected. Other collected variables are sales from trade and other activities per industry.

Around 3500 codes are recorded in accordance with the Combined Nomenclature (which consist of 10 300 codes) plus about 500 industrial services based on the PRODCOM list.

A total of about 2 200 codes of products and industrial services are recorded in Sweden in accordance with the PRODCOM list (which consist of 3 900 codes).

Further adjustments made to the survey data

No further adjustments are made to the survey data in order to estimate the parameters than those described above.

Financial enterprises, annual financial data (2021)

Link to surveys undertaken at the European level

There is no EU regulation.

The agency responsible for the statistics is the Financial Supervisory Authority.

The statistics are produced by Statistics Sweden.

Reporting units

The inquiry covers institutions listed in the inspection register of the Financial Supervisory Authority. In addition to these, investment corporations and mutual funds are also covered by the inquiry. Units recorded are:

- Credit institutions and securities brokerage companies according to the definition in Chapter 1 of the Act (1995:1559) on annual reports in credit institutions and mutual funds
- Subsidiaries of Swedish credit institutions abroad
- Groups in which a credit institution or a mutual fund is the parent company
- Groups in which a financial holding corporation in accordance with the definition in Chapter 1 of the Act (1995:1559) on annual reports in credit institutions and mutual funds is the parent company
- Foreign-owned banking subsidiaries
- Mutual funds
- Investment corporations

Periodicity

Annual.

Time of availability of results

The questionnaire with preliminary results is available approximately four months after the close of the year and the final results nine months after the close of the year. They are published in Statistics Sweden's statistical database and financial enterprises, annual financial data.

Sampling frame

The sampling frame used in the inquiry is the Financial Supervisory Authority's register of financial enterprises supplemented by investment enterprises from Statistics Sweden's Business register.

Survey is compulsory or voluntary?

The inquiry and supply of data is compulsory under the statutory provision FFFS 2014:14 for the Financial Supervisory Authority on annual and quarterly financial statements.

Main features of survey methodology

The statistical source for the annual production calculations for financial services, excluding ancillary services and insurance services, are the annual accounts statistics collected by Statistics Sweden. The questionnaire is drawn up by the Financial Supervisory Authority, and all financial corporations under supervision are to be covered by the inquiry. Reporting takes place with profit and loss account and balance sheet data set out separately for banks, credit market corporations, securities brokerage companies and mutual funds. In addition, the statistics also cover investment corporations, which are

not subject to supervision. The purpose of the statistics is to provide information on the financial position of the institutions and the results of their activity in different areas in accordance with their annual accounts.

The inquiry is a full census and the data are collected via the so-called annual overview which is sent out to the institutions at the end of each year. The contents of the inquiry are based on the Annual Reports Act for credit institutions and securities brokerage companies (1995:1559) and statutory provisions of the Financial Supervisory Authority (FFFS 2008:25, and FFFS 2017:21) for annual overviews for credit institutions and securities brokerage companies.

For investment corporations, there is a special form which is based on the Annual Reports Act, and for mutual funds, a simplified form is used for certain profit and loss account data (based on the FFFS 2008:25).

Incoming data are registered and scrutinised and contact is made when necessary with the respondent.

Population size

Approximately 450 units Swedish-registered financial entities according to the 2021 quality declaration.

Survey response rate

There is in principle no non-response.

Main variables collected

The main variables requested in the inquiry are:

PROFIT AND LOSS ACCOUNT

Interest income

Leasing income

Interest costs

Dividends received

Commission income

Commission costs

Net result of financial transactions

Other operating income

Total operating income

General administration costs

Writing-off and writing-down of tangible and intangible fixed assets

Other operating costs

Total costs before credit losses

Result before credit losses

Credit losses net

Change in value on acquisition of property

Writing-down of financial assets

Writing-back of financial assets

Operating result

Extraordinary income

Extraordinary costs

Appropriations

Taxes

Result for the year

BALANCE SHEET ASSETS

Cash and credit with central banks

Government debt instruments eligible to serve as security

Loans to the public

Bonds and other interest-bearing securities

Shareholdings (not included in the next two rows)

Shareholdings in associated companies

Shareholdings in affiliated companies

Intangible assets

Tangible assets

Other assets

Prepaid expenses and accrued income

Total assets

DEBTS, PROVISIONS AND SHAREHOLDERS' EQUITY

Debts to credit institutions

Deposits and borrowings from the public

Securities issued etc.

Other debts

Costs accrued and prepaid income

Provisions

Subordinate debts

Untaxed reserves

Result for the year

Total debts, provisions and shareholders' equity

Profit and loss accounts relate to the calendar year and balance sheets relate to the position as of the 31st of December, with the exception of institutions applying a split accounting year. Such institutions report data for the last accounting year ending before that date.

Insurance companies, annual financial data (2021)

Link to surveys undertaken at the European level

EU regulation exists; the legislation applicable is: Directive 91/674/EEC and Regulations (EC) 1225/1999, 1226/1999, 0101/2007, 2015/35. There are possibilities for international comparisons. The statistics are produced by the Financial Supervisory Authority.

Reporting units

Units are grouped by type of enterprise: national Swedish non-life and life insurance companies (including unit link companies) and larger local non-life insurance companies (with a balance sheet total over 1,000 base amounts two years in a row). PPM (premium pension funds) are not included in the compilation of data.

Periodicity

Annual.

Time of availability of results

The data are published eight months after the close of the year.

Sampling frame

All insurance enterprises that are obliged to report in accordance with the Insurance Business Act (1982:713) and as such the sampling frame is the inspection register of the Financial Supervisory Authority is used as a sampling frame. A smaller number of enterprises are excluded from this frame but this is deemed inconsequential for the completeness of the statistics.

Survey is compulsory or voluntary?

Supply of data is compulsory under Chapter 19, Section 3, of the Insurance Business Act (1982:713), Section 49 of the Insurance Business Ordinance (1982:790) and the Regulations on annual reports of insurance corporations (FFFS 2015:13).

Main features of survey methodology

The statistics cover insurance companies and pension institutions, excluding pension foundation and benevolent societies. PPM (premium pension funds) are not included in the compilation of data. Individual pension savings (IPS) are not included in these statistics and are published as part of Financial Market Statistics.

The data are based on the companies' annual reports. The statistics contain mainly data on the companies' profit and loss accounts and balance sheets, both at institution level and at overall level. The profit and loss account records are also broken down by branches of insurance.

Consistency and time series checks are carried out in each questionnaire. In some cases, checks are also made of the reasonableness of the responses and against other questionnaires. Checks are also carried out on the delivered statistics. Data providers are contacted where necessary. Obvious errors such as a large sum being placed in the wrong row in the questionnaire are usually detected during such checks.

Population size

During 2021, there were 28 life insurance companies 111 non-life insurance companies national companies.

Sample size

The inquiry is a full census and has a very high level of reliability.

Survey response rate

The companies recorded comprise 100% of the institutions listed above. The data are used in the supervisory activities of the Financial Supervisory Authority. The data are scrutinised by auditors.

Main variables collected

Profit and loss account and balance sheet data for groups of insurance companies. For each branch of insurance there is information on premium income, capital yield, unrealised gains and losses, insurance settlements, bonuses and rebates, operating costs etc.

Examples of variables presented are premium incomes, compensatory payments, allocations to reserves etc.

Riksbank's (Sweden's central bank's) Financial Market Statistics (2021)

Link to surveys undertaken at the European level

Financial market statistics (FMR) regarding monetary financial institutions are regulated by Council Regulation (EC) No 2533/98 of 23 November 1998 - concerning the collection of statistical information by the European Central Bank (ECB). This is specified in more detail in the guidelines (EU) 2021/835 and in the regulation (EU) 2021/379 concerning the balance sheet of the monetary financial institutions sector.

The agency responsible for the statistics is the Riksbank (Sweden's central bank).

The statistics are produced by Statistics Sweden, the Unit for Financial Market Statistics.

Reporting units

Data on lending from housing credit institutions have been collected by the Riksbank from 1989 until March of 2003 when Statistics Sweden took over on behalf of the Riksbank.

Data on certificates programmes on the Swedish market have been collected since December of 1985, and the issuing of bonds and debenture loans since January of 1996. As of March 2003, Statistics Sweden took over on behalf of the Riksbank.

Data on individual pension savings (RIPS) have been collected since 1994 and are regulated in the Individual Pension Savings Act (1993:931). RIPS is a long-term saving with the right to tax deductions. The statistics have been produced by the Riksbank until the reporting in March of 2003 when Statistics Sweden took over on behalf of the Riksbank.

Certain time series in the reporting of Foreign assets and liabilities (RUTS) have been collected from banks since 1978. The statistics were developed during the 1980s with breakdown by countries and currencies. These statistics have been produced by the Riksbank until the reporting for March 2003 when Statistics Sweden took over on behalf of the Riksbank.

Derivatives statistics are collected every six months from the four large banks on a consolidated level, i.e. including subsidiaries and branches abroad, on behalf of the Bank of International Settlements (BIS).

In addition to the above, Statistics Sweden collects some data from or via the following sources:

- Data on the Swedish national debt are collected from the National Debt Office.
- The Riksbank's assets and liabilities are collected from the Riksbank, as well as data on the spot exchange flows at the end of the month. The foreign holdings of treasury bills are also collected from the Riksbank.
- From Statistics Sweden, the total placements of life insurance companies, AP funds and the Swedish Pensions Agency in money market instruments issued by the Swedish government in total currency are collected.

Periodicity

The reference time for the balance values is the last calendar day in the month, quarter or year. The reference time for the change value is the entire period from the previous to the current reference time.

Time of availability of results

Derivatives statistics are collected every six months and should be received by Statistics Sweden roughly 45 days after the end of December and end of June. The production time at Statistics Sweden

is generally between eight to ten workdays. A smaller number of statistical deliveries have a longer production time of around 20 workdays.

The monthly balance and issue statistics should be received by the ECB at the latest on the 17th bank day after the end of the reference period. Other deliveries and publication on Statistics Sweden's website take place on the 19th bank day after the end of the reference period.

Quarterly data regarding balance statistics should be received by the ECB at the latest on the 28th bank day after the end of the reference period.

Sampling frame

The product FMR has a number of populations. The populations largely overlap each other but there are some differences. The main populations are MFIs, RUTS and RIPS but all the populations are presented in more detail below.

The MFI population consists of Swedish¹⁰⁵ monetary financial institutions (MFI) and their branches abroad. MFIs are defined as financial enterprises whose business it is to receive deposits and/or close substitutes for deposits from parties other than monetary financial institutions, and to grant credits or invest in securities on their own account. The following are considered MFIs: central banks (sector¹⁰⁶ 121000), banks (sector 122100), banking branches in Sweden of foreign banks (sector 122200), housing credit institutions (sector 122300), other monetary credit market corporations (sector 122400), monetary security and derivative dealers (sector 122500), other deposit-taking monetary financial institutions (sector 122900) and Money Market Funds (MMF) (sector 123000).

In the publication of data the MFI population usually refers to MFI excluding the Riksbank¹⁰⁷.

For MMF sector data from the survey Investment fund, assets and liabilities (FM0403) are used (where the Swedish Financial Supervisory Authority is the responsibility authority).

The Riksbank provides a list of the institutions which are considered part of the MFI population.

The RIPS population includes all institutions which have special permission from the Financial Supervisory Authority for carrying out pension savings operations (IPS) in Sweden. The Financial Supervisory Authority compiles a list of all institutions with such permission and forwards this to Statistics Sweden.

The population for issue statistics consists of all MFI institutions which have permission from the Financial Supervisory Authority to issue securities on the Swedish market on their own or others' account. Data on permits is available on the website of the Financial Supervisory Authority.

The RUTS population consists of Swedish-owned banks (including subsidiaries and branches operating abroad) and foreign-owned banks operating in Sweden with considerable activity with other countries. The RUTS population is established on the basis of the institutions in sector 122100 banks (and their branches abroad) and sector 122200 banking branches in Sweden of foreign banks, with considerable activity with foreign countries or have significant domestic position in foreign currencies. The population is reviewed once a year regarding the status on 30 September.

¹⁰⁵ Swedish means that the institution is operating within Sweden's borders.

¹⁰⁶ The sector divisions are according to INSEKT 2014, the Standard Classification by Institutional Sector, 2014.

¹⁰⁷ That which is here called MFI refers therefore primarily to that which is usually called OMFI (Other Monetary Financial Institutions), i.e. MFI excluding the central bank.

The population for Over The Counter (OTC) derivatives is made up of the largest domestically-owned institutions on the derivatives market, which in Sweden consists of the four Swedish-owned large banks. Reporting is made on a consolidated level, i.e. including subsidiaries and branches abroad.

Each institution (including branches to banks abroad) is a legal entity with the exception of the money market funds which are considered a tax object.

Balance and issue statistics are reported on a monthly basis. The statistics are based on data taken from the MFI form regulated by the Riksbank's statutes RBFS 2018:1, while Securities statistics are regulated in RBFS 2014:1. The MFI form is submitted on a monthly basis by the institutions which together have a balance sheet total amounting to 95 percent of the balance sheet total of all institutions which are obligated to report. The other institutions instead provide a statistical report for every quarter which Statistics Sweden uses as a basis for imputations in the in-between months. The delimitation of the 95 percent (monthly), 4.5 percent (quarterly) and 0.5 percent (yearly) is made for every calendar year, based on the circumstances on 30 September of the previous year.

RIPS and RUTS statistics are reported on a quarterly basis. RIPS is reported by pension savings institutions, i.e. institutions which have permission from the Financial Supervisory Authority to carry out pension savings operations, such as banks, securities companies, companies with permission to carry out securities operations and foreign securities companies with branches in Sweden. RUTS are reported by Swedish-owned banks (including subsidiaries and branches operating abroad) and foreign-owned banks operating in Sweden with considerable activity with other countries or significant local position in foreign currencies. The RUTS population is reviewed in September every year. The reporting of RIPS and RUTS is regulated by RBFS 2018:1.

Survey is compulsory or voluntary?

There is an obligation to report information according to Chapter 6 §9 of the Sveriges Riksbank Act (1988:1385).

Main features of survey methodology

The Riksbank has for a long-time produced statistics on Swedish MFIs and the financial markets, called financial market statistics. Data are collected primarily on a monthly basis. Some data are only collected quarterly or every six months.

The statistics provide a picture of the overall structure of

MFIs' assets and liabilities

The development of the money supply and credit flows (deposits and lending)

The securities market

Country and currency distribution of foreign assets and liabilities

OTC derivatives

All statistics are collected electronically via the FMBöP-system. The statistics are quick statistics, which means that Statistics Sweden can revise values afterwards. The statistics do not contain any balance sheet allocations, which means that the data are not completely comparable with the statistics based on data submitted after the accounts are balanced.

The statistics are primarily presented on the basis of a balance sheet structure containing assets and liabilities, which are broken down into more or less detailed levels and counterparts. Furthermore, individual pension savings, the derivatives market, foreign assets and liabilities and the securities market are reported separately.

Part (in many cases the same as the reporting institution) are presented either using the whole population as one group or as one or several particularly interesting institution groups within the population, such as banks, housing credit institutions and finance companies. Regarding the MFI population, the statistics are presented either including or excluding the Swedish institutions' branches abroad, depending on the statistical delivery.

The counterparts are divided up per country or country group and per institutional sector/sub-sector. The divisions follow the Standard Classification by Institutional Sector (INSEKT), with the difference that the foreign counterparts are specified into different sectors. The usual country breakdown is Sweden, EMU countries, other EU countries and rest of the world. The usual sector breakdown is MFI with sub-sectors and Swedish non-MFI in which households and non-financial corporations are included for example.

Deposits and lending are two very central items in the statistics and, for example, lending to Swedish households can be mentioned as one of the most important study domains. Lending to households is presented as stock data at the end of the respective month. Specified parts being banks, housing credit institutions and finance companies.

The money supply (M0 and M3) are also very central reporting measures. M0 is defined as the general public's holdings of notes and coins (Swedish kronor) and is calculated based on the Riksbank's total amount of notes and coins in circulation minus the MFIs' holdings of notes and coins. M3 is defined as the general public's holdings of notes and coins (M0), the Swedish general public's deposits in MFI (all fixation periods excluding IPS and in all currencies) and the Swedish general public's holdings in certificates of deposit, denominated in Swedish kronor. MFI deposits from the Swedish general public are presented specified into households, NPISH, financial corporation (not MFI), local government and non-financial corporations. Shares of MMF:s, repos and debt securities issued by MFI:s, (< 2 years and held by Swedish non-bank public) are also presented separately.

Consistency and time series checks are carried out in each questionnaire. In some cases, checks are also made of the reasonableness of the responses and against other questionnaires. Checks are also carried out on the delivered statistics. Data providers are contacted where necessary. Obvious errors such as a large sum being placed in the wrong row in the questionnaire are usually detected during such checks. However, errors due to the data provider misunderstanding what data should be reported under each item may not be detected.

Deliveries of statistics to the ECB and BIS are also checked with regard to time series, consistency and reasonableness by the recipient and this is communicated back to Statistics Sweden.

These statistics do not include balance sheet allocations. They are therefore not completely comparable with other statistics based on balance sheets, such as financial enterprises, annual accounting (FM0402).

Population size

Totally the population contain approximately 200 institutions.

Sample size

The coverage is very nearly total. There is a slight risk for undercoverage for newly-established institutions and foreign affiliates that have not started reporting at the first reporting time. It could alternatively be the case that the Swedish parent company has not informed Statistics Sweden that new branches or subsidiaries have been started abroad.

The main form for the statistics, the MFI questionnaire, is collected monthly with the exception of the smallest institutions, which together have a balance sheet total amounting to a maximum of 5 percent

of the balance sheet total of all the institutions that are obligated to provide data. These institutions submit the questionnaire on a quarterly basis.

When the first round of results is delivered to customers, non-response can amount to 1-3 institutions of a total of around 200 institutions. These usually submit data within a month or so.

The statistics consist of a number of total surveys, which means that sample errors do not occur. However, it is very difficult to know whether all data are correctly filled in, despite several checks being carried out. For example, a submitted balance sheet can appear correct even if the figures reported are not correctly filled in. This is also the case for gross changes during the period, etc. To minimise reporting errors, the Riksbank's regulations and general guidelines (RBFS) and supplementary instructions for each form have been developed in consultation with the reporting institutions. Questionnaires and instructions are continuously adapted to capture institutional changes and changes in the study domains. This work is also carried out in consultation with the reporting institutions.

Method used for to impute for missing data

When the first round of results is delivered to customers, non-response can amount to 1-3 institutions of a total of around 200 institutions. These usually submit data within a month or so. In cases where an institution does not submit the MFI report in time for delivery, the balance value is imputed from the previous month or quarter. This is the same as if no further financial events have occurred. For any non-response of other questionnaires, no non-response measures are taken. In conclusion, object non-response is considered to be negligible, as it is far too small to affect the results.

The partial non-response is not known. A submitted balance sheet always matches but it is still not possible to know whether the distribution of items has been correctly done. In certain cases, it is suspected that a large value has been placed under only a few items, for example the item "Other", instead of being specified into the various financial objects.

The main form for the statistics, the MFI questionnaire, is collected monthly with the exception of the smallest institutions, which together have a balance sheet total amounting to a maximum of 5 percent of the balance sheet total of all the institutions that are obligated to provide data. These institutions submit the questionnaire on a quarterly basis. For these institutions, the balance value is imputed for the in-between months from the previous quarter. This means that the months January, February, April, May, July, August, October and November are calculated as if no further financial events have occurred for these institutions. The 5 percent group's share of the total balance sheet is however so small that this estimation is not considered to significantly changing the results of the survey.

From December 2003 onwards, data on lending to the counterpart sector households by purpose have been compiled and delivered. However, this variable is not collected. The purpose is instead approximated based on which collateral the loan has in combination with the sectors that the lender and the counterpart belong to.

Main variables collected

All statistical data which an institution should report to Statistics Sweden are identified using 14 dimension variables:

- 1) Account: (balance value or changes)
- 2) Account type: (states page on balance sheet)
- 3) Account item: (states type of asset or liability)
- 4) Duration (type of time-related conditions)
- 5) Purpose: (for lending and deposits and shares)
- 6) Collateral (underlying asset)

- 7) Country (where counterpart is located)
- 8) Counterpart (type of sector of other party)
- 9) Currency
- 10) Valuation (valuation type for object)
- 11) Sort (unit such as number, sum in kronor or such like)
- 12) Data provider
- 13) Year
- 14) Period

Every dimension variable has a value set with at least two actual values (members). The dimension variables 1-11 can also contain the value "X" which means "not specified". In the forms submitted by the data providers, the variable code is not visible; they fill in cells based on named columns and rows.

10.2 Statistical surveys and other data sources used for the income approach

Structural Business Statistics (SBS)

See section 10.1

Basis of central government net lending, UFS

See section 10.3

Annual accounts for municipalities and county councils

See section 10.3

Financial enterprises, annual financial data

See section 10.1

Gross pay based on administrative sources (2021)

Link to inquiries conducted at European level

The statistics are produced by Statistics Sweden in the publication LSUM (Registerbaserad lönesummestatistik). The statistics show aggregate gross wages, preliminary income tax, and which social benefits have been paid. As of yet, there is no EU regulation directly affecting statistics from the gross pay based on administrative sources (LSUM)

Reporting units

The reporting units includes all registered employers in the Tax Agency. Information regarding employer PAYE returns (Arbetsgivardeklarationer, AG) is transferred every month to Statistics Sweden with a one-month delay. AG consists of individual-level employer PAYE returns (AGI) and simplified employer PAYE returns (fAgd). When data for a full year is available, a summarized annual version is created. This, together with the annual income statements (Kontrolluppgifter, KU), is used in the production of LSUM.

Periodicity

Calendar year.

Time of availability of results

The AGI/KU register is produced and published annually. A preliminary version is brought out in March and the final version in August the year after the income year.

Sampling frame

The frame population, which coincides with the target population, for the register-based wage sum statistics consists of all PAYE returns (AG) and income statements (KU) submitted to the Tax Agency by employers, as well as AG and KU related to payments from public and private insurance systems.

Compulsory or voluntary?

Anyone who is required to make tax deductions or pay employer contributions must submit an employer declaration as referred to in the Tax Returns and Income Statements Act (2011:1244). Income not reported under these obligations is not included in the final data. Income statements must be supplied for any person who has received a wage or salary, fee, other compensation or benefit which constitutes taxable income from employment as referred to in the Tax Returns and Income

Statements Act (2011:1244). An income statement must be supplied if the total value of remuneration and benefits to a person is SEK 1000 or more for the whole year. If the remuneration/benefits were paid by a natural person or the Swedish estate of a deceased person and are not charged to a business activity, an income statement need not be supplied where the total remuneration has a value of less than SEK 1000 for the whole year. The income statements also include identification numbers, which is only included to enable Statistics Sweden to divide the data into different economic activities.

Main features of survey methodology

The gross pay based on administrative sources (LSUM) is used as a basis for the production of wages and salary statistics. As the data are produced from full census material, recording for small groups, e.g. municipalities, is possible. Recording can also be undertaken according to sectors and industries. Total payroll can be calculated on the basis of both the municipality of residence and the municipality of the establishment.

Recording is undertaken according to:

- Sector initiating payment
- Industry
- Compensation code
- County of the working site
- Sex

Since the statistics are essentially registered at the level of the individual, many other recording groups can be specified. The income statement statistics have a dual purpose: direct use and indirect use for other statistical products.

The purpose of direct use is, on the one hand, to provide a picture of the distribution of taxable wages and salaries and social contributions and, on the other hand, to exploit the statistics on employers' payroll totals for economic evaluation and planning. The purpose of indirect use is to draw upon the register in order to supplement the variable content of a number of statistical products within Statistics Sweden (income statistics, the standard of living inquiry, the national accounts and regional accounts).

The AG/KU register is the main source for the production of the annual regional employment statistics by reason of the facilities it offers for linking together individual data with enterprise data by way of an individual's personal identification number and the corporate identification number/establishment number of the enterprise. The direct use of the AG/KU register exploits the possibilities of the register for the recording of amounts of taxable income and transfers to individuals. These statistics are used extensively by the national account statistics, the regional accounts and by local authorities to calculate their tax base by way of the total payroll statistics.

Population size

The total population for the 2021 AG/KU register were about 10 000 000 for the chosen year.

Sample size

Full census. The reliability of the statistics depends on whether the income statement data are correct and whether Statistics Sweden receives all the administrative data, which are supplied to the Tax Agency. Regarding the correctness of the data it can be said that reliance is usually on the employers' wage and salary accounting systems and personnel records, which form an important basis for the income assessment and taxation of employees. It is thus possible to assume that the data are checked by the employer before they are presented to the recipient and recorded by the Tax Agency.

Survey response rate

Full census.

Method used to impute for missing data

Various processing routines are applied, amongst others plausibility checks of amount fields. The small number of administrative sources carrying implausible amounts is removed. This is not thought to affect the reliability of the statistics overall. No changes are made to the original data, since the main responsibility for the register rests with the Tax Agency. After the first preliminary version has been produced, supplementing work is carried out by Statistics Sweden. Multiple-establishment enterprises, which have not entered an establishment identification number on the administrative sources, receive a questionnaire in which they are asked to fill in the missing establishment number. This is done in order to facilitate the linking of establishments with persons for those persons who received income statements.

Variable used to impute missing data

No variable imputed since it is a full census.

Variable used for grossing-up to the population

No variable used

Sample coverage, as % in terms of variable used for grossing-up

100%

Main variables collected

The basis for the variables in the AGI/KU register is formed by employer PAYE return (AG) and the income statements (KU), which Statistics Sweden receives from the Tax Agency.

These can be viewed as falling into two categories:

- Administrative sources from employers
- Administrative sources from entities initiating social compensation payments.

The register of administrative data from employers contains data supplied by AGI (monthly employer PAYE return on individual level, summed up yearly), fAGD (simplified employer PAYE return, summed up yearly), KU10 (income statement from an employer), KU13 (income statement – special income record for persons resident abroad), KU14 (special income record) and KU16 (income statement for seafaring income). KU17 (income statement – special income record for persons resident abroad with seafaring income).

The data include personal identification number, corporate and establishment identification numbers, gross cash pay, preliminary “A” tax, various benefits and compensations etc. These variables are then supplemented with data on the institutional sector code of the enterprise making the payment and the industry of the enterprise and establishment from the Statistical business register (SBR). The data are also summed for enterprises and establishments.

The register of administrative data from institutions initiating taxable social compensation payments contains the data presented on AGI (monthly employer PAYE return on individual level, summed up yearly), KU18 (income statement from institutions initiating pension and insurance payments) or KU19 (income statement from institutions initiating pension and insurance payments with special income record for persons resident abroad). The main variables in this case are personal identification

number, amount and compensation code (indicates what type of compensation is applicable). The payroll statistics are recorded in SEK.

An income statement must be supplied to anyone who has received wages, salaries, fees, emoluments or other forms of compensation or benefits, which constitute taxable income for work performed. Even if there is no direct employer-employee relationship, an income statement must be supplied by a person who issues payment for work performed where there is a community of interest between the person issuing the payment and the employer. For example, a staff foundation which is linked to an enterprise and supplies some form of taxable benefit – e.g. free holiday accommodation – to the employees of the enterprise must issue an income statement. An income statement (KU) must be supplied if the total value of remuneration and benefits to a person is SEK 1000 or more for the whole year. There is however one exemption to this rule. If the remuneration/benefits were paid by a natural person or the Swedish estate of a deceased person and are not charged to a business activity, an income statement need not be supplied where the total remuneration etc. has a value of less than SEK 1000 for the whole year.

For wages and salaries or other forms of compensation (benefits) paid, a strict cash principle applies as wages and salaries are paid during the period in which the work is done. Sick-pay which is paid by the employer is counted as cash remuneration on the income statement and the classification of sick-pay is accepted in the national accounts. The income statement is sent to the income recipient and to the Swedish Tax Agency for filing at the latest on 31 January of the year following the income year in question. Preliminary results without forward adjustment can be obtained from March. Final results are normally available in September. The gross pay data based on income statements include basic wages and salaries; enhanced payments; allowances; bonuses; holiday pay; savings schemes; and exceptional payment when leaving companies. The data does not include expenditure necessary for the production process; social insurance benefit; taxes or payment to outworkers.

10.3 Statistical surveys and other data sources used for the expenditure approach

Household consumption statistics (HCS) 2021

Introduction

During the past 10–15 years, Statistics Sweden has worked to shed light on its data sources. To an increasing extent, direct collection from companies and households has been replaced with administrative data as a basis for the statistics. This has led to manual parts being partially eliminated and the automated ones gaining more ground. An example is the estimation of the travel currency in Foreign Trade with services that now rely on payment card data. Another example is the Consumer Price Index (CPI), which has replaced traditional price collection with cash register data for more than a third of the shopping basket. Today, for example, price collection for food consumption is based entirely on cash register data. The fact that Sweden's economy and more specifically payments are highly digitized opens the possibility of also measuring household consumption with the help of such new data sources.

The calculations of household consumption in the National Accounts (NA) have not been revised for several years. The compilation are based on a variety of data sources and there has been a need to improve the quality and increase the level of detail.

This documentation describes the new Household consumption statistics which form the basis for the calculations of household consumption in NA. The statistics is also used for the CPI weights.

Link to surveys undertaken at the European level

There are no link to any statistics covered at EU level. But one of the main sources is the Structural business statistics (SBS) which is covered by “Council Regulation No 2019/2152 concerning European business statistics” and has therefore been adapted to that regulation. The statistics are produced by Statistics Sweden. The Swedish SBS also include entertainment and recreation R and other service activities section S to facilitate the needs of NA.

Identification and investigation of possible data sources

The survey about household consumption requires information about:

- What is bought in Sweden and how much?
- Has the purchase been made by an individual or company?

What is bought in Sweden and how much? - Structural business statistics

The main source for household consumption is the Structural Business statistics. SBS has information on sales from all companies in Sweden. The statistics are divided into both products and activities. For the purpose (expenditure item) food and beverages, data from the survey Food sales statistics are used (See section 10.3 Food sales). Altogether, these sources provide information on 86 of the 132 purposes that NA counts on and account for about 54 percent of the total value of household consumption.¹⁰⁸

¹⁰⁸For the years 2021 and 2022, the collected data was according to the COICOP-1999 and the result redistributed to the COICOP-2018. From the year 2023 collected data is according to COICOP 2018. For year 2021, information on 86 of the 132 purposes according to the COICOP-1999 came from new sources. 132 purposes are the total number of all COICOPs that we used for mapping COICOP-1999 to COICOP-2018

Facts about the statistics

The Structural Business statistics (SBS) is an annual survey. The statistics contain business financial data such as number of companies and number of employees, net turnover, production and processing value, assets, gross and net investments, revenue and cost data and operating profit. The statistics also contain a breakdown of net sales by product group and activity.

The food sales statistics show how much food and beverages are sold in the Swedish trade in total and broken down by detailed product group and activity.

Private consumption is reported according to 12 main groups and 140 subgroups of products according to COICOP (Classification of Individual Consumption by Purpose). COICOP is an international classification of household consumption by purpose. Each subgroup in turn consists of one or more product groups.

For the remaining 47 purposes, other sources are used. Some are calculated via models, while data for other purposes is obtained from other sources. Model calculations are made for, among other things, housing costs, energy consumption, healthcare, financial services, and illegal consumption. In annex 2 it is described which source that is used for different areas.

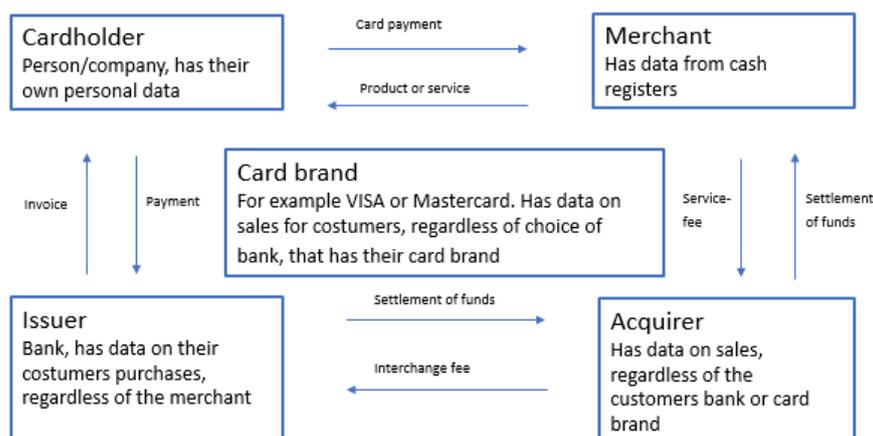
For NA and CPI, the information on the 140 purposes is not enough. To fulfill all the requirements NA and CPI have, the consumption also needs to

be distributed among 425 products. To solve this, there is still a need for more information. From a private company, Statistics Sweden has purchased detailed data with information on purchases in home electronics and white goods. This has led to more parts of household consumption being reported at a detailed level.

Transaction data provides information about who made the purchase

To split sales from SBS into household consumption and other sales, information is needed on who has made the purchase. Here, the project has relied on transaction data from banks and card issuers. In those statistics, you can see whether the purchase is registered on a private card or company card. This information has been used to split sales.

Picture 1: Several actors involved in card payment transactions



The picture above illustrates the parties involved in a bank/credit card payment. The card issuer (a bank) has access to its customers' purchases made via direct card payments. The credit card network (VISA/Mastercard) has information about its customers' purchases paid by credit card, regardless of who is the card issuer.

Via the card issuers (banks), Statistics Sweden will be able to capture transactions worth around SEK 1,000 billion annually. In addition to being able to distinguish between purchases made by households and other actors such as companies, information is also collected on the activity in which the purchase was made.

Another useful data source is data from card payment terminals (card acquirers). They capture all payments, i.e. purchases in Swedish stores and companies, which are made regardless of the card issuer. This data source also has information on whether a privately owned card or a company card was used and in which industry the product was purchased. The number of terminal suppliers is also small, which facilitates collection. Statistics Sweden has collected information from four card issuers. The statistics also make it possible to separately account for the consumption of foreign visitors in Sweden. In 2021, foreign consumption in Sweden amounted to SEK 55.4 billion according to transaction data in this source. The total transaction value from card acquirers added up to SEK 1.064 billion.

Since the fall of 2022, there has been an obligation to provide information for both card issuers and card acquirers, and the new data sources thus provide good coverage in most industries.

Cash payments are small

The division of sales into household and other consumption is done with transaction data. However, not all purchases are made with a card. Cash is also used. Therefore, an estimate of the use of cash as a means of payment has been made. Cash payments are captured in SBS but not in transaction data.

According to the Central bank's survey "This is how the Swedes pay in 2019", the use of cash decreased from 39 percent in 2010 to 13 percent in 2018 of all transactions. The proportion is estimated to have fallen further until today.

A good estimate for assessing the extent of cash payments in retail and other industries is ATM withdrawals. 65 million withdrawals were made from Swedish ATMs in 2020 to a value of SEK 84 billion. The outstanding number of notes and coins was SEK 63 billion in 2020. The turnover rate of the cash amount can be estimated here as $84/63 = 1.35$. Due to uncertainties in the turnover rate, it has been rounded up to 2. A turnover rate of 2 gives an annual turnover with cash payments of SEK 126 billion.

Based on these calculations, household purchases with cash can be assessed as small in relation to total household consumption of a total of SEK 2,322 billion in 2021.

Periodicity

The data refer to a calendar year. However, for enterprises surveyed concerning sales data using the so-called complete form and which have a split financial year, the reporting period is used that includes the annual figures for 1 May of the current calendar year to 30 April of the next calendar year. For financial years that cover a shorter or longer period than 12 months, the flow figures are recalculated to refer to 12 months. For other surveyed sample enterprises, and for enterprises that are based on administrative material and that have different financial years, the data refer to the reporting period that ends in the calendar year. However, the flow data here are also recalculated to refer to 12 months.

Time of availability of results

Delivery to the National Accounts takes place 13 months after the reference year.

Survey is compulsory or voluntary?

The part of the survey where information is directly collected from enterprises involves a legal obligation to submit information to Statistics Sweden. The Swedish Code of Statistics (SFS 2001:99 and 2001:100) states that participation in statistical data collection is obligatory. Specific provisions regarding the Structural Business Statistics are published in Statistics Sweden's Code of Statutes (SCB-FS 2009:13). The other part of the survey is based on administrative records consisting of tax declaration information from enterprises that are required to submit the information to the National Tax Agency for taxation purposes.

It is also mandatory for financial enterprises to send transaction data every year according to (SCB-FS 2022:18).

Main features of survey methodology

The Household consumption is conducted annually and should be regarded as a system of different statistical surveys rather than as a separate statistical survey. Data from many sources are collected inside and outside Statistics Sweden and are combined to produce all the statistics reported regarding Household consumption. Data from the Structural business statistics, Food sale statistics and transaction data from financial institutes is the basis for the statistics. Sales data from SBS is excluding VAT and Food sale data and transaction data is including VAT and the value is the value that is paid by households. For data coming from SBS, VAT is added based on products. There are four VAT rates in Sweden 0, 6, 12 and 25 per cent. The VAT rate depends on the product being sold.

Based on the data sources, the statistics has developed a calculation process to calculate household consumption. The calculation is done in three steps:

Step 1: Sales by activity and COICOP

These statistics are already in place today via the SBS and Food sale statistics. Overall, these surveys cover 81 activities (see annex 1) that sell to households. With the help of these statistics, a sales matrix is created divided into 81 industries and 140 purposes.

Step 2: Sales divided into private and other consumption by activities.

Based on transaction data from card issuers, card issuers and other payment institutions, sales in SBS are distributed between households and other consumption. This is done because the interested variable is household consumption.

Step 3: Estimation of household consumption at COICOP level

The share of household consumption from step 2 is multiplied by sales by industry and product from step 1. In one activity, all products receive the same share of household consumption.

Household consumption results

The statistics has produced for now produced estimates of household consumption for the reference years 2020 to 2021. The statistics are annual and do not affect the quarterly calculations of household consumption. The table below shows results for the calculations of household consumption compared to the old estimates in NA for reference year 2021. The results show a higher household consumption than SCB previously published. The items that increase the most in SEK are the accommodation item and the purpose of transport. It also must be remembered that the hidden economy must be added to survey results to reach the final estimates for National account.

For a few purposes such as iron, construction and plumbing products, the preliminary calculations probably end up too high. This is because certain consumption of iron, construction and plumbing goods must be classified as consumption or investment if the consumption refers to purchases for the home. The distribution between consumption, investment and consumption is difficult to assess based on sales and transaction data alone. Therefore, the new estimates are too high right now but will be reviewed.

Table 1: Household consumption statistics compared with National account, according to COICOP 1999, SEK billion.

Purpose	Household consumption statistics 2021	NA -2021 (Published in May 2023)
Food and beverages	284	298
Alcohol and tobacco	79	79
Clothes and shoes	94	94
Accommodation	634	598
Furniture, household equipment	137	161
Health and medical care	70	71
Transport, vehicles	345	278
Post, telecommunication	67	75
Recreation and culture	241	265
Education, daycare fee	7	7
Restaurants, hotels	148	134
Other goods, services	246	259
Total purpose divided	2 351	2 319
Swedish consumption abroad		104
Foreigners' consumption in Sweden		-87
Total		2 336

Source: National account and the Household consumption statistics

For transport, the consumption of cars is higher in the new statistics. Here it is more difficult to assess which source is closest to the true value. The model used in NA today is based on fully investigated statistics regarding newly registered cars and list prices.

There are also items where, according to the new sources, household consumption may previously have been overestimated. This is the case for hair and beauty care, for example. The new estimate for hair and beauty care aligns well with SBS and transaction data.

If you adjust the new data for the consumption of new and old cars and iron, construction and plumbing, construction and plumbing goods, the new calculations of household consumption end up 58 billion SEK below NA's current level. Then we must bear in mind that you must add the hidden economy to the Household consumption statistics. It is difficult to say which of the sources is closest

to the true value. However, other statistics from, for example, VAT payments have indicated that household consumption in NA is underestimated.

The consumption pattern remains

Weighting figures are important and are used in the CPI's shopping basket. The table below shows consumption shares per purpose (weighting figure). Broadly speaking, the weighting numbers are similar between Household consumption statistics and Household budget survey (HBS). For alcohol and tobacco, the weighing numbers are higher according to the Household consumption statistics but that use to be the case. Household use to underreport this consumption in HBS. For other goods and services, the weighting figures are lower, and this is largely due to lower consumption of hair and beauty care which has a rather big share of hidden consumption.

Table 2: Weights compared between Household consumption statistics and HBS 2021, according to COICOP 2018, Shares in per cent

Purpose	Household consumption statistics 2021	NA 2021 published in May 2024	HBS 2021
Food and beverages (01)	11,9	12,6	13,7
Alcohol and tobacco (02)	2,9	3,5	1,8
Clothes and shoes (03)	3,9	4,2	4,1
Accommodation (04)	26,3*	26,3	22,0
Furniture, household equipment (05)	5,8	6,0	7,2
Health and medical care (06)	3,3*	3,1	4,3
Transport, vehicles (07)	14,9	12,9	15,0
Information and communication (08)	5,5	4,8	3,7
Recreation and culture (09)	8,1	8,5	8,5
Education, daycare fee (10)	0,3*	0,4	0,2
Restaurants, hotels (11)	6,9	6,6	5,2
Other goods, services (12+13)	10,0	11,2	14,3
Total	100,0	100	100,0
Total in billion SEK	2 351	2 369	2 264

Source: National account and the new statistics. *Data mainly from NA estimates instead of the survey Household consumption

Annex 1 – Standard industry classification and division into household and other consumption

Standard industry classification (SIC)	Division into household and other consumption
Retail sale in non-specialised stores with food, beverages or tobacco predominating, larger shops (47.111)	Transaction data
Retail sale in non-specialised stores with food, beverages or tobacco predominating, smaller shops (47.112)	-/-
Other retail sale in non-specialised stores (47.190)	-/-
Retail sale of food in specialised stores, alcohol excluded (47.21-24+29)	-/-
Retail sale of alcoholic beverages in specialised stores (47.25)	-/-
Retail sale of tobacco products in specialised stores (47.26)	-/-
Retail sale of automotive fuel in specialised stores (47.30)	-/-
Retail sale of computers, peripheral units and software in specialised stores (47.41)	-/-
Retail sale of telecommunications equipment in specialised stores (47.42)	-/-
Retail sale of audio and video equipment in specialised stores (47.43)	-/-
Retail sale of textiles in specialised stores (47.51)	-/-
Retail sale of hardware and glass in specialised stores (47.521-2)	-/-
Retail sale of paints in specialised stores (47.523)	-/-
Retail sale of floor coverings in specialised stores (47.531)	-/-
Retail sale of carpets, rugs and wall coverings in specialised stores (47.532)	-/-
Retail sale of electrical household appliances in specialised stores (47.54)	-/-
Retail sale of furniture in specialised stores (47.591-2)	-/-
Retail sale of lighting equipment and other household articles in specialised stores (47.593-4)	-/-
Retail sale of musical instruments in specialised stores (47.595)	-/-
Retail sale of books, newspapers and magazines in specialised stores (47.61-62)	-/-
Retail sale of music and video recordings in specialised stores (47.63)	-/-
Retail sale of sporting equipment in specialised stores (47.641-2)	-/-
Retail sale of boats in specialised stores (47.643)	-/-
Retail sale of games and toys in specialised stores (47.65)	-/-
Retail sale of clothing in specialised stores (47.71)	-/-
Retail sale of footwear and leather goods in specialised stores (47.72)	-/-
Dispensing chemist in specialised stores (47.73)	-/-
Retail sale of cosmetic, medical and orthopaedic goods in specialised stores (47.74-75)	-/-
Retail sale of flowers, plants and seeds in specialised stores (47.761)	-/-
Retail sale of pet animals and pet food in specialised stores (47.762)	-/-
Retail sale of watches in specialised stores (47.771)	-/-
Retail sale of jewellery in specialised stores (47.772)	-/-
Retail sale of glasses in specialised stores (47.781)	-/-
Retail sale of photo equipment in specialised stores (47.782)	-/-
Retail sale of arts in specialised stores (47.783-4)	-/-
Other retail sale of new goods in specialised stores (47.789)	-/-
Retail sale of second-hand goods in stores (47.79)	-/-
Retail sale via mail order houses or via Internet (47.91)	-/-
Retail sale via stalls and markets (47.8+47.99)	-/-
Sale of cars and light motor vehicles (45.11)	SBS – Sales divided by customer
Sale of other motor vehicles (45.19)	-/-
Maintenance and repair of motor vehicles (45.2)	-/-
Retail trade of motor vehicle parts and accessories (45.3)	-/-
Sale, maintenance and repair of motorcycles and related parts and accessories (45.4)	-/-
Urban and suburban passenger land transport (49.31)	Transaction data
Taxi operation (49.32)	-/-
Removal services (49.42)	SBS – Sales divided by customer
Passenger rail transport, interurban (49.1-2)	Transaction data
Water transport (50)	-/-
Air transport (51)	SBS – Sales divided by customer
Service activities incidental to land transportation (52.21)	Transaction data
Service activities incidental to water transportation (52.22)	-/-
Postal activities under universal service obligation (53.1)	SBS – Sales divided by customer
Hotels and similar accommodation (55.1)	Transaction data
Holiday and other short-stay accommodation (55.2)	-/-
Other food service activities (56.210, 56.294 and 56.299)	-/-
Event catering (56.291)	-/-
Restaurants and mobile food service activities (56.1+56.3)	-/-
Publishing of newspapers (58.13)	SBS – Sales divided by customer
Publishing of journals and periodicals (58.14)	-/-
Motion picture projection activities (59.14)	Transaction data
Telecommunications (61)	-/-
Real estate activities on a fee or contract basis (68.3)	-/-
Technical testing and analysis (71.2)	-/-
Photographic activities (74.2)	-/-
Veterinary activities (75)	-/-
Renting and leasing of cars and light motor vehicles (77.11)	-/-
Renting and leasing of personal and household goods (77.2)	-/-
Tour operator activities (79.12)	-/-
Cleaning activities (81.2)	-/-
Other education (85.51-52, 85.59)	-/-
Private school activities (85.53)	-/-
Creative, arts and entertainment activities (90)	-/-
Libraries, archives, museums and other cultural activities (91)	-/-
Gambling and betting activities (92)	-/-
Sports activities (93.1)	-/-
Amusement and recreation activities (93.2)	-/-
Repair of computers and personal and household goods (95)	SBS – Sales divided by customer
Washing and (dry-)cleaning of textile and fur products (96.012)	Transaction data
Hairdressing and other beauty treatment (96.02)	-/-
Funeral, physical well-being and other personal activities (96.03-04, 09)	-/-

Annex 2 – COICOP covered with different sources

COICOP	Source
111	Food sales statistics
112	..
0113	..
0114	..
0115	..
0116	..
0117	..
0118	..
0119	..
0121	..
0122	..
0211	..
0212	..
02131	..
02132	..
02201	Household consumption statistics (ÄDB)
230	Model within National account
311	Household consumption statistics (ÄDB)
312	..
0313	..
0314	..
0321	..
0322	..
0411	Model within National account
412	..
0421	..
0422	..
0431	..
0432	..
0451	Model within National account
452	..
0453	..
0454	..
0455	..
0511	Household consumption statistics (ÄDB)
512	..
0513	..
0520	..
0531	..
0532	..
0533	..
0540	..
0551	..
0552	..
0561	..
0562	..
06111	Model within National account
6112	Household consumption statistics (ÄDB)
612	..
0613	..
06211	Model within National account
6212	..
06221	..
06222	..
06231	..
06232	..
06301	..
06302	..
07111	..
07112	..
0712	Household consumption statistics (ÄDB)
713	..
0721, 0723	..
0722	..
07241	..
07242	Model within National account
7243	Household consumption statistics (ÄDB)
7244	..
07245	Model within National account
731	Household consumption statistics (ÄDB)

COICOP	Source
7321	..-
07322	..-
0733	..-
0734	..-
0735	..-
0736	..-
0811	..-
0812	..-
08131	..-
08132	..-
0911	..-
0912	..-
0913	..-
0914	..-
0915	..-
09211	..-
09212+09213	..-
09214	Model within National account
9215	Household consumption statistics (ÄDB)
922	..-
0923	Model within National account
931	Household consumption statistics (ÄDB)
932	..-
0933	..-
09341	..-
09342	..-
0935	..-
09411+09412	..-
09413	Model within National account
9414	..-
09415	..-
09422	Household consumption statistics (ÄDB)
9423	..-
09424	..-
09425	..-
09426	..-
09427	..-
0943	..-
0951	..-
0952	..-
0953	..-
0954	..-
0960	..-
10111	Model within National account
10112	..-
10141	..-
10142	..-
1111	Household consumption statistics (ÄDB)
1120	..-
1211	..-
1212	..-
1213	..-
1220	Model within National account
12311	Household consumption statistics (ÄDB)
12312	..-
1232	..-
12401	Model within National account
12402	..-
12403	..-
12404	..-
1251	..-
1252	..-
1253	..-
1254	..-
1255	..-
1261	..-
1262	..-
12701	Household consumption statistics (ÄDB)
12702	Model within National account
12703	Household consumption statistics (ÄDB)

Food sales (2021)

Purpose and history

The Swedish board of agriculture has carried out the calculations over the consumption of food since the 1940's. The Swedish board of agriculture stopped measuring the value of the consumption of food in the year 2000 while it continued to calculate volume figures. From the year 2000 Statistics Sweden produces statistics on foods sales within the trade industry with different methods compared to those of the Swedish board of agriculture to better satisfy the needs of National Accounts and Consumer Price Index.

Link to inquiries conducted at European level

The inquiry is conducted by Statistics Sweden. There is no EU regulation.

Reporting units

Retail trade enterprises.

Periodicity

Annual.

Results availability

Nine and a half months after turn of the reference year.

Sampling frame

The sampling frame is registered retail trade enterprises and petrol stations (NACE 47) in Statistics Sweden's Business database (SBR) in November the reference year.

Compulsory or voluntary?

Food sales statistics are included in Sweden's official statistics. For statistics included in Sweden's official statistics (SOS), special rules for quality and accessibility apply, see the Act (2001:99) and the Ordinance (2001:100) on official statistics and Statistics Sweden's regulations (SCB-FS 2016:17) on quality for official statistics. The obligation to provide information applies according to the Official Statistics Act (2001:99), the Official Statistics Ordinance (2001:100) and Statistics Sweden's regulations (SCB-FS 2016:7).

Main features of survey methodology and population size

The aim of the publication is to show turnover by type of product within the trade of food and beverages.

The first four levels of the Swedish classification by industry (SNI) are identical with EU standard NACE Rev. 1 (Statistical Classification of Economic Activities in the European Community).

The following sources are used in the Food sales:

- The Statistical Business Register (SBR).
- The Value Added Tax (VAT) Register
- Register of companies belonging to the groups ICA, Kooperationen, Axfood, LIDL, Bergendahl, Circle K and Reistan.
- Data register of sales from these food sales groups.

- For alcoholic products sold at Systembolaget¹⁰⁹ directly to consumers, sales data is obtained directly from Systembolaget.
- The data register from the large everyday commodities' groups is the most important source of information.

The definition of food products is the same as for the value-added tax (12 %) for food and beverage products. The assumption that all the products that have 12% VAT are either food, beverage or health product is made. Then the health product is removed from the figures. In total there are about 110 000 products.

Sample size

Full census for the six large groups.

Full census from Systembolaget.

Data on the total food sales from the VAT register.

Survey response rate

Not applicable

Imputation method and grossing method

Using the VAT register.

Sample coverage

Over coverage: companies with wrong industry code, inactive companies and closed-down companies.

Under-coverage: companies with wrong industry code and newly started companies.

Main variables collected

The main variable collected is turnover (including taxes).

The turnover is presented for types of products such as food, beverages, tobacco, pharmacies, perfume, repair and service etc. The products are grouped in about 50 groups for the national accounts.

The food sales are shown for groups of products according to the Classification of Individual Consumption by Purpose, (COICOP). The groups of products in these statistics are within COICOP 01 (food and non-alcoholic drinks) and 02.1 (Alcoholic drinks). In total there are 39 groups reported in the food sales.

¹⁰⁹ Systembolaget is a state-owned chain of shops that have exclusive rights to sell alcoholic beverages.

Revenues and expenditure survey for multi-dwelling buildings (2015)

Information on the survey

The survey has been discontinued and this section is therefore not updated. The source data is however still used as a benchmark for some calculations and, consequently, the information below can be used as a reference in those cases. See also section 3.5.2.1.

Link to inquiries conducted at European level

The inquiry is conducted by Statistics Sweden in the programme for housing. No EU regulation has been introduced.

Reporting units

Three ownership categories are used:

- Municipally owned housing corporations,
- Private ownership
- Tenant-owners' associations

For municipally owned housing corporations and tenant-owners' associations data are obtained on the enterprise or association. Because of this it is easier to obtain the relevant data for them than for the private ownership group, in which data only cover individual properties/tax assessment units or groups of such units. For privately owned dwellings and tenant-owners' associations recording is by age (year of construction, valuation year) and size (number of dwellings). Municipal housing corporations are only recorded in terms size. All categories are reported by region.

Periodicity

Annual. The inquiry covers the calendar year. The respondent can also reply to a broken financial year

Results availability

Production time is 9 months.

Sampling frame

Sampling is used for the coverage of privately owned houses and tenant-owners' associations. The sampling frame is drawn from Statistics Sweden's real estate tax assessment register.

Compulsory or voluntary?

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's directive (SFS-FS 2016:18).

Main features of survey methodology

The main purpose of the inquiry is to provide information on income, costs and operation net in multiple-occupancy buildings. In addition information is provided on such aspects as long-term borrowings, tax assessment values and expenditure on reconstruction (also new construction for municipally owned housing corporations).

In its present form the inquiry has been conducted since 1975. Comparability over time diminishes, for example, because of changes in tax rules, subsidy rules, recording principles and changes in industry structures. The rapid changes in the real-estate industry over much of the 1990s have increased uncertainty in the statistics. It is mainly in the field of operating costs and capital costs for the private

ownership group that uncertainty has increased. One reason for this may be that company overheads are not fully apportioned or are not apportioned at all to the reporting unit in the company's accounts and/or in Statistics Sweden's questionnaire.

For privately owned dwellings and tenant-owners' associations data for Statistics Sweden are collected by questionnaire. For municipal housing corporations affiliated to the Swedish Association of Public Housing Companies (SABO), SABO handles data collection (questionnaires). After scrutiny and supplementing, the data are transferred to Statistics Sweden. For corporations, which are not members of SABO, data collection is carried out by Statistics Sweden using questionnaires.

Population size

The population comprises municipally owned housing corporations, multiple-occupancy buildings owned by tenant-owners' associations and dwellings owned privately (by legal and natural persons, not municipal housing corporations or tenant-owners' associations).

For municipally owned housing corporations the entire housing stock is included.

All tenant-owners' associations with a maximum of 20 percent of individual houses in the association are included.

For privately owned dwellings tax assessment units conforming to the following criteria are included; rented accommodation units with tax assessment code 320 or 321 (mainly dwellings and mixed residential and commercial premises, respectively) a minimum of 500m² of residential space in the tax assessment unit maximum 25 percent of the total area is used for business activity completion two year before the inquiry year.

The population does not include real estate owned by central or local government and municipally owned housing corporations comprising mainly special-category dwellings (e.g. retirement homes and student accommodation) or owners who mainly let furnished apartments or accommodation in which the area of commercial use exceeds the area for residential use. In addition it does not include privately owned tax assessment units and tenant-owners' associations in the following categories; properties consisting mainly of furnished apartments, secondary residences or special-category dwellings, properties whose area for commercial use exceeds 75 percent of the combined residential and commercial space, properties under reconstruction and properties in shared ownership.

Sample size

Municipally owned housing corporations are covered by a full census, i.e. all corporations in the population are included in the inquiry. Sampling is used in the coverage of privately owned dwellings and tenant-owners' associations. Sampling method is stratified sample with simple random sampling within strata with the tax assessment unit as the sampling unit. However, it is also rotating sample in which about 20 percent of the respondents are new each year. Stratification is by three variables; ownership category, size, region and age category (valuation year). New samples are drawn approx. every five years with supplementary samples for new construction in between inquiries.

The sample size in 2015 was approx. 4729 tax assessment units, of which 2572 for the privately owned portion and 2157 for tenant-owners' associations.

Survey response rate

Non-response from in year 2011 was around 32 percent for privately owned dwellings and 12 percent for tenant-owners' associations, calculated on the basis of the number of units in the sample. The total non-response rate corresponds to around 23 percent.

In order to minimise non-response, 2-3 reminders are sent out for privately owned properties and tenant-owners' associations. The questionnaire is reviewed before each inquiry. A separate letter is sent to owners/managers with several non-responding units.

Imputation method

The most common problems in data preparation are partial non-response and combination of variables in the return of data. This is remedied by amendments from the respondent or, in certain more straightforward cases, by imputation.

Grossing method

The inquiry is a descriptive survey intended primarily to estimate mean values for different income and cost variables. Adjustment for non-response for privately owned properties and tenant-owners' associations are carried out by approximating the mean value for the stratum in question with the mean value for the respondents ("flat-rate adjustment").

For the grossing to population level of privately owned properties and tenant-owners' associations, weightings are used in inverse proportion to the sampling probabilities of the tax assessment units. The weightings are adjusted for non-response (flat-rate adjustment). For municipal housing corporations, which are covered by a full census, no adjustment is carried out for non-response (low non-response rate).

Sample coverage

For samples covering privately owned properties and tenant-owners' associations sampling frames are constructed from Statistics Sweden's real estate tax assessment register. The frame population covers the target population well. For privately owned properties and tenant-owners' associations, tax assessment units build up to two year before the inquiry are included. Municipally owned housing corporations are surveyed by a full census. Coverage is good.

Main variables collected

The statistical measurements are:

- Mean value (for income, costs, and long-term borrowings)
- Total (long-term borrowings, tax assessment value, interest, interest allowance, reconstruction)
- Number (dwellings, commercial units, garage, and other car spaces)
- Surface areas (dwellings, commercial units)

Income

- Income for housing
- Income for commercial premises
- Income for garages and parking spaces
- Subsidies from the EU (only municipally owned housing corporations)
- Financial incomes (only municipally owned housing corporations)
- Other income (including interest income, only applies to privately owned properties and tenant-owners' associations)
- Local government grant (only municipal housing corporations)

- Central government grant (only municipal housing corporations)

Costs

- Rental loss
- Capital costs (specified by interest, depreciation, ground rent, other capital costs)
- Maintenance expenses
- Upkeep, management, administration
- Administration (only municipal housing corporations)
- Fuel costs
- Assessment-related costs (combination of water supply and sewerage, refuse collection and electricity for the property)
- Insurance
- Other operating costs
- Real-estate tax
- Income tax
- Interest allowance
- Reconstruction expenditure (including standard improvements)
- New construction expenses (only municipal housing corporations)
- Tax assessment value

Other

- Number of dwelling units
- Number of commercial units
- Number of heated garage spaces
- Number of parking spaces
- Area of residential space
- Area of commercial space
- Heated garage area
- Total area
- Net operating income (calculated from other variables)

Survey of Rents for dwellings (2021)

Rents for dwellings (HiB) is a survey with its origin in the Survey on housing and rents (BHU).

The BHU consisted of two parts.

- 1) The “Owners” part, which was an annual survey of rentals and charges in multiple-occupancy buildings with property owners supplying data by postal surveys. As from 2003 only tenanted dwellings are part of the new survey (HiB). The BHU also covered tenant-owners associations.
- 2) The “Households” part, which provided information on the housing conditions, composition, accommodation expenses and incomes of households, was published for the last time in 2002. Corresponding statistics are now published within the framework of Housing costs (Hushållens boendgifter, BUT). The Household's finances as a whole are described in another section in this chapter.

Link to inquiries conducted at European level

The inquiry is conducted by Statistics Sweden. No EU regulation has been introduced.

Reporting units

Data collection is by postal survey, web questionnaire or file transfer sent to the property owner (property manager). (Around 66 percent of the responses are received through web questionnaires year 2021). Important classification criteria are region, completion year and dwelling type.

Periodicity

Annual sample survey.

Time of availability of results

Production time is 6 months for the final report, and it is published in October.

Sampling frame

The sampling frame is the Population and Housing Census as of year 1990 supplemented by Statistics Sweden's register of newly produced dwellings (dwellings completed 1991-2012). The National apartment register is used for dwellings completed the years 2013 and forward.

Survey is compulsory or voluntary?

Supply of data to the inquiry is compulsory under the Official Statistics Act (SFS 2001:100) and Statistics Sweden's regulations (SCB-FS 2011:2).

Main features of survey methodology

The main purpose is to provide information on rentals, changes in rentals and on the composition of the housing stock and its distribution by various forms of tenure, dwelling types and age.

The main statistical features are:

- Number of flats
- Mean annual rental/charge
- Mean rental/charge year 0
- Percentage change in rental/charge between year 0 and year 1.

- Mean rental/charge per area in square metres
- Mean area in square metres per flat

Population size

The population includes all tenanted dwellings, which were counted in the 1990 Population and Housing Census and new dwellings completed up to and including the year before the inquiry year, which are included in Statistics Sweden's housing construction statistics. From year 2014 the National apartment register is used year 2013 and forward for completed apartments.

The population does not include the following categories: agricultural properties, properties consisting mainly of furnished apartments or special-category dwellings (for example student housing), properties whose area for commercial use exceeds 75% of the combined residential and commercial space, properties under reconstruction, rent-free properties and properties that changed tenure during the survey year. The housing construction statistics include all new buildings with at least one dwelling intended for a private household, which is structurally separate from other housing.

Sample size

Sampling errors are relatively small, since the sample is large and the population relatively homogeneous. The sample is drawn annually and was 15 498 dwellings in 2021. The sample is stratified by region, completion year and dwelling type.

Survey response rate

The response rate is 92% and is considered high. In 2021, the unweighted object non-response rate was 8.4%. The non-response response is very unevenly distributed across municipalities, and when reporting the average rent per square meter, not all municipalities can be reported as the non-response is considered too large. In 2021, statistics could not be reported for 2 municipalities.

Method used to impute for missing data

Through statistical imputation approximations are developed for records where values are missing. Imputation is carried out with multiple regressions and is estimated to have reduced failure error. Imputation is made differently for different variables. When space is missing last year averaged is added. The average is calculated in the apartment size where the apartment belongs. When the annual rent is missing a predicted value is set. It is based on a regression relationship between the annual value and the explanatory variables of floor space and completion year. The estimated regression is calculated from the corresponding items in each apartment size.

Variable used for grossing-up to the population

The estimates for the population are carried out by means of information from the sample on strata's. The estimates are covering the population with 95 % confidence intervals.

Sample coverage

Under-coverage stems from non-response in the Population and Housing Census. Another source of under-coverage is that there is no indication when the premises have been converted into flats. Register of newly built apartments are of good quality but may provide some coverage when the newly built apartments is not always reported in time.

Over-coverage stems from tenanted dwellings that, for example, has changed category to special-category dwellings during the year. The over-coverage is discovered in the survey and is not causing any errors in the final results.

Main variables collected

The main variables collected are:

- Dwelling type
- Ownership category
- Dwelling surface area in square metres
- Completion year
- Valuation year
- County, municipality, parish assembly code
- Regional grouping at 1 January in the year of the inquiry
- Monthly rentals in year 0. (Including heating supplement, excluding domestic electricity and garage.)
- Annual rental/charge year 0. Including heating supplement, excluding domestic electricity and garage
- January rental/charge year 1. Including heating supplement, excluding domestic electricity and garage

The statistical measurements published are number, mean value and mean error for rental/dwelling, rental/square meter and change in rental.

Housing costs (2021)

The Survey of Housing costs (Hushållens Boendegifter, BUT) is a survey with its origin in the Housing and rental inquiry (Bostads- och hyresundersökningen, BHU). The “Households” part of BHU, which provided information on the housing conditions, composition, accommodation and expenses of households, was published for the last time in 2002. The years 2003-2013 the survey was published within the framework of Household's finances (HEK).

The scope of these surveys has varied over the years. BHU previously consisted of two parts, one of which was directed at households that answered questions about their housing. Comparisons between statistics from HEK and BUT should therefore be made with some caution. The new survey on housing costs, BUT, is mainly focused on housing expenses, so the design looks different, for example, in terms of stratification and weighting of the sample.

BUT is a survey found under the Household Expenditures section under the subject area Household Finances, under which information on households' income, assets and debt as well as the pensions are covered. The aim of the Household Finances is to map the distribution of disposable income among different households, to illustrate income structures and to describe the living situation and living expenses for various types of households.

Link to surveys undertaken at European level

The inquiry is conducted by Statistics Sweden. There is no EU regulation.

Reporting units

Sample survey covering individuals and they are also asked questions of their whole household. The sample is a so-called network sample, which means that more sample objects (persons) can belong to the same target object (household). In a household, individuals who are not included in the frame can also be included, such as individuals under 18 years of age or persons who are not registered residents.

Periodicity

Every other year for the period 2024-2030, thereafter every 2-3 years. The survey covers the calendar year.

Time of availability of results

Production time is approximately 11 months.

Sampling frame

The Total Population Register is used for the sampling frame. The sample is made up of people aged 18 or over.

Survey is compulsory or voluntary?

The inquiry is voluntary.

Main features of survey methodology

Housing costs (Hushållens boendegifter, BUT) is a sample survey carried out every other year. The target variable is primarily housing expenses and its components: interest expenses, amortization, heating, property tax, maintenance and repair expenses, home insurance, fees for water and sewage, waste management, chimney sweeping, road maintenance and communal facilities, as well as rent/fees to the housing association.

The observation variables are the components that sum up the housing expenses. For the data collected directly from households, there are good opportunities to achieve consistency between observation

variables and target variables since the collection has been specially adapted to the purpose of the survey. The data are recorded for the three forms of tenure: simple ownership (individual houses), tenant-ownership rights and ordinary tenancies.

Most of the data were obtained from a computer-aided telephone interview with the sample person and some interviews were web-based.

Population size

The population for the survey consists of all households and people who were registered in the population register (RTB) in Sweden during the reference period.

Sample size

The total coordinated gross sample was 6500 households. After correcting for duplicates and overlap the sample included 6 477 households which consist of 14 893 individuals according to the population register. Less than half, 2 719 households consisting of 6 619 persons, responded to the survey.

Method used to impute for missing data

Extensive checks are made where they created variables including cross-checked against information from administrative registers.

Administrative records are used whenever possible using the imputation for partial loss. If a solution cannot be found through the records a regression or mean value imputation is performed.

Sample coverage

Over-coverage: Emigrant who does not report their move to other country.

Under-coverage: Immigrants who do not report their move to Sweden.

The total over- and under-coverage amount to less than 1 percent of the total sampling frame.

Main variables collected

The main variables collected are the components of the housing expenses:

- Interest expenses
- Amortization
- Heating
- Property tax
- Maintenance and repair expenses
- Home insurance
- Fees for water and sewage
- Waste management
- Chimney sweeping
- Communal expenses
- Rent/fees to the housing association (BRF)

Basis of central government net lending, UFS (2021)

Organisation collecting the data, and purposes for which it is collected:

The data is collected by the Swedish National Financial Management Authority (ESV). The purpose of the data collection is to compile accounting information for the central government.

Reporting units:

The basis of central government net lending (Underlag till statens finansiella sparande, UFS) covers all institutional units, which form part of the central government sector (S.1311) as well as the social security funds (S.1314), based on ESA2010 definitions.

Periodicity:

The units report their accrued expenditures related to each of their appropriations on a monthly basis to ESV. Most other data is reported on a quarterly basis, using ESV's so called "statistical reporting codes". A few statistical reporting codes are reported on an annual basis. The full data source is compiled and delivered to Statistics Sweden quarterly.

Compulsory or voluntary?

All agencies and departments are obliged to supply data. The corporations and other central government institutions, which are included, supply data to the Financial Management Authority voluntarily.

Main features of methodology

All expenditures of departments and agencies of central government are covered. The basis of the records is derived from the central government accounting system but also includes those financed from sources outside the State budget. From other sources means that the expenditures are financed otherwise than by appropriations and that income is not returned in terms of the income headings of the national budget. This part of central government activity is financed instead by charges and levies, fund resources and sales revenue. In order to measure and describe all flows of goods, services and money between central government and other sectors in the national economy, ESV produces statistics covering activities both within and outside the national budget. These statistics on total central government income and expenditure follow the national accounts apportionment of central government income and expenditure by real economic types and are termed "the basis of central government net lending".

One of the main purposes of total income and expenditure of central government is to provide material, which can be used directly by Statistics Sweden to compile the national accounts (NA). The definition of the central government sector is therefore adapted to that applicable in the context of the national accounts.

In addition, the national accounts use a classification of expenditure according to purposes based on an international standard (COFOG) developed by the UN. Items of expenditure with similar purposes or functions are grouped together without regard to their real economic nature. The classification by purpose gives increased opportunities for comparisons over time and for comparisons with other countries. The classification by purpose only partially coincides with the definition of the various expenditure areas now used in the compilation of the Swedish national budget.

Main variables collected:

The national accounts concepts and demarcations are based on the European System of National Accounts, ESA 2010. An important starting point for the NA work is that income and expenditure are

classified in real economic terms. This means in the first place that the accounting material of central government agencies and departments is regrouped in terms of real economic types, at a level such that the data can be compiled in accordance with the regulatory system and in terms of the transaction codes imposed by EU requirements. Examples of real economic types are various forms of taxes, consumption expenditure, investment and transfers. This makes it possible to analyze central government activity.

Methods used to allow for missing data:

The material is comprehensive.

Further adjustments made to the data:

All elements of the data set correspond to the national accounts in at least one way. However, there is a greater level of detail in the data than is requested in the national accounts, which means certain aggregation is needed to construct the NA transactions.

Annual accounts for municipalities and regions (2021)

Name of survey

Annual accounts for municipalities, municipal associations and regions (Räkenskapssammandrag för kommuner, kommunalförbund och regioner, RS)

Link to surveys undertaken at the European level

None

Reporting units

Reporting units is local government units: Primary municipalities, regions and municipalities associations.

Periodicity

Annual

Time of availability of results

The first preliminary data on activity level is available two months after the end of reference period for the municipalities and regions. The national total at more detailed level are published six months after the end of reference period for municipalities, regions and municipal associations. The results are published eight months after the end of the reference period.

Sampling frame

The frame is municipalities and regions. Sweden's division into municipalities and counties are described in the Swedish Code of Statute (Svensk författningssamling (SFS)) 2007:229.

The frame for Municipality associations is provided by Statistics Sweden's business register. The units included are associations classified with legal form 83.

Compulsory or voluntary?

The survey for reference year 2021 is compulsory, in accordance with Official Statistics Act (SFS 2001:99) and Statistics Sweden SCB's regulation SCB-FS 2021:32.

Main features of survey methodology (e.g. PPS sampling/panel of respondents/use of a size threshold for sampling/postal questionnaire/ telephone interview):

The data collection is carried out using three customized electronic forms. There is one form for primary municipalities, one for regions and another one for municipalities associations but the content is designed in similar manner. For the primary municipalities and regions there is also pre-printed data in the forms, audit controls and financial ratios that are calculated automatically.

Definitions of the variables in the survey are in the user manuals for each form. All variables in the survey are based on accounting plan K-Bas-21 (primary municipalities and municipal associations) and R-Bas -21 (regions) published by the Swedish Association of Local Authorities and Regions (SKR).

Population size

The population consists of 290 primary municipalities, 20 regions and 181 municipal associations.

Sample size

Total

Survey response rate

Nonresponse is unusual. However, partial non-response occurs.

Quality on a nationwide basis is good at aggregate level. Quality at local government level may be poorer for certain municipalities, regions or municipality association. The profit and loss account and balance sheet data are of very high quality. Measurement problems can arise in connection with the allocation of overheads and the recording of internal items.

Primary municipalities and regions answer all sections in the survey, though there may be missing data for some occasional variables. This is primarily in the sections with detail information of educational activities and care in municipalities. There is no imputation where data are missing in these cases.

There is no imputation for the missing data from municipalities associations.

Variable used for grossing-up to the population

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*Sample coverage, as % in terms of variable used for grossing-up**Main variables collected*

The survey comprises annual economic information from municipal and region financial statements. The survey comprises about 3 500 variables.

The annual accounts for municipalities and regions consist of the following sections:

- Profit and loss account. This section contains information on both the municipality and the municipal group. The profit and loss account presents the financial results of the municipality for current activity.
- Balance sheet. This section contains information on both the municipality/region and the municipal/region group and gives a presentation of assets, debts and proprietor's capital.
- Revenue and expense. This section includes costs/expenditure and revenue from operating accounts broken down by type of expenditure and revenue.
- Investment account. Investment expenditure and investment income for the year are recorded here. The activity classification is less detailed than in the operating account.
- Operating accounts. Presentation of the municipalities'/regions current costs and income during the year. It is the most detailed section, in which the municipal activities are recorded broken down by major expenditure and income types. Internal costs (e.g. accommodation costs, capital costs and joint activity) and internal income are allocated to activities. A breakdown is shown by both fields of activity and types of expenditure and income. Data by field of activity are used in the distribution by purposes in accordance with COFOG.
- Specification of operating accounts. This section provides information on purchases of activity, grants and transfers with a breakdown by counterpart (from whom the activity is purchased or who receives the grant). Specification of certain income is also included, for example operating grants from central government and the National Labour Market Board. The activity classification is less detailed than in the operating account. As for operating accounts a breakdown is shown by both fields of activity and types of expenditure and income. Data by field of activity are used in the distribution by purposes in accordance with COFOG.

The annual accounts for municipalities associations consist of profit and loss account, balance sheet, investment account and operating account.

Further adjustments made to the survey data

No further adjustments are done.

Non Profit Institutions Serving Households (2021)

Link to surveys undertaken at the European level

There is no EU regulation on this survey.

Reporting unit

Enterprises

Periodicity

Annually

Results availability

The results are published 16 months after the end of the period in question.

Sampling frame

The sampling frame is based on Statistics Sweden Business Register

Survey is compulsory or voluntary?

Voluntary.

Main features of survey methodology

The survey is conducted by postal questionnaire.

Population size

226 954 Enterprises/Institutions

Sample size

2 732 Enterprises/Institutions

Survey response rate

About 60 %.

Method used to impute for missing data

As a first stage, income declarations are obtained from the Swedish tax authority for imputing missing collected data. Secondly, enumeration is used.

Variable used for grossing-up to the population

Comparisons are made on wages from other sources.

Sample coverage

Institutions whose assets and capital gains exceed a certain level.

Main variables collected

Business statistics, revenues, costs, wages etc.

Further adjustments made to the survey data

None.

Comments

There are other religious institutions in the survey, but not the Church of Sweden.

Economic report Church of Sweden (2021)

Link to surveys undertaken at the European level

There is no EU regulation. Producing agency is Statistics Sweden.

Reporting units

The inquiry is conducted for church districts at local level and for diocesan bodies and property boards. The survey covers all church districts at local level with employers' obligations. In order to cover the whole local level, i.e. including church districts with no employers' obligations, the figures collected are grossed up. Diocesan bodies and property boards receive a separate questionnaire.

Periodicity

The economic report is published annually.

Results availability

Approximately 6 months after the reference year.

Sampling frame

All church districts.

Compulsory or voluntary?

The Swedish church is obligated to give an annual economic report under the church regulation chapter 44, paragraph 21 for the Church of Sweden (SvKB 1999:1). The report describes the economic development for the church districts and includes consolidated statement of income, balance sheet and operation accounts.

Main features of survey methodology

The inquiry gives an overview of the finances of the church districts. The report is issued by Statistics Sweden in cooperation with the Church of Sweden – Board of the Church (Kyrkostyrelsen) and Association of Parishes in the Church of Sweden (Svenska kyrkans Församlingsförbund).

The report contains profit-and-loss accounts and balance sheets for church districts at local level and for diocesan bodies and property boards (which manage real estate assets). For church districts at local level and diocesan bodies the material also includes analyses of financing and a statement of costs and income for operations and for investment.

Population size

Full census.

International trade statistics in goods (2021)

The purpose of the statistics is to provide information on Sweden's international trade by goods and countries. A consequence of Sweden's membership of the EU was that Statistics Sweden introduced an entirely new system for the publication of data on international trade with effect from January 1995. Up to the end of 1994 the statistics could be based entirely on the data supplied by enterprises to Swedish Customs on all exports and imports of goods. In order to show the statistics to the same extent as previously, data had to be collected from 1995 onwards by the following procedures:

Link to surveys undertaken at the European level

The statistics on trade in goods with EU Member States and other countries are regulated by the following EU regulations and amendments to them:

Intra-EU trade**Basic regulation**

Regulation (EC) No 638/2004 of the European Parliament and of the Council

amended by Regulation (EC) No 222/2009 of the European Parliament and of the Council

Commission Regulation (EU) No 1093/2013

Regulation (EU) No 659/2014 of the European Parliament and of the Council

Implementing provisions

Commission Regulation (EC) No 1982/2004

amended by Commission Regulation (EC) No 1915/2005

Commission Regulation (EU) No 91/2010

Commission Regulation (EU) No 96/2010

Commission Regulation (EU) No 1093/2013

Extra-EU trade**Basic regulation**

Regulation (EC) No 471/2009 of the European Parliament and of the Council

amended by Regulation (EU) 2016/1724 of the European Parliament and of the Council

Commission Regulation (EU) 2016/2119

Implementing provisions

Commission Regulation (EU) No 113/2010

amended by Commission Regulation (EU) 2016/2119

Commission Regulation (EU) No 92/2010

amended by Commission Implementing Regulation (EU) 2016/1253

Nomenclature of countries and territories

-Regulation (EEC) No 1106/2012

Reporting units

The suppliers of data to the Intrastat system are defined as enterprises or organisations. The data are obtained from the Swedish Tax Agency (STA), to which it is compulsory to supply EU Value Added Tax (VAT) data. As regards the Extrastat system, enterprises trading with countries outside the EU report all exports and imports of goods to Swedish Customs.

Periodicity

Monthly reporting and statistics are published by month, quarter and year.

Results availability

Statistics Sweden's international trade statistics, i.e. Intrastat and Extrastat, are published partly as aggregated statistics (total trade and net trade balance), 27 days after the close of the reference month, and partly as detailed statistics, 57 days after the close of the reference month. Volume indices are published each quarter, approx. 57 days after the close of the reference month.

Sampling frame

Intrastat: The VAT Register of the Swedish Tax Agency. Data are collected from all enterprises with total exports of goods to other EU countries to a minimum value of SEK 4 500 000 or imports of goods from other EU countries to a minimum value of SEK 9 000 000.

Extrastat: Full census of total record from Swedish Customs.

Compulsory or voluntary?

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99). The statistics for this survey are also regulated according to the Official Statistics Ordinance (2001:100) and Statistics Sweden's regulation (SCB-FS 2015:13) relating to Sweden's trade with EU Member States (Intrastat).

The regulation of Statistics Sweden (SCB-FS 2010:16) regulated data for statistics on certain specific movement of goods.

The regulation of Statistics Sweden (SCB-FS 2010:17) on data on export statistics broken down by invoicing currency

Main features of survey methodology

The purpose of the statistics is to provide information on Sweden's international trade by goods and countries.

Intrastat: Census with cut-off value based on the value of arrivals/dispatch from/to other EU countries.

Extrastat: Full census.

Population size:

The population is defined as all units, which import or export out of the country in trade with other countries. Some specific goods are included even though they do not follow the principle of physically moving between Sweden and other EU countries, for example vessels and aircrafts which follow the rule of ownership.

Sample size:

Intrastat: units, which import or export in trade with other EU countries with an annual export of at least SEK 4.5 million or import of at least SEK 9 million. According to the EU legislation, the survey

has to cover at least 97 percent of the dispatch value and 93 percent of the arrival value. During 2021, approximately 12 000 companies were obliged to provide information to Intrastat.

Survey response rate:

The proportion of data suppliers responding and the proportion of value received are used to estimate the response rate. For the intra-EU trade, the non-response in terms of value is normally a few percent whereas non-response expressed in number of non-respondents is around 8 or 9 percent at the very first dissemination round. Under-coverage and non-response are continuously adjusted for by supplementing data from EU VAT declarations and historical Intrastat data

Imputation method:

The collected trade data does not cover the total EU trade, as the survey is a cut-off sample from the total traders and also affected by non-response.

Under-coverage and non-response are continuously adjusted for enterprises by supplementing with data from their EU VAT declarations. The trade of enterprises from which no returns is received because of failure to respond is allocated into goods groups and countries in accordance with five different statistical methods:

Method 1 and 2 are based on a time-series-linked updating method, exponential smoothing, in which method 1 concerns non-response estimation which does not take account of seasonal influences. Method 2 estimates non-response by taking account of seasonal variations.

Method 3 uses monthly VAT data to impute for missing data.

Method 4 uses regression model with information from the VAT data.

Method 5 uses regression value with AR error term.

Method 6 projected value according to ESM1 (simple).

Method 7 projected value according to ESM2 (brown).

Method 8 projected value according to ESM3 (holt).

Method 9 projected value according to ESM4 (damp trend).

Method 10 annual imputation/supplementation for partially reported trading.

Method 11 average monthly value with seasonal component.

VAT data is being used when estimating for enterprises that are below the threshold.

For trade with non-EU countries (Extrastat) no estimations of missing data is needed since the import- and export declarations submitted to the Swedish Customs covers the total trade.

Variable used to impute missing data:

VAT data, 3-digit NACE code.

Grossing-up method:

Not applicable in this survey since it is a total survey with a cut-off.

Sample coverage:

Cut-off inquiry covering 93 percent of imports of physical goods in the EU and 97 percent of exports.

Main variables collected:

Commodity goods code according to the Combined Nomenclature (KN) on eight-digit level.

Partner country;

Exports: country of destination,

Imports: country of consignment (and country of origin in Extrastat)

Transaction type

Value (invoice value in Intrastat and statistical value in Extrastat)

Net weight

Supplementary quantity for certain goods

The conversion rates to SEK used are either the day rate of the delivery or the customs rate set for the month. Hedged rates may not be used.

Further adjustments made to the survey data:

For Intrastat, the collected invoice value is converted into statistical value with the help of special conversion factors. The conversion factors are based on a model-based approach that originates from the relationship between statistical value and the item's price, both collected via customs declarations. It is based on information regarding countries bordering the EU. The conversion factors are used in the Intrastat survey and Special movements of goods to convert the invoice value into a statistical value. The basis for the model is reviewed annually and, if necessary, adjustments are made to raise the quality of the model.

External trade in services (2021)

Link to surveys undertaken at European level

The regulation EC-184-2005 regarding the balance of payments includes these statistics (foreign transactions concerning services, wages, transfers and merchanting).

Reporting units

The suppliers of data to the survey consist of enterprises, organisations and public authorities.

Periodicity

Quarterly survey.

Results availability

The results are published quarterly by Statistics Sweden on behalf of the Riksbank (Sweden's central bank) around 2 months after end of the reference quarter.

Sampling frame

The target population includes all enterprises, public authorities and other organisations having had foreign transactions concerning services, wages and transfers during the previous year. This basic sampling frame is also supplemented with data from other sources for example VAT, money transfer organization, foreign owned companies etc., which are deemed to indicate foreign trade in services. There are companies which occur in more than one source. A cut-off is applied for the smallest companies in the frame, since their combined trade in services is deemed negligible.

Sampling

A random sample is drawn each year, stratified by industry, size and probability of international trade in services. Industry affiliations are determined based on the unit's main NACE code, which is reported to the Swedish Tax Agency. Size is based on the unit's turnover. Moreover, collected data from previous survey years are used as auxiliary information in the allocation. The value of each stratification variable for a unit may vary from year to year, meaning that units can change stratum between years.

A part of the sample consists of units that are exhaustively surveyed, meaning that they are included in the sample with a probability of 1 and only represent themselves. These mainly consist of units that are likely to have substantial services trade with major importance for the statistics, but some units are also included in the sample with the probability of 1 to ensure sufficient quality in specific service items.

Main features of survey methodology

Statistics Sweden has since 2003, at the request of the Riksbank, compiled statistics on foreign transactions concerning services, transfers and wages. The statistics, which are primarily based on surveys aimed at enterprises, public authorities and other organisations, have replaced the statistics previously compiled by the Riksbank.

Foreign transactions and the sectors to be covered by the statistics are defined in accordance with the Sixth Balance of Payments Manual of the International Monetary Fund (BPM6), which is consistent with SNA 2008 and ESA 2010. Quarterly statistics are compiled on foreign transactions concerning services, wages and transfers.

The system of surveys does not cover transactions by households. For balance of payment items where households' direct foreign transactions are deemed to be of such magnitude that they cannot be

disregarded (e.g. travel currency and transfers), either supplementary data are collected or models are used.

To facilitate the transmission of data, respondents receive one of two questionnaires depending on their activity.

Population size

For the 2021 statistics, the sample framework encompassing approximately 65 000 enterprises was drawn up with the aid of data from the Statistical Business Register, VAT declarations, business structural statistics, the register of foreign trade statistics, the register of the Financial Supervisory Board and other registers.

Sample size and coverage

In 2021, a sample of approximately 6100 units was used, stratified by sector, industry groups, size (turnover) and probability of trade in services.

Of the approximately 6100 enterprises in the sample, over-coverage (bankruptcy, transfer of activity etc.) was approximately 1%-2%. Almost 12% of the selected enterprises stated that they did not have any foreign trade in services during the year.

Survey response rate and imputation method

In 2021, the quarterly survey response rate was initially 78-81%. When taking late respondents that responded the following quarter into account, the response rate rose to approximately 85%.

Non-response

The size of the respondent determines how non-response is handled. Larger units are imputed with the value of the previous quarter, if available and applicable. For certain respondents, where a strong seasonal pattern is expected, the corresponding quarter of the previous year is used instead. If there is no applicable previous data available, weighting within the strata is used. In some cases, imputations are also made based on expert knowledge of the unit in question and sometimes with the help of information from registers. For small and medium-sized respondents, weighting within the strata is used to compensate for non-response.

Measurement errors

It is difficult to assess the magnitude of measurement errors. To reduce the risk of such errors, all the questionnaires are subjected to a logic check. For example, enterprises which report major changes in the export or import of services are subject of a more detailed check, through comparisons with other statistical sources and/or direct contact with the enterprises.

Imputation methods

Imputations are used in cases of non-response or when respondents have reported values that are deemed incorrect. Reported values from the previous quarter are used for imputation if available and applicable. If the previous quarter is missing, the quarter before that is used if available and applicable. In some cases, where transactions are predicted to follow a seasonal pattern, the imputation is made using the data from the corresponding quarter of the previous year. Sometimes expert imputations are used instead of previous reports. These are based on knowledge of the unit in question and sometimes with the help of information from registers. In the case of non-response, weighting within the strata is also used (see *Non-response* for more information).

Variables used for grossing-up to the population

The largest respondents are exhaustively surveyed, meaning that they only represent themselves. Small and medium-sized respondents represent themselves and a number of other units in the frame assumed to have similar international trade in services. Weights are applied on a stratum-level. If there are 100 units of similar characteristics in the frame and 10 are sampled and grouped in a stratum, each unit in the stratum has a weight of 10. See *Sampling* for more information on stratification variables.

Grossing method

See above.

Main variables collected

International trade in services, collected through a set of nationally developed service codes based on the Sixth Balance of Payments Manual (BPM6). Wages, transfers and non-cross-border goods are also collected in the survey.

The income and costs of the Scandinavian Airlines (SAS) consortia (2021)

Data of the income and costs of the SAS consortia are collected by product in a quarterly survey. The survey is used to obtain data on production and intermediate consumption by product and export and import data by product. The questionnaire contains questions on income and costs by product with the extra information whether the goods and services are sold to or bought from units in each of the ownership countries of the consortia (Denmark, Norway and Sweden). When deciding each country's income/cost by product the share of ownership is central: share of ownership * income/cost of product. Export and import by product is then estimated by deduction of the data received for sales/purchase of units in your "own country". This model is used by all three ownership countries. The questionnaire is collected by Statistics Sweden and is distributed to Statistics Denmark and Statistics Norway.

Research & Development (R&D) – Frascati Manual (2021)

Link to inquiries conducted at European level

The inquiry is conducted by Statistics Sweden covered at EU-level by Commission regulation No 995/2012. The surveys follow the guidelines published by the OECD in the Frascati-manual

Reporting units

1. The survey of business enterprises covers enterprises having at least 10 employees.
2. The survey in the Government sector covers all government units as well as public research foundations and universities and higher education institutions (census).
3. The survey on NPISH covers the units within the NPISH sector from the Statistical Business Register.

Periodicity

The data are supplied every second year, available approximately 11 months after the end of the survey period. The surveys are web-based.

Sampling frame

Business enterprises: The selection framework consists of enterprises, with at least 10 employees which were active in November 2021. It does not include foreign subsidiaries. The sampling frame is obtained from the Statistical Business Register (SBR). The frame used is from November of the current survey year.

Comprehensive surveys (all units are surveyed) are performed for government units, public research foundations, universities and other institutions of higher education. For the NPISH sector, no survey is conducted. Estimations were made using a moving average based on data for 2017 and the growth of government agencies.

Compulsory or voluntary?

The business and government surveys are compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's regulations (SCB-FS 2016:03)

Main features of survey methodology

The surveys show the characteristics of Research and Development (R&D) for the units covered. It follows the international guidelines described in the OECD Frascati Manual.

For the NPISH sector, no survey is conducted. Target variables are estimated based on values collected for 2017 using a moving average. Growth for this sector is modelled on the growth for government agencies.

Population size

The population for the business survey consists of enterprises from all Swedish NACE-industries and sectors. The population covered approximately 46 000 enterprises in the business sector in 2021.

It includes all enterprises with at least 200 employees, moreover all enterprises in NACE 72, all industrial research institutes, all enterprises which in the previous survey showed more than SEK 5 million of R&D.

All other enterprises with at least 10 employees are included in the sampling procedure, which is built on a stratified sample with optimal allocation (Neyman-allocation). An addition is made for

enterprises with less than 10 employees. This estimate is based on a special study of this group in 2013 and re-checked in 2021 and 2023.

The survey of government units is a census. The population consists of 20 regions, 290 municipalities, 185 government agencies and 15 public non-profit organizations.

Sample size

The sample for the Business enterprise sector amounted to approximately 8 000 enterprise units in 2021.

Survey response rate

The response rate was approximately 79 percent for the business survey and 90 percent for the government survey in 2021.

Imputation method

Compensation for non-response is made by assuming that non-responding enterprises have the same characteristics as the responding ones.

Sample coverage

The number of enterprises measured in the survey is determined with the aid of the SBR, Statistics Sweden's Business database. The sample coverage includes enterprises with at least 10 employees that were active, according to the SBR, when the sample was chosen. Enterprises having more than 200 employees and enterprises in NACE-section M72, Research & Development, are surveyed in total, while smaller enterprises and other NACE-sections than M72 are surveyed by selection.

Over-coverage: Mainly enterprises in so called joint units where the underlying operation is already included in the sample and also enterprises not active at the time of the survey.

Under-coverage: Enterprises that have been added after the sample was chosen.

Main variables collected

The survey shows resources spent on R&D in terms of economic values and labour.

Main economic variables are type of cost, product groups, purpose/use and financing. For R&D assigned to an external part the receiving part is to be categorized, i.e. university or municipal.

The number of employees and years employed in R&D is reported by gender and profession. The variables total R&D expenditure, number of persons, full-time employment per year by scientists, product developers etc. are divided regionally. Estimates for all variables but number of persons are also collected for the year after the surveyed year.

Statistical register for vehicles (2021)

Link to inquiries conducted at European level

There is no EU regulation. The agency responsible for the vehicle register is The Swedish Transport Agency (Transportstyrelsen). The agency responsible for the statistics is Transport Analysis. The statistics are produced by Statistics Sweden.

Reporting units

Motor dealers and vehicle owners.

Periodicity

Stock data are recorded annually. Reported data are published quarterly with monthly data. Registrations are recorded on a monthly basis.

Results availability

Production time for the stock statistics is about two months after the year-end. The quarterly statistics are recorded around two weeks after the close of the quarter.

Compulsory or voluntary?

Vehicles are subject to compulsory registration. Supply of data to the inquiry is compulsory under the Official Statistics Act (SFS 2001:99), Statistics Sweden's regulations of the Official Statistics (SCB 2001:100) and the Swedish Transport Agency (Transportstyrelsen) regulations (TSFS 2015:63).

Main features of survey methodology

The purpose of the statistics is to describe the Swedish vehicle population: in the first instance, the stock of vehicles, registrations (number and in certain case their economic value), categories of persons owning the vehicles and vehicle density at regional level.

Official statistics on vehicles subject to registration are based on extracts from the common vehicle register for the country. The central registration authority for the vehicle register is the Swedish Transport Agency (Transportstyrelsen).

Population and sample size

The inquiry population consists of the vehicles registered in the Central Motor Vehicle Register of the Swedish Transport Agency, which covers passenger cars, goods vehicles, buses, trailers (including caravans), motorcycles, off-road scooters, tractors, off-road vehicles, off-road trailers and motor-driven machines in accordance with the Road Traffic Ordinance (2001:558). This means that only vehicles subject to compulsory registration may be included in the statistics, hence only EU mopeds are included, but not other mopeds. Military vehicles belonging to the State and vehicles used only within fenced-in areas and for which there is no compulsory registration are not covered by the statistics.

Number of units in the population: 10 883 362 according to the stock at 31/12/2021. The number of registrations and deregistrations in 2021 was 795 053. Passenger cars form the largest group at around 6,4 million vehicles, followed by trailers counting a little more than 1 million vehicles.

Main variables collected

Passenger cars, goods vehicles including trailer tractors, buses, trailers including caravans and semi-trailers, motorcycles including EU mopeds, farm tractors and off-road scooters, including snow

scooters, are the main units and are shown in the register. The main variables are county, municipality, year/model, make and status.

Primary variables common to the main units:

- Registration number
- Owner number, postcode, age, sex, owner category
- Municipality code
- Group code (makes code + group number)
- Model code identity
- Year/model
- Registration status
- Fuel type
- Data indicating various changes
- Reason for deregistration
- Number of owners
- Leased vehicle indication
- Directly imported vehicle indication
- Body code
- Chassis number
- Vehicle designation
- SNI2007 code, institutional code
- Commercial transport indication
- Natural/legal person
- Recording month (year-month)
- Make code (two or three letters)
- Institutional sector text for the code
- County code
- Name of municipality
- County code
- Name of county

Primary variables common to several of the main units:

- Power unit
- Type of fuel

- Environmental class
- Service weight, Total weight (kg)
- Vehicle length, width (cm)
- Axle distance 1.2 (cm)
- Type of tractor coupling
- Number of axles
- Indication of equipment of various types
- Type of tractor coupling
- Individual variable for all registered vehicles: Direct import
- Individual variable for passenger cars and buses: Number of passengers
- Individual variable for passenger cars: Colour code
- Individual variable for goods vehicles: Charge (registrations)
- Individual variable for motorcycles: cylinder capacity (cc)

Investment survey (2021)

Link to surveys undertaken at the European level:

There is no EU regulation. The responsible and also producing agency for the statistics is Statistics Sweden.

Reporting unit:

Kind of Activity Units (KAU:s) within mining and quarrying, manufacturing, sewerage, waste management and remediation activities, transportation and storage, construction, financial and insurance activities with at least 20 employees. Cut off rules for electricity, gas, steam and air conditioning supply, water supply are at least 5 employees, for other service activities at least 10 employees and for KAU:s within real estate activities an assessed value of more than 10 million SEK.

Periodicity:

Quarterly

Time of availability of results (e.g. months after the end of the surveys period):

Quarterly, 50 days.

Sampling frame:(e.g. name of business register used/population census):

Statistics Sweden's Business Register (SBR).

Survey is compulsory or voluntary?

Compulsory

Main features of survey methodology (e.g. PPS sampling/panel of respondents/use of a size threshold for sampling/postal questionnaire/ telephone interview):

A stratified simple random sample is drawn once a year and used for all quarters a specific reference year. Stratification is based on economic activity and size (according to number of employees). KAU:s with more than 200 employees are completely enumerated, while a sample is drawn among smaller KAU:s. Investments among KAU:s between 10-19 employees, classified into the manufacturing sector, are modelled. This model is based on the assumption that KAU:s with 10-19 employees has the same investment per employee as KAU:s with 20-49 employees. A web-questionnaire is used.

Population size:

Approximately 39 800 units.

Sample size:

Approximately 7 800 units.

Survey response rate:

Approximately 82.5 percent unweighted, 88,2 percent weighted (according to size).

Method used to impute for missing data:

Imputations for unit-non-response among large KAU:s is done manually.

Variable used to impute for missing data:

Reported investments for previous quarters as well as administrative data (like annual/quarterly reports).

Variable used for grossing-up to the population (e.g. turnover/employment):

During the estimation phase the design weight is used for grossing-up (number of population KAU:s divided by number of selected KAU:s). However, number of selected KAU:s is replaced by number of responding KAU:s (imputed KAU:s included) to compensate for unit-non-response. There is no other variable included in grossing-up.

Sample coverage, as % in terms of variable used for grossing-up (e.g. sample covers 60% of employment recorded on the sampling frame):

Not applicable

Main variables collected:

The main variables collected are summaries of executed and planned gross fixed investments by type of investment object. Examples of types of investment objects include purchase of buildings, land, and facilities, new construction, extension, and renovation of buildings and facilities, machinery and equipment, and dwellings.

Further adjustments made to the survey data:

Not applicable.

Enterprises IT expenditure

Link to surveys undertaken at the European level:

There is no EU regulation. The responsible and also producing agency for the statistics is Statistics Sweden.

Reporting unit:

Enterprises. 3760 out of 4534 enterprises surveyed responded to the questionnaire.

Periodicity:

Intermittent survey with a 5-year cycle. Conducted specifically for NA requirements in order to timely update benchmark estimations of software and databases.

Time of availability of results (e.g. months after the end of the surveys period):

Results are usually available 2-3 months after the reference period.

Sampling frame:(e.g. name of business register used/population census):

Statistics Sweden's Business Database.

Survey is compulsory or voluntary?

Survey is compulsory.

Main features of survey methodology (e.g. PPS sampling/panel of respondents/use of a size threshold for sampling/postal questionnaire/ telephone interview):

PPS sampling.

Population size:

Approximately 41 000 units.

Sample size:

4534 for 2021.

Survey response rate:

Approximately 84 percent 2021.

Method used to impute for missing data:

No item non-response where detected for 2021.

Variable used to impute for missing data:

None.

Variable used for grossing-up to the population (e.g. turnover/employment):

Number of enterprises.

Sample coverage, as % in terms of variable used for grossing-up (e.g. sample covers 60% of employment recorded on the sampling frame):

Not applicable.

Main variables collected:

Data required for the estimation of own account software (time allocated on software development) as well as for purchased software (expenditure on software related items). Further adjustments made to the survey data:

Further adjustments made to the survey:

Not applicable.

Business inventories (2021)

Link to surveys undertaken at the European level (e.g. structural business statistics):

None.

Reporting units (e.g. enterprise/ local KAU/ household):

KAU.

Periodicity (e.g. annual/quarterly/other- to be specified):

Quarterly.

Time of availability of results (e.g. 18 months after the end of the survey period):

Approx. 45 days end of the surveys period.

Sampling frame: (e.g. name of business register used/ population census):

The name of the used business register is Statistical Business Register, SBR (Företagsdatabasen). The population is divided in stratas based on kind of activity units and size (Inventories from standardised accounting statements data) in the mining-, manufacturing-, trade- as well as some service industries – corresponding to NACE departments B, C, G, J and M. In order to ensure that the statistical results are as industry-specific as possible, activity units are used as the inquiry unit while the sampling frame is defined in terms of business entity, but activity units are the used sampling object within the selected business entity.

Survey is compulsory or voluntary?

Compulsory, enterprises are obliged to submit inventory data to Statistics Sweden on request under statutory provisions SFS 2001:99, SFS 2001:100 and SCB-FS 2015:4.

Main features of survey methodology (e.g. PPS sampling/panel of respondents/use of a size threshold for sampling/postal questionnaire/ telephone interview):

Stratified random sampling, cut off by turnover 1 million SEK. The survey is conducted by electronic questionnaire, possibility for the respondent to submit information by e-mail or telephone.

Population size:

The number of objects in the population consists of about 436 000 KAU. The number of objects over cut off consists of about 13 000 KAU.

Sample size:

Complex company structures and industry-dominant business units are always included in the inquiry. The number of units surveyed is about 3 400.

Survey response rate:

About 80 %.

Method used to impute for missing data:

Depends on availability and feasibility. The sequence of methods is essentially that imputed values primarily will consist of estimated values based on the previous values multiplied by a coefficient based on responding KAU:s in the same industry and of similar size. If neither received values or earlier imputed values are available, then the value imputed will be decided by the total value of the

inventories within the total sampling frame from the selection drawing. For some complex KAU:s - the latest received value can be used as the value imputed.

Variable used to impute missing data:

The collected data itself.

Variable used for grossing-up to the population (e.g. turnover/ employment):

The values of total inventories received by the Swedish Tax Agency within KAU:s tax declarations from two years prior (t-2). This information is used to adjust the total inventory values to compensate for both the KAU:s that does not exceed the cut-off limit (at least one million SEK of inventory value) to be included in the survey, as well as to compensate for 10% of the remaining population post cut-off that is not covered - as the degree of coverage is set to 90%.

Sample coverage, as % in terms of variable used for grossing-up (e.g. sample covers 60% of employment recorded on the sampling frame):

Approx. 90% - possibly a bit lower depending on what sub-group within the industry that is being measured.

Main variables collected:

The value of inventories concerning Input goods, goods in progress, finished goods, goods for resale on the final day of the quarter in question.

Further adjustments made to the survey data:

Deflation and adjustments for recurrent inventory losses and gains, as well as adjusting the values from acquisition- re-acquisition values.

Monthly fuel, gas and inventory statistics (2021)

Link to surveys undertaken at the European level (e.g. structural business statistics):

With reference to (EC) 1099/2008 from October 22, 2008, on energy statistics, the Member States are obliged to answer questionnaires regarding fuels.

Reporting unit (e.g. enterprise/local KAU/household):

Enterprises

Periodicity (e.g. annual/quarterly/other- to be specified):

Monthly

Time of availability of results (e.g. 18 months after the end of the surveys period):

Approximately 6 weeks after the reference month.

Sampling frame:(e.g. name of business register used/population census):

Oil trading companies and other enterprises with contingency inventories selling petroleum products, major importers of petroleum products which do not belong to the first category, coal trading companies, coking plants and producers and suppliers of FAME and ethanol for vehicles.

Survey is compulsory or voluntary?

Compulsory

Main features of survey methodology (e.g. PPS sampling/panel of respondents/use of a size threshold for sampling/postal questionnaire/ telephone interview):

The survey is conducted by questionnaire through Statistics Sweden's tool for online collection.

Population size:

The number of objects in the population consists of about 60 companies.

Sample size:

Complete survey of carbon trading and oil trading companies.

Survey response rate:

Non-responses (objects and partial) in 2021 survey were limited to single objects.

Method used to impute for missing data:

Received information are examined and when errors are noted the enterprises are contacted for additional information. For those companies that have not responded to the survey, imputations are not used.

Variable used to impute for missing data:

Not applicable.

Variable used for grossing-up to the population (e.g. turnover/employment):

Not applicable.

Sample coverage, as % in terms of variable used for grossing-up (e.g. sample covers 60% of employment recorded on the sampling frame):

Not applicable.

Main variables collected:

Data on quantities relating to opening and closing stocks of inventories, import, export, production, own consumption, bunkering for foreign shipping and delivery to consumers and retailers for the following products: Coal, coke, crude oil, gas fuel, intermediates, ethane, refinery gas, kerosene, light petroleum, others light oils, petroleum naphtha, gasoline, kerosene, other kerosene and other medium oils, diesel, domestic heating fuel and bunker oils (EO 1, EO 2 incl. WRD and EO 3-6), LPG (propane and butane), lubricating oils, road oils, bitumen (asphalt), paraffin wax, additives, sulfur and FAME and ethanol for vehicles, both E85 and E95. Details of own consumption of natural gas and biofuels are also included. Deliveries to dealers and consumers are allocated to consumer groups.

Further adjustments made to the survey data:

Not applicable.

Quarterly Fuel Statistics (2021)

Link to surveys undertaken at the European level (e.g. structural business statistics):

None

Reporting unit (e.g. enterprise/local KAU/household):

Enterprises

Periodicity (e.g. annual/quarterly/other- to be specified):

Quarterly

Time of availability of results (e.g. 18 months after the end of the surveys period):

Approx. 90 days after the end of the surveys period.

Sampling frame:(e.g. name of business register used/population census):

Manufacturing industry: Energy use in manufacturing industry (Annual survey with a population of industrial workplaces with at least 10 employees).

Producers of thermal power generation, cogeneration, district heating and gas works according to the annual electricity, gas and district heating statistics demarcation. Gas statistics: Natural Gas Importers and distributors of gas by pipelines.

Survey is compulsory or voluntary?

Compulsory

Main features of survey methodology (e.g. PPS sampling/panel of respondents/use of a size threshold for sampling/postal questionnaire/ telephone interview):

The survey is conducted through Statistics Sweden's online questionnaire, with possibility for the respondent to submit information by excel or traditional paper forms. For distributors of natural gas – it is possible to submit through either online questionnaire or excel-forms. The survey consists of two parts, one census and one model based.

Population size:

About 7288 (= 6435+853) industrial workplaces.

Sample size:

About 853 (= 524+322+7) industrial workplaces.

Survey response rate:

92,5%

Method used to impute for missing data:

The values from the previous year are used. If there are no earlier entries from the respondent within industrial manufacturing, values from the yearly survey are used

Variable used for grossing-up to the population (e.g. turnover/employment):

Total energy use in industry from the survey “Energy use in industry” conducted by Statistics Sweden. Sample coverage, as % in terms of variable used for grossing-up (e.g. sample covers 60% of employment recorded on the sampling frame):

The survey consists of two parts, one part is a census and the other is model based, so the coverage is 100%.

Main variables collected:

Data on quantities relating to opening and closing stocks of inventories for the fuels coal, cokes, kerosene, diesel, EO1, EO2, EO3-5 and LPG.

Further adjustments made to the survey data:

Changes in inventories in electricity and heat generating plants and gasworks are calculated with the aid of Statistics Sweden’s fuel statistics. From these, data are obtained on quarterly volume changes for the various types of fuel. The fuel statistics only contain quantitative data and is converted to monetary values as described and illustrated in chapter 5.11.

New construction (2021)

Link to surveys undertaken at the European level

There are no EU regulations.

Reporting units

The statistics report changes in the size and structure of the housing stock through the measures new construction, conversion and demolition. On an ongoing basis, all 290 municipalities submit information on building permits that are granted and that refer to the new construction and extension of residential buildings, non-residential buildings and building for seasonal and secondary homes.

Periodicity

Quarterly and annually.

Time of availability of results

Preliminary new construction is published 60 days after the end of the quarter. Preliminary annual data is published three months after the end of the calendar year.

Sampling frame

The frame population for the statistics comprises Sweden's 290 municipalities. The observation unit and data source are the same. The frame is comprehensive as the municipal building committees are the body that processes building permit cases. The frame for new construction and conversion statistics is based on the building permit statistics, and the frame population consists of all the building permits that concern dwellings, including dwellings located in non-residential buildings, and granted building permits for the conversion of multi-dwelling buildings that lead to a change in the number of apartments.

Survey is compulsory or voluntary?

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's directive (SFS-FS 2021:15).

Main features of survey methodology

Municipalities deliver data through a questionnaire. In their capacity of granters of building permits, all municipalities submit monthly data on granted building permits for new construction, extension that gives rise to new dwellings or a larger non-residential floor area and altered use (conversion) of multi-dwelling buildings that changes the number of dwellings. The collection procedures are according to the new Planning and Building Act, as amended from 2 May 2011, and pertain to building permit data that essentially correspond to much of the data submitted by building permit applicants in their application for a building permit, including plans. All construction projects that require building permits are reported to Statistics Sweden, either through a specific Statistics form online or on paper. A reminder to report approved building permits for the previous month is sent out every month by SCB. The preliminary building permit data are, as a rule, underestimated due to late submissions of reports or forgotten projects. The underestimation for individual quarters is up to 30–40 percent for the number of building permits, and for the cumulative amount over the reporting quarters concerned, the underestimation is 5–40 percent. This makes the data initially difficult to compare with prior periods in the quarterly accounts. In order to create comparability for the period concerned, the average underestimation for the same period in the previous three years is therefore also calculated in order to extrapolate actual data with the average underestimation. This is however not a concern for the annual accounts, since the data on building permits and number of started

dwelling starts and completions, follow-up is performed with the municipalities on building permits pertaining to dwellings by means of a list of projects in progress. As a rule, data on starts is not obtained from precise inspections of construction work, but from the developer's approval to start according to the starting clearance. This data sometimes deviates from the start of the actual construction work. Data on completions shall be based primarily on the final decision given to the developer by the municipal building committee in the building permit case. A handful of municipalities can grant their own date for a more actual start of construction work besides the checkpoints set forth in the Planning and Building Act (starting clearance and final decision) that they usually provide. Number of started dwellings is integrated with data from the developers provided in the survey Prices for newly produced dwellings, and more detailed data are obtained from there about the building and the dwellings, e.g. type of building and tenure. Data regarding start date and estimated completion date are also obtained from the developer. These data can be compared with equivalent data from the municipalities.

Population size

The statistics are based on a total population survey.

Sample size and survey response rate

The statistics are based on a total population survey and no calculation of nonresponse is performed.

Method used to impute for missing data

The statistics are based on a total population survey and no calculation of nonresponse is performed.

Measurement errors due to incorrect information may occur because of misregistration by the municipalities. However, these are generally considered negligible.

Variable used for grossing-up to the population

The statistics are based on a total population survey and no grossing-up measures are performed.

Sample coverage, as % in terms of variable used for grossing-up

No sample survey, all units are included in the statistics. The statistical data therefore do not contain any sample uncertainty.

New construction of ancillary residential buildings that are exempt from the building permit requirement ('Attefall houses') are not included in the new construction statistics because they do not require a building permit and are therefore not within the frame.

Main variables collected

- Start (year, month) usually refers to the initial date of starting clearance from the municipality; a more actual date for commencing construction work can be obtained from the developer later.
- Completion (year, month) is measured using an observation variable which is the date of the municipality's final decision
- Tenure (rented, tenant-owned dwellings (ownership rights) or owner-occupied dwellings)
- Residences for communities
- Size of dwelling (number of rooms and kitchen type)
- Original construction period (year of completion for new construction)

- Type of one-or-two-dwelling building (detached houses or terraced, semi-detached and linked houses)
- New construction or extension (from the building permit documentation)

Further adjustments made to the survey data

As mentioned in *Main features of survey methodology*, no further adjustments are needed in the annual calculations.

National apartment register (2021)

Link to surveys undertaken at the European level

The survey is conducted by Statistics Sweden. No EU regulation has been introduced.

Reporting units

The National apartment register is a national register of all Swedish residential apartments. It is a census survey based on all residential apartments in the Property Register. Statistics Sweden receive weekly notes on additions, changes and removals from the register. The register is managed by Lantmäteriet, which is the Swedish mapping, cadastral and land registration authority. It is a public authority that belongs to the Ministry of Rural Affairs and Infrastructure.

There is a minor loss of apartments in the apartment register. One reason is that Lantmäteriet, in connection with the organisation of the register, failed to receive data from all property owners of apartment buildings (including special housing and other buildings). This even though property owners are required by law to disclose information that causes changes or additions to the register of apartments. After Lantmäteriet had put up the register it is the municipalities, also by law, that must register changes and additions for each dwelling within the municipality. For apartment buildings, this must be done in cooperation with the property owners because it is they who will number their apartments and provide details of apartment number, size etc. to the municipalities. Another reason for loss could be shortcomings by the municipalities in keeping the register up to date. A rough estimation of the loss has been calculated by using the number of persons in the Total Population Register who are registered at properties that lack apartments in the apartment register, divided by the average household size in multi-dwelling buildings in Sweden, which is 1.8 persons. This estimates a under-coverage of 1.7 percent or 86 000 apartments for the year 2021.

Periodicity

Annual.

Time of availability of results

The National apartment register is published in April every year and shows the dwellings stock as of December 31. It takes about 3 months to complete the register from the reference date.

Sampling frame

It is a census survey, but some apartments are lost as described under the section Reporting units.

Survey is compulsory or voluntary?

Supply of data to the inquiry is compulsory under the Official Statistics Act (SFS 2001:99) and the Official Statistics Act (SFS 2001:100).

Main features of survey methodology

The apartment register is created by matching information (attributes) from various objects in the Property Register. The starting point is the apartment object itself, which is supplemented with information about property, building, address, and owner. Most of the ownership information is obtained from leaseholders (tomträttsinnehavare) or registered owners according to the Property Register. In cases where there is no match with the Property Register's ownership tables, information about the responsible owner according to the Property Taxation Register is used.

Secondary residences or vacation homes are also included in the apartment register. In this context, secondary residences (vacation homes) are defined as small houses owned by individuals or estates

that lack registered residents. To identify these, the Total Population Register (RTB) must be matched against the apartment register. Small houses without registered residents are then marked as secondary residences and excluded from the dwelling stock.

Population size

The apartment register is a census survey and includes all tenanted dwellings. Since vacation homes/secondary residences should not be included, approximately 687,000 apartments are excluded from the final population. The dwelling stock in Sweden, according to the survey as of December 31, 2021, amounts to 5,096,007 apartments.

Sample size

The total number of apartments in the year 2021 is nearly 5.8 million. From this number, secondary residences are excluded as described above.

Survey response rate

The National apartment register is a register-based survey.

Method used to impute for missing data

Other completing sources are confronted. However, object loss does not contribute to uncertainty in the statistics because the survey is register-based. Partial loss of certain variables might occur and is simply due to municipalities missing to register certain information. This is reported as objects with “data missing”, so they are still included in the statistics.

Variable used for grossing-up to the population

Irrelevant.

Sample coverage, as % in terms of variable used for grossing-up

Irrelevant.

Main variables collected

The main variables collected are:

- Type of building
- Period of construction
- Type of ownership
- Tenure
- Useful floor space in square metres
- Size of dwelling (number of rooms and kitchen type)
- Type of special housing
- Region

Further adjustments made to the survey data

For all the tenures, i.e. rented dwellings, tenant-owned dwellings and owner-occupied dwellings there exist some objects with “data missing” as described in the section *Method used to impute for missing*

data. It can be for example objects missing the period of construction, but all other variables known. It can also be that the category of useful floor space is missing, but all others are known.

This is addressed by adding the missing data into the real data. In the case of not knowing the useful floor space category into which to place the object, we use the known distribution and extrapolate the real data with the missing objects. That gives us the missing objects in each strata of useful floor space, which can then be multiplied with the real average floor space in each category to obtain an estimation of the total floor space for the missing objects.

In the case of missing data in the period of construction variable, there is no need to adjust the data. More information about this can be found in section 3.18.2-3.18.4.

10.4 Statistical surveys and other data sources used for the transition from GDP to GNI

Foreign Direct Investments – assets and income (2021)

Link to inquiries conducted at European level

None

Reporting units

Enterprise or Local Enterprise Group

Periodicity

The survey is an annual survey measuring Foreign direct investment (FDI) earnings according to the Current Operating Performance Concept (COPC) and dividends:

Foreign Direct Investment in Sweden (report form 1346) / Swedish Direct Investment abroad (report form 1347)

The monthly survey measures interest on debt instruments and dividends:

Direct investments – Loans and dividends (report form Di45)

Time of availability of results

Annual survey: Preliminary results are reported to international organizations at T+9 months after the reference period. The final results are included in the quarterly publication of the Balance of Payments 3rd quarter as well as in a separate survey report in December.

Monthly survey: Preliminary results are reported to international organizations T+44 days after the reference period. The results are included in the quarterly publication of the Balance of Payments at Statistics Sweden's website.

Sampling frame

Annual survey: The sampling frame is built from business registers including register of group structures in combination with direct investment data from Statistics Sweden's internal FDI database.

Monthly survey: Cut-off survey covering enterprise groups with the largest FDI positions and transactions.

Survey is compulsory or voluntary.

Both surveys are compulsory for respondents.

Main features of survey methodology

Annual survey: Stratified random sampling

Monthly survey: Cut-off survey covering enterprise groups with the largest FDI positions and transactions.

Population size

Annual survey:

Inward FDI (2021): 7143 enterprise groups

Outward FDI (2021): 5319 enterprise groups

Sample size

Annual survey:

Inward FDI (2021): 1210 enterprise groups

Outward FDI (2021): 884 enterprise groups

Monthly survey (cut-off): 200+ enterprises with the largest FDI positions and transactions.

Survey response rate

Annual survey:

Inward FDI (2021): 82%

Outward FDI (2021): 94%

Monthly survey: 90-100% for the T+44 days reporting to international organization. Over time the response rate is between 95-100% for monthly reporting enterprises.

Method used to impute for missing data

Annual survey: Adjusted grossing up and in very few cases imputation of data.

Variable used to impute missing data

Annual survey: Survey response from previous year with adjustments according to data from the monthly survey (if available).

Variable used for grossing-up to the population

Annual survey: Stratification is made by estimated absolute size value of total FDI stock. If the enterprise has not responded in previous surveys, the total FDI stock is estimated based on information on total equity or share capital from business registers.

Sample coverage, as per cent in terms of variable used for grossing-up

Annual survey:

Inward FDI (2021): 89 %

Outward FDI (2021): 94 %

Monthly survey: 80 %

In retrospect, some deficiencies in coverage among the groups included in the surveys have been noticed. This means that groups that ought to have been included in the sampled population were not (under coverage) and groups were included that should not have been (over coverage). An example of under coverage is a Swedish company that has acquired a subsidiary abroad before or during 2021 but has not reported this to Statistics Sweden. Companies that have gone bankrupt or have been liquidated prior to 2021 are examples of over coverage”

Main variables collected

Annual survey: measuring FDI earnings according to the Current Operating Performance Concept (COPC) and dividends. Main variables collected to calculate COPC earnings: *Profit/loss after financial items, write-downs, reversals of write-downs, capital gains, capital losses, dividends and tax.*

Monthly survey: Interest on debt instruments and dividends.

Balance statistics for non-financial companies, including statistics for the balance of payment (2021)

Link to inquiries conducted at European level

The European System of Accounts (ESA2010) regulates the financial account and thereby also the Balance Statistics for non-financial companies (BAST).

Within the framework of BAST Statistics Sweden by direction from Sweden's Central Bank (Riksbank) also collects balance statistics for the Balance of Payment (BB-BAST).

Reporting units

Data are collected from legal units, the statistical unit in the survey is Enterprise (or Institutional unit).

Periodicity

Every quarter of the year.

Results availability

The results are published every quarter by Statistics Sweden, as a part of the financial accounts. The results are available 11 weeks after end of a quarter.

Compulsory or voluntary?

Supply of data is compulsory under the Official Statistics Act (SFS 2001:99) and Statistics Sweden's regulation (SCB-FS 2012:6).

Supply of data for the BB-BAST data is compulsory under the Central Bank Act (1988:1385).

Main features of survey methodology

The Balance statistics (BAST) and the BB-BAST illustrates the significance of the non-financial enterprises on different financial markets. This is done by reporting balance and transactions of the non-financial enterprises. The other purpose is to provide data on the enterprises' financial savings to the quarterly financial accounts.

Statistics Sweden is assigned to inquire into some foreign transactions and report opposing country and currencies (BB-BAST). These data are used in the Balance of Payments.

Population size

The population contains non-financial enterprises (sector 111000), the general government public service companies (sector 112000), branches in Sweden of foreign non-financial corporations (sector 113000) and enterprise households with employees or for own account (sector 141 and 142).

Foundations are not part of the population. The population size is over 1 million enterprises. Some enterprises in the population are not active in the Business Register but are identified by other sources.

The survey uses a cut-off threshold, enterprises with total assets/liabilities of less than SEK 5 million should be excluded from the survey. Their total assets/liabilities are approximately 2,5 percent of the population total.

Sample size and frame

The sampling frame in the survey 2021 was constructed from the Swedish Business Register, a frozen version in March 2021. Auxiliary information such as financial assets and liabilities were used from the Swedish Tax Agency (income statement of business activity from 2019). The survey uses a cut-off threshold (see the part *Population size*). All enterprises in the sampling frame had total

assets/liabilities of SEK 5 million or more in the Swedish Tax Agency income statement 2019. The sampling frame contained 112 454 enterprises (in fact legal units) in 2021.

The sampling frame was stratified into 10 strata by total assets/liabilities. In the first quarter enterprises within strata 7-10 was totally enumerated (591 enterprises all with total assets/liabilities of at least SEK 4.7 billion) and from strata 1-6 a random sample of enterprises was drawn (totally 2100 enterprises). The total sample size in the first quarter was therefore 2691 enterprises. In the second, third and fourth quarter data was only collected from the enterprises within strata 7-10.

Survey response rate

The unweighted non-response rate is usually about 18-20 % in strata from which random samples was drawn. The unweighted non-response is about 2-4 % in the total enumerated strata.

Sample coverage

Overcoverage is regarded as a minor problem in the survey. It is assumed to be zero for all the variables.

Undercoverage (newly started enterprises etc.) can for some variables and some quarters be of significant size. Some newly started enterprises can start with very high values of balance. Information of such high balance will come to our knowledge with two years lag.

Imputation method

The foreign items are assumed to be zero for enterprises who reported no foreign items in the last BB-BAST survey.

The non-response enterprises in the total enumerated strata are imputed using reported values from the last quarter. If there are no reported values from the last quarter, values from other enterprises in the same stratum are used.

Non-response enterprises in strata where a random sample was drawn are not imputed. Instead, reweighting is used for grossing up to the population (see the part om *Grossing method*).

Grossing method

The estimation procedure in BB-BAST is executed by two different approaches. In the first quarter a regular sampling approach is used. That means that the responding enterprises values in the sample are weighted to population level by their inverted inclusion probabilities (and with their inverted estimated response probabilities to adjust for non-response).

In quarter two, three and fourth, data are collected only from enterprises in strata 7-10. For estimating the other enterprises (in strata 1-6) a model approach is used. The other enterprises contribution to a population total is predicted based on the estimates in first quarter forecasted by the change between the current and first quarter. The change must be estimated based on the responding enterprises in strata 7-10.

No compensation is done for the enterprises below the cut-off threshold in the population for estimating a total.

The main variables that are collected and used for estimation of totals are

- Financial assets
- Financial liabilities
- Balance

- Transactions
- Financial derivatives
- Lending
- Income from interest
- Cost of interest

All variables with foreign counterparties are divided and estimated by country and currency.