Jens Malmros
Ingegerd Jansson
SCB

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Minutes

# Scientific Advisory Board of Statistics Sweden

07-08 May 2026

## Attending board members

Jan Bjørnstad
Barteld Braaksma
John Eltinge
Anders Holmberg
Sune Karlsson
Johanna Laiho-Kauranne
Thomas Laitila (adjunct to the SAB)
Giovanna Ranalli
Bella Struminskaya (remote)
Li-Chun Zhang

## Attending Statistics Sweden staff

Eva-Lo Ighe
Marina Carlén
Marie Haldorson (remote)
Jenny Hjort
Ingegerd Jansson
Lilli Japec
Mikaela Järnbert
Mia Kling
Jens Malmros
Kristina Strandberg

Thomas Önskog
Johan Löfgren
Natalia Ogorodnikova
Hanna Karlsson
Mats Bergdahl-Kercoff
Pär Hammarström
Markus Ridhagen
Markus Milan
Mikaela Similä
Carl-Johan Renberg
Leo Bierbum Hansson
Jakob Engdahl
Mattias Björling
Daniel Lennartsson
Elise Wester
Thorsten Holzer
Björn Forssell

## Other participants

No other participants

## Welcome and presentation of new Board members

Eva-Lo Ighe welcomed the meeting participants. A special welcome was extended to the new members of the Board, Li-Chun Zhang, Giovanna Ranalli, and John Eltinge. The new members introduced themselves and their research interests.

## Current issues at Statistics Sweden

Eva-Lo Ighe presented current issues at Statistics Sweden (SCB).

Currently, SCB is preparing for an aid project in Ukraine, primarily focusing on preparing for application to EU membership. SCB has previously participated in similar projects in other countries.

This year is election year in Sweden. SCB has an important role to play presenting facts for the political debate, explaining the statistics, and informing how to use them.

A recent survey shows that the public has a high level of confidence and trust in SCB.

SCB has been assigned to establish a Data Steward function in Sweden together with the Agency for Digital Government.

We are now on our last year of the current five-year plan and are looking forward to outlining a new plan on four different areas:

- Automation – Focus on increasing automation by systematic mapping of previous and upcoming efforts.
- Security and preparedness – Increased preparedness to protect our data and production.
- AI – Further identification of use and implementation of AI in areas of interest.
- Data collection – Clarify and prepare for future data collection.

## Reply to recommendations

Lilli Japec presented SCBs replies to the recommendations of the Board. The replies were from the November meeting 2025 and the May meeting 2025, altogether five topics.

## Topic 1: Representativity of the response set in SE-SILC

The Swedish Survey on Income and Living Condition (SE-SILC) is produced annually with a sample of approximately 20 000 individuals from the Swedish

Total Population Register. In 2022, the mode of collection of the survey was changed from CATI to mixed-mode CAWI/CATI. With the current survey design, the sample is first offered CAWI and, beginning two weeks after the CAWI offer, non-respondents are approached by CATI. The CATI resources are uniformly distributed over the set of non-respondents.

To obtain better representativity in the response set of SE-SILC, we would like to direct the CATI resources towards sampled individuals whose response propensity in the CAWI mode is low. We propose to use response data from the previous year to construct a model for the propensity that a sample individual responds in the CAWI mode without first being contacted in the CATI mode, given background variables from registers. This model can then be applied to the sample of the present year to predict the CAWI response propensities of all individuals in the present sample. To evaluate the proposed procedure, we suggest carrying out an embedded experiment during the collection of SE-SILC in the spring of 2027.

Thomas Önskog introduced the topic.

Bella Struminskaya opened the discussion

## Discussion

Some comments from the discussion:

- Do not focus too much on mode. CAWI is the only mode offered initially, and then people with high probability to respond will respond in CAWI. Rather, focus on how many contact attempts that are needed.
- It is possible to add a category of people that will never respond and limit the resource use for this group.
- You should carefully consider the rotation group. For example, the first group must be separated from the others in e.g. modelling. Response patterns matter and studies have shown that they will be consistent over years.
- The R indicator is not a good measure of representativity. The respondent sample composition that minimizes the R-indicator is the equal probability sample, i.e. the quota sample.
- In the MAR case, you will not have control of response probabilities. The response measure is affected by your intervention.
- Living conditions are highly related to, e.g., income. You can target respondents by income instead of modelling response probability.
- In the survey bias analysis for the previous rounds, it is possible to look at the impact of extra fieldwork and understand how much the late respondents correct for the bias.
- It could be possible to further elaborate the goal of the experiment by looking at the key users and the needs. This may guide in the formulation of stopping criteria.
- Further study of drop-outs might guide experimental design choices.
- The research question is about optimal targeting of CATI resources, i.e., treatment, for enhancing response. You need to specify the treatment

effect and a loss function. However, because the treatment effect is not exact, i.e., you might not get an answer when a person is targeted, the problem cannot be solved mathematically. Hence, it should be approached as a simulation. Then you can design the experiment to validate the robustness and usability of the approach. Formulate the experimental target after the simulation.
- Imputation might be possible for some variables. Then you can focus resources on other units.
- If interviewers are having insights not captured in paradata, these insights might be used to facilitate understanding of respondent behaviour.
- At CBS, surveys that implemented adaptive survey design have had modifications later. Some advice is to be more careful early on and bolder after a few years.
  There are international collaborations available for adaptive design, e.g. the ADSaMM group of UNECE.

## Statistics Sweden's new role as Data Steward

Marie Haldorson presented.

SCB has been assigned to establish a Data Steward function, together with the Agency for Digital Government (Digg). The new function will support improved data management on national level. The objectives are to provide guidance and support to the public sector, enable increased use of data in the public administration, provide support on how to organize and classify data, and contribute to increased data sharing without compromising privacy protection and information security.

SCB has recently finished the second step of an internal investigation of SCB´s role for greater societal benefit. The first report focused on data governance and stewardship with a proposal to offer standards, skills and services inspired by CSO Ireland. The second report focused on data management and data quality. The third report will focus on data services.

Some comments:

- SCB is congratulated on the new role. This is the way NSOs should evolve and play a bigger role for better use of data in society.
- SCB is depending on trust. Being a data steward may have a positive impact on trust, but there is a risk that it has a negative impact.
- It is important that SCB gets enough resources for the work. The budget for this year is 400 000 Euro, SCB expects the same amount the following years.
- It is crucial that the legislation gives enough room for SCB to act. Digg may enforce legislation, but SCB will be involved.

- It is important for SCB to think strategically. Motivate stakeholders and form networks that will enforce sustainability and help when it is necessary to scale up or down.
- Think of perspective use cases for key partners. They could be involved and give support if it is necessary to scale down.
- A common use case could be that AI needs to understand data, and that metadata are necessary for AI to understand and interpret data. It is important to emphasise that AI without data is nothing.
- Different areas and fields should connect when it comes to standards, metadata, and information structure. Open science is an example. This is an opportunity for many agencies to make their data visible for research, for the benefit of many. The needs for society come first, not AI readiness.

## Topic 2: Use of generative AI at Statistics Sweden with application to web collection of consumer price data

The use of machine learning (ML) in statistical production at Statistics Sweden is supported by the internal process for machine learning. This process is part of the general Process Support System and supports development and implementation of ML applications. It primarily applies to supervised ML applications. The quality of ML models is assessed with respect to the quality dimensions accuracy, explainability, reproducibility, timeliness, and beneficiality.

Generative artificial intelligence (AI) models differ from traditional ML models in several ways. For example, because of the computing resources required, the models are pre-trained using vast amounts of training data to which access is typically not possible. Generative AI models are however powerful tools which are increasingly utilized for statistical production and related procedures. Because of the difference between generative models and traditional models, several issues on e.g. quality, methodology, and process workflow arise. The present paper discusses these opportunities and challenges in general and for an application of generative AI within the context of web collection of consumer price data.

Pär Hammarström, Jens Malmros, and Markus Ridhagen introduced the topic.

Johanna Laiho-Kauranne opened the discussion

### Discussion

Some comments from the discussion:

- The Beneficiality dimension may be viewed as a quality dimension within a quality dimension and captures too many aspects. It may be problematic to mix quality and resource use. Also consider using another terminology.

- The Explainability dimension may be problematic – compare with the case of human intervention where explainability may be difficult to achieve but is typically not required. The focus in the quality work should be more on the results and other dimensions.
- Reproducibility is probably the most important dimension, since if it is not achieved, the application is not useful. It is therefore important to consider all aspects, e.g. data and model versioning, data access, and data collection.
- The process is useful on the high level but is not clarified on a detailed level in the paper. For example, feedback loops are missing and should be clarified.
- The AI policy can be modified to better accommodate the generative AI case, especially if external models are to be used, since this means that data are made available to them for training.
- It is important to look at different models and how they perform. Try to create a systematic way to evaluate the quality of models. Use international contexts of model evaluation.
- There may be other useful use cases, for example, updating classifications and standards by looking at websites. This may be useful for automatic monitoring.
- A taxonomy may be developed to describe AI/ML and facilitate collaboration. This work is itself best done as a collaboration. This could provide an accessible description of applications.
- If the application is to be used for CPI production, justification of methods and techniques is important. It might also be important to have explainability for CPI production.
- It is unclear if web scraping is the best way forward for price statistics. The volumes are too low. It might be easier to ask providers to get data.
- It would be interesting to investigate RAG models next.
- The price must be assigned to a quantity, and you have to find a way to get both the price, and the quantity sold.
- AI methods or other methods may be used to extract information that will help SCB to decide if a substitution is possible. This is something worth to explore when working more on price indices.
- There may be price fluctuations that are hard to detect. It may be possible to use generative AI to detect when intensive price dynamics occur. Having a constant flow of prices may help us to understand prices.
- There may be intermediate steps to take instead of taking the leap from rule-based production to generative AI.

## The BALSAM platform - Status update and plans for the future

Mattias Björling and Jakob Engdahl presented.

BALSAM is a self-service platform for processing and analysis. It will support regular production and projects as well as innovation and the use of AI and ML, with built-in quality and security features. BALSAM will enable the use of R and Python in production.

In 2025, SCB took a decision on a target state for processing and analysis, which will impact the ways of working. Among the drivers are higher security, better quality, cost efficiency, transparency, and better collaboration.

Migration to the new environment will start in 2028. By then, the plan is to have in place a shared IT environment for processing and analysis, support for writing and running processing code (VTL, R, Python, SAS, SQL), data and source-code management, and support for new ways of working.

Some comments:

- At ISTAT, going from SAS to R has taken 20 years. The transition finished completely last year when it was decided to discontinue SAS. About ten percent of the code was by then still in SAS.
- The use of generative AI might help to speed up the transition.
- The architecture presented has a top-down perspective. It could be useful to also consider the bottom-up perspective. Use cases might help clarify the effects for the users.
- The formulations you present are at a high level but there are many details in there. There is a need to clarify what is meant by that business must be managing lifecycle and quality. Will there be a core function to oversee the process? It is necessary to have a quality assurance framework for handling this.
- For how long do you expect the systems survive? When will need to refresh or change again? These are difficult questions but useful to think of, for example to advertise in advance when investments are necessary.
- This is also a cultural change, and it will be necessary to work in teams. Different compositions of teams may however cause other issues.

## Topic 3: New method for the short-term consumption statistics

Short-term economic statistics reflect recent economic developments. Recently, there has been a demand for earlier and more frequent economic indicators. There are many challenges to produce rapid and frequent statistics based on card data, such as estimation, index calculation, deflation, and seasonal adjustment of weekly data. In this paper we will describe different methods to combine VAT data with transaction data. VAT data are comprehensive and have broad coverage but are less timely compared to transaction data. On the other hand, transaction data are rapidly available, but their coverage is limited compared to VAT data. This paper will describe different methods for estimation, including periods where estimation is purely based on transaction data as VAT data are missing.

Daniel Lennartsson introduced the topic.

Sune Karlsson opened the discussion

## Discussion

Some comments from the discussion:

- SCB should be positive towards improvements that the users want, but it should not be done for free. There should be a balance between what users expect and resources.
- CBS uses scanner data on a detailed basis, daily or weekly. This includes both prices and volumes. Scanner data give an adequate image of reality.
- There are other predictors available than consumption on the same dates the previous year, for example the weather might influence consumption.
- It is probably possible to calculate a measure of uncertainty before June, when the first publication is due, since the proposed estimator is quite simple. On a given day there are transaction data but no VAT data. The first estimator is a ratio estimator. The second estimator is a twice ratio estimator where you adjust for error one year back. For an uncertainty estimator, you can assume the historical ratios as constant, and then the only uncertainty is in the large sample transaction data today.
- A simple model is now used, where data are not used extensively. It is possible to do better, but that requires more time. The Norwegian experience, where transaction card data from debit cards only are used, is described in a recent JOS article[1]. The approach is called transfer learning and the ratio estimator is a simple transfer learning idea.
- The users want results to be in fixed prices, but it is not relevant for SCB to do the work required for the short-term statistics. SCB should instead concentrate on the raw data which represent the core information. For example, an issue is the relation between VAT data and transaction data which is not clear - it is unclear what daily data means in this context. For example, transactions could have happened on adjacent days, or different consumer behaviours could have an influence.
- It would be interesting to have statistics broken down on the household variable.
- The granularity of data is of interest. The transaction data from Riksbanken will be broken down on enterprises only. The Swedish interpretation is that GDPR does not allow for breakdowns on persons or household type and composition.
- Another legal angle, to be able to use household data, was tried by SSB; make a provision that is sent out for public consultation. It is necessary to comply with confidentiality and data minimization. For example, SSB will sample no more than one receipt per household.
- It is great to have the new sources, but the old ones might be needed too. If data are needed from people, you will have to work on that too, like apps, data donation, etc. It may be possible to target data collection to groups where it is necessary.
- Official statistics should not compete with other statistics, like those produced by banks, but they could complement each other. If possible, work together, and do not compete. However, the experience at SCB is that the banks do their own statistics and consider SCB less relevant if

[1] Turnover Flash Estimation by Purposive Sampling and Debit Card Transactions - Li-Chun Zhang, Jens Kristoffer Haug, 2025

the statistics from SCB are available a month later. When SCB started to publish weekly statistics, the banks stopped their own publishing.

## Concluding words

Eva-Lo Ighe thanked the board for the valuable contributions and discussions.

## Recommendations

Recommendations will be sent to Statistics Sweden by Mid-June.

## Next meeting

The next meeting of the Scientific Advisory Board will be held 19-20 November 2026. The meeting will be digital only.