

Official Statistics in Hungary Before Full Membership in the EU

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The objective of this article is to highlight the main problems faced by Hungarian statistics at the gateway of the EU accession. The majority of these problems are characteristic for the majority of the candidate countries, too.

The article puts great emphasis on the role of the comparative databases and the data warehouse put to operation in 2001, on the collection of regional data and distribution of regional information, comparability of time series based on GDP–GNI, and on the problem of data revision.

In the 21st century the relationship between official statistics and users acquired a new function.

After describing the situation, the article concludes with suggestions regarding further directions of development.

Key words: Regional statistics; statistical problems of new EU members; statistics of multinational companies; changes in the foreign trade statistics; public sector activities.

1. Introduction

This article is concerned with the challenges faced by the statistical services in the transition countries at the end of the 20th century and the beginning of the next, with special emphasis on the statistics in Hungary. It must be said that the transition countries are not a homogeneous group. They experience different levels of economic and social development. The quality of their statistical infrastructure and the range and depth of their outputs vary. They also differ because they can be clearly divided into either the group of countries that acceded to the EU on May 1, 2004, or into the group of countries that have not acceded to the EU at that time.

Foremost among the challenges we face is the increasingly strong effect of globalisation. This does not affect all transition countries to the same extent but undoubtedly exerts influence on the statistical work in all of them. Another general challenge that is perceived as a novelty is the revolutionary genesis of the information society, a development that has not come to an end and is likely to become even more significant in the next ten years. The various statistical services will have to cope with it to different extents. Of course these challenges are faced by all countries in the world but it is arguable that, given the scale of change in transition countries since 1990, these challenges

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are perhaps felt more acutely by the latter countries. For those countries involved, accession to the EU will heighten the effects.

There are additional challenges that have affected mainly the transition countries and resulted more or less in a shock for statistics. Some examples are:

- The transformation of the economic and political systems emerging at the end of the 80's and the beginning of the 90's influenced almost all areas of the economy and the society and set new tasks for the statistical services. To illustrate this point let me mention that in several countries with a so-called planned economy only a limited number of economic entities functioned and the number of small and medium size enterprises in the majority of these countries – specifically in comparison with the developed market economies (see for example OECD 1988) – was relatively small (Hungary is a particularly good example of this, where the scarcity of small and medium size enterprises was a hindering factor for the economic development in several areas). In the 1990's a large number of small and medium size enterprises were established, and reviewing them regularly could be performed only with representative sampling. The problem has now more or less been solved, although refusal to supply data and the necessary involvement of a large number of new data suppliers create its own challenges.
- In the previous decade the consolidation experienced in all of the transition countries influenced the status of statistics. This called for the elaboration of methods that enable – on the one hand – a view of the longer perspective based on relatively comparable time series and – on the other hand – offer an opportunity for the elaboration of a wider range of short and medium term forecasts. “Relative” comparability should be stressed here, since there are several transition countries where such data do not exist because of the structural and constructional changes that have occurred in these countries. In particular where one country has been divided into many new countries, the data corresponding to the current structural basis are not always available. Hungary in this respect is a lucky exception because there were no such changes. In the transition countries and specifically in the candidate countries for EU membership the Official Statisticians were given the task of pointing out the extent of their consolidation and deficiencies, if any, in the implementation process. This frequently called not only for more than the simple delivery of data, but also for analyses and evaluations from an entirely objective point of view, free from politics.
- The statistical tasks stemming from the accession to the European Union could be regarded as an old, nevertheless unsettled problem (Franchet 2000). In the last few years the preparedness of the candidate countries for this problem is also quite different, and has been regularly described by experts in the EU screening documents. As one of the candidate countries, Hungary was prepared in almost all statistical areas, although there are some fields where deficiencies were still to be eliminated. In many countries the preparations were aggravated by the fact that the required expertise in the system of national accounts did not exist or was inadequate. Hungary had such experience, but this did not mean that there were no new tasks to be solved. Producing quarterly estimates of GDP and of regional GDP, and the practical implementation of various other elements

within the system of national accounts, posed challenges even to Statistical Offices that were familiar with the basic framework.

When describing these challenges, an obvious question arises, namely: to what extent is the Hungarian practice typical for the EU accession countries and – in general – for the transition countries? After objective study of this question, I conclude that it has some typical elements that are not always dominant.

2. Major Challenges for Statistical Offices

2.1. Legal framework

In all transition countries the Central Statistical Office, or an equivalent organization named differently, plays a decisive role. In most countries this role has a legal basis and the adaptation of the law to the new tasks was generally completed by the end of the 90's, although smaller or larger adjustments could still be necessary everywhere, not excluding Hungary. It is the law that determines the extent to which statisticians within the public administration framework are able to play their essential and decisive role in the delivery of objective information. The legal background should ensure that statistics cannot be influenced improperly, which at the same time means that no partial interests of certain specific user groups can be permitted to dominate the statistical activities. In this respect the Hungarian legal ground is appropriate. It is solid and strict rather than lenient.

Special attention should be paid to the enforcement of the confidentiality protection of the data sources/suppliers and this fundamental principle should be enforced taking the information level and the extent of aggregation into account.

2.2. Statistical coordination

Another principle of fundamental significance is that the most important statistical activities should be concentrated under the control of a central statistical service. Otherwise the danger of inappropriate influence of partial interests of particular key users cannot be avoided. In this respect in 2002 the position of Hungary is not yet ideal in all respects, since there are some significant statistical activities that are performed by a ministry responsible for the given area. No matter how much we rely on the full objectivity of the ministries, wider user perceptions may be overshadowed by some sort of suspicion of "data beautification."

Absolute objectivity does not necessarily mean that the central statistical service should take control of all kinds of statistics and perform the relevant production activities. However, it is necessary that the appropriate powers of supervision should be delegated to it, coupled with the appropriate coordination authorisation. Although in Hungary the necessary legal basis for this exists, in practice the enforcement of such authorisation is problematic in some cases. In Hungary, in order to have unified and coordinated data collection, the National Statistical Data Collection Program (the Hungarian acronym is OSAP) was introduced in the 1990's. This involved a rather complicated organisational structure, and contained certain elements that are hard to control. In addition the system can prove to be quite inflexible in some cases. The Hungarian National Assembly (Parliament) must approve a rather detailed specification of the data collection program,

including intended questionnaires, once each year. In practice there are too many preparatory steps and the elaboration of the final questionnaires is very time-consuming. Given the timescale for obtaining Parliamentary approval we must use a rather long period for the preparation-approval-implementation procedure, and this is what makes the system inflexible. Nowadays, in the era of quick economic changes and changing needs, new requirements come up frequently and it is difficult to respond as flexibly as is needed.

2.3. Access to and use of administrative databases

In international practice, the use of administrative databases for statistical purposes is common and includes countries with well-developed statistical systems. From among the EU member states one example is Finland, where this practice is widespread and the secondary – statistical – use of the administrative data sources reduces both the data collection costs and the burdens on data suppliers, and at the same time does not impair the quality of the data published. A comparative study of EU member states and candidate countries showed that the member states regularly utilise six external administrative data sources on average, whilst the EU candidate countries use only about four. And as regards the latter countries, it is not clear that their data sources enable the compilation of statistical information of the same quality as could be seen in the member states. In Finland the Statistics Act obliges all government institutions to make all requested data available for the statistical service providers, the only exceptions being national security and defence data. In all cases Finnish statisticians inform data suppliers in several ways that the data collected for some other purpose will be used for statistics also. The Hungarian Act does not include any similar elements.

In Hungary and to my knowledge also in the majority of the new EU accession states, the statistical utilisation of administrative databases encounters legal constraints and – even more – practical problems as well. One example of the latter is the problem of ensuring the comparability of data when information is retrieved from different data sources. Our foremost legal problem is that according to the Statistical and Data Protection Act in force, the different data resources may not be connected. Therefore the tasks to be performed are to incorporate the securing of the legal ground – and this is not easy – as well as the harmonisation of the terminology and content of those databases with the other elements of statistics, specifically with the international regulations that we intend to use for statistical purposes regularly in the future. This would obviously be a minute and detailed task, but could, I believe, be implemented within two to three years.

From among the different branches of statistics, the utilisation of administrative data sources plays a significant role primarily in the field of social statistics, for which an excellent example is the Finnish demographic statistical register that has been in existence since the 1970's with significant government support. This allowed Finland to be the second country in the world to conduct the 1990 Census without questionnaires, i.e., by connecting register information. Subsequent five-yearly censuses were conducted in the same way. For Hungary this is an ideal that we would like to approach in the coming years and ideally before the next census.

In the field of economic statistics, business registers should be the basis of the statistical data collection. However, their quality and in particular whether they are as up-to-date as

is needed could rightly be challenged in most of the transition countries, including Hungary. New economic units are captured quickly in the registers, but units that cease their activities are kept in the system too long and impair the registers' usefulness for selecting representative samples of active businesses on a regular basis.

The use of the administrative databases requires the active cooperation of the national agencies maintaining the respective databases if they are to be up-to-date, permanent and serving mutual interests. This point is of particular importance if the database owners and operators feel that they are not interested in the use of their data for statistical purposes. This may cause them to consider the specific demands of the statistical use to a lesser extent.

2.4. *Regional and other subnational statistics*

The position and role of statistics in public administration gives rise to a special issue, which is heightened though accession to the EU. This is the regional dimension of the statistical system. In this respect Hungary is well-placed. Since the second half of the 1990's we have been continuously working on the establishment of a statistical database fitted to the seven regions that will be used in Hungary (each region to be broken down by counties). In addition the system covers subregional statistics as well as certain sections (e.g., statistics for big cities and their surroundings, industrial parks, entrepreneurial outskirts, etc). These developments have taken place in parallel with maintaining the previous structure of subnational statistics based on counties. In general this has been a particular problem for candidate countries since in many cases the structure of the public administration has been revised since 1990.

The problem of regional and subregional data processing and analysis took several years to solve but was achieved by the turn of the century.

However, there is an element in the regional problem that requires further developments in statistical practice since the Hungarian statistical system has been based on and is supported by county directorates and the regions are composed of these counties. Hence the regional level statistical unit is not operating in Hungary and in the coming period we should think over whether or not the organisational structure of our statistical system should reflect the EU regional system. This is not a specific Hungarian problem and concerns all the new accession countries. In addition, the role of the so-called Euro-regions is growing and we have already published several studies covering joint analyses of the Hungarian regions next to the borders and the regions in the neighbouring countries. This is important because the country borders and the economic regional borders do not necessarily coincide. Similarities can be found, for example, between the western counties of Hungary and Burgenland, the territory of Austria on our borders. Other examples occur in our borders with other countries. Where the statisticians of both neighbouring countries are interested in the problem, joint analyses and joint publications might facilitate the solution of several methodological problems (and this could be a secondary benefit from supplying information on the Euro-regions).

2.5. *Multinational companies*

Throughout the world the main form of globalisation has been driven by a very fast expansion of multinational companies and, in particular, a large number of subsidiary

companies established in countries characterised by lower levels of economic development as well as transition countries. In principle this does not constitute a new statistical problem, but in practice it does since some of these multinational companies build up their domestic accounting schemes without regard for the country borders (Van den Broecke 2001).

However, as regards multinational companies we believe that another problem is that these firms bring not only foreign capital but also foreign technology and management methods into the transition country. It is important and necessary to monitor the role of foreign capital in the different sectors of the economy (as has been done in Hungary since the beginning of the 1990's), as well as the level of development represented by the technologies introduced into the country; the level of its adaptation (this is more or less monitored, although not comprehensively), and also the share of the profit generated by the multinational companies dedicated to local investments, as well as the profit withdrawn from the country every year (the review of this has been implemented).

However, in the case of multinational companies a further important aspect occurs. Not only are independent subsidiaries established but joint venture companies too, with the involvement of foreign capital. It is important that classifications should be based on consistent terminology: specifically there should be a limited number of clear criteria according to which an enterprise should be classified as a foreign company (e.g., the characteristics of joint venture, the type of enterprise, the percentage share of foreign capital in the equity for a firm to be classified as foreign). There are OECD guidelines in this respect and the FATS project of EUROSTAT is in operation, but none of these are comprehensively enforced in Hungarian statistics.

Another aspect of having a strong multinational presence in a country is the effect on National Accounts. Not only must Gross Domestic Product (GDP) be properly monitored but also – with respect to financial flows – the volume and the development of Gross National Income (GNI) over time (see more details in EUROSTAT 1996). This places extra burdens on the system of national accounts, adding nonnegligible data requirements and new statistical tasks.

2.6. Foreign trade statistics

In line with globalisation and accession to the European Union the role of foreign trade statistics has changed considerably. Following accession to the European Union the previous concept of a free trade zone ceased to exist. Hence the distinction made in Hungarian statistics (as in the statistics of several other countries), namely that there are certain foreign trade activities that are performed in areas covered by the Hungarian customs regulations, and others that are performed in free trade zones and therefore require statistical amendment. Adjustment of the foreign trade surveys to the EU concept is a process and should be finalised by 2005, with special attention to the maintenance of consistent time series.

2.7. The hidden economy

A general issue that is applicable not only to the transition countries is the estimation of the hidden economy (sometimes referred to as the black, grey or shadow economy).

In countries, that have gone through significant reforms (particularly the transition countries whether or not they are EU accession countries) the hidden economy plays a large role. The more the economy becomes a real market economy – and in Hungary this process is significantly advanced – the more activities in the hidden economy are drawn into the normal economy and hence will be captured in the statistics produced. Estimates of the hidden economy require many subjective assumptions, as is widely known. In both the SNA and the ESA methodological descriptions long paragraphs are dedicated to the assessment of economic activity not transgressing the threshold of illegality although not qualifying as entirely legal. In Hungary it is believed that these activities are underestimated, which may have a perceivable effect on the fundamental elements of the national accounts including GDP. The problem is ameliorated by tax policy measures drawing activities into the measured economy (as occurred in the run-up to EU accession). Also a wider network of experts has been engaged in estimating the hidden economy according to activity groups. It is essential that this task is maintained for the future.

2.8. *Public sector activities*

There are significant problems in parts of the service sector, in particular concerning certain activities in health care, education and public administration. The SNA methodology recognises that most of the performance in these sectors cannot really be measured from the output side, but only from the input side. In this respect, the regulations in the statistical system of the European Union cannot always be applied to Hungarian practice, since this was elaborated for services in a completely different input scheme (see Cravis, Heston, and Summers 1983). An approach using wages as the input measure in the transition countries (including Hungary) shows that the wages of lecturers and teachers, and to some extent of physicians and medical staff too, are relatively low (in comparison with the wages of persons employed in other sectors of the economy) compared to developed market economies. If performance is valued using wages, these activities will be diminished in international comparisons.

In addition productivity and the base to which it is applied over time will be affected. The estimation of productivity in this case may not follow precisely the EU regulations, but it is the regulations that need to be adapted to reflect the situation in Hungary and other transition countries (see Summers and Heston 1991 for more details). This is a continuing issue with only the first steps having been taken, and the further modernisation of the system of national accounts is a key task for the coming years. This will require experts from other areas, as well as statisticians, to be more intensively involved. This relates strongly to the service sector since the latter sector represents an increasing proportion of GDP and any underestimation will unavoidably generate errors.

2.9. *Continuity of time series*

The generation of homogeneous data series for the longer run, in certain cases for historical periods, is a general problem regarding economic statistics for transition countries. In recent years some improvements have been achieved but deficiencies still exist. There are time series that were interrupted at the beginning of the 1990's (at the time of the transformation of the political and economic systems) and have been reinstated after

some years of suspension. Further work is essential but the substitution of the missing data through expert estimation is unavoidable. For example, surveys on work productivity, which had a long history in Hungary could not be continued in a reliable manner, but an improvement in this field should be achieved relatively quickly. This is a general issue and not specific to Hungary since in the countries where the economy was subjected to a shock effect, the homogeneous continuity of the data series is problematic. This common problem can be solved either by imputing estimated figures in lieu of the missing ones, or, where possible, by a retroactive survey of the missing data.

2.10. Summary

In general the topics outlined in this section are particular challenges for economic statistics in Hungary and in the transition countries more generally. How we address these issues underpins the need to publish methodological booklets so that those who need to can find detailed methodological descriptions of the production of the statistics. Normally, users can find the terminology, definitions, and descriptions of the main methods in the last chapter of each publication. This is a necessary but insufficient solution. The users, among them primarily the analysts familiar with our outputs, not only need the description of the methods adopted but also the reasons behind the choices, the margins of error within which the statistics should be considered, any confidence intervals, and guidance as to where the estimates require further correction or have already been corrected. The key point is that we should not publish a methodological booklet on a given topic once and for ever, but rather a series of methodological publications should be published, where all major methodological changes should be followed by new editions of the methods used – as reflected in international practice.

3. Relationships with the External World

The user-oriented attitude of Hungarian statistics has improved significantly in the last decade. Regularly convened press conferences help in the distribution of new information. All areas of the Hungarian media utilise the HCSO information. This is facilitated by a half-yearly press calendar containing the exact date of publication for each topic.

Both the government and the citizens have high expectations of the Statistical Office. The government requires the office to produce a wide range of high quality statistics as quickly as possible, and at the same time using the smallest budget resources possible. The citizens also want more, better and fresher data and would like the data response burden decreased. I am deeply convinced that the management of these competing objectives can be achieved by a nontraditional approach to the problem provided that we are ready to introduce new means and methods.

3.1. Evaluating and prioritising demands

Limited resources coupled with competing objectives unavoidably raise the issue of prioritisation. This calls for the establishment of an appropriate mechanism that offers people working at different levels in the organisation, or in different expert areas, an opportunity for inputting their views. Given clear and unambiguous priorities, a flexible

planning system is needed that provides for the implementation of the prioritised objectives and for the modification of the plans, should the priorities be changed. The difficulties of practical implementation stem primarily from too rigid practice. For those working for the Statistical Office there is a large impetus embodied in routine work, standard data collections and data transfers that have been performed for a long time. For HCSO employees working in public administration, the task of prioritising is hard to interpret, because the practice of preceding decades required that governmental tasks were given absolute priority (irrespective of the character of those tasks). There was no purposeful selection even if a lot of tasks were accumulating, but rather the deadlines were postponed and/or the data quality impaired. This imperfect practice should be left behind by making the conflicts and the necessity of selection unambiguous.

3.2. Flexible operation and resource allocation

The traditional public-administration-type activity is basically hierarchical, characterised by instructions from the top towards the bottom and by the execution of those instructions. There is small room left for the cooperative-type horizontal relationships. The organisational structure of the office determines the basic operational units, built on each other, and the tasks and ways of operating are determined in the organisational statutes stated in writing. Under such circumstances, it is difficult to implement a flexible operation.

An operational system appropriately adjusted to the user requirements and the changing priorities should strongly rely on the horizontal relations (among the organisational units) and the decentralised (not organisation-based), and the flexible (changeable during the year) mechanisms for the allocation of resources. Based on international experience, in such cases the best solution could be a project-based operation and a matrix-shaped organisation that ensures the appropriate level of flexibility. However, the introduction of the project system would raise additional problems. Firstly, a major conflict could emerge between the resource allocation based on the traditional organisational units and the one based on the changing tasks, and it is very difficult to create a mechanism that could solve this conflict in a reassuring manner. Secondly, as in every budgetary organisation in Hungary, the HCSO uses expense accounting and resource recording that reflects the broad organisational structure. These kinds of information are not available on the organisational unit and the task levels. Therefore we do not know the efficiency of the individual units or the volume of free capacity they have, nor the price of the generation of the individual data (data collection, processing, and publishing). Moving ahead could therefore be just gradual. As a first step, the HCSO has addressed the establishment of an independent accounting system for the organisational units (departments) and the financial management of these units based on the tasks and resources.

3.3. Electronic data collection and communication services

The reduction of the burden on the data suppliers is a task of outstanding importance, because – despite all expectations – with the solidification of democracy the willingness to deliver data did not improve but rather became worse. At the same time the office has incurred increasing costs of data collection. An obvious solution would be a more comprehensive use of administrative databases although this, as has been illustrated

above, cannot be regarded as an easy alternative due to quality problems and legal hindrances to access.

An alternative breakthrough would be the modernisation of data collection using electronic methods. Our experiments in this area have produced mixed results. First we have had to face the fact that for data collection from the population it cannot yet be used, because of the relative inexperience of the Hungarian population in computer using. Furthermore, although the economic organisations responded positively, a significant proportion is still not prepared for the continuous and automated application of the new methods.

In the area of disseminating statistical information by electronic methods, our experience so far suggests that the extension of the Internet- and CD-based communication services does not raise any fundamental problem. A much larger and more complicated task is the establishment of the data warehouse to support these services efficiently and effectively. When data were downloaded to the warehouse we had to face the fact that the description of data estimation and the methodology used, which had been neglected under the pressures experienced in the last decade, could no longer be postponed.

3.4. Active role on the market

After recent voluminous data collections (e.g., agricultural surveys and the census) and the completion of the EU-harmonisation tasks, we must be prepared for a reduction in the budgetary support made available to the office earlier. Also a maturing information society raises increasingly extensive user requirements for statistical information. These two facts together signal the need for a role in the information market, which should be more active than before.

The question is the “how-to,” and the HCSO has no solide experience in this field. It is not easy for a public administration organisation to learn marketing activities, to ascertain or even generate demands and then meet them in a fast and flexible manner. An important question is whether or not a fulfillable demand will emerge. From the citizens’ side this is surely not the case, but from the business organisations’ side and specifically from the large industrial (multinational) companies, probably it is.

A related basic question is whether, within public administration and primarily at the ministries, any additional demands for new data will be generated and, if so, there will be sufficient financial resources to cover such demands. And an even more important question is whether the governmental agencies would fulfil their new information demands using their own resources and own administration, or do so through the HCSO on a business basis in market environments. The choice will be fundamentally determined by the place and role the HCSO is given within public administration; in other words by the practical answer given to the academic question about statistical data: are they private or public property?

4. Conclusions

The responsible role to be played and the new challenges to be faced by official statistics in the 21st century call for simultaneous adaptation to international, more specifically EU requirements and the continuation of domestic traditions.

The examples mentioned in this article emphasise that the transition countries – including Hungary – should simultaneously become active members of the international institutes of statistics and meet domestic demands on a reasonable level.

Another important element is that the statistical agencies of the international organisations should perform their activities on different levels. The Hungarian experience is that we were able to acquire excellent support within the framework of the Phare programme. There were, however, some less successful experiences when our staff received training in areas that they had known well for ages. Some involvement of experienced experts drawn from the new accession countries in the preparation of the international training programs could guarantee greater success in the majority of the cases.

It is important that the status and role of the accession countries, as also the broad range of problems facing them, should be given greater emphasis in the statistical discussions of the nonofficial organisations. Such organizations include not only the International Statistical Institute (ISI) and its sections but also the associations and organisations of other statistical societies.

Significant priority should be given to training programmes for the users of statistics. The involvement of foreign experts in this field is beneficial and desirable if for no reason other than that the users of statistics in a given country are less willing to learn from the producers of the statistics of the given country than from foreign experts.

In this article the emphasis has been on the problems experienced by the Hungarian Central Statistical Office (and by extension the central statistical offices of other accession countries) and the challenges that remain. However, it must be recognised that so far we have received considerable assistance from the international organisations and we are content with the methods – or at least with the majority of them – that we have acquired. My intention has been to make a contribution to the further development of statistical activities in Hungary and to international cooperation.

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