The role of NSOs in dissemination of Leading, Composite and Sentiment Indicators in the case of Business Tendency Surveys conducted by CSO of Poland

Katarzyna Walkowska, Central Statistical Office of Poland

National statistical offices are primarily responsible for providing statistical quantitative data, with the status of official information, supported by the authority of state institution, which has the knowledge, experience and resources, and above all a mandate to speak on behalf of the state on the topic. The national statistical office, bearing responsibility for published information, at every stage of preparing and conducting the survey retains a special care that offered final product meets all quality requirements, including those of the European Statistics Code of Practice.

Qualitative business tendency surveys, the results of which are not based on quantitative data, but on the subjective opinions of respondents, are conducted by many national and international institutions, often private ones. Tendency surveys may cover different populations, both businesses and consumers in general, as well as only their selected activities. Also, the scope of surveys may concern generally understood economic issues or specific issues from the field, including those defined ad hoc. The result is that while national statistical offices are leaders in the field of quantitative surveys, on the qualitative survey market there are many competing centres offering results of surveys adjusted to the range of interests of the institution or group of users.

For the above reasons, it may raise a question, whether the national statistical offices have to - or even - are allowed to - conduct qualitative surveys based on subjective opinions, and to construct composite indicators, including prognostic factors, which are based on subjective - to some extent - selection of components.

A special case are Business and consumer tendency surveys contained in *Joint Harmonised EU Programme of Business and Consumers Surveys (Commission decision C(97) 2241 of 15 July 1997 and in Commission communication COM(2006) 379 of 12 July 2006)*. These surveys are not covered by European Statistical Programme, and in the European Commission responsible for them is not Eurostat, but Directorate-General Economic and Financial Affairs (DG ECFIN). The European Commission is working in this area with selected organizations in each country on the basis of agreements on co-financing business and consumer tendency surveys, and among these institutes are not only national statistical offices, but also, for example, research institutes.

It might seem that a wide range of institutions to which the tender is addressed before signing contracts for research within the *Joint Harmonised EU Programme of Business and Consumers Surveys* could speak for non-engaging NSO in conducting qualitative surveys. However, should be kept in mind that not in all EU countries NSO carries out qualitative business survey that comply with the requirements of the European Commission, so limiting by the European Commission to work exclusively with the NSO may cause the lack of data for some countries.

It should also be noted that the results collected by DG ECFIN are often presented in relation with the data of quantitative official statistics, they are also available in databases published on the Eurostat website (in *the European and national indicators for short-term analysis*) together with short-term statistics and quarterly GDP. For this reason, running the BTS by the NSO on the basis of agreed by the experts at international level (EU and OECD) consistent research methodology seems to be fully justified. Involvement of held by the NSO resources, including the ability to use both the business register as a basis for frame of quantitative survey, as well as the results of business surveys to prepare weights, as well as recognition of the NSO by respondents and trust that they enjoy, may provide a further argument for the conducting BTS by the NSO, the results of which are published on a par with the official quantitative data.

Conducting such surveys by the NSO could also provide greater stability and length of the time series, because carrying out these surveys in the public statistics system is less dependent on e.g. funds raised from the users of data.

At the same time, due to the nature of qualitative data, it is particularly important to provide users with the appropriate methodological explanations, including tips on how properly interpret surveys data on the economic situation in order to avoid misinterpretation of results that may be confused with quantitative data, especially when both quantitative and qualitative data are delivered by public statistics. In this paper there will be presented experiences of CSO of Poland in the publication of data

on the economic situation, in particular related to support for users in the correct use of qualitative data.

1. Business tendency surveys in Central Statistical Office

Central Statistical Office conducts business tendency surveys since 1992 covering with these surveys further activities: in June 1992 as the first has been introduced BTS in the industry, in July 1993 was started survey on the situation in construction, and in October of the same year - in retail trade. In 1999, from the BTS in industry and in construction there were isolated to a separate survey, covering these two types of activity, questions about the investment activities of enterprises, expanded to include variables in accordance with the harmonized questionnaire of the European Commission on the investment in manufacturing. In January 2003 there was started survey of the situation in services. From January 2011 BTS also covered entities engaged in wholesale trade. Furthermore, in 2011 sampling scheme was introduced to allow presentation of the results, broken down by voivodships.

The questions asked in individual BTS in subsequent years were subject to modifications resulting, both from changes in the legal and economic environment, and the changing needs of users, taking into account the requirements of *the Joint Harmonised EU Programme of Business and Consumers Surveys.*

Since the beginning of the survey there were presented simple indicators calculated for individual questions and composite indicator modelled on the IFO business climate index, based on the current and expected economic situation of the company. Since June 2009, after the conducted analysis, to published data set there were added sentiment indicator based on the methodology for calculating EU Economic Sentiment Indicator, but solely with the use of data from BTS.

2. Publication of data

Currently, users of data on the website of the Central Statistical Office can find among the thematic areas the one dedicated to tendency surveys (in CSO, in addition to the surveys of economic situation is also conducted consumer tendency survey and business tendency on agricultural holding). Every month there is published a news release containing a description of the BTS results and graphs, the database in Excel with time series and methodological guidebook. In each of these publications there were made efforts for appropriate balance between the content to provide users with the information necessary for proper data analysis. Therefore, all three publications make up the overall presentation of results of BTS, including time series, visualization of results in the form of graphs, a brief analysis of the data and methodological explanations.

In the next part, I would like to draw attention to some elements of the system, particularly important from the point of view of ensuring the correct interpretation of the results of BTS by users.

2.1. Description of the methodology of the survey

Description of the survey methodology is important for users who want to make use of the published data. Basic information about the survey methodology is contained in the database, where in addition to the time series are the questionnaires used in each survey and synthetic descriptions of the methodology, including basic information about the scope of individual surveys and way of counting indicators, as well as their range.

Such basic information is also included on the last page of the published each month news release with text and graphs. Because in that news release on one of the charts there is presented for comparison ESI index prepared by the European Commission, there is also contained a link to the European Commission, where the user can find both the time series, as well as relevant methodological explanations concerning the methodology of the European Commission.

Important information about the quality of survey results is both the size of the sample covered by the survey and response rate achieved. Due to the need to provide representative data in all sections, samples in individual BTS conducted by CSO of Poland range from about 3500 entities in the manufacturing sector to 5200 in retail trade. In a news release, every month, for each business survey there is provided information about the response rate obtained, which was in October from e.g. 81% in retail trade to 95% in manufacturing.

The most detailed information on the survey methodology can be found in the published since 2008 methodological guidebook, updated when any changes are made in the surveys (Internet site

archive includes previous editions of this publication). You can find here, among others, a brief history of the introduction of BTS in the CSO, information about their scope and variables and the available levels of aggregation of data, sample sizes and frequency of sample updates. There are presented organization and schedule of the survey. There are also described particular types of questions and methods of calculating indicators (balances) and weighing. Because of the different ways of counting of some balances than in the European Commission, the attention was paid to these differences for data from the BTS for Poland, which are published simultaneously on the websites of the CSO and the European Commission. There was also described a method of calculating composite indicators, also pointing to a derogation from the original methodology.

2.2. Regional data

Since 2011 data of the BTS are also published at the NUTS 2 level in relation with the demand reported by users, mainly from local governments. Since BTS are conducted on the basis of legal entities, which can operate in a number of regions and have there their local units, it was necessary to add appropriate explanations. In the news releases presenting the BTS results at the regional level there is highlighted that there are covered legal units classified into regions according to the place of registration of the activity. In addition, in the methodological guidebook in part regarding surveys at the voivodship level there is mentioned that BTS is conducted not at the level of local units, but according to the company's headquarter which may operate at the national level and relate its evaluations to that level. It was also pointed out that in these questionnaires there is no separate questions on opinions of entrepreneurs on a regional level, so the answers may, depending on the scale of business operations, involve both the local and regional scale as well as national or international.

By introducing additional regional level there were prepared samples for surveys to ensure the representativeness of the data in this breakdown without having to change the size of the samples. Still, after an analysis of how the scope of the data from the BTS can be published at the regional level, it was decided to reduce the level of the published results to the NACE section level - also such information was included in a methodological guidebook.

2.3. Seasonally adjusted data

A separate chapter in the methodological guidebook is devoted to seasonal adjustments. There was the information on methods for seasonal adjustments used in CSO of Poland to the results of the BTS and the way of implementation of the method, i.e. the frequency of model changes and the publication date of the time series after its change, the execution of order of calculations for composite indicators, as well as differences in a method and approach for calculating composite indicators used by the CSO and DG ECFIN. Thanks to this users who in the course of work may face the same indicators for Poland published independently by the CSO of Poland and DG ECFIN, seasonally adjusted using different methods, will be informed of the reasons for differences between the published data.

2.4. The interpretation of qualitative data

A particularly important chapter in the methodological guidebook is a section on the specifics of interpretation of qualitative data from the BTS.

First of all, it is emphasized that the BTS results should not be construed as quantitative data indicating the specific level of e.g. production, but rather as an indication of the direction of changes in the area. For this reason, it is appropriate not to analyse data from separate points in time, but the long time series and their trend. There were also highlighted examples of time series comparisons, both of only BTS results and of qualitative data with quantitative data.

In addition, in the section describing the methods of calculating the indicators, there is showed, among others, an example that the same balance can be the result of different positive and negative levels, and neutral responses are not included in it. There was also highlighted that the indicators are calculated from the point of view of the respondent, so e.g. a positive sign of the indicator of delays in payment represents a decrease in delays, because to show a favourable situation for the entrepreneur the balance is calculated by subtracting positives from negative responses.

3. *Summary*

CSO of Poland presents data from the BTS complemented by a number of complementary information which may be helpful in analysing the data. It is not a closed set, as it always is being considered for enrichment. Currently the Knowledge Database is under construction in which the user will be able to find all previously published information presented using modern IT tools.

In the Central Statistical Office there are conducted quality assessments of all surveys. This year the detailed quality assessment was undertaken on BTS in manufacturing. Different aspects of the survey starting from its designing to dissemination of results were analysed. There were also discussions with representatives of the scientific institutes that are the most important users of the BTS results, on their opinion on the survey and their needs in this field. This is the additional source of information on users' needs that will be used in the further developments of BTS.

In the nearest future it is planned to complement the methodological guidebook with information about the history of changes in the questionnaires, so that users will be informed how long are time series that are available. Moreover, in the first half of 2016 it is planned to conduct survey of surveys covering all BTS, which also can provide information about the possible need to modify both the survey itself, as well as the resulting information.

Despite providing so many explanations, there happen, even rarely, errors in interpreting the results of the BTS, published by the media. Then CSO turns to their authors with the explanation and indication of the correct information.