

Response burden database and response burden indicators at the Statistical Office of the Republic of Slovenia

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Abstract

In its continuous efforts to measure and manage the response burden for business surveys, the Statistical Office of the Republic of Slovenia plans a series of actions in this area. One of them is the project Measuring Response Burden for Business Surveys (MOPS), which ended in March 2016. This paper presents our approach of introducing a system of response burden measurement in regular statistical process.

Keywords: response burden, response burden measurement, response burden indicators

1. Why measure the response burden?

As all NSIs, the Statistical Office of the Republic of Slovenia (SURS) pays a lot of attention to managing response burden of all respondents. In the last fifteen years a number of measures were adopted in an effort to reduce the response burden, especially for businesses. These measures include:

- Use of administrative data
- Introducing electronic questionnaires
- Optimization of sample design and partial coordinated sampling
- Establishment of central help desk for communication with businesses
- More user-friendly and simpler instruments for collecting the data (questionnaires)

A lot of other activities had also direct or indirect impact on managing the burden response, especially in the field of dissemination (new official website, new type of publications adapted to the general public, new dissemination channels, e.g. Twitter, etc.).

Despite a substantial reduction of burdens in recent years and the fact that compared to overall administrative burden the actual response burden caused by statistical surveys is relatively low, the need to manage respondents' burden is and will remain a continuous commitment for SURS. This commitment originates from the European Statistics Code of Practice (Eurostat 2011) and from our goal of successful cooperation with the national business environment. However, purely substituting business surveys or decreasing sample size has a limit (Bavdaž et al 2011). Thus there is a strong need to find new, alternative ways to continue managing response burden at an acceptable level.

Some of the new possible measures are:

- Further development of coordinate sampling
- Advertising about the importance of statistics
- Tackling the negative perception of statistics
- Motivation of businesses and individual reporters
- Specific approach to large businesses
- Publishing information on response burden imposed by SURS
- Survey calendar at the level of individual businesses
- Defining the maximum load threshold
- Eliminating hot-spots
- New approaches to survey design (special questionnaires for small businesses, joining the surveys, modular surveys, reduction of frequency)
- Personalized statistical feedback

To apply, evaluate and especially present the results of new measures, an appropriate system of measuring both the actual and perceived response burden is essential. In this paper, we will focus on the measurement and management of burdens in statistical businesses surveys.

2. What is the best way to measure response burden?

So far SURS has done some assessments on response burden, especially at the level of individual surveys (Quality Reports); in some cases also at the aggregate level for all surveys.

In October 2014, SURS started a project called Measuring Response Burden for Business Surveys (MOPS), which ended in March 2016. The main purpose of the project was to establish a system for measuring the actual and perceived response burden in a standardized way. While building this system we tried to follow some key principles:

- *The measurement system should follow international recommendations.*
International recommendations such as the Handbook for Monitoring and Evaluating Business Survey Response Burdens (Dale et al. 2007) and the Handbook on Methodology of Modern Business Statistics – MEMOBUST (Eurostat 2014) were followed as much as possible. This includes the usage of the Standard Cost Model, measurement of both the actual and perceived response burden, using proposed core questions, measuring both time and monetary dimension, monitoring the calendar year where the burden took place, using basic differentiations such as size class, activities and reporting mode.
- *The principles have to be adapted to national economic environment.*
Although the Slovenian economy is very small, requirements for statistical data are almost the same as in other countries. This means that businesses in Slovenia can be relatively more burdened than businesses in larger economies. There are also fewer possibilities to exclude businesses from the survey, so SURS has to resort to other measures for managing the response burden.
- *The measurement system should be on one hand integrated in regular process and on the other hand cover all exemptions.*
Since modes of data collection can be quite different, we had to construct a relatively robust system that can cover all of these differences. The system of measuring

response burden should also have a minimal impact on regular statistical processes. The usage of existing methods, programs and databases was given a priority over completely new solutions. Some of the most burdensome surveys, e.g. Intrastat or the Labour Force Survey, have (because of their complexity) often separate collection systems, which had to be incorporated into a common measurement system.

- *The measurement system should be established at the appropriate level.*

We decided to set up a measurement system for actual burden at the lowest possible level. Time needed to collect data and complete the questionnaire is thus determined (measured or estimated) for each individual questionnaire. This allows calculation of a vast range of possible indicators but also gives us a potential for simulating effect on burden for different possible future scenarios. We also tried to create a system which would not only evaluate burden imposed but also burden avoided because of using already used measures of managing response burden.

- *The measurement system should cover all present and future needs.*

The most important features that the system for response burden measurement should support are:

- Detailed set of indicators for the internal annual report on the response burden
- Basic indicators for the general public (e.g. Burden Barometer)
- Indicators for the needs of Standard Quality Reports at the level of the individual survey
- Information on inclusion of the selected business in the statistical survey and its reporting times
- Input for upgrade of the system of coordinated sampling
- Complex ad-hoc analysis and simulations

3. Measuring response burden for business surveys at SURS

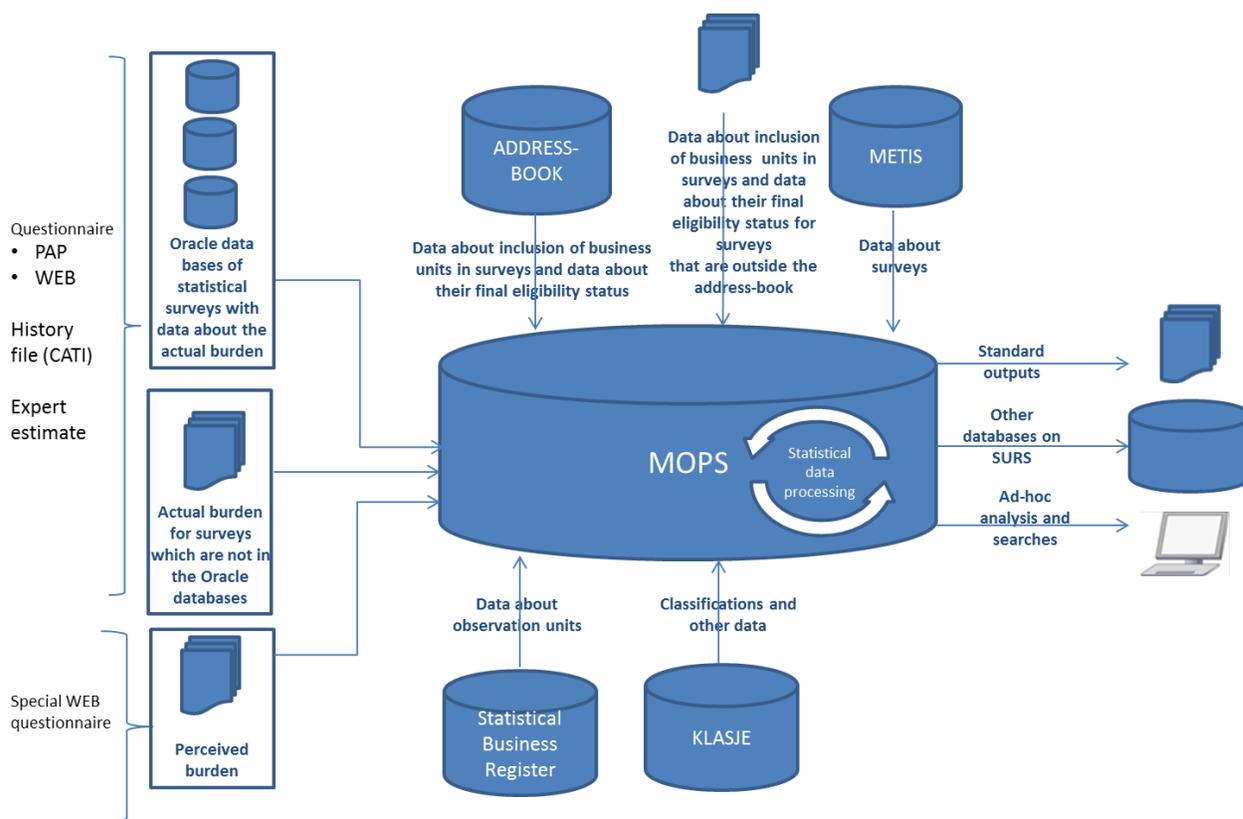
Managing the response burden is an ongoing process that should never stop. In this chapter we present three aspects of measuring response burden: architecture of IT solution for measuring response burden, a set of basic indicators on actual response burden, and measuring of the perceived burden.

3.1. Architecture of IT solution for measuring response burden

When building a new measurement system some technical and process guidelines had to be considered besides the principles mentioned earlier. The new system had to be harmonized with:

- Meta Data Repository (METIS)
- Server for Statistical Classifications (KLASJE)
- Address Book (ESTAT)
- Statistical Business Register (sPRS)
- System of standardized Statistical Data Processing (SOP)
- Databases of individual surveys (Oracle databases)

Table 1: Information system architecture MOPS



Unfortunately, the process of harmonization is still going on, so all of the surveys and all of the processes have not yet been completely harmonized. Although their number is relatively low, it includes some of the most burdensome surveys for businesses. Therefore, it was necessary to make some adjustments in order to cover all the exceptions.

3.2. Indicators on actual response burden

The detailed set of indicators for the internal annual report on the response burden includes:

- Number of observed units
- Number of businesses
- Number of questionnaires (total and returned)
- Time taken to respond (hours and minutes, man-days and man-years)
- Average time taken to respond (hours and minutes)

- Cost of reporting (EUR)
- Survey and response rate (%)
- Number and share of electronic questionnaires

These indicators can be grouped at different levels: by year, by institutions collecting the data, by type of period, by activity (NACE), by size class (number of employees) and by individual survey.

Detailed information on participation of an individual business in surveys and its reporting times includes:

- Information on reporting time for an individual business for each survey that it participated in
- Comparative data for other, similar units
- Detailed data on inclusion, response status and reporting time for combination of each individual survey and period

Data needed for calculating the indicators for the needs of Standard Quality Reports include input data for the calculation of two main indicators for quality dimension “Cost and Burden”:

- Total and average time taken to report the data for the survey
- Total and average cost of reporting for the survey

3.3 Measuring of the perceived burden

During the project Measuring Response Burden for Business Surveys our goal was to prepare and test the model questionnaire for measuring the perceived burden. The model questionnaire was based on guidelines from the Handbook for Monitoring and Evaluating Business Survey Response Burdens (Dale et al. 2007) and examples of questionnaires from other countries. It was appropriately adjusted and prepared for both paper and electronic reporting.

As regards the testing, we decided that it should be used only in cases in which we will have a specific purpose to measure the perceived burden and concrete intention to implement

activities to manage the burden. The questionnaire is actually quite long and relatively complex, so it is necessary to carefully consider when we should use it.

Fortunately, the project was very appropriately aligned with another project Evaluation of the Burden and Costs in Intrastat due to the implementation of SIMSTAT. In this project SURS carried out a special survey to assess the existing burden in Intrastat as well as reporting costs of reporting units. The burden reduction if collecting only data variables required by EU legislation was also assessed. At the same time the additional increase in reporting burden due to the introduction of the proposed new data elements to be reported and decrease in reporting burden due to the exclusion of some reporting units from the Intrastat reporting obligation after the implementation of SIMSTAT system were estimated.

The action consisted of two empirical sub-studies performed in May and June 2014. Thirteen different questionnaires were prepared for around 7,700 observed and reporting units. The results were analysed in great detail as regards the content of the survey. We decided to use this survey also as a study case for evaluating the measurement of the perceived burden. The analysis revealed some issues that should be further tested before final conclusions could be adopted:

- If the purpose of the survey is well-defined, the response rate for this kind of surveys can be very high even if reporting is voluntary.
- Observed units reporting for the basic survey by themselves are more likely to respond to this kind of surveys than reporting units answering the basic survey for other units.
- Reporting units tend to see the basic survey as more useful for the whole society than observed units. However, there is no difference in the perception of usefulness for them.
- Reporting units take less time to report for the basic survey than observed units reporting by themselves. On the other hand, both perception of time taken and perception of the cost of reporting are usually higher if a reporting unit is involved.
- Observed units are not pleased if surveys are conducted too frequently (there were some follow-ups in this project).

- At opinion questions many middle values were given, which makes it difficult to perform a suitable analysis.

4. References

Bavdaž M., Bolko I., Biffignandi S., Grisen V. T. (2011), Motivation in business surveys, Proceedings of BLUE-ETS Conference on Burden and Motivation in Official Business Surveys, pp. 7-22.

Dale T., Erikson J., Fosen J., Haraldsen G., Jones J. & Kleven Ø. (2007), Handbook for Monitoring and Evaluating Business Survey Response Burdens, European commission.

Eurostat (2009), SIGMA, The Bulletin of European Statistics, Cutting red tape, Focus on statistical response burden, Available at:

<http://ec.europa.eu/eurostat/documents/42577/761078/KS-BU-08-004-EN>.

Eurostat (2011), European Statistics Code of Practice, Available at

<http://ec.europa.eu/eurostat/web/quality/european-statistics-code-of-practice>.

Eurostat (2014), MEMOBUST Project, Handbook on Methodology of Modern Business Statistics, Available at: https://ec.europa.eu/eurostat/cros/content/memobust_en.

OECD (2007), Cutting Red Tape Comparing Administrative Burdens across Countries, OECD, Paris.

Reiner N. (2008), Measuring response burden under EU-context: some principles for a management tool at the EU-level, 94th DGINS Conference, Vilnius, Lithuania.