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FIFTH INTERNATIONAL WORKSHOP ON BUSINESS DATA COLLECTION METHODOLOGY - LISBON 2018

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• ABSTRACTS







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THE RESPONSE PROCESS IN LARGE BUSINESSES

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In close collaboration with the Dutch Central Bank, Statistics Netherlands is redesigning the Quarterly Survey on Finances of Enterprises. The target population consists of the 350 largest non-financial enterprises in the Netherlands. In 2014, a new set of required data has been developed (the conceptual data model). This data model is very complex and requests for a lot of detailed information. As a consequence, the response process within businesses could be quite complicated and burdensome, even though the goal of this redesign was to reduce response burden.

As input for the questionnaire a feasibility study was conducted in 2015, studying the internal response process in these businesses. Research questions included:

- What (data): What data do we get? Are the concepts clear and do they match or differ with accounting definitions?
- 2. Who (units): What entities in the enterprise are involved in the response process?
- 3. Where (people and sources): what business staffs is involved in the response process and where can the requested information be retrieved?
- 4. When (time): When is the requested information available?
- 5. How (questionnaire): What would be the best way to collect the required information?

This study resulted in a number of requirements which served as input for the questionnaire design, in order to tailor the questionnaire to the response (or reporting) process. One of these results is that the internal response process depends on the structure of the business administration. This process can be very complex, involving many respondents/data providers and data sources at various locations.

In the spring of 2018 the questionnaire development was almost finalised and a workable version was put available for the businesses to prepare themselves. A small number of businesses were visited to study whether they could work with the new questionnaire. The conclusion was that the questionnaire by itself works well, and doesn't seem to be an issue; a major concern however was the reporting process: getting everyone needed involved in this process and setting up a new reporting process. This comes down to the following three-step plan for businesses:

- Getting an overview of the requested data, where the data reside and who is involved. This includes checking: a. the consolidation cluster, b. variable definitions, c. periodicity of the data
- 2. Getting everyone involved and discussing a new integrated reporting process
- 3. Implementing the new integrated reporting process.

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These findings may have consequences for a fundamental methodological question: How to pre-test business survey questionnaires?' A simple cognitive in-depth interview may not be sufficient, as this mainly focusses on step 1 in the Tourangeau survey response model (Snijkers et al., 2013): comprehension. My hypothesis is that for complex reporting processes getting a good understanding of step 2, the retrieval process, is of more importance. Also starting a pretest study when a draft of the questionnaire is ready would come too late for tailoring the questionnaire to the response process. In the presentation I will briefly show what the new questionnaire looks like (see videos on www.cbs.nl/balanceofpayments), but for the main part I will discuss the complex response process for retrieving the requested data, and its consequences for pre-testing.

References:

Snijkers, G., G. Haraldsen, J., Jones, and D.K. Willimack, 2013, Designing and Conducting Business Surveys, Wiley, Hoboken.













AN INTERNATIONAL ESTABLISHMENT SURVEY AND THE COVERAGE OF MICRO ENTERPRISES – DOES ONE-SIZE FIT ALL?

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The second European Survey of Enterprises on New and Emerging Risks (ESENER-2), carried out in 2014, involved almost 50,000 establishments across all business size classes and activity sectors in 36 European countries. Like ESENER-1, its focus was on how European workplaces manage occupational safety and health (OSH) risks in practice. ESENER-2 built on and extended the approach used in ESENER-1 by including, for the first time, micro establishments with 5-9 employees and establishments in the agriculture, forestry and fishing sector. The European Agency for Safety and Health at Work (EU-OSHA) undertook a review to consider the impact of this expansion of the survey universe. The review was informed by and structured around the Total Survey Error framework. This paper focuses on its findings on **measurement error** in relation to the inclusion of **micro establishments**.

In addition to a review of the ESENER-2 questionnaire content and comparative assessment of survey responses by establishment size, in-depth qualitative interviews were carried out with respondents from 28 micro establishments: 14 each in Spain and Romania. The participating establishments were operating in the construction, retail, HORECA (hotel, restaurant, catering) and agriculture/forestry sectors – in which micro establishments traditionally predominate.

The findings suggested that the participating micro establishments were relatively successful and OSH-confident businesses. Nevertheless, there were also indications of a mismatch between the intent of ESENER-2 questions on key aspects of OSH arrangements and their interpretation by respondents in these micro establishments. Moreover, there was some evidence that the understanding and interpretation of these questions varied with establishment size, sector, and regulatory and business contexts. All these findings resonate strongly with those of EU-OSHA's recent in-depth investigation focused on understanding and improving OSH in micro and small enterprises in Europe (the 2014-2017 SESAME project), as well as with the literature more generally.

The review therefore indicates that the inclusion of micro establishments in a large-scale international survey of businesses' OSH practice presents significant challenges, in particular around:

• Refusals at recruitment and during the survey process.











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- Respondents' understanding and interpretation of key concepts and terms, and its implications for survey development.
- The collection of sufficient contextual detail for meaningful data analysis and interpretation.

Overall, the review suggests that one-size does not fit all, and care must be taken to develop survey methods and content that are appropriate for the smallest as well as larger businesses. To this end, the review makes a number of recommendations for improving data collection from micro businesses in future waves of ESENER.















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EXPLORING RESPONDING BEHAVIOR BEHIND "REMAIN UNCHANGED" ANSWERS

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Abstract

This study observes the responding attitude of Business Tendency Survey (BTS) participants. The main issue is about survey participants' behaviors in Business Surveys' questions, in particular to the question of general business conditions in their industry. The data quality and measurement issues on this question is especially important because this is one of the questions used for business confidence index calculation. Confidence indices formed by using business and consumer surveys data plays a critical role since there is not much data out there measuring their current situation and future expectations. Therefore, those short term statistics are very significant for policy makers. Early signals for business cycles are good to consult as long as qualified data is maintained. The general tendency of perception and attitude change due to economic situation is measured by this question by a three-level Likert scale on a monthly basis with a self-administered survey. The three scale points in this question are "more optimistic; remain unchanged; more pessimistic". The high percentages of middle alternative responses over time draw our attention to look into this topic in more details from a cognitive point of view. Therefore, the possible options how this answer choice is interpreted by the respondents of BTS is discussed. At first, by implementing an ad hoc interpolation method, how different the balance would be under certain assumptions is studied. Results show that how firms evaluate middle category response choice does not cause any substantial changes in the direction how we interpret economic tendencies. However, the meaning of answering middle category response is still a puzzle. Secondly, we analyzed the general business conditions data by using decision tree models to observe whether we can classify a certain behavior on developing this response choice. These analyses also proved the uncertain respondents in general. As a further investigation, to validate assumptions, underlying factors that are shaping this behavior are to be researched by in-depth interviews with managers, on a visit to the companies. In this workshop, the intention is to share and discuss the results of this qualitative research. This research aims to help developing better questionnaire design tools in business surveys.













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EXPLORING WEB SURVEY PARADATA TO IMPROVE SURVEY DESIGN

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Abstract

At Statistics Canada, electronic questionnaires (web questionnaires or e-questionnaires -EQ) have long been recognized as very important reporting options for survey collection. Various electronic data reporting tools have been explored over the last 20 years. Statistics Canada (STC) has continued its attempts to develop an effective and efficient e-questionnaire solution that will meet respondent expectations, comply with Statistics Canada requirements for confidentiality, security and data quality standards, and comply with Government of Canada requirements for accessibility and common look and feel.

The key drivers for moving to web-based questionnaires were:

- Requests from respondents to provide an electronic means for reporting their data;
- Provide a secure, convenient and simple means to respond to our surveys;
- Reduce respondent burden and help counteract anticipated declining response rates;
- Reduce costs by reducing mail, data capture and follow-up collection costs.

This presentation will examine paradata generated by the electronic questionnaire to mine for lessons that can be learned by survey design teams. For example, do new businesses in the sample spend more time on certain pages than respondents who have been in the survey for longer periods? Are help pages accessed by respondents as they progress through the questionnaire? What devices are businesses using? Does the device use frequency change according to the survey complexity?

The presentation will examine paradata from a range of web-based business surveys ranging from mission critical monthly surveys, to longer, more complex, quarterly surveys.















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Subject matter edits in online forms; problem definition, exploration, development and alternatives

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Abstract

Over the last twenty years, the Australian Bureau of Statistics has added online questionnaires to almost all collections so that almost all businesses now respond online. However, business survey managers face high costs for moving and maintaining collections online and seek to balance costs by gaining efficiencies and cost reduction in processing and editing. For many stakeholders, the use of edit messages in questionnaires (often called in-form edits) is an obvious tool for getting respondents to provide correct data and achieving a net benefit from online collection. What is not often obvious is how to can use in-form edits to actually obtain benefits in processing and editing while not increasing other types of non-sampling error.

The ABS has developed ways of evaluating, developing and implementing in-form edits, or their more effective alternatives. I will outline how, when we are developing or redeveloping an online form, we define the problems we seek to solve and arrive at definitions of those problems as related to online collection and not to other (previous or concurrent) modes. I will then outline how, in cases where an in-form edit may be a solution, we work through the algorithms for identifying respondents' errors in the typical form completion pattern/s and how we might describe to respondents the problems and possible solutions in terms that are understandable and implementable by them. We've had limited success conducting cognitive testing with businesses (or individuals in households). Because both the evaluation and exploration stages often raise blockages to effective use of in-form edits, I will discuss how we have worked with subject matter and technical teams to develop alternatives that address the root causes of poor quality data.











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DESIGNING AN INSTRUMENT FOR COLLECTING DATA FROM POLITICAL ORGANIZATIONS

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Abstract

Statistics Norway collects income and expenditure data from all active political parties in Norway on behalf of the Ministry of Local Government and Modernisation. We do so by using a web questionnaire. The questionnaire has been altered and improved each year since it was launched on www.altinn.no for the first time in 2014.

We have used techniques such as focus groups, in depth interviews and user testing along the way, and during the years met and received feedback from hundreds of representatives from the different political parties on different levels throughout Norway. We have tried out different designs, redesigned and tried again. This recurrent process of trial and error has given us some useful insights and experiences.

One lesson learned is that it isn't necessarily always fruitful to transform tables or matrixes into a series of single questions. We found that overview and consistency, and also recognizability, were crucial in this case; more so than exposing the respondents to one question at the time. One likely drawback is of likely to miss out on useful help text, explanations and other additional information.

Another conclusion is that automated validations and controls can and should be used wisely, not solely to prevent the respondent from sending in a faulty result, but first and foremost to help and guide the respondent through the questionnaire.

Also worth mentioning is the reuse and prefill of existing information (data collected earlier and data from other sources) and the introduction of a summarizing overview at the end of the questionnaire.

The next step will most likely be to enhance the data collection instrument so that the respondents are able to upload their income and expenses records to the questionnaire, given that they use the standard bookkeeping template provided by the official government.









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COMBINING DATA FROM ADMINISTRATIVE AND STATISTICAL SOURCES IN PRODUCING LABOUR MARKET STATISTICS

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This paper will give a detailed overview of SORS's new methodologies and approaches in producing Labour market statistics.

In order to harmonize activities with European methodology, and to produce statistical data that will be more comparable with EU members, SORS has been working constantly on modernisation of the statistical production processes.

The Monthly survey on employees and their salaries and wages has been carried out for decades on a purposive sample of legal entities. The sample provided the representativeness of data on total average wages and salaries on municipality level, and, for regions, on the level of activity division. Regular semi-annual survey on employees and their salaries and wages, which provided data on level of educational attainment and sex, was carried out on enlarged sample. Collection of monthly data imposed a significant response burden on Serbian businesses. Various analysts and decision-makers are in constant need for quality information, if they want to better understand economic activity and to react quickly.

SORS has made significantly step forward last year. Administrative data of Central Register of Compulsory Social Insurance (CRCSI) and Tax register became available, as source, for Labour market statistics. Labour market statistics represents important input for decision-making process. Analysis of quality of these administrative data started immediately, as well as all necessary actions needed for adapting data to statistical needs. Use of administrative data poses major challenges. For example, two important information are not available from CRCSI: municipality of working place and activity code. In order to overcome these shortcomings in 2016 SORS introduced a new methodology for computing registered employment. New methodology combines data from the CRCSI and Statistical Business Register (SBR). Monthly, SBR active enterprises are linked with the CRCSI data to provide sets of employees in those enterprises. From SBR, also, all local units are extracted with number of employees broken down by activity. Based on these SBR structures, the number of employees from CRCSI database can be broken down by municipalities and activities.

On the other hand, Tax administration data covers all the earnings for which the employer filed a tax return. Tax Administration data lacks important information needed for earnings statistics: activity of local kind of activity unit (LKAU), municipality of working place, educational level etc. This challenge has been overcome, also, by the significant changes in methodology, for example using municipality of place of residence, instead of municipality of working place.

Administrative data, despite all the shortcomings, secure better efficiency, reduce the response burden on reporting units, allow better coverage, more up-to-date data and improve the quality of statistical output. Challenge is to develop new methodologies or significantly improve old ones in order to get better information combining statistical data with administrative sources.















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EXTENDING THE USE OF ADMINISTRATIVE DATA IN THE PRODUCTION OF BUSINESS STATISTICS IN TURKSTAT

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Abstract

Turkish Statistical Institute (TurkStat), as the coordinator and the prominent actor of Turkish statistical system, aims at ensuring the quality indicators such as timeliness, accuracy, accessibility, comparability, relevance and coherence when producing statistics to meet user needs in compliance with international methodological standards. TurkStat's quality assurance framework is based on the European Statistics Code of Practice. Within these principles and the corporate strategic plan, the entire statistical process, from the generation to the dissemination of data, is configured in a quality-oriented manner.

Another factor that should be taken into consideration in the production of statistics, just as well as the sustainability of the process cost-wise, is using the less burdensome mode for the respondents. These constraints taken into account, it could be said that whether or not the official statistics possesses desired attributes can be associated with data source used and data collection mode preferred, as well as the other methodological choices. Data sources in the statistical production process could be censuses and surveys conducted mainly for statistical purposes (primary data) as well as records already accumulated for different purposes within institutions (secondary data).

The vast economic, social and technological changes have necessitated that TurkStat improve quality and timeliness while reducing the response burden in data collection process. In order to meet this requirement, TurkStat has prioritized the use of administrative data for statistical production in its plans and programs and expedited the work thereon. TurkStat has set out to extend the use of administrative data in statistical production. The major motivators of TurkStat to redesign and modernize business statistics based on administrative data has been decreasing the response burden and improving data integration.

This document explains the details of TurkStat's motivation of integrating new data sources into Turkish Statistical System, its experience along the process and redesign of the "Business Statistics" as a result.









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INTRODUCTION OF A NEW PRODUCTION SYSTEM FOR THE COMPILATION OF BUSINESS STATISTICS

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ABSTRACT

Business statistics are acknowledged to provide an overview of the business cycle and and estimation on: the structure and development of enterprises activities, the production factors use, the performance and competitiveness of enterprises, the regional and national development of enterprises and markets, the policy implemented by enterprises and the special characteristics and special distribution of their activities.

The current economic circumstances create an urgent need for more comprehensive business statistics, which in turn increases the response burden of enterprises and the cost of producing such statistics, in a time when the NSIs face, generally, resources constraints.

Business statistics in Greece up to 2014 were compiled on the basis of large scale sample surveys to enterprises of various economic activities. The method used presented several drawbacks, the most important being the low response rate that had an impact on the quality of statistical output, while delays in the production of statistics were quite frequent. Moreover, the burden on the enterprises for providing the relevant data was significant and so were the requirements for financial and human resources.

To this end, the Hellenic Statistical Authority (ELSTAT) explored the use of alternative sources, besides surveys, for the compilation of business statistics, and proceeded to the use of administrative - mainly tax - data for the production of the main statistical characteristics of businesses in Greece.

A new production system of structural business statistics for the reference year 2015 was put in place on the basis of the combination of data from multiple sources, such as tax data, social insurance data, data from commercial databases, as well as a small scale sample survey for the estimation of variables not available in the administrative sources.

The presentation will focus on the activities of ELSTAT, at a legal and technical level, in order to get access to administrative data, as well as on the activities for the development of a secure IT environment for collecting, storing and automatically processing these data. Moreover, the presentation will depict the statistical techniques used for estimating missing variables on the basis of survey data and finally the process for integrating all these multiple-source data for the compilation of SBS.

In this context, strengths and weaknesses of the new production system and their impact on the quality of the statistics produced will be discussed in the light of recent experience.

















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Organization: Statistics Finland



Abstract

Statistics Finland monitors the response burden of enterprise surveys regularly. The follow-up is made at the level of individual survey: the burden is calculated based on the average responding time, survey rounds per year and the sample size. The results are converted into staff-years and monetary costs. The level of response burden that consists of all the surveys that are directed to certain enterprise within a certain time period is also followed.

This paper focuses on the perceived response burden (PRB) measurement. The aim is to describe the implementation of a response burden measurement project and the challenges met in data collection. In addition, some preliminary results are presented.

A comprehensive perceived response burden measurement that covered most of Statistic Finland's direct enterprise data collections was last carried out in 2008-2009. To update the measurements, during 2018 the PRB questionnaire is attached to all our enterprise data collections in web. The data is gathered by a voluntary feedback survey where the respondent is directed after filling the actual inquiry. The spent on collecting the needed information and to fill in the questionnaire, and how burdensome or easy they regard responding. In addition, there is an open question for other feedback.

The information provided voluntarily by the respondents is at the core of perceived response burden measurement. Within the project, challenges have been faced in getting enough data. Better results were pursued by changing the way the respondents are directed to the response burden questionnaire and using an email invitation.

Preliminary results suggest that in most of the data collections the proportion of respondents that perceive responding quite or very burdensome has increased compared with 2009. Yet there is a lot of variation between surveys and also opposite results appear.













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SHOULD WE APPROACH DIFFERENTLY TO DATA COLLECTION FROM LARGE BUSINESSES?

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Abstract

In 2016 there were more than 200,000 companies in the Business Register of Slovenia, of which 324 were businesses with more than 250 employees. These large companies are annually on average included in 13.4 statistical surveys, and have to answer on average 190.5 questionnaires, which is much more than the average for all businesses (2.3 surveys and 4.6 questionnaires).

When collecting statistical data it is natural to use different approaches for different types of reporters including when it comes to their size. SURS distinguishes key reporters from other units and gives them greater importance in the data collection and the data control. A special project for selective data editing is currently underway in which larger units will have special attention in data editing. However, SURS does not use a special management system for the treatment of large businesses.

Special treatment of large enterprises could be considered in all processes of data collection. We can start with sampling and review if large companies could be selected less frequently. The second area is communication, where we could consider an individual approach to large businesses. Data collection itself is a wide area with lots of possibilities, including adjustment of collecting the data to reporters' systems (pull instead of push approach). Furthermore, if we were to decide for a special strategy for large businesses, we should choose a wider approach, including also a question of confidentiality, non-response, etc.

On the other hand, we have to realise that large businesses are not the only important survey respondents. Medium-sized (50–249 employees) and small (10–49 employees) companies are also very important groups for which we could not afford individual approach but could













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prepare special target groups. On the other hand, different categorization of important businesses should be considered. For example, if we further analyse large companies by activity, we can see that companies registered under economic activity C - Manufacturing are on average included in 19.4 statistical surveys, and have to answer on average 140.1 questionnaires, while, on the other hand, companies registered under economic activity Q - Human Health and Social Work Activities are on average included in 5.2 statistical surveys, and have to answer on average 13.2 questionnaires. SURS has a new system for measuring actual burden of reporting units. We could take a bottom up approach, where we could first identify individual large reporters and try to gather them into homogeneous groups. We could then prepare different strategies for different focus groups.

Strategies and activities that we would like to explore in more detail are:

- Coordinated approach in communicating with key respondents. This does not mean that one person should always contact an individual business. One person cannot efficiently manage different subject areas for which data are collected and it is usual that in businesses more than one person completes statistical reports.
- Further development of coordinated sampling.
- Using predefined datasets instead of web questionnaires. SURS would prepare the structure of an electronic record for individual statistical surveys. Businesses would prepare reports from their information systems. Such a solution would be particularly useful for businesses that are involved in some statistical surveys with certainty.
- Use of data from information systems of the reporters. We could for example arrange with businesses to export their data from their accounting information systems from which we can obtain authentic information on assets, liabilities, revenues and expenses as shown in the general ledger. It would first be necessary to obtain precise information about the used businesses chart of accounts and internal bookkeeping rules.

Keywords: data collection, large businesses, communication with reporters











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HARMONIZING ECONOMIC SURVEYS

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Abstract

In response to declining budgets and decreasing response rates, the US Census Bureau launched an effort to harmonize all economic survey programs. Primary goals included the following: produce timely, relevant products/services; reduce respondent burden; improve quality; increase ability to share data and resources across surveys; increase the agility and efficiency of economic programs; and maintain a high level of trust with data users and respondents. From these goals, requirements for capabilities were identified and projects were launched. This presentation will primarily discuss projects to harmonize survey content and the business units while acknowledging other efforts that are currently ongoing.

The business unit harmonization team's goal is to determine a common unit of observation that all economic survey programs could implement consistently in data collection. They first developed a complexity indicator to understand the business population. This segmented the population into complexity categories gauging organizational structure and industry diversity. Initial research focused on the most complex companies and concluded a standardized unit was not possible. Rather these companies require a dedicated account manager to develop customized reporting units. Additional research was conducted on all remaining companies to determine feasibility of a harmonized observational unit. Research recommended a unit based on the industries each company operates in.

The content harmonization team is seeking to develop common concepts, terms, and survey questions across all economic surveys. The team started by investigating and harmonizing inventory questions, assessing the quality of inventory data, and field testing the questions. Similar work has started on questions requesting data on payroll, sales, and











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expenses. In addition, a content change control process was established and administered among all surveys.

We would like to discuss challenges, successes and opportunities others have experienced during harmonization efforts. How are business units defined for data collection purposes in your organizations? Are they consistently defined across survey programs? Why or why not? What benefits do you see in harmonizing survey content and collection units?

















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STATISTICAL BUSINESS REGISTER SURVEY ON THE LOCAL UNITS OF LARGE AND MEDIUM SIZED ENTERPRISES

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Abstract

The purpose of this paper is to introduce Workshop's participants with methods of organizing and conducting Statistical Business Register (SBR) Survey of large and medium sized Enterprises in the Statistical Office of the Republic of Serbia (SORS). Methods will refer to data collection mode, survey frame, communication with Businesses, reminders, methodology papers and FAQ (responses on Frequently Asked Questions). From IT point of view, methods will refer on web questionnaire design and software solution for monitoring current response rate (during data collection) and the quality of data. This paper will also describe using and combining administrative and statistical sources in conducting SBR, in order to assure expected outcome for SBR users.

SBR in SORS has been established in 2006. It consists of little above 454 000 active Legal units, 448 000 Enterprises, 500 000 Local units and 8398 Enterprise groups. SBR is the main supplier of Business data for various Business statistics in SORS. However, existing administrative and statistical sources are not enough to fulfil the needs of SBR stakeholders. Database on Local unit level is not fully covered with required data. Therefore, the need of establishing an SBR survey is emerged. First SBR survey took place in 2010, and since then survey is carried out on the yearly basis. Data have been collected twofold – by web questionnaire and by filling data in Microsoft office excel format (for large Businesses with an extensive network of local units). The targeted population are big and medium sized Enterprises. Last SBR survey frame gathered 7691 Businesses. Response rate (data provided) was 97%. The task of the main and 15 regional SORS offices, in this survey, was to ensure data flow of certain quality on the territory they are covering. The intention is to collect data on locations on which Enterprises perform their activities, conducted NACE classes on these locations and number of Employees engaged in this NACE classes. The data collected are latter used in determining the principal activity of surveyed Enterprises according to the number of employees (as substitute of value added).

The aim is that all-important Enterprises have to be covered and contacted at least once in two years. It was decided regarding the burden on units, in order to reduce it as much as it is possible, and, at the same time, to provide SBR with accurate data. Plan is to leave web questionnaire open online. In that way, Businesses will be enable to update data when any change in the characteristics occur.

SBR is constantly challenged with: how to fine new administrative and statistical sources that will satisfy the increasing user needs, how to match data from various administrative sources, how to influence other business surveys to add new variables needed for SBR and how to conduct own ad hoc and regular surveys. It still has a lot of improvements to be implemented in order to improve the quality of SBR data. The introduction of the SBR survey is a significant and important step.













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INTERNAL TRADE SURVEY

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Introduction

The Internal Trade Sector in Jordan is considered one of the most important sectors that contribute to the Gross Domestic Product (GDP) and in the employment of manpower. Due to this importance, the Department of Statistics (DoS (conducts an annual sample survey for the establishments engaged in wholesale and retail trade, repair of motor vehicles and motorcycles.

Objectives of the Survey

The overall aim of the survey is to provide data on, or for the calculation of the following items:

- a. Compensation of employees whether in cash or in kind.
- b. Gross output and intermediate consumption.
- c. Size of investment and capital formation during the year.
- d. To compute the contribution of the internal trade sector to the GDP.

Thus, the data are used to prepare the National Accounts according to the United Nations standards.

Survey Coverage

The Internal Trade Survey covers all establishments classified in the divisions 45, 46, 47 of The International Standard Industrial Classification of all Economic Activities, Fourth Revision (ISIC4). These divisions include wholesale and retail trade, repair of motor vehicles and motorcycles.

Sample Design

A stratified random sample was designed, where the population was divided into four strata as follows:

• Stratum 1: All establishments employing 10 workers or more were completely enumerated.

- Stratum 2: This stratum included all establishments employing 5-9 workers.
- Stratum 3: This stratum included all establishments employing less than 4 workers.

• Stratum 4: All establishments which had revenues equal to, or more than 500,000 JD and not covered in the sample.













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WAIT! BEFORE YOU GO, JUST A FEW MORE QUESTIONS: PILOT TEST OF A PIGGYBACK SURVEY

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The Bureau of Labor Statistics' Annual Refiling Survey (ARS) is a web survey that asks approximately 1.2 million businesses to review and verify or update their industry and geographic information each year. As a short survey that reaches a large audience annually, the ARS offers the opportunity to append additional surveys after respondents complete the ARS. Respondents already logged into the ARS secure website could be directed to a second survey and asked to answer additional survey questions after completing the ARS. This 'piggyback' survey design would allow BLS to leverage the multitude of information already known about the sample establishments from the ARS to allow for targeted sampling, maximizing the information collected while minimizing burden. Additionally, the second survey would have little data collection overhead, leveraging the address refinement, printing, and mailing efforts that are undertaken as part of the production ARS.

There are several unknowns that will determine the success of this piggybacking approach. Attrition rates, or how many respondents complete the second survey, will determine the true efficiency of the approach. Since the ARS only asks respondents about their industry and location, we do not know who the respondents are and what type of information they could provide about their establishment. This limits the type of information that could be accurately collected with this approach. In 2018, BLS conducted a pilot test of a "Quick Business Survey" (QBS) that asked respondents 8 questions after completing the ARS. Rather than collecting substantive information (e.g., establishment size or type), questions asked what type of information the respondent would be able to provide about their establishment (e.g., could you tell us the top three products produced by your company).

This paper will present the results from the pilot test, including ARS response rates, attrition rates, item-nonresponse rates?, and responses to the QBS survey. Using information from the ARS, QBS and sample frame, we will explore if there are patterns of nonresponse that would limit the effectiveness of this approach. We will end with recommendations, both for the next steps for the QBS as well as for other agencies considering this type of approach.

Keywords: piggyback survey; survey development, pilot test













DATA COLLECTION AND INFORMATION FLOW MANAGEMENT IN STATISTICAL SURVEYS CONDUCTED WITH THE USE OF REPORTING PORTAL.

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Abstract

In the Polish statistical system, overwhelming majority of data from and about business are obligatorily collected via Internet. In order to enable respondents to report online, in 2007 Statistics Poland set up an Internet platform named "Reporting Portal", designed exclusively for statistical purposes.

Reporting Portal, one of the biggest and busiest information systems in the Polish public administration, is responsible for collecting about 3,000,000 statistical questionnaires a year, used as a source of information for more than 200 statistical surveys carried out by the Statistics Poland on the basis of the annual programme of surveys. But processes performed by Reporting Portal include not only data collection itself, but also numerous activities associated with this process. Among other things, those activities include exchange of information connected with different stages of survey and intended for different groups of recipients. This exchange of information takes place within and, what is even more important, outside of the statistical services. As a result, Reporting Portal serves as a huge channel of communication between statisticians and respondents (more than 800,000 active users' accounts all over the country) obliged to deliver the data. What is more, this communication is not only limited to sending typical announcements about obligations and deadlines connected with particular surveys; Reporting Portal provides also an opportunity for respondents to ask questions or to report problems connected with participation in a survey. This two-way communication requires perfect organization and planning, and, needless to say, involves large groups of employees of statistical services, almost permanently engaged in regular contacts with different groups of respondents.











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Polish experience from more than 10-year period of conducting statistical surveys online shows that this method relies very much on proper information flow. In many cases, appropriate information, delivered on time to a proper recipient, is the most important factor in the whole process of collecting the data. Apart from obvious benefits for statisticians, being well-informed on every stage of a survey is also necessary for respondents, in order for them to deliver the data of high quality and without delay.













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TRANSFORMING SHORT-TERM STATISTICS: THE BUSINESS PERSPECTIVE

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Abstract

The Office for National Statistics (ONS) is taking forward a programme of transformation to deliver improvements to the UK's economic statistics and, of particular focus for this paper, the data collection processes underpinning their production. We will discuss research on the transformation of the short-term statistics which to date has, amongst other work, involved qualitative research with around two hundred businesses across the retail, services and construction industries. We will highlight issues that have emerged with the current survey design and latest proposals to address these. Alongside this ongoing research, we will encourage discussion on the benefits and challenges of working under an agile project framework which, while having an advantage of focus and collaboration, does not easily lend itself to qualitative research.

ONS's transformation programme goals include better integration of non-survey data sources and development of innovative statistical methods and operational approaches to build a common architecture for collection, processing and analyses. In addition, an aim is to rationalise surveys making operations more efficient, moving what are currently paper-based and telephone surveys, online. These changes will reduce the burden on businesses as well as have operational cost benefits. Transformation is part of ONS's commitment to continual improvement; ensuring user requirements for relevant and more detailed information and greater insight into economic statistics are met.

The short-term outputs are the first suite of business statistics to go through transformation. The focus has started on the 'Distributive Trade' outputs which will be produced for the retail, motor trade and wholesale industries. The transformation of construction, production and other services' short-term outputs is intended to follow. ONS is exploring using HM Revenue and Customs (HMRC) Value Added Tax (VAT) data and linking this with business data held on a new statistical 'business













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spine', the 'Statistical Business Register (SBR)', which would replace ONS's current Interdepartmental Business Register (IDBR). Using VAT data has the potential to reduce the number of businesses currently sampled alongside other benefits. Variables collected via the short-term surveys would also be changed. This has an impact for businesses. We therefore gathered businesses' perspectives on issues such as:

- whether or not the proposed changes were feasible
- how their own accounting practices relating to turnover (for example, work-in-progress (WIP), subcontracting and long-term contracts) could affect the data provided
- the burden involved to provide the current and proposed data
- whether they could provide data at the UK 'enterprise' rather than 'reporting unit' level

A new, electronic questionnaire was iteratively tested using cognitive testing and user research methods. Research is ongoing, but the aim is to introduce a new, online 'Monthly Turnover Survey' (MTS). Data collected via the MTS will be used in conjunction with improved methods to reduce burden on businesses and improve the quality of the short-term outputs.











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STANDARDIZATION OF THE DATA COLLECTION OF BUSINESS STATISTICS IN BELGIUM

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Abstract

Since the beginning of the century governmental public services are confronted with less means in terms of budget and people. Beside the limited state budget context, there was also a growing demand and a political willingness to reduce the administrative burden. Apart from the more classic burden reducing techniques, the Belgian NSI decided to draw the card of e-government.

A study in 2007 had pointed out the structural business survey as the most expensive businesssurvey organized by the NSI. Administrative simplification technics such as avoiding goldplating, sample-reduction and avoiding double questioning were applicated on the survey. In terms of e-government the NSI choose to use XBRL as a standard.

The successful use of XBRL technology for SBS formed the base for a transformation and standardization of the process of data collection of several other business statistics. Until 2010 data collection and data processing in the Belgian NSI have been organized per survey. This organisation of different production lines (stovepipes) had resulted over the years in the implementation of a great variety of data collection tools and software: Blaise,xls files, txt files, xml files, coolgen, cobolt, Java, XBRL... This mix made the entire data collection process inefficient and rigid.

In order to standardize the data collection and processing, some lines were drawn out, resulting in the following action plan: All surveys should be web based using only 2 tools: Blaise or XBRL. All existing surveys that do not use one of these 2 formats would be converted. In accordance with the rationalization of the web survey tools, the number of internal processing systems would also be reduced as much as possible. A single declaration platform would be created for all web surveys. The integration of surveys in existing software systems would be further investigated and implemented. The B2G information flow should be web-based as much as possible. Paper forms should gradually disappear. The use of XBRL for the collection of statistical data must be expanded further (e.g. Structure of earnings, tourism, road transport,...) And finally the standardization of the export Statistics Belgium.

In 2017 the standardization process was finalized. Since then the Enterprise section of the data Collection Department Section has 22 surveys in XBRL format, monitored in one single system 'StatData' which is directly connected with the Business Register. Also all the surveys follow the same standardized process in terms of loading the sample, loading data to prefill forms, creation of follow-up, creation of userids, creation of web forms and the export of data. Apart from the cost reduction, all these 'identical' steps also allow more flexibility in terms of human means, as input, output and data-processing of different surveys have similar characteristics.













SIMPLIFIED BUSINESS INFORMATION – THE WAY FORWARD

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Abstract

In 2006, a program settled up by the Portuguese government was in place – The Simplex Program, which main goal was simplifying and modernizing the public administration. In that context, a new model was put in place through the joint efforts of 4 public entities that made possible to acquire administrative data while simultaneously complying with four legal obligations.

The Simplified Business Information (IES – stands for "Informação Empresarial Simplificada") is a system where economic and financial data related come from one single administrative source, being collected by electronic means, at a single moment.

IES is considered a win-win project, where all the participants have advantages. For Statistics Portugal, it should be stressed: the simplified data collection, the less time to have data available, the access to more information with a total coverage of enterprises' population, and a reduction in burden and costs – the structural business statistics survey was dropped out. For the companies, this paper free system allows a significant reduction in costs and burden, taking into account that companies are allowed to fulfil four legal obligations once in a single moment: the presentation of tax declarations to the Ministry of Finance; the settlement of accounts to the Public Register (Ministry of Justice); the supply of statistical data to Statistics Portugal and also to the Central Bank.

In 2015, a fifth public entity joined this group – the ministry of economy, in order to gather information on local units, necessary to update their commercial records.

In 2018, continuing the simplification process initiated in 2006 which led to the creation of IES, a new simplification is being planned. The purpose is to pre-fill the IES Financial Statements with data extracted from the Standardized Audit File for Tax Purposes (SAF-T) related with accounting, allowing to eliminate tables and fields from the current IES, in cases where the information can be obtained by SAF-T.











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MOBILE DEVICE USAGE IN ESTABLISHMENT SURVEYS: CASE STUDIES FROM THREE U.S. FEDERAL STATISTICAL AGENCIES

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Abstract

Mobile devices are becoming more of an issue for survey researchers who have to ensure that their web surveys are compatible, and that the use of a mobile device doesn't harm response rates or data quality. However, most of the studies that have been conducted have focused on mobile device usage for household or social surveys. As with many other features of survey design, establishment survey respondents can have a very different response experience and also need to be considered.

Establishment survey respondents are assumed to use desktop or laptop machines to complete surveys, generally because a) they are reliant on records, b) multiple individuals are involved in completing the survey request, and c) questionnaires tend to be lengthy and complicated. Because of these reasons, despite a push for web reporting to save money, establishment surveys have not experienced the same push for mobile optimization that household surveys have.

The three agencies represented by the authors conduct surveys on a variety of topics, including agriculture, employment, and research and development expenditures. These surveys collect information from private industry (including non-profit organizations), farms and ranches, federal and state government agencies, and colleges and universities. Some surveys are exceptionally short or straightforward, while others are longer or more complex. We suspect all of these factors determine how likely a respondent is to access or complete a survey on a mobile device.

By looking at paradata from a range of online surveys, we will take a high-level examination of the use of mobile devices within the establishment survey portfolio at three U.S. federal statistical agencies. This analysis will give agencies insight to allow statistical organizations to make informed decisions about designing online surveys for establishments.















USE OF COMPUTING MOBILE DEVICES IN THE ECONOMIC CENSUSES FOR UPDATING THE MEXICAN STATISTICAL BUSINESS REGISTER AND GEOREFERENCING ESTABLISHMENTS

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Abstract

The purpose of the presentation is to describe some uses of the Computing Mobile Devices (DCM its acronym in Spanish) for updating the Statistical Business Register in Mexico, as well as georeferencing of establishments. Mexican Economic Censuses are carried out every five years; the use of the DCM has been implemented for the last three Economic Censuses (2004, 2009 and 2014), which has allowed INEGI to significantly improve the collection of information.

For the 2014 Economic Census, the system enabled to locate, during the itinerary of the census researchers, both establishments and dwellings at the specific point where they are located in the geographical space. The point in front of the blocks was precisely assigned in the digital cartography for collecting data of more than 5 million establishments during the Economic Censuses 2014.

The DCM included the directory of the Mexican Statistical Business Register, which enabled to update the status of every single establishment during the collection itinerary, by pointing out the continuity of operating establishments, identifying those no longer in business, and registering those not previously captured in the directory.

The app designed comprises tools for incorporating new blocks, roadways, districts, and it allows updating names and type of roadways, external numbers, merged blocks, etc; i.e., it reflects the changes occurred in the settlements, and it allows locating the economic units and the dwellings in the geographical space with higher precision, and overall, with a higher degree of confidence concerning the location of points in the digital cartography. The point merges data on address, street name, back street, district name, locality, municipality, state, as well as zip code, inheriting them to both the directory and the corresponding census questionnaire.

Likewise, the app in the DCM considers the classification of the economic activity, automated data validation (at the moment of capturing), and the production of reports for control and tracking work progress.

Keywords: Computing mobile device, digital cartography, statistical business register, automated data validation.













THE MIGRATION OF THE CANADIAN CENSUS OF AGRICULTURE TO AN INTEGRATED BUSINESS PROGRAM WITHOUT CONTACT WITH RESPONDENTS

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Since 1956, the Canadian Census of Agriculture has used a collection model based on the complete enumeration of farms and on data reported by respondents. However, the context is rapidly changing.

Farms have become increasingly integrated and complex businesses. These businesses are best handled using Statistics Canada's business survey processing infrastructure, rather than the traditionally used social survey processes. Additionally, data requirements are becoming progressively more complex and include linkages beyond the primary production sector. Information from the Census of Agriculture must be integrated with that from other sectors of the economy (e.g., the environment, food manufacturing, energy, transport, international trade and prices) to measure program efficiencies and to identify broad issues affecting one or more sectors.

The ability to complete the census online has reduced the burden imposed on farm operators. Now, the increasing availability of administrative data and satellite imagery gives Statistics Canada the opportunity to eliminate all or almost all contact with agricultural producers by 2026. This would significantly reduce collection costs and preserve the detailed level and quality of information required by stakeholders.

This modern approach is being implemented as a response to changes in agricultural businesses and stakeholders.

The new model will be implemented by combining remote sensing and geospatial information, data from approximately 300 administrative sources already available, data from other harmonized business surveys, and data from the introduction of models. Other non-traditional alternative sources of information, such as web scraping or precision agriculture, will also be considered.

This new model will be deployed progressively with the 2021 Census of Agriculture. A proof of concept will be produced using the new model by predicting all the census variables (nearly 200 variables) for the whole population (close to 200,000 units). In addition, up to 10 questions will be replaced in the 2021 Census of Agriculture by alternative data, using an agile collection instrument that allows data to be "smartly replaced" when the alternative source is of sufficient quality.

The objective is to reduce the response burden by 100,000 hours by 2026.















EMPLOYMENT AND COMPENSATIONS OF EMPLOYEES SURVEY

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General Background of the Survey

The Employment Survey is an annual national survey conducted by the Department of Statistics (DoS). The principal aim of the survey is to provide up-to-date statistical data on the number of establishments, number of employees and their basic socio-economic characteristics, volume of compensations in both the public and the private sectors, as well as basic data that allow measuring the development of the salaries and wages according to various occupations.

Due to the fact that some of the workers do not work all year round, the data are collected annually with October serving as the reference month.

Objectives of the Survey

The Employment Survey aims at providing the following data:

a. Number of establishments operating in the public and the private sectors by various economic activities.

b. Number of employees in the public and the private sectors and their characteristics, such as sex, nationality, educational level and specialization.

c. Levels of cash salaries and wages paid to different occupation categories as well as regular and irregular cash allowances and remunerations.

d. Compensations of employees by major occupation categories.

e. Usual work hours during the month except week end days by occupation categories in both the public and the private sectors.

f. Size of employment in both the public and the private sectors.

Survey Coverage

The survey covered all operating establishments in the public sector (except for military and security establishments) and all establishments of the private sector regardless of the number of employees (except for the agricultural sector). The Department of Statistics has included establishments employing less than five workers since 1999.

Sample Design

The sample of the survey was designed to include:

a. All establishments of the public sector excluding military and security establishments.

b. All establishments of the private sector engaging 50 workers and more excluding the agricultural sector.

c. A sample was drawn from the remaining establishments.

Data Collection

Data collection started in April, through the personal interview method. In case of large-size establishments the enumerators left the questionnaire by the concerned person in the establishment and fixed a later appointment to complete or collect the questionnaire. This procedure allowed sufficient time for the respondent to prepare the required information















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INTEGRATING SURVEY DESIGN AND DATA QUALITY MANAGEMENT A PRACTICAL EXAMPLE

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Abstract

Survey research aims at producing comparable data without survey errors. However, in reality numerous problems occur at any stage of the data production process from questionnaire design to data processing: Comparability of data may be limited because different projects may survey the same characteristics with different operationalisation approaches. Variables may be surveyed over time repeatedly, but measurement error or comparability over time may change. Compensating such issues after the data is collected requires plenty of data work and becomes increasingly difficult with the number of studies and variables.

Although survey errors are unavoidable, there is a considerable potential for data quality improvement and monitoring by integrating work steps of data production. The presentation suggests a practical solution to streamline and connect questionnaire development, data collection and data quality monitoring. For this purpose, the questionnaire design will be based on a software solution (LimeSurvey) and connected with a relational data base application storing survey data and further variable information. This integration of information allows rationalising work steps, improving coherence of surveys and facilitates data quality monitoring. The approach is completely implemented with open source software and thus can be applied cost-effectively in any organisation.













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QUALITY ASSURANCE FOR THE 4TH EUROPEAN COMPANY SURVEY

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Abstract

The European Company Survey

The <u>European Company Survey (ECS)</u> is a questionnaire-based survey among a stratified, random sample of establishments in Europe. The results of the ECS are published and disseminated widely. Traditionally, an overview report is produced, as well as secondary analyses focussing on themes of research and policy interest.

The survey has been carried out every four years since 2004 by the <u>Eurofound</u> and the fourth edition, which is currently in the preparation stage, is being commissioned jointly with the <u>European Centre for the Development of Vocational Training (Cedefop)</u>, and will go to the field in early 2019. The target population for the ECS are establishments with 10 or more employees in all economic sectors (except NACE Rev. 2 categories A, O, P, Q, T and U) in the EU Member States and some candidate countries. Within the establishment the survey targets the most senior manager in charge of personnel and, where present, an official employee representative.

The ECS 2019 will look at workplace practices in terms of work organisation, human resources management, skills strategies, digitalisation, employee participation and social dialogue. In a change from previous editions, which were administered by telephone, the ECS 2019 will use a push-to-web approach and will be the first large-scale, cross-national survey to apply such a method. Over 25,000 establishments across all EU Member States will be contacted via telephone to identify a management respondent, and, where possible, an employee representative respondent after which respondents will be asked to fill out the survey questionnaire online. This approach reduces the burden on respondents and is expected to improve the quality of responses. It is intended that moving the questionnaire administration fully online shall make the ECS well and truly future-proof.

Quality assurance, transparency and quality control

Considering its impact at EU, international and national levels, Eurofound has a strong commitment to quality assurance and improvement. It is important that data collected are sound, robust and of the highest quality and that information on data quality is made available











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to stakeholders and the research community. For the preparation and implementation of the ECS 2019, information will be gathered to assess it against a quality assurance framework based on the quality concept of the European Statistical System as developed by Eurostat¹, as well as other quality frameworks such as the Cross-Cultural Survey Guidelines² and the Total Survey Error Approach³. This information will be published in a report along with an external quality assessment report which will document the quality of the ECS 2019. Detailed methodological information will also be made to the public.

Sophia MacGoris will present the ECS 2019 with a focus on the approach to quality assurance and quality control. Feedback from participants on the presentation is encouraged.

³ Cf. Herbert F. Weisberg (2005). *The Total Error Approach. A Guide to the New Science of Survey Research*. Chicago: Chicago University Press.











¹ http://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V1-2final.pdf/bbf5970c-1adf-46c8-afc3-58ce177a0646

² <u>http://ccsg.isr.umich.edu/index.php/chapters/survey-quality-chapter</u>



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FRAME ERROR IMPACT ON STRUCTURAL BUSINESS SURVEYS

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Abstract

The structural busines is carried out in order to obtain indicators of enterprise activity structure and outcomes of their business.

This paper treats some details of the first data analysis of the Structural Business Statistics (SBS), concerning the frame error non-response rates and post-stratification as well as the analysis made in order to check and edit data for KAS. The analysis is done on the 'raw' data with higher overview on the frame error, editing, post-stratification, non-response analysis and the small overview on some findings on estimated numbers of enterprises, entrepreneurs and employees in Kosovo.















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EVALUATING MODE SEQUENCE WHEN EMAIL IS USED AS THE INITIAL CONTACT IN ESTABLISHMENT SURVEYS

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The U.S. Bureau of Labor Statistics is conducting a series of experiments to evaluate the use of Email as a method to invite establishments to a survey, both to save the cost of paper mailings as well as to increase online responses which are also cost efficient. Prior to the survey invitation, a pre-notification letter is sent to sampled establishments informing them of the upcoming survey and to collected updated contact information, including an Email address. For the respondents that provide their Email address in response to the pre-notification letter, it is now possible to solicit their survey response through an Email, potentially saving cost and time compared to a mailed paper invite. In order to maximize the benefit of this cost saving mode, research is needed to evaluate response rates, costs and timeliness of response for various sequences of Email and postal mail reminders.

Previous research on mode sequence has focused on surveys of households and individuals. Medway and Fulton (2012) conducted a meta-analysis of surveys that offered concurrent web/mail options and examined the effect on response rates. Their review of previous experimental comparisons found that mail surveys that also incorporate a concurrent web option have a significantly lower response rate than those that offer a single mode. This suggests that modes should be offered in a sequence rather than providing respondents with a choice. Millar and Dillman (2011) investigated the effects of different sequences of web and mail on response. They found that following requests for web response with a final request to respond by mail produces an equivalent response rate to when mail is the only response option.

Given the previous results from household survey experimentation, it is possible that a similar effect of mode sequence will be realized in establishment surveys. However, as Willimack notes (Snijkers et al., 2013), techniques commonly accepted and used in surveys of households and individuals may not be applicable for a survey of businesses. Therefore, it is important to conduct an experiment of mode sequence in an establishment survey to investigate optimal order and timing for each mode of survey request on response, costs and timeliness.

This research will evaluate the effectiveness of using Email to send businesses the initial survey invite when different sequences of modes are used for non-response follow up. Specifically, we focus on response rates, time to response, mode of response and cost per response.











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THE IMPACT OF INVITATION MODE ON PARTICIPATION IN AN ONLINE ESTABLISHMENT SURVEY

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Abstract

Establishment surveys are increasingly shifting from paper-and-pencil interviewing to web survey data collection in order to reduce costs and improve data quality. However, a complete shift to web may not be enticing to all establishments, especially those that are accustomed to participating in paper-based surveys. The survey designer is therefore faced with the challenging task of enticing establishments, who may be otherwise willing to participate in the survey, but are reluctant to engage with an online medium. One design decision that may influence the propensity of survey participation is the mode in which the survey invitation is administered. The invitation mode is an important design decision for any survey, but it takes on even greater importance when the aim is to push previous paper-based survey participants to the web. We consider the decision of whether to use a paper or email invitation mode to invite establishments to a web survey. While email invitations may be effective for online-savvy establishments, paper invitations may do a better job of "bridging" previous paper-based respondents to the online mode. We investigate this notion by conducting an experiment in which establishments that participated in a previous paper-based survey were recruited to participate in a follow-up Web survey in Germany. The experiment varied the invitation mode (paper vs. email) as well as the mode of the reminder (paper vs. email). We analyze the effect of the invitation and reminder modes on the response rate in order to identify the combination of modes that optimizes participation. We also utilize an extensive array of auxiliary information on the full sample to determine whether mode combination has a strong effect on the representativeness of the responding establishments.













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LEVERAGING BEHAVIOURAL INSIGHTS TO IMPROVE CONSTRUCTION BUSINESSES' SURVEY RESPONSE

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Abstract

Background

The timeliness of participants' response to government surveys is essential to guarantee the quality of the derived data and statistical outputs. The Monthly Business Survey (MBS) – Construction and Allied Trades is the most resource-intensive ONS business survey for response chasing. Responses are typically late, and respondents complain that they are unable to provide the data. This raises quality issues for the Monthly Construction Statistical release.

Objectives

To apply principles from the behavioural sciences to increase the number of businesses that return the survey questionnaire by the specified deadline, thereby reducing resources spent response chasing. To assess the feasibility of behavioural insights trials across business surveys, and gauge the benefits of behavioural insights interventions weighted against the operational and reputational risks.

Method

We set up a cross-team project group with members from the ONS Business Data Operations Division, ONS Behavioural Science Unit, Survey Processing Centre, Business Statistical Outputs and Methodology. This allowed us to engage key stakeholders in decision making, understand practical operational issues, test the risk appetite of the business and speed up sign off process. We designed and ran a two-arm stratified randomized control trial (RCT) while conducting the MBS for the construction sector in the months of April and May 2018 (research in progress). Businesses were newly selected participants in the survey sample for January- May 2018. To mitigate the risk that the intervention could adversely affect the data for the statistical release, only businesses with fewer than 20 employees (and rotationally in the survey sample) were included in the trial. Businesses in the control received the business-as-usual survey material. For the BI intervention group, we redesigned the material to include several behavioural 'nudges' to help the businesses understand











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the purpose and expectation of the letters. We also introduced a prenotification message to build businesses' confidence that the ONS values their input and respects their effort, and an infographic flyer to help businesses appreciate the relevance of their data and so create a positive engagement loop.

Conclusion and Contribution of the study

The RCT is still in progress. Data will be collected in April and May 2018. In the analysis, we will assess the expected effect of the BI intervention to increase businesses' likelihood to comply to the return deadline. Results will be finalized by August 2018. An assessment of the feasibility to conduct behavioural insights trials across business surveys will be discussed, including key challenges faced (i.e., stakeholders' risk aversion, operational constraints, difficulty influencing long-standing respondents) and lesson learned. Basic guidelines will be shared with conference attendees on how to run their own behavioural insights trial with business survey respondents.















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FROM EXPERIMENTATION TO IMPLEMENTATION: PUTTING THE PIECES TOGETHER TO FORM A COHESIVE CONTACT STRATEGY FOR THE U.S. ECONOMIC CENSUS

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Abstract

The U.S. Census Bureau conducts a mandatory, self-administered Economic Census every 5 years, collecting detailed financial data from approximately 4 million business establishments. Data are used by businesses, policymakers, local communities, and researchers for economic development, business decisions, and strategic planning, and provide key source data for the Gross Domestic Product (GDP) and other indicators of economic performance.

The Census Bureau undertook a major re-engineering effort to modernize the 2017 Economic Census, including implementation of 100% Web data collection, adding a layer of risk to ensuring adequate response rates. Therefore, to aid development of an effective communication plan, we conducted several randomized experiments to test alternative contact strategies.

Since the Economic Census is an infrequent collection with heavy response burden, it was infeasible to conduct one or more census-like pilot tests to investigate alternatives, nor even to test a complete communication strategy from beginning to end. Instead, we tested one or more components by incorporating experiments into the production collection of several annual or sub-annual surveys. These experiments tested options from the following general approaches:

- Variations in the type, timing, and/or sequence of contacts
- Optimal targeting of escalation techniques under adaptive design scenarios
- Envelope appearance and labeling
- Alternative motivational messages

Experimental results indicated individual components to use or avoid, along with associated circumstances. Although tested separately, it was impractical to consider any of these techniques to stand alone. While this presentation will briefly describe the experimental findings, its focus will demonstrate how these results, along with other empirical evidence of survey response patterns, were woven together, under practical constraints, to form an evidence-based comprehensive, integrated data collection strategy for the 2017 U.S. Economic Census.











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RESULTS OF SEVEN DIFFERENT PILOTS TO IMPROVE TARGETED COMMUNICATION IN BUSINESS STATISTICS, STATISTICS NETHERLANDS, 2017

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Organization: Statistics Netherlands

Targeted communication to different groups of stakeholders is a promising technique for improving our data collection-method, and strengthening the image of our Statistical Office. By supplying the businesses with the right information, and by removing potential hurdles, we expect the businesses to provide us with better data, and, if possible, a faster response. But if some progress can be made, what is the best way to react proactively to the needs of the businesses? To gain a better understanding of the possibilities of targeted communication in business statistics, Statistics Netherlands conducted several pilots. For each pilot, a communication plan was made, and, according to the plan, communication products were prepared. To determine whether or not it is worth putting the products into production, the results of the pilots are monitored and evaluated thoroughly. This includes the effects on the response rates, the quality of the response, declarants' use and appreciation of our communication materials, and, of course, the consideration of extra costs. The summary of the performed pilot projects is as follows:

- For the mandatory Annual Business Statistics, we approach 70.000 companies annually, 70% of which are small businesses or even self-employed without employees. Two thirds of the total number of businesses are first-time respondents. This results in a lot of confusions and problems for the businesses, and a lot of phone calls to our helpdesk. We have analysed the questions and comments over the past year. Based on the results, we improved our FAQ's on the website, and we made an instructional video. Furthermore, we created a new notification letter for the smaller businesses, and a new pre-due reminder for all businesses.
- The non-mandatory survey on art and culture has a very low response level (34%, while the minimum requirement is 50%). Therefore, we improved the communication materials, particularly the pre-due date reminder.
- To highlight the newly developed electronic questionnaire for the survey on industrial waste stream, we developed an instruction video, and a pre-due date reminder-card, with a QR code, linked to the instruction video.
- Only half of the addressed businesses of the rental-survey are obliged to fill in the questionnaire. The other half (lessors with less than 10 homes) are allowed to respond on a non-mandatory basis. Therefore, we formulated a less strongly-worded reminder for the last group, and hope that there won't be a reduction of the response level.
- For the mandatory survey on R&D, we developed an information card about the approaching enforcement procedure. This card was enclosed with the reminder-letter.
- Recently, the majority of our agricultural surveys have become mandatory. To remove potential barriers, we made instruction video's, factsheets, and pre-due reminder















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cards. To determine the effect of the mandation, we developed the same communication products for a non-mandatory agricultural survey.

• Last but not least, we sent the participants of the non-mandatory ICT-survey an incentive, a more relaxed pre-due date reminder, and to the non-respondents an additional third reminder.

In the presentation the applied communication approach for the several statistics will be discussed in detail, showing communication materials. In addition, by the time of the Workshop more paradata will be available, indicating the effectiveness of the different strategies, and the considerations of putting the individual products into production or not.

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* The views expressed in this paper are those of the authors and do not necessarily reflect the policies of Statistics Netherlands.













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Abstract

The quality and relevance of official statistics depends crucially on the accuracy and timeliness of data reported by the Providers of Statistical Information (companies, families, public and private institutions). One way to improve the quality of official statistics is to motivate respondents by enhancing the relevance of the data provided.

Regarding this concern Statistics Portugal started in 2017 a regular initiative based on an ad hoc survey, with voluntary response, to the companies that usually participate in business surveys. This initiative allowed obtaining a picture of how the obligation to reporting statistics is viewed by the Providers of Statistical Information. The survey was divided into four sets of issues: I - Characterization of the respondent; II - Degree of effort and difficulties of reporting statistical information III - Number of information obligations, and IV - Quality and usefulness of the information provided. The questionnaire had mainly qualitative questions with an ordinal scale reflecting greater or lesser severity of judgment.

This initiative, allowed Statistics Portugal to start the measurement of Perceived Response Burden and the quality of the data reported, and obtained critical suggestions for the improvement of procedures in data collection.

In consequence and in order to enlarge the perceived utility of statistical information for the respondents Statistics Portugal started a regular production of Personalized Feedback Reports. These reports are produced as a mix of individual statistical information and aggregate data, and the respondent see it as a payback for the data reply and is an important way of communication in order to have better and more collaborative data providers.

Keywords: Perceived Response Burden; quality; business surveys; respondent management; personalized feedback report; data collection; survey management.















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CENTRALIZED INBOUND AND OUTBOUND CONTACT CENTER SERVICE AS NEW STRATEGY IN DATA COLLECTION

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Abstract

The implementation of Inbound and Outbound Contact Center service has been realized in Istat in order to better tackle the needs of businesses enterprises involved in statistical surveys. This represents one of the main innovations in the process of data collection centralization, realized by Istat in the last two years.

First step was to build a single entry point for businesses enterprises in order to access the data collections systems actives for each survey in which they are involved.

In order to support respondent units on access modality and functionality of the data acquisition system a unique green number has been activated and outsourced. The service deals with two different channels, a synchronous (telephone contacts) and an asynchronous (email system and web form) ones.

As regards requests for assistance on the characteristics of the survey, on the specific content of the questionnaire, and on the data collection technique a recurrent part is managed by the Contact center directly, through an organized FAQ system. The more specific and complex questions are forwarded to the specific Istat experts through the shared tickets system that is an IT tool. The specialization of the services garantees the standardization of the criteria adopted to treat specific and general enquiries and cases.

The Outbound service is used close to the deadline of the data collection to remind to the units not complying with the statistical fulfilment that are called to absolve. Main objectives are increasing the response rate with particular attention to the ones that historically have been not satisfactory.













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The Outbound and Inbound functions are at the moment managed by two different societies, nevertheless the flux of the generated information is integrated so that the respondent receives a service of information and assistance that is uniformed and efficient.

The paper will present more in detail the organization of the two services, the information fluxes and the results obtained in qualitative and quantitative terms.

Key-words: process standardization, Inbound and Outbound service, response rates















NOTIFYING AND TRAINING PROCEDURE FOR RESPONDENTS (ENTERPRISES, HOUSEHOLDS) IN STATISTICS ESTONIA

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Abstract

The main task of Statistics Estonia is to provide reliable and objective information on Estonia. In order to do that, data are collected from enterprises, databases and individuals Since the production of statistics requires also information which is not included in the registers, data need to be collected directly from enterprises and institutions as well.

For data submission, we recommend using the electronic data collection environment <u>eSTAT</u>, where the questionnaires have been partially pre-filled.

As stipulated by the Official Statistics Act, submitting data is compulsory because statistics that reflect the processes of the society are vital in the running of the country as well as for drawing up an enterprise's development plan and making management decisions.

Upon failure to submit data or submission of distorted data, the producer of official statistics has the right to issue a precept for the elimination of the violation to the respondent. Upon failure to comply with a precept, the producer of official statistics may impose a penalty payment pursuant to the procedure provided for in the Substitutive Enforcement and Penalty Payment Act.

As much as we have rights to impose a penalty payment, we have a responsibility to inform enterprises about what data and how to submit. And for that a notifications and training procedure has been developed in Statistics Estonia.

In this document is described how we inform enterprises about the obligation to submit data:

- what kind of notification we have
- how we send notifications
- to whom we send notifications
- when we send notifications
- what is the purpose of theses notifications

Statistics Estonia wishes to introduce to the managers, accountants, etc. of enterprises/economic entities the objectives of specific statistical activities for which the enterprises must submit data, and instruct and consult them about using eSTAT and completing questionnaires.

In this document we describe trainings purpose and procedure:

- What kind of trainings we do
- how we send notifications about trainings
- **to whom** we send notifications
- when we send notifications
- what is the purpose of theses trainings
- how we collect feedback on training









