

FIFTH INTERNATIONAL WORKSHOP ON BUSINESS DATA COLLECTION METHODOLOGY

19–21 SEPTEMBER 2018 – STATISTICS PORTUGAL, LISBON

STANDARDIZATION OF THE DATA COLLECTION OF BUSINESS STATISTICS IN BELGIUM

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Introduction

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. In the aftermath of the succesful transformation of the structural business survey, all other business surveys would be migrated and fitted into a single system.

Use of XBRL for SBS

A study in 2007 had pointed out the structural business survey as the most expensive business-survey organized by the NSI. Several administrative simplification technics were applicated on the survey. These technics where avoiding gold-plating (checking to what extent national survey are in line with European statistical demands), questioning fewer enterprises (the treshold for exhaustive surveying had been increased and a rotation scheme was introduced for SME's) and avoiding double questioning by prefilling the questionnaire with figures of the enterprises annual account. The latter, the re-use of national accounts data, paved the way to introduce XBRL as an e-government tool and as the standard for data collection amongst enterprises in Belgium. In 2008 Statistics Belgium decided to develop an xbrl-based websurvey. The idea of XBRL (eXtensible Business Reporting Language) is to identify each concept (e.g. 'turnover') and add it to a 'taxonomy', which is similar to a dictionary. These concepts, brought together in a structured way, can be recognized, processed and represented in different ways, depending on the intended use (e.g. 'annual accounts' or 'SBS').

Adaptation of business process model of other business statistics

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 had been organized per survey. This organization 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, since every statistic had its own specific programs, format, licenses, IT-specialists.

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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 did not use one of these two 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 had to be expanded further (e.g. Structure of earnings, tourism, road transport,...)

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 user-ids, 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.

Conversion of existing surveys and standardization of export of processed data in Data Warehouse

As the data collection section of Statistics Belgium now had some xbrl-knowledge, it was possible to re-use existing concepts and create new specific concepts for each survey. Interesting was the fact that the 'organizer' of the survey could directly make changes and add controls (business rules) to the form by himself, a task that in the past could only be carried out by a computer scientist. Since all surveys would be organized in a similar way, they should be logically processed similarly and also the data had to be stocked the same way in a data warehouse. For each survey, data are daily transferred and stocked in a library. Since all these libraries contain similar tables with identical variables it is made much easier to have access to data of other statistics, because the same software and the same structure of data is used.

A single monitoring system 'StatData'

All business surveys, questionnaires are monitored in a single system called 'StatData'. The system has an internal component to follow up / manage a survey, to open xbrl-form and to add comments. The internal component is directly connected to the business register which contains enterprise information (activity, legal information, address, contact person). The external component of StatData is the platform where an enterprise can login and fill in or upload a form. Access rights to the external component can be directly verified, modified, blocked. Every employee of the business datacollection section has (restricted) access rights to this system. Since all the business surveys make use of the same modus operandi, it's easy to switch employees within a relatively short period of time. The activity of internal and external users on StatData is logged and some useful metadata are also exported to the data warehouse.

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Standardization of the preparation of a survey

At the moment all business surveys were transformed to an xbrl-based survey and the monitoring could be done in the StatData-system, every step in the preparation phase of a survey still had to be done manually (e.g. a csv-file with sample had to be created, sent to IT, loaded and verified by a responsible of the business section).

Since there were again similar steps and actions to do for each business survey apart, the automatization of these tasks was further investigated. This resulted in a new subsystem, linked to StatData from where general 'jobs' in the preparation phase could be executed. The single condition to make use of these jobs is that every file to load needs the predefined structure (e.g. legal unit number, reference period,...) The jobs permit to load the sample, verify and adapt the actual situation of the loaded units in the business register, create a status for a form, load prefilled data, create a userid and password and access rights to every form and to create the xbrl-forms and export parameters. Similar to the export of the collected data and the metadata, there is also an export to the data warehouse of results of these jobs.

Summary

In a context of budgetary limitations and with a heritage of all different production lines, the Enterprise section of the data Collection Department Section managed to reorganize the data collection process in a positive way by offering web forms through a single platform. The gradual implementation of a new system has brought more standardized processes, flexibility and less dependency of personnel, but the perception about expiry dates of IT-systems has been changed a lot since the start of the century.