Innovative tools and sources

in European social surveys

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1. INTRODUCTION

The 2011 DGINS Wiesbaden's Memorandum stressed «the need for better information from time use and household budgets in terms of coverage and comparability ». This has been followed up by Eurostat in the context of the modernisation of social statistics in order to improve responsiveness to users' needs and efficiency of statistical production using new technological development.

More generally, the burden of the survey data collection on respondents in Member States, the subsequent low and/or decreasing response rates as well as burden for NSIs with the data processing, stress the need for modernisation by finding more attractive ways of collecting these data, including the use of new data collection tools and new sources in the Member States.

Both the household budget survey (HBS) and the time use survey (TUS) are key elements of the social statistical architecture. They are the source of information for many purposes and their information is used and re-used in several contexts.

HBS is the basis for the consumption patterns used for weighting price indices including the Harmonised Index of Consumer Prices (HICP), and is used for the consumption side in the National Accounts. In a broader sense, the HBS gives a picture of the living conditions of households by providing detailed information on households' expenditures, useful in a variety of contexts, like social protection, poverty, transport, energy, education, health and health care expenditure, consumer protection, sports, culture, etc. Furthermore, the HBS is capturing one essential dimension of the material living conditions of the households, and plays an important role in the context of a better and joint measurement of income, consumption and wealth.

TUS is the unique source of data for measuring unpaid work, household production, including volunteering, accurate working time, gender balance in daily activities, care for children and the elderly, transport time and use, leisure and non-work activities, use of ICT, loneliness and isolation and several elements of quality of life including subjective perceptions.

Both surveys have some common characteristics. Their sample sizes allow the identification of groups of particular interests, like the elderly or youngsters, employed or unemployed persons, families with different compositions, etc. They are currently usually based on paper diaries (of expenditures or time use).

Both surveys are time consuming for the respondents, and they can both benefit from available technology:
- o for HBS: use of shop cards, credit cards, scanning of receipts or other forms of access to big data;
- o for TUS: use of a mobile phone, as an element to locate the respondent or as a device to input selected data. Other new technological developments are expected in the near future, like detection of the activity (sleeping time, etc.).
- o in general: use of speech recognition to fill e-diaries

Although the surveys are in their current form, rather extensive (several days of reporting on a 10 minute basis for TUS and usually two weeks of detailed expenditures for HBS), it has already been considered how to alleviate the burden on respondents by elaborating the introduction of shorter or lighter versions of the surveys which could lead to more frequent execution of the surveys.

Eurostat has set up a modernisation project to develop solutions, using innovative tools and sources, supporting the modernisation of the data collection in Member States for completing the surveys. Member States are highly involved in the project and this is steered by two dedicated Task Forces (one for TUS and one for HBS). Eurostat coordinates the project and in the project team, besides business analysts, experts on HBS and TUS from the University of Tartu (Estonia) [1] and the Vrije Universiteit Brussels (Belgium) [2] participate.

Two phases have been identified:
Phase 1 (2017 - 2019): to set up an inventory and to have first tools being updated or developed and in test in some Member States.
Phase 2 (2020 - 2024): to realise a full implementation on ESS level. Using innovative tools (e.g. e-Diaries, speech recognition) and other sources (e.g. cards, geo-localisation), have data linked covering the complete survey and improved validation of data put in place. This includes updated guidelines for HBS and TUS data collection.

2. METHODS

2.1. Project approach

In a first phase for both surveys detailed questionnaires have been defined and launched in order to obtain a better view on ESS level about already existing modernisation activities in Member States. The results are used as input for the mentioned inventory. This is followed by work on defining criteria for tools and sources to be used for HBS and TUS data collection. Now the focus is changing towards a more detailed level, to organise testing of updated tools and prepare a strategy for future deployment on ESS level. At the end a governance model should be put in place to steer the modernisation activities at ESS level for both surveys.

2.2. Data collection

During the project different methods of data collection, depending on the type of sources identified to be of interest, will be analysed and described. This will serve as input for future updates of existing tools and sources and might trigger the definition of new projects like for example a shareable speech recognition tool that could be coupled to existing e-Diary apps and thus improve the ease of use for respondents.

3. RESULTS

The expected outcomes of the project are

- Identified shareable tools or projects in Member States, which are modified and maintained by system owners (e.g. NSI's) to make and keep them shareable on ESS level. These tools will improve the data collection for completing both surveys.
- Availability of an inventory of innovative tools and sources containing harmonised descriptions of identified tools and sources in the ESS, based on the recommendations defined in the Common Statistical Production Architecture (CSPA) [3].
- Methodological development taking into account:
  - ✓ identified new sources (e.g. geo-localisation) to be used in the data collection process for HBS and TUS.
  - ✓ the usage of new devices and apps to collect data that will support the introduction of light diaries and possible more frequent survey data collection.
- Member States guidance for implementing tools and sources in their organisation: Update of the statistical production process description including referential metadata and quality information; Reference business architecture covering both surveys; User guides; Training material.
- Governance put in place to assure a sustainable maintenance and usage of tools and sources for the concerned surveys.

4. CONCLUSIONS

The project responds to the needs of the various stakeholders, as it's outcomes will contribute:

- to decrease the burden on data respondents in MSs and on NSI's compiling/completing the surveys.
- to increase the response rates.
- to obtain a faster, easier, flexible, more frequent, and better quality data collection.

The work is being done now because the data collected and disseminated by Eurostat is being used very broadly, and without improvements, the data quality and meaningfulness of the data for these surveys would be at stake. Furthermore instruments are now available supporting the work to de done, coming from different projects executed on ESS level like the work of the ESS TF Big Data or the project shared services. Finally another important enabler is the state of technology supporting data collection that has advanced over the years.

REFERENCES

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[3] Common Statistical Production Architecture, https://statswiki.unece.org/display/CSPA