



Reform of the German System of Household Statistics

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Abstract

In many cases the official household statistics – the surveys of private households – allow an adequate provision of detailed statistical information about persons and households. This information has been used and appreciated by many user groups of the society for many years. In this regard, the official household statistics also serve as a major source of the measurement of poverty.

This key area of official statistics is facing new demands from different sides. For instance in connection with the discussions about the report of the Stiglitz-Sen-Fitoussi commission of September 2009 and the associated questions about the measurement of economic performance and social progress, an additional need for official social data is to be expected and is becoming more and more concrete.

In order to be able to react flexibly to new demands and thereby to enable an adequate data production in the future as well, a reform of household surveys is necessary. For this reason the Federal Statistical Office of Germany initiated the project “reform of the system of household statistics” in 2012 and started it in cooperation with the statistical offices of the Länder. Goal of the project is the establishment of a coherent and sustainable system of household surveys of official statistics, which copes with both the changing demands for data production and the changing need for data.

The paper will present the basic ideas of the new German system of household statistics and thereby discuss current methodological issues of designing household surveys.

keywords: sampling methods, survey design

Basic idea

The basic idea of the German reform of household statistics is the establishment of an overall system, in which the household statistics that are currently conducted independently will be realized as one single survey.

Facing the fact that in Germany neither a population register nor a register of dwellings is available, the common basis shall be a random sample, which is an area sample (master sample), based on the results of the last Census in 2011 with a sampling ratio of about 1 %. The current household statistics Microcensus, the EU Labor Force Survey (LFS), the European Union Statistics on Income and Living Conditions (EU-SILC) and on Information and Communication Technology in Private Households (ICT) will be integrated as modules in the overall system. For each module a disjunct subsample of the 1 % sample will be selected. The households of these subsamples do not only answer a common core programme of questions but also additional questions of the respective module.

Following the long tradition of a rotating sample design in the German Microcensus, all households of the master sample shall be questioned about a standard core programme up to four times. In order to reduce respondent burden, this core programme shall only contain about half of the current questions of the Microcensus. The core shall be composed of variables, for which – according to the long-term user’s needs – a large sample size is still required for potential, detailed analyses regarding subject matter as well as regional aspects. Variables of the

previous individual surveys that are not covered by the core programme shall be inquired as modules only for a part of the selected households.

By the use of a common core programme, the previous individual surveys are to be understood as modules of the overall system. In this system, the survey tools, the survey management as well as the analysis methods are closely linked. The total random sample provides advantages regarding the analysis potential of a future overall system compared to the status quo. The core programme, that is asked in all households of the common master sample and that connects the modules by content, improves the opportunities regarding the use of state of the art methods of estimation and analysis such as statistical matching and small area methods.

Furthermore and depending on the realized response rates of different modules, the new system shall give the opportunity to add new or rather ad hoc surveys with up-to-date topics.

From a methodological point of view two aspects – sampling methods and survey design – are of special interest.

Sampling methods

The overall sample covers 1 % of the German resident population per year. It is assumed that approximately 380,000 households can be interviewed on the basis of the new sample of the Census 2011.

Following the methodology, which is currently used for the sampling procedure of the Microcensus, the overall sample is realized as stratified area sample. On the basis of the results of the census 2011, twenty 1 % samples are generated. Each of these 1 % samples are separated in several disjunct and combinable subsamples at the sampling procedure.

One of these already defined subsamples is surveyed regarding the LFS in addition to the core programme. Corresponding to the EU requirements on the LFS, the subsample is designed as rotating and sub annual sample. The selected households are surveyed for four times according to the 2-(2)-2 design (two quarters in the survey, two out, two in). At the moment, a total of approximately 160,000 households is calculated for this subsample.

From the remaining part of the overall sample (without the subsample of the module LFS), that consists of approximately 220,000 households, the subsamples for the other modules of the system are drawn. Regarding the modules EU-SILC and ICT a stratified and if necessary disproportionate sampling design is ideal. Because certain subgroups of the population are at the center of attention in this kind of surveys and because there are specific precision requirements for these subgroups, it is desirable that the respective subsample contains a disproportionate amount of the corresponding subgroups.

Survey design

With the new system of household statistics an integrated system is created, which understands the previously separate surveys as modules of a common survey. The integrated system offers synergy effects, but at the same time the complexity increases with such a system. For a successful realization of an integrated survey it is therefore crucial that high-performance IT systems are available which allow an efficient survey management. A comprehensive IT support has to supply the management of sampling data, of interviewers, of written reminders and much more.

Another important aspect of an IT infrastructure is the support of different survey modes. With the realization of the new system of household statistics a mixed mode concept is pursued more than before, in order to make advances to the respondents and therefore to enhance the response rates of the selected households. Whereas in the initial surveys the computer assisted personal interview (CAPI) is preferred, in the follow-up surveys computer assisted telephone interviews (CATI) shall be used primarily. The respondents shall also get the opportunity to answer all surveys with a computer assisted web interview (CAWI) or a self-administered paper and pencil interview (PAPI). This comprehensive mixed mode concept causes a lot of methodological and even technical challenges the new system has to cope with.