

MICRO-ENTITIES SAMPLE SURVEY DESIGN PROBLEMS

Natallia Bokun

Belarus State Economic University, e-mail: nataliabokun@rambler.ru

For the last years the growing number of small enterprises has motivated the development of specialized methodology and software for micro-entities sample survey. Survey object is the organization with number of employees less than 15 persons.

Nowadays, the National Statistical Committee of the Republic of Belarus together with Department of Statistics (BSEU) makes the preparatory work on the implementation of Micro-Entities Sample Survey (MS). In November 2014 a test sample survey was conducted; since 2015 MS is provided on a regular basis. The first results of MS indicated the appearance of significant organizational and methodological problems: non-responses, the need for localization of the sample, the presence of atypical units, need in a combination of statistical weighting methods, samples in small domains.

This talk on micro-entities sampling has four parts:

- 1) Sampling Frames that incorporate two files of economic units: micro-entities and private farms.
- 2) Sample design; territorial stratified univariate and multivariate (multidimensional) samples are used.
- 3) Statistical weighting that includes three methods: traditional Horvitz-Thompson estimator and calibration (GREG- and SYN-estimators).

The results of trial calculations testing the first of methodological and software sampling were obtained in 2014 and 2015 years. The use of combination of univariate and multidimensional samples, different weighting methods will provide very reliable information over larger number of variables: employment, wages fund, revenues and others. However, standard errors, calculated by separate indicators in the context of different kind of activity at regional level are rather high. The improvement of representativeness in region weighting procedure can be complicated by use of auxiliary calibration estimators.

References

Bokun, N., Chernyshova, T (1997). Methods of sample surveys. Ministry of statistics and analysis of Belarus, Research Institute of Statistics.

Bokun, N., (2010). Problems of multidimensional samples in retail trade. Questions of statistics 3, 52-60.

Bokun, N. Micro-entities sample survey: problems of design, formation and usage / N. Bokun // Workshop of Baltic – Nordic – Ukrainian network on Survey Statistics, Tallinn, Estonia, August 25-28, 2014. – P. 25-31.

Särndal, C.-E., Swensson, B., Wretman, J. (2003). Model assisted survey sampling. Springer Verlag.