

TWINNING PROJECT

**Support to Development Process in the State
Statistics Service of Ukraine with the Objective to
Enhance its Capacity and Production**

Ukraine



MISSION REPORT

on

Component 10: Sample Survey

Activity 10.3: Practical approaches designing a sample

Mission carried out by Daliute Kavaliauskiene, Statistics Lithuania
25 - 28 November 2014



IPA 2009

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List of Abbreviations

ToR	Terms of Reference
SSSU	State Statistics Service of Ukraine
SL	Statistics Lithuania

Executive summary

The activities of component 10.3 will support SSSU in practical work on construction sample designs and selecting samples for 3 statistical observations: 1) over the use of energy materials and oil refined products, 2) over material investments, 3) over sales and stock of goods in trade and restaurant networks. The first two of them will be started in 2015 as pilot surveys. The third one is going to change the present statistical observation over sales and stock of goods in trade and restaurant networks.

The overall purpose of the mission was to jointly become familiar with:

- Expert of SL – the new developments of sampling methodologies of statistical surveys in business statistics at the SSSU;
- Experts of SSSU – practical experience of European statistical services in construction of sample designs and sample selection procedures in business statistics;
- Discussion on organizational approaches of sample selection.

The activities in this mission included:

1. Presentations of SSSU staff on sample design approaches for the future sample surveys in business statistics at the SSSU.
2. Discussions of the current and planned policies and practices for development of survey sampling methodology and implementation of sampling methods in business statistics.

The overall conclusion is that very big progress was achieved since the first mission (10.1.) in April 2014, which allows expecting that survey sampling methodology in business statistics of SSSU will be implemented successfully and according to the plan drafted in April 2014.

The next activity 10: Short term finalising mission in May 2015.

1. General comments

This mission report was prepared within the Twinning Project „Support to Development Process in the State Statistics Service of Ukraine with the Objective to enhance its Capacity and Production”. It was the second mission devoted to implementation of Sample Surveys within Component 10 of the project. The mission is aimed at evaluation of the progress made by the specialists of SSSU since the first mission within the component 10 and discussion of the practical issues concerning the sample design and sample selection for the concrete sample surveys to be implemented in 2015 and 2016.

The concrete objectives of the mission were:

- discuss the sample design and sample selection approach prepared by the specialists of SSSU for the statistical survey on the use of energy materials and oil refined products.
- discuss the sample design and sample selection approach prepared by the specialists of SSSU for the statistical survey on sales and stock of goods in trade and restaurant networks.

The expert would like to express many thanks to all officials and individuals met for the kind support and valuable information which we received during the stay in Ukraine, and which highly facilitated the work of the expert.

The views and observations stated in this report are those of the expert and do not necessarily correspond to the views of EU, SSSU or Statistics Lithuania.

2. Assessment and results

The assessment was carried out in accordance with the following topics:

- 2.1. Sample design approach for statistical observation on the use of energy materials and oil refined products.
- 2.2. Sample design approach for statistical observation on sales and stock of goods in trade and restaurant networks.

The participants from SSSU Department for Statistical Methodology and the expert from SL introduced each other and went through the program for ensuring common understanding of the ToR, especially the expected results.

2.1. Sample design approach for statistical observation on the use of energy materials and oil refined products

Currently 2 surveys – yearly and monthly – on the use of energy materials and oil refined products are being conducted at SSSU. The target population is the same for both surveys and consists of about 600-700 thousands of units. However only about 100 thousand of them are currently surveyed. The assumption is made that the part of energy materials used by the rest is statistically negligible. The monthly questionnaire contains 7 survey variables (7 types of energy products). The yearly is much more exhaustive and is aimed at finding out the consumption of 45 kinds of energy materials. The statistical information is provided on regional level (currently 25 regions) and NACE 2 digit level. The pilot sample survey in monthly statistics of energy consumption is planned to be conducted in 2015.

The sample design was made on the base of the yearly data of 2013 and the first 9 months of the year 2014. The aim was to analyse the population of energy consumers and to find the best ways of stratification. The analysis showed that the correlation between the uses of different energy materials was very low as far as with other available data. It was decided that big consumers (according to the available data) are to be surveyed entirely. Also enterprises from “small” economic activities (for example 30 enterprises) have to be taken into “take all” strata.

The rest are to be stratified by regions with simple random sample drawn from each stratum.

2.2. Sample design approach for statistical observation on sales and stock of goods in trade and restaurant networks

Two surveys – monthly and quarterly – on sales and stock of goods are conducted at SSSU. Currently the monthly survey on sales and stock of goods is based on non-random sample. Sample of 4000-5000 enterprises is the main data source. The population consists of about 25 000 enterprises. Individual entrepreneurs are not surveyed. The data on individual entrepreneurs involved in trade is obtained from the taxation office. It is estimated that their share makes about 45% of the total sales.

Starting from the year 2015 the random sampling methodology has to be implemented. The sample size is going to be the same – about 4000-5000. Sampling frame will be based on statistical business

register, using also the quarterly information of the current survey. Stratification will be carried out by 7 groups of economic activities (different than NACE classification) and 25 regions.

2. Conclusions and recommendations

During the mission, some important organizational and methodological issues were discussed concerning implementation of sampling methods in surveys of business statistics. The recommendations mentioned below should be seen as supplementary initiatives to facilitate the process which have already been initiated.

It is a big pleasure to mention the increased qualifications of the specialists of methodological unit of the SSSU. During the last half a year big work was done by the methodological unit in development of survey sampling methodologies in business statistics. The situation in SSSU was analysed and priorities made by deciding in which surveys the sampling methods have to be implemented firstly. Keeping in mind different organizational, methodological and other aspects, the three surveys described above were selected.

Much of data analysis was done to understand the character of survey variables and choose the most effective sample designs. Naturally, some problems were faced, which indicate the fields of the future works. Most of them are connected with construction of frame populations.

1. The big part of the target population of the survey on the use of energy materials and oil refined products is not surveyed. It is considered as making a negligible share of total consumption of the main 7 energy materials. Justification of such an assumption has to be provided to the users as far as the clear principles how the distinction between “consumers” and “non-consumers” is made. One of possible ways to do that is to organize a pilot survey.
2. Considering the survey on the use of energy materials and oil refined products, it was agreed during the mission on the need to check the relationship between consumption of energy materials and the kind of activity of an enterprise. It can give some improvement in construction of frame population.
3. The questionnaire of the yearly survey on energy consumption is very detailed. It is suggested to check the questionnaire and to consult the users and the unit of National Accounts if there is a real need of so detailed information.
4. Technical problems were faced by constructing the survey population for statistical observation on sales and stocks of goods, as the survey data from different regions were in different formats. There are also data linking problems which should be solved by implementation of a unique identifier of local units.
5. It is general understanding that survey frame has to be constructed on the base of statistical business register and no other lists of survey units can be used in local statistical offices. It should come into practice together with implementation of the new sample methodology.
6. The sample methodology will possibly be implemented into the survey on sales and stocks of goods in trade and restaurant networks without any pilot survey. It can be a challenge for both units – methodological and trade statistics – to cope with this task. The timetable of data exchange and clear distribution of responsibilities should be discussed and agreed before the start of the survey to minimize the risks.

Annex1. Terms of Reference



European Union Twinning Project

Support to Development Process in the State Statistics Service of Ukraine with the Objective to Enhance its Capacity and Production

Twinning No.: UA/13/ENP/ST/38

Terms of Reference

for a short-term mission to the State Statistics Service of Ukraine

Component 10 Sample survey

Activity 10.3. Practical approaches designing a sample

General information

Statistics Denmark in partnership with INSEE France, Statistics Lithuania, Statistics Finland, Central Statistical Bureau of Latvia, is leading the EU-Twinning project on “Support to Development Process in the State Statistics Service of Ukraine with the Objective to Enhance its Capacity and Production” in Ukraine. The beneficiary is the State Statistics Service of Ukraine.

This activity is implemented under the Component 10: Sample survey. The purpose of this activity is to align the Ukrainian sample survey with the EU standards. This activity will help to achieve the aforesaid objectives and targets set out in the contract.

Purpose of the mission

Mission’s priority purpose is to design sample population for state statistical surveys.

Expected results

- design a sample for statistical observation over the use of energy materials and oil refined products.
- design a sample for statistical observation over sales and stock of goods in trade and restaurant networks.

–experimental texting of designed sample populations.

Tasks to be performed by the SSSU in order to facilitate the mission

SSSU experts will present the designed sample populations and inform the EU experts on issues and questions that have arisen when applying some sampling methods. An experimental testing of the constructed sample will be carried out.

Activities

Preliminary scheduling:

Day 1 10:00 - 17:00

25.11.2014 Discussion of mission programme.

Presentation of a designed sample for statistical observation over the use of energy materials and oil refined products.

Questions and answers.

Day 2 10:00 - 17:00

26.11.2014 Presentation of a designed sample for statistical observation over sales and stock of goods in trade and restaurant networks.

Questions and answers.

Day 3 10:00 - 17:00

27.11.2014 Experimental testing of designed sample populations.

Questions and answers.

Day 4 10:00 - 17:00

28.11.2014 Discussion on issues, summing-up and recommendations.

Consultant and partner

Daliutė Kavaliauskienė (Statistics Lithuania)

O. Ostapchuk, Director, Department for coordination of statistical activities and information dissemination, SSSU;

Ms Anna Rozumna, Deputy Director, Department for Statistical Methodology,

Mr Anton Tovchenko, Head of Division of mathematic processing methods and analysis of statistical data

O.M. Tkachenko, Chief Expert-Economist, Division of mathematic processing methods and analysis of statistical data

G,Tykhonov, Chief Expert-Economist, Division of mathematic processing methods and analysis of statistical data

Scheduling

The Mission will take place on November 25-28, 2014 in Ukraine

Report

The final report on the mission should be submitted no later than two weeks after the completion of the mission.

Annex 2. Persons met

SSSU:

Mr Yuriy Ostapchuk, Director, Department for Statistical Methodology, Component Leader

Ms Anna Rozumna, Deputy Director, Department for Statistical Methodology

Mr Anton Tovchenko, Head of Division of mathematic processing methods and analysis of statistical data

Mr Glib Tyhonov –Leading Specialist – Economist of Division of mathematic processing methods and analysis of statistical data

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RTA Team:

Irina Bernstein , RTA

