

TWINNING CONTRACT

Development of new statistical methodologies and indicators in selected areas of statistics in line with EU statistical standards

Ukraine



MISSION REPORT

on


Sampling design for the Capital Investments Survey

Component no 3.1

Mission carried out by Tiina Orusild, Statistics Sweden

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Tiina Orusild
Statistics Sweden
Box 24300
SE -104 51, Stockholm
Sweden
Tel: +46 8 506 942 03
Email: tiina.orusild@scb.se

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List of Abbreviations

ToR	Terms of Reference
SSSU	State Statistics Service of Ukraine

1. General comments

This mission report was prepared within the Twinning Project „Development of new statistical methodologies and indicators in selected areas of statistics in line with EU statistical standards”. It was the first mission to be devoted to sampling in the Capital Investments Survey within Component 3.1 of the project. The mission was aimed at defining a strategic plan forming the base of the further implementation of the project in this statistical area.

The concrete objectives of the mission were:

- *Improve knowledge and practical skills of SSSU concerning EU experience for the issues of sampling survey of capital investments*

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

This views and observations stated in this report are those of the consultant and do not necessarily correspond to the views of EU, SSSU or Statistics Sweden.

2. Assessment and results

This first mission within Component 3.1, „Sampling Survey of Capital Investments”, was devoted to assessment of the existing Capital Investments System. Detailed presentations of the Ukrainian Capital Investment Surveys were given by SSSU on the following topics;

- System of indicators of capital investments
- Elaboration of indicators of capital investments
- Surveyed population
- Generation of population of survey reporting units and familiarization with the national register of statistical units
- Data dissemination
- Components of capital investments
- Components of capital investments indicators
- Data elaboration profiles (region, industry, institutional sector etc.)
- Level of detail of disseminated data
- Analysis of existing information base

The main objective during this mission was to discuss probability sampling for the capital investment survey. Today, the capital investment surveys are based on cut-off samples. All large and medium-sized enterprises are included in the survey but only a subset of small enterprises. The plan is to change the design, to improve coverage of small enterprises, by selecting a probability sample of small enterprises.

A quarterly and an annual survey on capital investments are conducted. The annual survey includes the same variables as the quarterly survey and additional variables.

Both the quarterly and the annual surveys are based on cut-off samples. Enterprise is used as survey unit. The quarterly survey covers all large and medium sized enterprises and some of the small enterprises. In the annual survey all large and medium sized enterprises are included, as in the quarterly survey, and in addition a larger number of small enterprises than in the quarterly survey are included.

The size of the enterprises is defined as follows;

- Small: employees ≤ 50 and turnover ≤ 70 million hryvnia

- Medium: $50 < \text{employees} \leq 250$ and/or $70 < \text{turnover} \leq 100$ million hryvnia
- Large: more than 250 employees > 250 and turnover > 100 million hryvnia

The population of large and medium sized enterprises is constructed by taking all active large and medium sized enterprises from the business register which is based on administrative data. Other sources of information used to find the enterprises are SBS, Structural Business Survey, and Financial statistics survey. Also information on enterprises with capital investments in previous runs of the survey is used.

Small enterprises with capital investments are identified by using previous runs of the survey and including those who had capital investments and, by using information from regional offices.

In the quarterly survey new enterprises are added to the survey during the year. Information about new enterprises is available from an administrative register and the regional offices ask new enterprises about investments. The enterprises with “large” investments are added to the survey.

In the annual survey the aim is to cover the whole population of enterprises with investments while in the quarterly only large and medium sized enterprises and small enterprises with known “large” investments are covered. The quarterly survey suffers from undercoverage and so does the annual survey but to a smaller extent.

All sectors and economic activities (except public administration) are included.

The population for the annual survey year t is constructed in the end of year t . The population of the quarterly survey year t is constructed in the end of year $t-1$.

The quarterly survey includes about 40,000 enterprises and the annual about 80,000-100,000 enterprises.

Domains of study on the most detailed level of breakdown are districts combined with economic activity (4-digit NACE level). However, results for all subpopulations defined by the most detailed level of domains is not published since there is a risk for disclosure of confidential data and some of the estimates are of poor quality.

3. Conclusions and recommendations

The annual survey covers a larger part of the population than the quarterly and thus, adding the quarterly total investments a given year, the sum is smaller than the total for the annual survey. SSSU wants to have a better coverage of small enterprises on quarterly basis. Keeping the large and medium sized enterprises in the quarterly survey and selecting a probability sample of small enterprises would improve the coverage but to a higher cost and increased response burden. One question is could at least some of the medium sized enterprises be sampled instead of totally enumerated? Probability sampling of small enterprises for the annual survey should also be considered.

The coverage of enterprises in the Business register has to be studied more thoroughly. Some enterprises which are included in the in the investments survey are not found in the Business register, why? Other sources of information used to find enterprises with investments should also be assessed, e.g. what information is added by these sources and can we construct a frame of good quality without these sources using registers. Would we miss important enterprises if don't use them?

The level of detail of the domains for the most detailed level of breakdowns is districts×NACE on 4-digit level. The number of districts in Ukraine is 492. Results for the most detailed level of breakdown are produced whenever possible. Problems with e.g. disclosure risk leads to that all results are not disseminated for all combinations of districts and economic activities by 4-digit NACE.

The number of enterprises included in the annual and in the quarterly survey is large. If the breakdown on districts and 4-digit NACE is of great importance a large sample size should be used both in the quarterly and annual survey.

Different users have different needs as concerns the level of breakdown. To aim for good precision of estimates on the most detailed level of breakdown is not possible. To sample small enterprises from all districts and economic activities would lead to a too large sample size.

In these types of surveys stratification is usually done by domains, to guarantee large enough sample size in subpopulations, and by size to improve precision of the estimates. The most important domains should be considered as stratification level for domains. This could be for instance some level of breakdown on economic activity and some regional breakdown but not on the most detailed level with 4-digit NACE and districts.

The work by Oksana Honchar on sample selection for the capital investment survey will be very useful for the discussion and work on a sampling design on the next mission.

Data consisting of some of the variables (main indicators) from the capital investment survey will be prepared by SSSU before the next mission. The identification number of enterprises is confidential but it will be replaced by another numbering so that matching information on enterprise level from e.g. different periods will be possible. Both annual and quarterly data will be used.

Variables from the Business register would be needed and we also need access to the Business register to construct a sampling frame and assess the coverage of that frame. Variables from the business register that are needed,

- Variables needed for delimiting the frame: indicator on whether the enterprise is active or not,
- Domain and stratification variables: economic activity, number of employees, turnover, size (defined by turnover and employees), regional variables e.g. regions and districts

All active enterprises in all sectors and economic activities (except public administration) are included in the survey. If there is any other delimitation then we need information on that so that the frame can be constructed correctly.

It would be very useful if an overview of the Ukrainian capital investment survey and the questionnaires could be translated into English and sent to Statistics Sweden before the study visit to Sweden.

Action	Deadline	Responsible person
Discuss within SSSU which are the most important domains of study in the capital investments survey.	Start of the next mission	
Prepare data on capital investments and information from the Business register	Start of the next mission	

Annex 1. Terms of Reference



Цей проект фінансується
Європейським Союзом



STATISTICS
DENMARK



Twinning Project

“Development of Ukrainian Statistical Methodologies in line with EU Standards”

Terms of Reference

For Short-term Mission to the State Statistics Service of Ukraine

Component 3.1 Sampling Survey of Capital Investments

Activity 3.1.1 Assessment of the Existing Capital Investments System

Background information

Statistics Denmark in partnership with Statistics Finland, Statistics Lithuania, Central Statistical Bureau of Latvia, Statistical Office of Slovak Republic, INE Spain - National Statistical Institute of Spain and Statistics Sweden, implements in Ukraine "Development of New Statistical Methodologies and Indicators in Selected Areas of Statistics in Line with EU Statistical Standards" Twinning Project. The State Statistics Service of Ukraine (State Statistics of Ukraine) is the Beneficiary of this Project).

This action is being implemented under Component 3.1 Sampling survey of capital investments. The purpose of this Component is to develop the methodological support to conduct sampling survey of capital investments in terms of small enterprises.

This action will contribute to achieving the abovementioned objective and reference indicators specified in the contract, namely: developing the methodological support to conduct sampling observation of capital investments in terms of small enterprises, which is harmonized with EU standards.

Purpose of the Mission

The prior purpose of the mission is: Improve knowledge and practical skills of SSSU concerning EU experience for the issues of sampling survey of capital investments.

Expected Results

Getting familiarized with the existing national survey of capital investments (existing observation system, components of capital investments, breakdowns of data for capital investments, surveyed population etc.). Getting familiarized with European practice of sampling surveys in capital investments statistics. Receiving the recommendations concerning necessary data to generate sampling population.

Actions

The tentative schedule of the mission is the following:

Date: 24.04.12

Date: 27.04.12

Tasks to be fulfilled by SSSU to facilitate the mission

The Beneficiary will ensure the following:

Attendance of experts of division, which is engaged in national observation of capital investments and conducts its organizational and methodological support.

Consultant and Partner

The mission will be conducted jointly with:

Tina Orusild, Statistics Sweden

The partner from the country-beneficiary will be:

L. M. Ovdenko – Director of Production Statistics Department;

M. M. Sobko – Deputy Director of Production Statistics Department;

M. A. Hirsu – Head of Unit for Statistics of Capital Investments and Fixed Assets, Production Statistics Department;

I. M. Kladchenko, O.A. Myslynsky – Chief Experts-Economists of the same unit.

Timing

The mission will be conducted within four days in Ukraine.

Report

The summary report on the results of the mission should be submitted not later than two weeks after the mission is completed.

Annex 2. Persons met

SSSU:

L. M. Ovdenko – Director of Production Statistics Department;

M. M. Sobko – Deputy Director of Production Statistics Department;

M. A. Hirsu – Head of Unit for Statistics of Capital Investments and Fixed Assets, Production Statistics Department;

I. M. Kladchenko, Chief Expert-Economist

O.A. Myslynsky – Chief Expert-Economist

A. Tovchenko - Methodologist

G. Tihonov - Methodologist

T. Ye Kobzeva – Head of Unit for Statistics of investments of Foreign Economic Activity, Production Statistics Department

S. P. Karpinska – Chief Expert-Economist

O. M. Antonova – Chief Expert-Economist

O. M. Faraon – Chief Expert-Economist

Scientific and Technical Complex for Statistical Researches:

Oksana Honchar

RTA Team:

Irina Bernstein , RTA

Volodymyr Kuzka, RTA Assistant

Svitlana Taranova, Interpreter