**TWINNING CONTRACT**

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

# Ukraine

# MISSION REPORT

**on**

Classifications on Structural Statistics

***1.4.3 Recalculation of time series 1***

Mission carried out by

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***Statistics Ukraine, Kiev***

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# List of Abbreviations

| | |
|---|---|
| ToR | Terms of Reference |
| SSSU | State Statistics Service of Ukraine |
| INE | Statistical Office of Spain |

## Executive Summary

*If report-core text- exceeds 4 pages*

*Include information to Project Leaders and the RTA.*
*Main conclusions and highlights from findings.*

# 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 mission to be devoted to recalculation of structural business statistics time series in order to implement NACE rev.2 within Component I – Activity 1.4 "Classification in Structural Statistics" 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:

- Discussing NACE rev.2 based calculations of the 2010 structural business statistics data by using micro- and macro-methods.
- Identifying of a retrospective analysis method most fitted for the Ukrainian structural business statistics with regard to available resources.
- Discussing levels of detailing (groups) of structural statistics data calculated based on NACE rev. 2.
- Specifying the content of further activities on retrospective NACE-2010-based calculation of structural statistics data.

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

This views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of EU, SSSU or Statistics Denmark / Statistics Finland / Statistics Lithuania / Central Statistical Bureau of Latvia / Statistical Office of the Slovak Republic / INE / Statistics Sweden.

# 2. Assessment and results

After study visit of Ukrainian specialists was decided to perform pilot recalculations of Turnover, Number of employees, Gross value added and Wages and salaries indicators in breakdown of clean or main economic activities and territory of registration of legal entities. Pilot estimations were calculated for three counties. The work was done in four stages: analysis of initial data, data preparation, recalculation using conversion coefficients given by Statistics Ukraine, analysis and preparation of results. Pilot calculations have shown some of data and the conversion matrix weakness. This allowed the formulation of recommendations presented in Chapter 3.

During the mission all foreseen objectives were achieved. The EU experts fully investigated the situation and problems in retrospective analysis of data of structural business statistics based on NACE, rev.2 raised in Statistics Ukraine. All possible problems and difficulties were captured.

One of the main problems is evaluation of accurate conversion matrixes. Division for Statistical Units Register must ensure accurate and complete list of enterprises with economic activity codes and main indicators.

Data rounding problem was also discussed during the mission. In some cases, due to the rounding of figures, displayed sums of published information can show a difference with the sum of the breakdowns. Statistics Ukraine specialists tend to force sums of rounded components. It was recommended, that it is necessary to inform users about the data rounding problem and forcing of sums is redundant. This practice applies in Statistics Lithuania, as well as in Eurostat, for example in Eurostat news release Nr. 110/2012 "EU27 current account deficit 4.1 bn euro" is written note "*Sums of components and data of different periodicity may not add up due to rounding*" (active link http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-19072012-AP/EN/2-19072012-AP-EN.PDF, 2012.08.10).

During the mission a draft methodology for recalculation of structural business statistics time series was discussed. EU experts provided recommendations on a retrospective analysis method most fitted for the Ukrainian structural statistics. Micro-method advantage is the highest accuracy, if size of the sample is sufficient or an exhaustive survey was carried out. But this method requires more human, financial and time recourses than macro-method. Macro-method disadvantages are that it works only at aggregate levels, and results can't be obtained in a lover level than conversion coefficients. In addition, results using macro-method will be reliable, only if Statistical Units Register is complete and accurate and estimated conversion coefficients are sufficiently precise. Ukrainian statistics specialist must to decide which method micro- or macro- or both they are going to apply with regard to available resources.

Questions foreseen for next mission are:

- Quality checking of recalculated data;
- Analysis of results: compatibility and coherence when micro and macro methods were used;
- Analysis of recalculated 2010 and 2011 years data in the context of estimated 2012 year data in NACE rev.2.

# 3. Conclusions and recommendations

*List conclusions and recommendations related to the activities mentioned in the ToR.*

1. The target SBS indicators which are scheduled to recalculation should be fully prepared. It is important that prepared SBS data were at the same NACE level as conversion coefficients. Each entry should have precise code of activity.

2. Sum of data on the main economic activity and on the territory of registration of legal entities must be the same as sum of date on the clean economic activity and on territory of registration of legal entities in the count level.

3. Sum of data on the main or clean economic activity and on the territory of registration of legal entities must be the same as sum of date on the clean economic activity and on the territory of the location of local units in the country level.

4. Conversion coefficients must be calculated correctly. Statistical Units Register data must be accurate and complete. Entity must have clear main and clean NACE rev.1.1 and NACE rev.2 activity codes. Statistical Units Register must be full – the presence of the coefficients for all activities codes. Number of enterprises can by used for checking.

5. Rules for recalculation using macro-method:
   5.1 If corresponding coefficients are available in business register, they should be used for transition from NACE rev.1.1 to NACE rev.2;
   5.2 Coefficients, estimated on the average number of employees should be used for the wages and salaries;
   5.3 Coefficients, estimated on turnover should be used for the gross value added;
   5.4 For the indicators of clean economic activity and on territory of the location of local units use same coefficient as for clean economic activity and on territory of registration of legal entities.

6. For big enterprises micro-method is recommended. For average enterprises both micro- and macro-methods are suitable but preferable is micro- for bigger accuracy if the sample is sufficient. Small enterprises and self-employed entrepreneurs can be recalculated by using macro-method. Method should be chosen based on available resources and pursued accuracy.

7. If possible it is necessary to compare results obtained by using micro- and macro-methods.

8. Initial data of individual persons is on different digit levels in NACE rev.1.1. Therefore it is recommended to recalculate these data in the two-digit level in NACE rev.2. Structure of corresponding small enterprises indicators can be used for individual persons.

*Actions needed for preparing the next mission – fill out and add tables as needed.*

| **Action** | **Deadline** | **Responsible person** |
|---|---|---|
| Prepared conversion matrixes | 15 September | Specialists from SSSU |
| Recalculation of data from two or three counties at micro level | 20 September | Specialists from SSSU |
| Analyses of conversion matrixes | 10 October | Experts from Statistics Lithuania |
| Pilot recalculation of data from two counties | 10 October | Experts from Statistics Lithuania |

# Annex 1. Terms of Reference

This project is implemented by the European Union



**Twinning Project**

***"Development of Ukrainian Statistical Methodologies and Indicators in Selected Areas of Statistics in line with EU Standards"***

Terms of Reference
*for the short-term mission to Statistics Ukraine*

*Component 1.4. Classification in structural business statistics*
*Activity 1.4.3. Working mission*

## 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 1.4. Classification in structural business statistics. The purpose of this Component is recalculation of structural business statistics time series in line with the EU standards.
This action will contribute to achieving the abovementioned objective and reference indicators specified in the contract, namely:

- improved knowledge and practical skills of SSSU experts on retrospective analysis of data of structural business statistics based on NACE, rev.2;
- developed a draft methodology for recalculation of structural business statistics time series;

**Purpose of the Mission**

The prior purpose of the mission is:

- Discussing NACE-2010-based calculations of the 2010 structural business statistics data by using micro- and macro methods.
- Identifying, in joint effort with EU experts, a retrospective analysis method most fitted for the Ukrainian structural business statistics with regard to available resources.
- Discussing levels of detailing (groups) of structural statistics data calculated based on NACE-2010.
- Specifying the content of further activities on retrospective NACE-2010-based calculation of structural statistics data.

**Expected Results**

- EU experts provided recommendations on a retrospective analysis method most fitted for the Ukrainian structural statistics with regard to available resources.
- SSSU experts have practical skills in retrospective analysis of structural statistics data based on NACE-2010.

**Actions**

The tentative schedule of the mission is the following:

01.08.2012
NACE-2010-based calculations of the 2010 structural statistics data by using micro and macro methods.

02.08.2012
Identifying, in joint effort with EU experts, a retrospective analysis method most fitted for the Ukrainian structural business statistics with regard to available resources.

03.08.2012
Discussing levels of detailing (groups) of structural statistics data calculated based on NACE-2010.
Specifying the content of further activities on retrospective NACE-2010 calculation of structural statistics data.

**Activities to be implemented by the SSSU to facilitate the mission**

Calculations of selected structural statistics indicators for 2010 will be carried out based on NACE-2010.

**Consultant and Partner**

The mission will be implemented by:
Bronislava Kaminskene (Lithuanian Republic),
Nomeda Bratchikovene Номедою Братчиковене (Lithuanian Republic)

**Beneficiary Partner will be:**

Department of Structural Business and Companies' Finance Statistics of the SSSU:
- Iryna Zhuk, Department Director, I.Zhuk@ukrstat.gov.ua, тел.287-20-22, interoffice telephone 60-07;
- Margaryta Kuznetsova, Department Deputy Director, M.Kuznetsova@ukrstat.gov.ua, tel. 287-50-33, 60-74;
- Olena Kolpakova, Department Deputy Director – Head of Division, O.Kolpakova@ukrstat.gov.ua, tel. 287-14-33, 64-02.

## Timing

The mission will be conducted from August 1 till August 3, 2012 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:

- Iryna Zhuk, Director of Department of Intersectoral Statistics of Enterprises;
- Margaryta Kuznetsova, Deputy Director of Department of Intersectoral Statistics of Enterprises;
- Tetiana ZAKHAROVA, Head of Division of Structural Business Surveys within the Department of Structural Business Surveys and Financial Statistics;
- Neonila KOMLEVA, Head of Division of Coordinated Activities within the Department of Structural Business Surveys and Financial Statistics;
- Anton Tovchenko – Head of Unit for Mathematical Methods of Statistical Data Processing and Analysis.

and other.

RTA Team:
Irina Bernstein , RTA
Volodymyr Kuzka, RTA Assistant.