

TWINNING CONTRACT

BA 17 IPA ST 01 20



Further Support to the Reform of Statistics System in Bosnia and Herzegovina



MISSION REPORT

Activity 4.1E: Longitudinal surveys
Subcomponent 4.1 Auxiliary activities to Labour Market Statistics
Component 4 – Labour Market Statistics

Mission carried out by
Oona Pentala-Nikulainen, Finnish Institute for Health and Welfare
17 – 19 October 2023

Version: Final

Expert contact information

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List of Abbreviations

BC	Beneficiary Country (BiH)
BHAS	Agency for Statistics of Bosnia and Herzegovina
BiH	Bosnia and Herzegovina
CBBH	Central Bank of Bosnia and Herzegovina
EU	European Union
FIS	Institute for Statistics of Federation of Bosnia and Herzegovina
MS	EU Member State
RSIS	Institute for Statistics of Republika Srpska
RTA	Resident Twinning Adviser
RTAA	Resident Twinning Adviser Assistant
ToR	Terms of Reference

1. General comments

This mission report was prepared within the EU Twinning Project "Further Support to the Reform of the Statistics System in Bosnia and Herzegovina". It was the first mission to be devoted to Subcomponent 4.1 - Auxiliary activities to Labour Market Statistics, within Component 4 - Labour Market Statistics.

The purpose of the mission was to train the BC in:

- Sampling design for the longitudinal surveys - panels, rotation, ...;
- Non-response prevention and treatment. The impact of non-response and attrition in a panel, and adjustments such as weighting and imputation given that missing data patterns differ between waves. How to account for missing data by adjusting the sample size;
- Weights calculation (initial, non-response and calibrated) and estimation;
- Appropriate methods to analyse longitudinal data;
- Results and errors evaluation and presentation.

The consultant would like to express her thanks to all officials and individuals from Bosnia and Herzegovina met for the kind support and valuable information, 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, BHAS, FIS, RSIS, CBBH, Statistics Denmark, Statistics Finland, Statistics Sweden, The Italian National Institute of Statistics and the Finnish Institute for Health and Welfare.

2. Assessment and results

This mission covered the following topics:

Day 1: Fundamentals of Longitudinal Surveys

- Introduction to Longitudinal Surveys
- Advantages and Challenges of Longitudinal Data
- Types of Longitudinal Surveys (panels, rotations, etc.)
- Sampling Design for Longitudinal Surveys
- Target populations
- Sampling frames
- Sampling methods

Day 2: Sampling, Weighting and Estimation

- Sample size determination
- Sample Size Adjustment for Nonresponse
- Impact of Nonresponse and Attrition in Longitudinal Surveys
- Nonresponse Prevention Strategies
- Weight Calculation in Longitudinal Surveys
- Initial Weights, Nonresponse Weights, and Calibrated Weights
- Methods for Calibrating Weights
- Variance Estimation

Day 3: Analysis of Longitudinal Data

- Methods for Calibrating Weights
- Calibrating Weights with Statistical Software (SAS, SPSS, R)
- Practical training
- Variance Estimation in practice
- Introduction to Finnish SILC
- Methodological Overview of Finnish SILC
- Data Collection Methods and Practices
- Data Quality Assurance in Finnish SILC

3. Conclusions and recommendations

The experts were very well aware of the guidelines concerning longitudinal statistics such as LFS and SILC. However especially with SILC the practical work has only started since this is the first year longitudinal weights should be calculated and the longitudinal data to be delivered to Eurostat. The beneficiaries were working well together and solving practical questions.

The beneficiaries would benefit from having discussions with other countries which have recently started doing EU-SILC (such as Croatia, Bulgaria and Romania). Some information from those countries' operationalizations of SILC can also be obtained from the first quality reports at Circabc: <https://ec.europa.eu/eurostat/web/income-and-living-conditions/quality>.

The beneficiaries might also benefit from discussing sampling and sample frame building with the previously mentioned countries which use address list as their main source for the frame. It is also recommended that the methodology experts are more involved with the field work process in order to get a better understanding of the field work process and choices made during that period since it affects the weighting and estimation process as well.

Annex 1. Terms of Reference for the current mission

Terms of Reference

EU Twinning Project BA 17 IPA ST 01 20

Component 4 - Labour Market Statistics

Sub component 4.1 Auxiliary activities to Labour Market Statistics

Tuesday 17 October (10:00 hrs.) – Thursday 19 October (15:30 hrs.) 2023

Venue: Republika Srpska Institute of Statistics, Vladike Platona bb Banja Luka

Activity 4.1E: Longitudinal surveys

1. Mandatory result

The component on Labour Market Statistics has the following objectives and Indicator / Relevant Milestones / Internal deadlines:

Component 4: Labour markets statistics: Structure of earnings Pilot survey conducted and respective indicators produced		
Objective as in Twinning Fiche:	Indicator / Relevant Milestones / Internal deadlines	Status
4.1 Questionnaire and methodology for implementing Structure of earnings Pilot survey prepared (including preparation of sample survey)	Questionnaire is to be ready by the end of 2021	Work completed
4.2 Developed application for entering data for the needs of BH institutions	February 2022	Work completed

4.3 Pilot survey conducted and data entered	Data is expected to be collected during April 2022 and be entered in June 2022	Work completed
4.4 Results of Pilot survey analysed	September 2022 (<i>Delayed due to lack of MS experts</i>)	Work completed
4.5 New indicators of the Labour market statistics based on the Structure of Earnings Pilot Survey such as: gross and hour wages by age, sex, occupation, duration of the working hours and type of contract services produced	December 2022 (<i>Delayed due to lack of MS experts</i>)	Work completed
4.6 Staff of the Labour market statistics trained for implementing full Structure of Earning Survey	February 2023/ End of project	Work completed for the subject statisticians. BC assistance on sampling procedures related to SES remains

2. Purpose of the activity:

- Training course on
 - Sampling design for the longitudinal surveys - panels, rotation, ...;
 - Non-response prevention and treatment. The impact of non-response and attrition in a panel, and adjustments such as weighting and imputation given that missing data patterns differ between waves. How to account for missing data by adjusting the sample size;
 - Weights calculation (initial, non-response and calibrated) and estimation;
 - Appropriate methods to analyse longitudinal data;
 - Results and errors evaluation and presentation.
- Presentation of Finish SILC or similar longitudinal survey, from a sampling and methodological point of view.
- Exercise and practical examples regarding the topics above, presented during the training.

3. Expected output of the activity:

To introduce the BC methodologists in a part of sample design and calculation of weights for the longitudinal survey.

Annex 2. Persons met

BHAS:

Jasna Isakovic, Head of Department for Sample Design and Methodology
Aida Zukanovic, Senior Advisor for Sample Design and Methodology

FIS:

Edina Mehidic, Junior associate for sampling and statistical analysis
Asmira Selimovic, Head of Section for Statistical Methods and Coordination

RSIS:

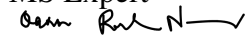
Vedrana Dejanovic, Application Designer for CATI and CAPI

RTA Team:

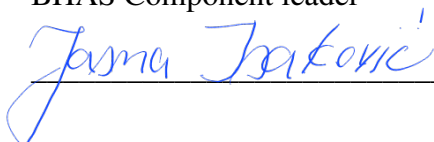
Niels Madsen, RTA

The content of this report is approved by:

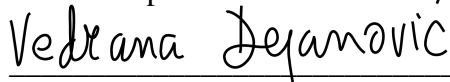
MS Expert



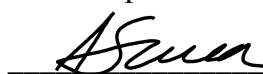
BHAS Component leader



RSIS Component leader



FIS Component leader



RTA