

TWINNING CONTRACT

Support to the State and Entity Statistical Institutions, phase V

Bosnia-Herzegovina



MISSION REPORT

on

Construction Statistics

Component no. 1 Activity 1.3.6

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List of Abbreviations

BiH	Bosnia-Herzegovina
BHAS	Agency for Statistics of Bosnia and Herzegovina
FIS	Institute for Statistics of Federation of Bosnia and Herzegovina
RS	Republika Srpska
RSIS	Institute for Statistics of Republika Srpska
ToR	Terms of Reference

Executive Summary

The topic of this mission was support for regular compilation of Index of Production in Construction (IPC) and discussion on method for Construction Cost Index (CoCI).

1. Discussion about Building Permits (BPS):
 - a) Discussion of the results of the survey
 - b) Short overview of IT-application developed for BPS
 - c) Format for data transmission to Eurostat – instructions from experts (relevant formats presented, an example presented and discussion) in order to prepare BC staff for data transmission from 2014
 - d) Suggestions and recommendations for the future work on BPS
2. Discussion about Index of Production in Construction (IPC):
 - a) Discussion of the draft version of the questionnaire for quarterly IPC-survey, prepared on the earlier mission – improvements and other suggestions
 - b) Analysis of existing data from the monthly survey on Construction in the entities and annual SBS data for section F, with special look on the labor productivity coefficient
 - c) Recommendations for calculation of IPC
3. Methodological Document
 - a) Discussion about form and division of duties
 - b) Establishing of a timetable
4. Discussion about Construction Cost Index (CoCI):
 - a) Discussion of the selection of a representative building
 - b) Establishment of a weighting system for the CCI.

General comments

This mission report was prepared within the Twinning Project „Support to the State and Entity Statistical Institutions, phase V”. It was the sixth and last mission within subcomponent 1.3 on construction statistics of the project. The main focus of the mission was Building Permits, Index of Production in Construction (IPC) and Construction Cost Index (CoCI), with a large part of the focus on the Methodological Document which shall be completed for Building permits and IPC.

The views and observations stated in this report are those of the consultants and do not necessarily correspond to the views of EU, BHAS / FIS / RSIS or Istat/Statistics Denmark. Furthermore, the consultants would like to express thanks to all officials and participants for the kind support, the involvement and valuable information which we received during the stay in Bosnia-Herzegovina.

1. Discussion about Building Permits

BC presented about the activities carried out since the last mission concerning building permits. In particular the WEB-application with modules for data entering and control was developed and presented.

The control system checked for coherence between different variables in the questionnaire. The WEB-application makes it easy for the entities to register the reports from municipalities, etc.

The experts recommended that there should be developed a WEB-application for reporting units. BC told that this was planned.

Regarding the output tables for building permits survey, BC presented 11 tables for control and review. A selection of them will be chosen for press releases depending on user needs. All the tables are referred to a quarter of a year. The next step will be preparation of some tables in order to check and compare the changes of Building permits data in the current period (quarter) with the data of the same quarter in the previous year. The tables contain data fulfilling the requirements of STS-Regulation on building permits.

The experts show an example on a data transmission to Eurostat – performed in GESMES/eDamis. The experts in this connection referred to the guidelines for GESMES. BC showed the excel-macro which is used for the creation the GESMES-file for IPI. According to the instructions and examples stated in GESMES manual, we proposed to statisticians from all three institutions to use the same procedure for building permits.

Concerning calendar days adjustment there are great differences between the entities. Therefore, it was recommended that the adjustment should be calculated individually and aggregated on state level.

The final recommendation from the experts was that data should be:

- Send quarterly totals to Eurostat (Eurostat does not want quarterly transmissions with a monthly breakdown)
- Establish Single Register of building and issued building permits using unique identification number (As results there will be a better control of data and will give several administrative advantages)
- That BiH should try to establish series as long back as possible (For seasonally and other adjustments)

2. Discussion on quarterly Index of Production in Construction

Under this subject it was discussed both the final version of the questionnaire and the methodology for the calculation of labor productivity coefficient.

The final version of the questionnaire is a simpler version compared with the first version. There are only 5 tables. The experts recommend that the statistical number should be filled in before sending. The expert recommended also that signing procedure of the questionnaires should be reduced from two to one person.

As decided in the previous mission the methodology for producing the IPC will be hours worked collected with Gradj-21 in the entities, adjusted with labor productivity coefficient. Data for Value of works put in place, Hours worked and Number of persons employed (from Gradj-21) for the period January 2008 - April 2013 and Gross Value Added and Hours worked (from SBS survey for 2010 and 2011) are provided to the experts from BC staff. The experts performed analysis of data and presented the result of an analysis of the SBS data for 2010 and 2011 for section F- Construction by NACE Rev.2 and Gradj-21 data for BiH. It shows that there was a good coherence, except for civil engineering. They also presented a way to produce the labor productivity coefficient.

The experts recommended:

- BC should check the elaboration and coherence between different data sources
- The micro data from SBS should be checked (micro vs. macro approach)
- The NACE 41.1 should be removed
- BC should investigate if there was an official deflator
- BC should check the method for calculating the labor productivity coefficient and look in the Guidelines on IPC for different methods

3. Methodological Document

The last point on the mission for building permits and IPC was discussion on the preparation of the methodological document.

It was agreed about the common form and the division of duties between experts and BC. Furthermore, there was an agreement that Building permits and IPC should be prepared in the two separate documents. General agreement is that the experts will prepare first draft of the methodological document and will send them to the BC staff for comments and proposals.

The structure of the methodological document is shown below:

Methodological Document - Building permits and IPC:

1. PURPOSE OF THE INDICATOR

- INTRODUCTION (Short description about BP and IPC covered through IPA 2008 TP)
- Experts and BC
- MAIN TASKS, DEFINITIONS AND GOALS OF BUILDING PERMITS STATISTICS and IPC - Experts

2. REQUIREMENTS

- BASIC INTERNATIONAL REGULATIONS AND RECOMMENDATIONS- Experts
- PERIODICITY OF DATA COLLECTION (compare with EU demands) - Experts

3. DATA SOURCES

- ASSESSMENT OF CURRENT SITUATION IN BiH CONCERNING BUILDING PERMITS and IPC - BC
- SCOPE OF BUILDING PERMITS STATISTICS and IPC (COVERAGE BY AREA, BY VARIABLES), BY REGULATION AND HOW IT WAS DONE IN BiH (PILOT SURVEY + REGULAR SURVEY)- Experts and BC
- DATA SOURCES (ADMINISTRATIVE SOURCES- NOT AVAILABLE, QUESTIONNAIRE)- Experts and BC

4. METHODS FOR COLLECTION

- DATA COLLECTION PROCESS (IN REGULAR SURVEY) - BC

5. CALCULATION

- This section is done by experts (theoretical/STS--Regulation) AND BC (practical)
- DATA EDITING, DATA IMPUTATION AND DATA PROCESSING, e.g. Aggregations of buildings permits/Corrections for deflation and productivity for IPC by using effective hours (FROM MICRO TO MACRO DATA) - Experts and BC
- IT APPLICATION (SUPPORT)- BC

6. PUBLICATION AND DISSEMINATION

- OUTPUT RESULTS (What should be produced? How to calculate output variables?)
- Experts
- DATA COMPILATION FOR DATA PUBLISHING ON THE STATE (AND ENTITY) LEVEL - BC
- TRANSMISSION OF DATA TO EUROSTAT – Experts

7. RECOMMENDATIONS AND SUGGESTIONS

- This section is done by the experts

8. ANNEXES/DOCUMENTS?

- Experts and BC

Timetable for the Methodological Document

Action	Deadline	Responsible
1. Draft version	16. August 2013	Experts
Send to BC	16. August 2013	Experts
2. Draft version	1. September 2013	BC
Send to experts	1. September 2013	BC
Final version	1. October 2013	BC and Experts

4. Discussion about Construction Cost Index (CoCI)

According to STS, the construction cost index should reflect the development in the costs incurred by the contractor in the construction process. STS requires transmission of three indices for construction costs. An index for total construction costs, an index for material costs in construction and an index for labor costs in construction. The two latter indices form the former index.

The topic of this mission was to discuss the selection of a representative building and the establishment of a weighting system for the CCI. Based on this discussion, along with the STS requirements and the expert's experience, expert recommends the following action plan:

1. By the end of this year, 2013, when building permits survey-data (BPS-data) is sufficient; a representative residential building is defined for each of the entities based on this data.
2. Then the design and documents for buildings similar to each of the representative buildings is retrieved from the municipalities
 - The municipalities should be contacted in writing explaining the need for obtaining these drawings and it should be stressed that no information on the owners of the building is needed.
3. Once the design and documents have been retrieved the contractor is contacted and asked to write up a list of construction input corresponding to the designs. The list must include quantities and prices for each of the input items.
 - Expert recommends that several contractors complete such a list for each of the representative buildings. This will help to qualify the weighting system.
 - Expert recommends that BC develops a general template for the contractors to fill in. In this way the reports from the contractors will be similar and easier to compare.
 - According to the STS, prices used, both in the weighting system and in the calculation of the indices should be based on actual prices rather than list prices. This means that the prices reported by the contractors should be including discounts and excluding VAT.
4. From the quantities (q) and prices (p) reported by the contractors money values (mv) are calculated for each input item

$$mv_i = p_i \times q_i$$

5. For each input item a weight is specified by calculating its per thousand (‰) out of the total money value of the entire construction of the building

$$w_i = \frac{mv_i}{mv_{total}} * 1000$$

6. Weights for the individual input items are aggregated so they correspond with the available price data from PPI, import prices and labor statistics.

These steps, 1 – 6, should be carried out by each of the entities. Every 5 years the steps should be repeated to update the weight base of the construction cost index in accordance with STS-requirements. Updating the weight base will also minimize problems caused by new materials replacing older materials and changes in productivity.

Further steps:

7. Entities transmit indices to the Agency.
 - Expert recommends that these indices are transmitted at the most detailed level possible and that entities and Agency agree upon the level of detail
8. Agency calculates national indices at the aggregation level agreed upon. First by weighting together the indices from the entities using the weights that are already used in the calculation of industry statistics.

$$national\ index = w_{Srpska} \times I_{Srpska} + w_{Federation} \times I_{Federation} + w_{Brcko} \times I_{Brcko}$$

Then by weighting together these indices to form the material cost index, the labor cost index and finally the total CCI.

$$CCI = w_{material} \times I_{material} + w_{labour} \times I_{labour}$$

- No seasonal adjustment should be carried out
- Factors such as developments in technology and building organization are fixed until the next weight system is implemented in 5 years.

Indices are then transmitted to the EU every quarter through GESMES, as with the IPC. Nationally the indices can be published in any possible way.

5. Conclusions

The conclusion is:

1. *Building Permits: BC have now a final questionnaire ready, have established processes for control of data, have a plan for publication and for data transmission to Eurostat “reusing” the transmission of IPI (Gesmes)*
2. *Index of Production in Construction: With few recommendations from the experts a final questionnaire should be ready and there is a general agreement about the methodology for producing the IPC (hours worked, adjusted with labor productivity coefficient). For BC still some analysis and controls of the method should be carried out.*
1. *Construction Cost Index: BC now has an action plan, to construct a CCI, which can be executed as soon as sufficient BPS-data is available by the end of this year, 2013.*

General: It is the experts’ opinion that BiH will be able to fulfill the EU-demands concerning the STS-Regulation for Building Permits, Index of Production in Construction and Construction Cost Index.

Construction Statistics
17th to 21th of June 2013
Terms of Reference - Activity 1.3.6.
EU Twinning Project BA 08-IB-FI-03
Institute for Statistics of RS,
Veljka Mladjenovica 12d, Banja Luka

- Component 1 Business Statistics
- 1.1. Statistical Business Register
 - 1.2. Structural Business Statistics
 - 1.3. Construction Statistics**
 - 1.4. Retail Trade Statistics
 - 1.5. Tourism Statistics
- Component 2 Household Budget Survey
- Component 3 Institutional Capacity
- 3.1. Long term strategy
 - 3.2. Metadata and classification system development
 - 3.3. Promotion of dissemination

Benchmarks

- A. Plan for development of pilot survey on building permits developed by the 2nd project quarter.(Fully achieved)
- B. Plan for modification of existing surveys on construction statistics developed by the end of 2nd project quarter (Fully achieved).
- C. Detail plans and preparation for pilot survey on building permits and regular production of construction statistics by 4th project quarter (Fully achieved).
- D. Pilot survey on building permits conducted and existing survey on construction statistics improved by the end of 6th project quarter (Fully achieved).
- E. Relevant results analyzed and plan for regular surveys in force by the 8th project quarter (fully achieved).
- F. Methodologies developed and documented by the 8th project quarter (end of September 2013).

Activity 1.3.6:

Follow-up on the work done on construction statistics

The expected activities are:

Building permits survey (BPS):

- Discuss the results of the survey
- Short overview of IT application developed for BPS
- Format for data transmission to Eurostat – instructions from expert; relevant formats (presentation and discussion) in order to prepare BiH staff for data transmission from 2014
- Data transmission to Eurostat- Example
- Suggestions and recommendations for the future work on BPS

Index of Production in Construction (IPC):

- Discuss the draft version of the questionnaire for quarterly IPC survey prepared on the previous mission – improvements, other suggestions
- Analysis of existing data from monthly survey on Construction in the entities; Annual SBS data for section F about GVA, number of persons employed and hours worked
- Recommendations for calculation of IPC

Construction Cost Index (CoCI):

- Discuss the homework:
 - ✓ Define a preliminary building project on the basis of the available raw data from the building permits survey;
 - Investigate, using e.g. experience from the PPP Construction survey, whether a weighting scheme can be calculated on the basis of a contractor's budget for an actual building project or from a model project.
- On the basis of the preliminary weighting system prices are selected from PPI
- Unit value indices for imports are monitored
- Concluding discussions and follow up on the work done
- Clarification of the outstanding issues

Expected output

- Mission report – summarized and detailed version completed
- BPS data analyzed and further improvement reached
- Available data for IPC analyzed and simulation for IPC calculation performed
- Defined method for calculation of Construction Cost Index
- Prepared and agreed development plan for future CCI according to EU standards

Participants

List of participants for first mission through IPA 2008 Twinning Project for sub-component 1.3 Construction statistics:

Agency for statistics of BiH

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Jelena Ljuboja, Interpreter

Time	Event	Purpose / detail
17 June, 12:00	Welcome	Introduction by Experts on programme of the week
		Erik Nielsen, Statistics Denmark Roberto Iannaccone, ISTAT
	Discussion about Building permits survey	Activities carried out in the previous period
		(MS and BC participants)
18 June, 09:00	Discussion about Building permits survey	Discussion:
		Short overview of IT application developed for BPS
		Format for data transmission to Eurostat – instructions from expert; relevant formats (presentation and discussion) in order to prepare BiH staff for data transmission from 2014
		(BC participants, experts)
19 June, 09:00	Discussion about Building permits survey	Discussion:
		Data transmission to Eurostat- Example by Erik and Roberto
		Suggestions and recommendations for the future work on BPS
13:00	Discussion on quarterly survey for Index of Production in Construction (IPC)	Discuss the draft version of the questionnaire for quarterly IPC survey prepared on the previous mission – improvements, other suggestions
		Analysis of existing data from monthly survey on Construction in the entities; Annual SBS data for section F about GVA, number of persons employed and hours worked
		Recommendations for calculation of IPC (by experts)
20 June, 09:00	Discussion about Construction Cost Index (CoCI)	Discussion:
		Preparing preliminary building project on the basis of the available raw data from the building permits survey- based on available data from BPS and other sources in statistical offices
		Weighting scheme defining
		Concluding discussions and follow up on the work done
		(BC Participants and MS experts)
21 June till 12:00	Debriefing	Other issues and evaluation of the summarized mission report; Preparation of methodological documents related to three statistical surveys mentioned above
		(BC Participants and MS experts)