

TWINNING CONTRACT

**Support to the State and Entity Statistical Institutions,
phase V**

Bosnia-Herzegovina



MISSION REPORT

on

Construction Statistics

Component no. 1 Activity 1.3.5

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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
CCI	Construction Cost Index
PPI	Production Price Index
PPP	Purchasing Power Parities

Executive Summary

The mission topic was to analyze the general context concerning the survey constructions cost index for residential buildings (CCI), discussing how to build up a new survey owing to the EU standards.

EU experts presented two methods of compiling the CCI in Denmark and Italy, respectively:

- a) Discussion on the comparison between the two approaches and their coherence with EU standards;
- b) Analysis of the methods used to define the weighting system;
- c) Discussion about adopting an analytical frame to detail the elementary costs derived from a bill of quantities (Italian approach) or to get the weighting system by selecting building contracts from actual building projects (Danish approach);
- d) Analysis of the main characteristics that the Entities' and the State CCI should have;
- e) Agreement between Entity and State Agency staff about using internal data sources (PPI and wage statistics) respectively for the CCI costs regarding materials and labour costs;

f) Recommendations: the EU experts do suggest to define a building project that should form the basis of the weighting system; adopt a planning work to share data provisions (regarding in particular aspects on level, detail and deadline); then to start building up the CCI survey. Further, all experts agree to postpone the development of topics referring the survey main frame once the CCI actually will be compiled and published (such topics being the producer prices on construction, the use of external data for CCI, chain-linking approach).

CCI methodology

Weighting system

The Danish weighting system is based on 8 representative buildings that cover one-family, houses, town houses, two-family houses and multi-family houses. These buildings are actual construction projects and the bills of quantities of labour and materials are equal to the contractors' budgets for the projects. Since they are budgets the input factors have specified money values, i.e. the amount spent by the contractor on each factor. Thus, from the budgets it is possible to calculate the costs shares of all input factors and establish a weighting system (for more detail see Annex 4).

On the basis of a room document provided the Italian expert, a deep analysis of approaching to an analytical weighting system has been carried out. The pivot element characterizing this approach is founding the weighting system on a bill of quantities, that is a technical (see engineering) complete list of items (for labour and materials) detailing the residential building project. By grouping those items whose price measurement is not allowed (because of lack of data available in such detail) a statistical bill of quantities is derived. This new list contains all quantities to which price indices can be associated. Grouping criteria, in fact, depend upon the feasibility to associate price indices (singled out by the PPI surveys) to quantities. Weights are derived after i) multiplying quantities and prices; ii) rescaling each value with respect to the total value so to get value relatives (for more detail see Annexes 5 and 6).

Issues

- How to define a representative building for BiH since the BiH building permits survey has just been initiated in January 2013. Final statistics on building permits are expected to be disseminated in a year, give or take.
- It is not possible to obtain price data on specific building materials to calculate the values of all input factors. In fact only a few aggregated indices might be available. This has caused a bit of concern for the validity of an index calculated on this basis.
- Finally, it was discussed whether to calculate an index with fixed base or chain-linking technique.

Recommendations

- With regards to the definition of a representative residential building the experts recommend that the work starts now using the preliminary data on building surveys. It should be possible to obtain a good estimate of what a representative building should look like with that data at hand. This will give time to form an idea of what input data will be necessary to produce the index and a pilot production system could be set up. Input data and production system could then be adjusted when the final building permits data are available. In the PPP there is some experience with an external source providing bills of quantities and it will off course be a huge advance to draw upon this experience.
- It is not necessarily problematic that there is not complete price data for the materials included in the bill of quantities in the PPI. Materials could be grouped and then represented by wider price indices rather than actual prices. This is shown in the very stylised table below:

Materials from b of q	Price index from PPI
Cement type 1	Price index for Cement
Cement type 2	
Cement type 3	
Bricks for outer walls	Price index for bricks
Roof tiles	
Brick for inner walls	
Concrete for casting foundations	Price index for fresh concrete
Concrete for casting walls	
Concrete for casting stairs	

- The EU experts recommend that the BiH CCI is produced as an index with fixed weights. This is the easiest to begin with as the bill of quantities does not have to be updated as frequently as with chain-linking. In the future the CCI could be managed as a chain-linked index.

Actions:

- 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.

Prices

Both Italy and Denmark use PPI and wage statistics as sources of input data for the calculation of CCI. This is also the recommendations of the STS. This point was also agreed upon by BiH experts of NA, PPP, PPI and labour statistics who took part in one of the meetings held.

Issues

- PPI for construction is only available for aggregates of construction materials;
- Import prices are not available but they are approximated by unit values;
- Labour statistics can provide information on average monthly gross earnings of persons in employment.

Recommendations

- Aggregates can be sufficient (see table above). However, the experts strongly recommend that the departments for construction statistics are provided with the full list of prices and goods in the PPI. Thus, they will be able to label every single price that would be of interest when calculating the CCI. As a result of the meeting the producers of PPI agreed to provide this selected data. For the prices not covered in PPI import price data would be a good source.
- Import price data is disseminated as unit values. To apply this data in the calculation of the CCI it must be monitored closely and compared with other statistics to determine if the development in these prices is in fact mirroring reality. If so, they will be an acceptable source for material costs not included in the PPI.
- It is the experts' recommendations to apply the average monthly gross earnings of persons in employment.

Actions:

- On the basis of the preliminary weighting system prices are selected from PPI,
- Unit value indices for imports are monitored

Cooperation between the Entities and the State Agency

For the construction and production of a CCI for the entire BiH the Entities and the State Agency should agree on certain points. Experts recommend that agreements are made on the following points:

- What representative building to use;
- Aggregation level of data provided from the Entities to State Agency
 - o Categories or sub-indices transmitted to State Agency must be the same.

Besides from these points the Entities are free to choose methods for obtaining weighting systems and the level of detail in their own indices. The items that the Entities transmit to State Agency should be the same

Action: Clear agreements are made between the Entities and the State Agency regarding the above mentioned points.

Activities for the next mission

- On the basis of the preliminary weighting system prices are selected from PPI,
- Unit value indices for imports are monitored

Annex 1. Terms of Reference

Construction Statistics
15th to 19th of April 2013
Terms of Reference - Activity 1.3.5.
EU Twinning Project BA 08-IB-FI-03
Federal Institute for Statistics of BiH,
Zelenih beretki 26, Sarajevo

- 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.
- F. Methodologies developed and documented by the 8th project quarter (end of September 2013).

Activity 1.3.5:

Support for production of Construction Cost Index

The expected activities are:

- Analysis of methods used by EU-member countries and proposal for calculation of Construction Cost Index to be in line with EU regulations
- Meeting with National Account, Labour and Price Departments
- Discussion on available data source for calculation of Construction Cost Index
- Discussion on the proposals and an agreement on quarterly Construction Cost Index
- Discussion about scope, coverage and sample design
- Experts recommendations for calculations of Construction Cost Index
- Preparing activities for next mission (preparation of the list of activities to be done before the next mission)
- Planning of final mission and preparation of the list of topics for the next mission

Expected output

- Mission report – summarized and detailed version completed
- Defined method for calculation of Construction Cost Index
- Conclusions made on available data source for calculation of Construction Cost Index
- Agreement made on quarterly Construction Cost Index
- Guidelines defined for calculations of Construction Cost Index

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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Edina Dulić, Senior Adviser for Construction statistics

Institute for Statistics od Republika Srpska (RSIS)

Želimir Radišić, Senior Associate for Construction and Housing Statistics and coordinator for STS

Representatives from National Accounts Departments from three statistical institutions as well as Price and Labour Department

Experts

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Remark: Slides from previous missions for Construction are available on Statistics Denmark's web site: www.dst.dk

Annex 2. Programme for the mission

AGENDA		
Time	Event	Purpose / detail
15 April, 12:00	Welcome	Introduction by Experts on programme of the week
		Kirsten Balling, Statistics Denmark Sigrid Krogstrup Jensen, Statistics Denmark Valerio De Santis, ISTAT
15 April, 12:00	Analysis of methods used by EU-member countries and proposal for calculation of Construction Cost Index to be in line with EU regulations	Analysis of methods for calculation of Construction Cost Index
		(MS and BC participants)
16 April, 09:00	Analysis of methods used by EU-member countries and proposal for calculation of Construction Cost Index	Discussion:
		Analysis of methods for calculation of Construction Cost Index
		Currently recommended approach by Eurostat based on Construction Cost Index
		(BC participants, experts)
17 April, 09:00	Discussion on available data source for calculation of Construction Cost Index	Discussion:
		Meeting with National Account, Labour and Price Departments
		Available data source for calculation of Construction Cost Index
		Experts' proposals which data sources to use
13:00	Discussion on the proposals and an agreement on quarterly Construction Cost Index	Discussion on the proposals on quarterly Construction Cost Index
		Discussion and common conclusions made on quarterly Construction Cost Index
18 April, 09:00	Discussion about scope, coverage and sample design	Discussion:
		Scope, coverage and sample design
13:00	Preparing activities for next mission (preparation of the list of activities to be done before the next mission)	a. Preparation of topics for the next ToR
		b. Homework elaboration for the next mission
		(BC Participants and MS experts)
19 April till 12:00	Debriefing	Other issues and evaluation of the summarized mission report
		(BC Participants and MS experts)