

TWINNING CONTRACT

BA 15 IPA SR 01 17

Support to the reform of the statistics system in Bosnia and Herzegovina



MISSION REPORT

Activity 2.3.5:
Preparation of regular survey on CPPI for Civil Engineering I

Component 2: Business Statistics
Sub-component 2.3: Construction Producer Prices Index

Mission carried out by
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List of Abbreviations

BHAS	Agency for Statistics of Bosnia and Herzegovina
BiH	Bosnia and Herzegovina
CBBH	Central Bank of Bosnia and Herzegovina
EC	European Commission
EU	European Union
FBiH	Federation of Bosnia and Herzegovina
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
ToR	Terms of Reference

1. General comments

This mission report was prepared within the EU Twinning Project "Support to the reform of the statistics system in Bosnia and Herzegovina". It was the fourth mission to be devoted to sub-component 2.3 within Component 2 of the project.

The purposes of the mission were:

- Follow up from the previous mission including taking stock of the experience from the pilot survey,
- Presentation of the experience from INSEE,
- Regular survey on CPPI for civil engineering,
- Discussion on methods and 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 Bosnia-Herzegovina and which highly facilitated the work of the consultants.

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, INSEE, Statistics Finland and Croatian Bureau of Statistics.

2. Assessment and results

Follow up from the last mission

The last mission under this sub-component took place in Sarajevo November 2018. Since then all three statistical institutions have conducted a pilot survey which include the following items:

- Sample selection,
- Preparation of questionnaires,
- Sending out the questionnaires,
- Contact with enterprises – including visits,
- Data editing and use of IT-system.

The BHAS, FIS and RSIS have invested a great amount of time in establishing contact to the enterprises relevant for this survey and meetings have been set up with many enterprises. The aim of these meetings were to explain the purpose of the reporting of data to the three statistical institutions and to avoid non-response based on misunderstandings concerning the use of the questionnaires.

All potential reporting units (enterprises engaged in construction of roads, highways, tunnels and bridges) received all four questionnaires (one for each of the four selected construction types). The reason for this is the lack of knowledge on which enterprises are engaged in which construction activities. Information from public enterprises responsible for contract on infrastructure investments and the Ministry of Transportation and Communication could give valuable information on who's doing what. These units will be approached at a right time in the future.

The status from the pilot surveys is that RSIS received questionnaires with prices from 10 enterprises. The sample size for RSIS was 61 but five of these enterprises did not undertake construction activities within the scope of interest. The most important conclusion here it that the largest enterprise in Republika Srpska has been very reluctant in terms of giving any information to RSIS. RSIS has used significant efforts in order to get this enterprise to understand that no information on a single enterprise can be deducted from the resulting statistics to be published. MS experts recommend that further efforts should be taken in the future – possible on a higher level.

The status from the pilot survey conducted by FIS is that out of 95 enterprises included in the sample, 44 of these responded with useful information in 73 questionnaires (34 on roads, 16 on motorways, 17 on bridges and 6 on tunnels). Four of these enterprises responded with information on all four construction areas.

The status from the pilot survey conducted by BHAS (in Brcko District) is that out of 18 enterprises included in the sample, 13 of these responded with a total of 20 questionnaires.

For all three statistical institutions it can be concluded that some enterprises responded with few prices in the questionnaire, but all in all each work item are represented with more than three prices on State level. Three prices per work items is a commonly used threshold when deciding if there are sufficient information for further production and publication of indices.

During the mission there were discussions on how to get enterprises to participate in the reporting. The three statistical institutions do have legal mandate to ask enterprises to report, but as it is the case for statistical institutions in other countries this is not the most wanted tool to use. The legal mandate can of course be a useful tool to get the enterprises to co-operate. Another solution could be to ask the enterprises to report “index prices” – that is prices which is not the real price, but instead enables the enterprise to report neutral prices (price = 100 in year 1 and then reporting the “price” in year 2 in relation to the price in year 1).

Knowledge of your data is important. This is the reason why metadata must be developed in order to describe the data and the process. This can be achieved by filling out standardized tables with information on the reported data and the reporting enterprises. With this one can easily take stock of the situation (are the reported data sufficient or not) and it will also help in communicating to others, information on the survey.

Therefore, it is recommended that the following two tables should be filled out with relevant information every time the survey is conducted.

Number of questionnaires	DB	FIS	RSIS	BHAS (total)
Total population (enterprises)	18	95	61	174
Roads - questionnaires received	12	34	8	54
Motorways - questionnaires received	2	16	4	22
Tunnels - questionnaires received	3	6	0	9
Bridges - questionnaires received	5	17	2	24

Number of reported prices for each item	DB	FIS	RSIS	BHAS (total)
Roads (items with less than 3 prices)				
Roads (items with 3 prices)				
Roads (items with more than 3 prices)				
Motorways (items with less than 3 prices)				
Motorways (items with 3 prices)				
Motorways (items with more than 3 prices)				
Tunnels (items with less than 3 prices)				
Tunnels (items with 3 prices)				
Tunnels (items with more than 3 prices)				

Number of reported prices for each item	DB	FIS	RSIS	BHAS (total)
Bridges (items with less than 3 prices)				
Bridges (items with 3 prices)				
Bridges (items with more than 3 prices)				

Information for the first table was given at this mission, whereas information for the second table will be provided for the next mission.

Presentations by MS expert

The MS expert from INSEE gave a detailed presentation of the experience from France. Different indices for the construction area were presented, including:

- Construction cost index,
- Construction price index,
- Index for building maintenance and renovation,
- Owner occupied housing index.

The difference between these indices were discussed and questions clarified. The discussion included topics like data sources, calculation methods, definition of the different price/cost concepts and the delimitation between new and existing buildings, etc.

The MS expert from INSEE also gave a presentation on GSDEM (Generic Statistical Data Editing Models) which is a standardized way of working with statistical data editing and imputations under a cross-country agreed framework.

The presentations (powerpoint) will be distributed to all three statistical institutions.

Regular survey

The pilot survey included all relevant enterprises and covered the years 2017 and 2018. This means that regular survey should be conducted first time for the year 2019. The timeline for the regular survey to be conducted for the year 2019 is expected to follow the following timeline:

Survey for year t:

- Sample finalized – end November (t),
- Questionnaires prepared – end November (t),
- Questionnaires send to reporting units – mid December (t),
- Deadline for data delivery – end January (t+1),
- Contact to non-responding units ended – February 10 (t+1),
- Data entry and imputations ended – February 15 (t+1),
- Index production and publication – February 20 (t+1).

The three statistical institutions were satisfied with the questionnaire used at the pilot survey. Many of the reporting units had help from civil engineers with filling out the questionnaire, so the three statistical institutions received only a few questions for clarification concerning the questionnaires. Therefore, only small changes has been made to the questionnaires and they are now ready in a version to be used for the regular survey for the year 2019.

Concerning publication of the statistics there were some talks on when and how. One solution could be to include this index for civil engineering in the publication on construction price index for dwellings. The publication on dwellings is quarterly, but the statistics for civil engineering could be included in the publication of fourth quarter data in February 2020.

Discussion on methods and data

During the mission, there were several discussions on specific topics concerning methods and data. One issue was the reporting of different levels of prices for the same item. These differences may not be a problem as long as the enterprise has the same understanding of an item over the years. That is, one enterprise may report the price equal to 1 KM for item X in 2018, while another enterprise reports the price 10 KM for the same item in 2018. The reason could be that the enterprises have different methods of conducting the task under this item. The three statistical institutions should of course contact an enterprise if it the year after reports a price significantly different from the one it reported the year before (e.g. 1 KM in 2018 and 10 KM in 2019). Nevertheless, the three statistical institutions will approach some of the enterprises to learn the reasons for big differences in prices for the same item between enterprises. The MS experts supports this, as it will give BS experts better understanding of the data to be used for compilation of the indices.

In the pilot survey there were five cases of new items not included in the questionnaire. BHAS, RSIS and FIS will look closer at these cases before the next mission.

During the mission there were discussions on weights and on which level to apply these weights. The three statistical institutions will only publish index on the level of the construction type – that is indices for roads, motorways, tunnels and bridges. Therefore, there is no need to apply weights on the most detailed level (level of items) since it will not have a significant effect on the indices. Nevertheless, since they already have the weights on the most detailed level (item level) and since they already apply the weights on the most detailed level in the statistics on construction price index for dwellings, they would prefer to use the same solution on the statistics on construction price index for civil engineering corresponding to *Option 2* in the table below.

			Option 1			Option 2		
Group	Sub-group	Item	Weights			Weights		
			Group	Sub-group	Item	Group	Sub-group	Item
1.			70			70		
	1.1			80			80	
		1.1.1			-			40
		1.1.2			-			60
	1.2			20			20	
		1.2.1			-			70
		1.2.2			-			30
2.			30			30		
	2.1			40			40	
		2.1.1			-			100
	2.2			60			60	
		2.2.1			-			25
		2.2.2			-			75

3. Conclusions and recommendations

It was concluded, that the “pilot” survey for the years 2017 and 2018 is sufficient regarding the collection of data for those two years. Therefore, the next regular survey is conducted in the beginning of 2020 for the year 2019.

It was concluded to introduce weights on the most detailed level – that is on the level of the items.

It is recommended to develop metadata to describe data and processes – tables on number of questionnaires and number of prices per item are useful.

Conclusions were made on a plan for the regular survey.

It is recommended to make further efforts to get large enterprises to participate in the reporting of prices on construction. Try to find a solution that fits the enterprise.

It is recommended to take contact to the Ministry of Transportation and Communication for co-operation with J.P. Autoceste and J.P. Autoputevi in order to gather information on enterprises engaged in relevant construction projects.

At this mission it was agreed that the next mission could be held 20-23 May or 11-14 June 2019.

Actions needed for moving forward as well as for preparing the next mission.

Action	Deadline	Responsible person
Fill out relevant metadata tables	Before next mission	BS experts
Investigate new item descriptions	Before next mission	BS experts
Include weights in IT-application and check that the computation of indices works in the IT-application	Before next mission	BS experts
Present and discuss the computation of indices in the new IT-application	At the next mission	BS and MS experts
Investigate imputation methods, data editing and indices produced	At the next mission	BS and MS experts
Start discussion on methodological document and quality report with a short presentation	At the next mission	BS and MS experts

Annex 1. Terms of Reference, persons met and agenda**Terms of Reference****EU Twinning Project BA 15 IPA ST 01 17****Component 2: Business Statistics****Sub-component 2.3: Construction Producer Price Index****18-21 March 2019****Hosting institution: RSIS - Veljka Mladjenovica 12d Banja Luka****Activity 2.3.5: Preparation of regular survey on CPPI for Civil Engineering I****1. Mandatory result and benchmarks for the component**

Mandatory result:

- Construction producer price index for division F42 – Civil engineering works produced by 8th project quarter

Benchmarks:

- Plan for development of producer price index produced by 1st project quarter
- Draft questionnaire and supporting documents for pilot survey prepared by 1st project quarter
- Pilot survey conducted by 2nd project quarter
- Results of pilot survey analyzed by 2nd project quarter
- Criteria for an IT application defined by 2nd project quarter
- Plan for regular production developed by 4th project quarter
- Index compiled by 5th project quarter
- Index made available to users by 6th project quarter
- Methodological document on producer prices in construction developed by 8th project quarter
- Quality report for producer prices in construction developed by 8th project quarter

2. Purpose of the activity

- Follow up from the previous mission:

To be prepared by the BC counterpart

- Create CPPI test data and import it to the IT application
- Send questions and comments to MS expert under activity 2.C.2
- Investigate possible co-operation with business associations
- Approach Ministry of Transport and Communication for co-operation with J.P. Autoceste and J.P. Autoputevi

- Finalise sample selection
- Questionnaires, cover notes etc. are prepared
- Send out questionnaires to selected sample
- Contact to non-responding units ended
- Data editing ended
- Data in new IT application
- Method for a regular survey on CPPI based on the experiences from the pilot survey
- Proposals of imputation methods to be used for regular compilation of price indices
- Preparation of final questionnaires for a regular production
- Plan for a regular survey on CPPI for Civil Engineering
- Presentation on pricing methods and calculation of CPPI for Civil Engineering
- Discussion on possible ways for a weighting system

3. Expected output of the activity

- Method for regular survey agreed
- Final questionnaires agreed
- Plan for regular production developed
- Imputation methods agreed
- EU experiences presented on pricing methods
- Possible ways of weighting discussed
- Input provided to the ToR of next activity

4. Participants

Agency for Statistics of BiH (BHAS)

Fahir Kanlic, BHAS

Dženita Babić, BHAS

Anita Brković, BHAS

Institute for Statistics of Federation of BiH (FIS)

Edina Dulic, FIS

Nusreta Imamovic-Kaljanac, FIS

Institute for Statistics of Republika Srpska (RSIS)

Danica Babić, RSIS

MS Experts

Martin Ausker (DK)

Gérard Vittek (FR)

Twinning Project Administration

Katja Møller Hjelvang, RTA

Đemka Šahinpašić, RTA Assistant

Haris Imamović, Interpreter

Agenda

Location: Veljka Mladjenovica 12d Banja Luka

Time	Day	Place	Event	Purpose / Details
9:00-11:00	18 March Monday	Hotel	MS experts and RTA	<ul style="list-style-type: none"> • Discuss the programme • Preparation of activity
12:00-15:30	18 March Monday	RSIS	Meeting with BC Experts	<ul style="list-style-type: none"> • Follow up from the previous mission: • See the details under point 2. Purpose of activity • <i>To be presented by the BC counterpart</i>
9:00-12:00	19 March Tuesday	RSIS	Meeting with BC Experts	<ul style="list-style-type: none"> • Experiences from INSEE
13:00-15:30	19 March Tuesday	RSIS	Meeting with BC Experts	<ul style="list-style-type: none"> • Data and the new IT-application • Discussion on possible ways for a weighting system
9:00-12:00	20 March Wednesday	RSIS	Meeting with BC Experts	<ul style="list-style-type: none"> • Preparation of final questionnaires for a regular production • Plan for a regular survey on CPPI for Civil Engineering
13:00-15:30	20 March Wednesday	RSIS	Meeting with BC Experts	<ul style="list-style-type: none"> • Proposals for imputation methods to be used for regular compilation of price indices • Other unresolved issues for data editing and processing
9:00-12:00	21 March Thursday	RSIS	Meeting with BC Experts	<ul style="list-style-type: none"> • Presentation of MS experts' findings and agreement on the reached conclusions • Agreement on summary mission report • Identification of work to be done until next activity. Input to ToR of next activity • Conclusions and next steps

Signatures

For the approval of the contents of this report, representatives from BHAS, FIS and RSIS as well as MS experts and the RTA sign here:

Date: 21th of March 2019

Component leader, BHAS

Component leader, FIS

Component leader, RSIS

RTA

MS Expert

MS Expert