

TWINNING CONTRACT

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



MISSION REPORT

Activity 2.4.5:

Activity 2.4.5 Preparation of regular survey on SPPI I

Component 2: Business Statistics
Sub-component 2.4: Services Producer Prices Index

Mission carried out by
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List of Abbreviations

BC	Beneficiary country
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 in BiH to be devoted to SPPI within Component 2 of the project.

The purposes of the mission were:

- Follow up from the previous mission
- Analyses of results from the pilot survey for first two quarters
- Method for the regular surveys on SPPI based on experiences from the pilot survey
- Preparation of final questionnaires for a regular production
- Plan for a regular survey
- Treatment of non-response and proposal for imputation methods
- Pricing methods and calculation of SPPIs
- Preparation of final version of correspondence tables for deflators

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 consultants 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

Day 1

Presentation of the results of the pilot survey

Eight to nine services industries are collected but they are not all processed yet.

First, RSIS counterparts present some figures: in 2018, 24 response units were in the sample for the 71 industry in the pilot survey; RSIS received responses for 16 units, 2 units were misclassified, one sent data that were incomplete. For FIS, there were 29 response units in the sample, and 18 or 19 responses were obtained for 2018. There were six misclassified units in 71.

The sample method was a cut-off limited to 60% of total turnover of the industry 71. Researches were carried out to identify companies that should be classified in the industry 71 and that were not, to add them in the survey. Secondary activities from construction enterprises could be also obtained.

Ways to increase response rates and reliability

BC experts tried to improve the response rates in various ways, using telephone reminders and e-mails. At the very beginning of the pilot survey, experts visited the most important companies. They obtained some progress in terms of responses. During all the pilot survey, experts continued to visit enterprises, realizing that the questionnaires were in some cases not understood well. Visits also continued for some significant units that have not responded.

For instance, RSIS experts visited 12 companies in one week, but for some of them the data quality still remained problematic.

Companies reported difficulties with working conditions, the competitive market and difficulties with pricing. Sometimes, people encountered were accountants or bookkeepers, with limited information concerning pricing.

There was a fear of lack of confidentiality when it came to reporting prices: companies tried to avoid the correct price. BC experts argued with explanations of their visits: samples remain secret, letters stipulate their commitment of confidentiality, but the fear could not be completely eliminated. However, companies seemed to be interested in the indices.

Meetings with professional chambers or professional unions were suggested by MS experts, but there are many independent companies or individual architects or consultants. Associations can also have some ideas about the pricing methods and they can have some expertise on the price development.

Pricing methods

MS experts suggested some pricing methods that could be useful in this industry: model pricing, component pricing, percentage fee (inflated with an underlying index). In OECD-Eurostat manual for SPPIs, examples for calculation of prices indices based on percentage fees are given.

BC experts reported problems with: flat prices, contract pricing (not repetitive transactions), bills of quantities with too many items, percentage fees with difficulties to identify underlying indices because they are not produced yet and bundled services.

Exchange rates are taken into account when the invoice is not charged in KM. Replacing units for non-responses was discussed.

Weights and annual chain-linked indices

In May, BC experts will get turnovers for the whole year 2018 by groups of services, as part of the SPPI questionnaire. Year 2017 turnovers were already collected using this way. BC experts will consider the necessity for yearly update the detailed level weights, especially if there is no structural change in the industry.

Aggregated levels coming from SBR are updated annually.

Direct use of the turnovers as weights is allowed in a cut-off sampling method.

Day 2

Examples of questionnaires

An example of questionnaire in English was given by BC experts (freight transportation by road). No English version of the questionnaire for engineering was provided, but it is very close from freight transportation by road in its presentation.

When they receive their first questionnaire, enterprises are requested to specify the products descriptions and the codes for pricing methods. They also have to provide the annual turnover for each group of services. For following quarterly surveys, these items are pre-filled. The architecture and engineering industry is more complex than freight transportation by road: instead of two pricing methods proposed for the latter, the questionnaire proposes four pricing methods.

BC experts intend to introduce practical examples of services in the instruction and recommendations for the pricing method associated. They can find such examples in the OECD-Eurostat manual.

Preparation of the regular survey

BC experts plan to obtain turnover for 2018 during the next quarterly SPPI survey; then process calculations and compare indices with Croatia, Slovenia, and other countries covered by Eurostat. The need for deflators is quarterly in BiH (services production index is quarterly). BC experts will also soon deflate the production with SPPIs already available (H transport section). MS experts suggest, if possible, to BC experts to cooperate with future users of these deflators.

For Eurostat, MS experts think of processing the calculation of indices backwards to 2015, which is the reference year requested by Eurostat, using indices from neighbour countries as proxies. If published, the users should be informed of this approximation. 2017 referenced indices can also be published in the country.

Presentation by MS experts about response rates

MS experts presented the way the response rates are monitored in their countries, and the tools at their disposal: automatic and personalized reminders, statistical laws, survey visits and prioritized lists of enterprises to contact depending on the weights. There was a useful discussion around this topic. The revision policy is not decided yet, it should be considered in the future when more periods will be available. It will also depend on the response rates.

Calculation

MS experts presented some calculation aspects such as chain-linking at aggregated levels, with weights updated yearly from national accounts or SBS sources.

Finnish and French indices are product based. At this step, BiH indices are activity-based, because of the availability of the sources used for sampling. In the future, indices could be shifted to a product-based approach, depending on the other sources.

BC experts presented an example of calculation for freight transportation by road for 50 response units and 8 service groups, using Laspeyres chain-linked indices with weights updated yearly. The method is now implemented correctly in the application. The documentation of the application still needs to be updated regarding this development.

Demonstration of the IT application

The application for SPPI/CPPI is developed with Visual Basic. BC experts made a demonstration of the application:

- reason codes for price changes,
- aggregation structure (service groups to aggregates),
- intervals used for controls,
- termination of a product and adding a new one.

The application also enables the re-calculation of the previous index when there is a need for revision (major respondent integrated lately, for instance).

MS experts were impressed with the progress accomplished since previous missions. The application has many advantages compared to Excel calculation.

MS experts remarked that there is no feature in the application to adjust a price, such as a quality coefficient or a calculational previous price. For the moment, prices that need to be quality-adjusted are re-calculated outside the application and then prices are modified in the data entry, with a comment added to explain why the price entered is different from the original one given by the response unit. A solution could be to add a second price variable called "modified price" that allows the data operator to adjust quality by entering another price to be included into calculation.

MS experts recommend to avoid manual quality adjustment outside the application; they strongly recommend the creation of the variable "modified price" in the IT application.

Day 3

Quality adjustment

The MS expert from Finland presented an example of calculation displaying a quality adjustment, using two methods:

- a quality-readjusted fictitious price for the previous period,
- a percentage price change.

The MS expert from France also presented an example of calculation with a quality coefficient.

Telecommunications

MS experts presented their countries methods for telecommunications industries. They recommend the reading of the Voorburg Group sector paper revisited in 2018.

In Finland, calculation of telecommunications SPPI include data that are provided by operators. The method is the unit value, based on calculation of invoicings per number of subscriptions. Finnish indices for telecommunications are Fisher indices, as they can be calculated thanks to the availability of the quantities for the most recent period. The MS expert from Finland explained the detailed calculation of a Fisher index for a group of services, in an Excel sheet.

In France, telecommunications SPPI rely on data provided by the regulator, except for some industries like satellite telecommunications. The method is mostly the unit value, based on calculation of turnovers divided by stocks of active equipment. The retail market is covered as well as the wholesale market (fees charged to MVNOs by MNOs). For the wholesale market, some regulated fees like termination rates are also taken into account.

BC experts still have to determine if their telecommunication indices will be based on data from the regulator or direct surveys from operators. The main operators regularly send data. On the other hand, the data from the regulator are available three months after the end of the quarter. BC experts may visit the regulator in 2019. An agreement on confidentiality would be necessary.

BC experts also have to decide the calculation method for telecommunication services: Fisher index or chain-linked Laspeyres index. These two sorts of indices are superior to a basic unit value index, in the case of industries with rapidly-changing quantities. They mean a step of calculation outside of the application, so BC experts will compare those to the direct use of the unit values.

Deflators tables

This topic was briefly evoked, but does not seem to be of crucial importance at this step. Levels of publishing (CPA-3 digits, CPA-4 digits) need to be defined first, depending on the quality of the data collected and the response rates. Deflators tables and output tables will be discussed more precisely during next missions.

Preparation of ToR for next mission

The terms of reference were discussed and agreed for next mission. The next mission can be planned for end of June 2019.

3. Conclusions and recommendations

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

MS experts were very impressed by the work done since the previous missions. The materials provided are of very good quality: questionnaires and instructions provided to respondents are clear

and detailed. BC experts care for quality and their quest for the best methods allowed rich discussions during the meeting. The work achieved on the architecture and engineering industry is encouraging, and the samples are of good size to evaluate both entities and BiH. The visits done to enterprises guarantee a better quality. Due to the complexity of the industries, some issues remain around pricing methods.

BC experts presented a functional IT application which will be a great step towards a reliable index production. MS experts recommended some minor yet important additions to manage quality adjustment inside the application; as a second priority, MS experts recommend to update the application's documentation.

Based on the discussions during the mission, the MS experts recommend the following:

- MS experts recommend avoiding quality adjustment outside the application; they strongly recommend the creation of the variable “modified price” in the IT application.
- For telecommunications industries, they recommend the reading of the Voorburg Group sector paper revisited in 2018.
- MS experts also recommend the application of the OECD-Eurostat manual prescriptions for percentage fee methods.
- MS experts appreciated the productive cooperation between the three institutions and recommend maintaining connections also between the missions.

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

Action	Deadline	Responsible person
Calculation of results from pilot survey for four quarters of 2018 and preliminary production of available indices	Before next mission	BC experts
Presentation of summary report on conducted pilot survey	Before next mission	BC experts
IT application follow-up	Before next mission	BC experts
Presentation of MS on output tables (publication forms, transmission formats, etc.)	Before next mission	MS experts
Agreement on revision policy	October 2019	BC experts
Presentation of MS on the calculation of service deflators	Before next mission	MS experts
Proposal of weighting system for deflators calculation for some specific industries	October 2019	BC experts

Annex 1. Terms of Reference

Terms of Reference

EU Twinning Project BA 15 IPA ST 01 17

Component 2: Business Statistics

Sub-component 2.4: Services Producer Prices Index

18-21 March 2019

Hosting institution:

Hosting institution: RSIS - Veljka Mladjenovica 12d Banja Luka

Activity 2.4.5 Preparation of regular survey on SPPI I

1. Mandatory result and benchmarks for the component

Mandatory result:

- New indicators for producer prices in services produced by 8th project quarter

Benchmarks:

- Plan for development of producer prices in services 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
- Criteria for an IT application defined by 2nd project quarter
- Results of pilot survey analyzed by 4th project quarter
- Plan for regular production of producer prices in services developed by 4th project quarter
- Indices on producer prices in services compiled by 6th project quarter
- Indices on producer prices in services made available to users by 8th project quarter
- Methodological document on producer prices in services developed by 8th project quarter
- Quality report for producer prices in services developed by 8th project quarter

2. Purpose of the activity

- Follow up from the previous mission
 - To be prepared by the BC Counterpart**
 - Study methodological documentation in detail to extend the knowledge and understanding of SPPIs

- Study methodological documentation on annual chain-linked index elaborated by the STS Task Force on chain-linking
 - Check the main activity of businesses and make feedback to SBR during the work in the field
 - Collect both information about availability of prices and turnover to address further decisions about weighting possibilities
 - Amended methods for the regular surveys on activity M71.1 based on the experiences from the pilot survey
 - Preparation of final questionnaire for a regular production
 - Preparation of plan for a regular production
 - Preparation of output tables (publication forms, transmission formats, etc.)
-
- Quality of results from the pilot survey
 - Sending of the outputs from the IT application to MS experts

To be prepared by the MS experts

- Analyse the results of the pilot survey
 - Provide practical examples on index calculation, example J61
 - Analysis of the outputs of the IT application
-
- Analyses of results from the pilot survey for first two quarters
 - Method for the regular surveys on SPPI based on experiences from the pilot survey
 - Preparation of final questionnaires for a regular production
 - Plan for a regular survey
 - Treatment of non-response and proposal for imputation methods
 - Pricing methods and calculation of SPPIs
 - Preparation of final version of correspondence tables for deflators

3. Expected output of the activity

- Results from the pilot survey analysed
- Methods for the regular surveys agreed
- Final questionnaires agreed
- Plan for regular production developed
- Imputation methods agreed
- EU experiences on pricing and calculation of indices presented
- Final version of correspondence tables for deflators made
- Input provided to the ToR of next activity

4. Participants

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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: 21st of March 2019

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Component leader, FIS

Component leader, RSIS

RTA

MS Expert

MS Expert