

TWINNING CONTRACT

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



MISSION REPORT

Activity 2.C.2:
IT application development for producer prices II

Component 2: Business Statistics

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 final mission to be devoted to development of an application for price indexes within Component Business Statistics of the project.

The purposes of the mission were:

- To discuss and solve issues that has been detected during the use of the application
- To clarify outstanding issues

The consultant would like to express his thanks to all officials and individuals met for the kind support and valuable information which he received during the stay in Bosnia-Herzegovina 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, INSEE, Statistics Finland and Croatian Bureau of Statistics.

2. Executive Summary

This mission was organized in a way, that before the lunch break, there was a general discussion the outstanding issues. In the afternoon the consultant and IT staff would the take the time to make necessary changes to the application.

In the period since the last mission (in April) Pero Kazanović (from RSIS) has spent time on studying the application and made some changes. This was done in a very good way and, most important, should demonstrate that it will be possible to maintain the application locally.

There was a wish to make an automatic recalculation of product weights. After some discussion it was agreed that this is most important in the case where BHAS has imported data from the entities, because then this recalculation is always needed for all elementary items. The solution has been to make an automatic recalculation in the case that there is a price related to each weight and each weight has a price (for a given item in one period). However, in the situation that new prices are added it is not possible to do (as information on turnover will be missing) and when a price is missing for a period, it may still be good to manually inspect the case and then recalculate as needed.

The application was updated according to this.

During this discussion it became clear that there was still some confusion on the role of the two different types of weight used in the system. It underlines the need of BHAS to take a leading role on methodological issues and the need for a better understanding of these issues.

There was a discussion about the removal of Response Units. Response units may be terminated, meaning that they will not provide data from a given point of time. The removal of a response unit is only needed (and possible) if the unit has not reported any prices, that it should not have been introduced in the first place. It was decided to introduce a check that the conditions are met, and this has been implemented.

For a given survey the index structure is to be defined by BHAS (in cooperation with the entities). However, some entities (most likely District of Brcko) may not be able to collect data on each elementary item. Rather than changing the index structure locally it was proposed to be able to mark

such item (as unused), After some discussion a solution on this was found where items can be marked as unused, keeping the common structure intact. This was implemented in the application.

In relation to this the option to export and import the whole index structure was also implemented. The idea is, that BHAS creates the index structure in their data base and then export it. It can then be imported in the entity level databases.

During some of the previous mission there has been discussions regarding the base period for price comparisons. It has been demonstrated, that using last quarter of previous year or previous quarter will produce the same result, on the condition that no new price-items are introduced and all price-items reports for all periods in the year. However, when applying the two different methods on the data from SPPI (in FIS), different results were obtained, and it was speculated if the actual calculation methods were correctly implemented in the application. It was demonstrated that the reason for this was that one response unit was terminated in the calendar year. A special 'normalized' database was constructed, where this unit was removed, and it could be demonstrated that then the same results would be obtained.

This led to a renewed discussion of how to implement price base period. What will give the most correct result in the case where one or more response units are terminated during a year. The application will continue to support both methods. The literature on the subject does not give many clear answers but just point out that there are different ways to calculate.

An important part of the mission was that it allowed local IT staff (who will be responsible for maintenance and further development) to work close together with the consultant and this way get a deeper understanding of the application.

3. Status at the beginning of the project

At the beginning of the project some work had been done on CPPI and for SPPI some pilot surveys had been carried out. For CPPI an application had been developed that took care of both data entry and index calculation, but this was only used in FIS. For SPPI Excel workbooks were used to enter and process the data in FIS.

The project was initiated because a need for a common solution was clear as the cost of developing special applications for each survey could be very high and put a lot of burden on the scarce IT resources in the institutions. It is anticipated, that for SPPI more surveys will be added in the future.

The goal was then set to build an application that would

- Be able to handle both the CPPI and SPPI (including future expansions)
- Cover the need of both the entities and BHAS
- Facilitate a common methodology
- Facilitate the division of work between the entities and BHAS

4. Status of project results

The first stage of the project was successful in developing a specification for application that would meet the goals set up from the start. The experience of Denmark in setting up such an application (covering all kind of price indexes) was useful as a starting point. It also became clear, that there was a need for a certain degree of freedom in the way indexes were set up and the rules for calculations of the indexes, all of this was included in the specification.

A side effect of this was that a description of the workflow from data collection to index calculation (both on entity level and level of BiH) was produced.

During the creation of the specification some methodological issues needed further discussion. Consultants on methodology was contacted as needed and provided valuable assistance on this as well as commenting the draft for the specification.

In the next step the actual application was developed by the consultant in a mission dedicated for that purpose.

The application was then presented and tested by BC and based on the findings of this the application was corrected and refined. The last step of this took place during this mission as mentioned above.

There is a general agreement, that the system as delivered are meeting the objectives set up, even if there are still room for further improvements.

5. Sustainability of the achievements

The fact that IT-staff in BC has already been able to improve and add features to the system shows that the necessary competences for maintenance and improvement of the system exist. There are plans to create a multilingual version, something the consultant has not been able to with very limited knowledge of local language.

Another important area is the possibility to add reports to the system, but here the necessary competences (writing SQL) is also present.

As the system goes into production it is important that all users become familiar with the system. The users Guide provided will hopefully be a good starting point, but it is as important that there is now a critical mass of users who has worked with the system. As new surveys may start using the system these users may provide assistance in setting up the new survey and pass on information about the proper usage of the system.

If the system is maintained and used as anticipated, it should be able to serve all the institutions for many years.

6. Recommendations for the future (short and long term)

The most important issue for the short term seems to be to put the system into production replacing the spreadsheets and the old application and then use the system to share data between the entities and BHAS in the way the system is designed.

Another important issue may be to more clearly define the roles of BHAS and the Entities in setting up a new survey in the system.

As request for changes in the system may come, they should be very carefully considered to ensure that they are both in line with the methodology and does not pose a threat to the consistency of the system.

In the short and long term, it is recommended that the system is used also in the pilot phase of new surveys. It will both act as an actual training of using the system and ensure that in the case a new survey has need for special features there will be a reasonable time to consider, design and implements such feature.

RSIS
Jovanović Pera

FIS
Beganović Memur

BHAS
Juh

RTA
Rga

MS EXPERT

Snott

Annex 1. Terms of Reference

Terms of Reference

EU Twinning Project BA 15 IPA ST 01 17

Component 2: Business Statistics

14 – 17 January 2020

Hosting institution: FIS, Zelenih beretki 26, Sarajevo

Activity 2.C.2: IT application development for producer prices II

1. Purpose of the activity

- Follow up from the previous mission
- Fix potential issues discovered in the application
- Further testing and usage of the application and clarification

2. Expected output of the activity

- IT application for producer price indices is in use by the BC

3. Participants

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