

TWINNING CONTRACT

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

Bosnia-Herzegovina



MISSION REPORT

on


Structural Business Statistics

Component no 1.2

Activity 1.2.2

Mission carried out by Ville Tolkki, Statistics Finland

27th February – 2nd March 2012

		 STATISTICS DENMARK

IPA 2008

Abbreviations

BHAS	BiH Agency for Statistics
BiH	Bosnia-Herzegovina
BRC	District of Brcko
FIS	Federation Institution for Statistics
KAU	Kind of Activity Unit
RSIS	Republic Institution for Statistics
SBR	Statistical Business Register
SBS	Structural Business Statistics
SRS	Stratified Random Sample

Discussions on the SBS timetable for the reference year 2011

The timetable for SBS 2011 activities was discussed. The sample specifications were sent 24th of February (scheduled in January). Sampling experts assessed that, it is possible to have the sample and frame finalised by the 15th of March. Also it was discussed that the questionnaires are confirmed by the 15th of March. This means that the questionnaires can be sent to the reporting units by the 1st of April.

It was emphasised the two and half months for data editing is very short time. General assessment is that data editing consume about 40 percent of total statistical production process. Also for the SBS which is very complex including high number of data controls in the editing process can be even more laborious.

For the preparation of the activity 7 (in the timetable) it was agreed that next mission should be in the last week of June. This would concentrate on data treatment including selective, automatic and manual editing routines. Also possible solutions for the data imputation should be discussed.

Discussions on SBS frame and sampling in BiH

The present situation regarding SBS in BiH was presented and discussed during the mission. The Statistical Business Register was used as the frame for the survey, and in the 2010 regular survey questionnaires were sent out to all enterprises with 20 or more employed person (census part). Enterprises with less than 20 persons employed, the sample is stratified random sample. Sample consists of 360 stratum. The stratum are divided by NACE rev2 (2010 onwards implemented for SBR) and size of the enterprises. The data on turnover, value-added, personnel costs from previous surveys and turnover and number of persons employed from SBR are used to define the stratum.

In the relevant activities (according to NACE rev2 classification) the frame consists of around 22 000 companies. Of these roughly 10 000 enterprises are in the sample. The frame does not include the entrepreneurs. The SBR expert judgement is that the frame would be two times (around 50 000 enterprises) larger if the entrepreneurs are included.

Special problems relating to frame and sample were discussed:

NACE rev2 classification, when observed as incorrect, there exist two options: 1) its corrected when observed 2) its corrected for the second year. If the classification is corrected when observed it could imply re-weighting and post stratification. For large enterprises the weights do not need any adjustments, because these belong to the census part of the survey. Most important thing is to have clear rules for all business statistics, when activities should be corrected. Also the information of the new activity should be simultaneously applied for the statistical business register (SBR).

The replacement of the enterprises is not a practise. The current approach for the business statistics is to re-weight the data in the case of unit non-response. Item non-response is imputed. In the case of population and household statistics replacement units are more important.

The sample includes also the smallest units in the frame. For the small units it is possible to apply the threshold. The threshold means, that the smallest units are excluded from the sample and imputed. The sample experts calculated 3 different thresholds for the survey. The calculated thresholds are turnover <10 000 KM (2 700 enterprises in the frame), <5 000 KM (2 200 enterprises in the frame) and <2 000 KM (1 900 enterprises in the frame). For the 2011 survey, it was decided, that there is no urgent need to apply the threshold. If the entrepreneurs are included to the frame sample would increase and the exclusion of the small units from the sample would become more important to reduce response burden and burden for the statisticians treating the data.

Good quality imputation for the small units (under the threshold) would need admin data for SBR for the basis of imputation.

The Finnish experiences with data collection and data processing to fulfil the requirements of the SBS Regulation was discussed. In Finland the statistics used for the SBS rely heavily on administrative data, and even if the administrative systems in BiH are quite different from the situation in Finland, the Finnish experiences might give some inspiration to the work with the SBS data in BiH.

Discussions on SBS questionnaires (also web questionnaires) in BiH and Finland and applications (also data treatments process) in BiH

For each module: services (1), industry (2), trade (3) and construction (4) there are two questionnaires, the simple and the detailed (including a annex for the KAU table). The simple is sent to the SRS part of the survey and detailed is sent to the census part of the survey. The questionnaire for industry was discussed through.

The most important concepts and definitions of SBS Regulation 295/2008 were discussed during the mission. In particular the items: production value and value-added at factor cost were discussed. Also the differences between the price concepts market price, basic price and factor cost were clarified.

The same questionnaire was used in FIS and in RSIS and in the BRC. The guidelines for filling in the questionnaires were also the same. Also the rules for controlling of the answers received were the same. FIS and BRI used one web-application, and RSIS used windows application for data entry and other application for data treatment. The software solutions are innovative and well functioning. It would be a good idea to assess the best practises in both software packages and develop only one application for the institutions. Also the further development of the application should be in alignment with the IT strategy.

The error lists were discussed and it was noted that different errors need to be valued / given points. That is, selective editing practises could be integrated to data treatment applications. This implies that statisticians correcting the data could treat the most meaningful observations first.

For the next mission in June it was discussed that most important topics relate to selective editing (principles and applications) and automatic editing and imputation (scaling, calibrating, outlier detection, cold deck and hot deck imputation). Also during the mission it should be discussed how the solutions could be applied for BiH.

Finnish SBS enterprise questionnaire and tax declaration form was discussed (the paper forms). It was emphasised that according to the Statistics Act in Finland only data which is not available from administrative data sources but is needed for the statistics production can be collected directly from the enterprises. Also it was explained that the questionnaire is confirmed every year after discussing with National Accounts and studying the new tax forms. The idea is to evaluate if there are some variables in the questionnaire which could be excluded.

Also web-questionnaire was presented to give inspiration / idea for BHAS, FIS and RSIS how the paper and web forms differ. Special properties of web questionnaire were discussed.

Co-operation between BHAS, FIS and RSIS is needed to develop common web-questionnaires for SBS data collection. Also institutions need to co-operate strongly to develop uniform controls and selective data editing system.

To foster the co-operation between BHAS, FIS and RSIS a rolling plan is needed (rolling plan refers to a plan which is confirmed for each year separately). That is, two joint meetings between the institutions per year would be good to organise. It is preferred to have one meeting in Sarajevo and one in Banja Luka.

Conclusions and recommendations

The recommendations from this mission is

1. *Discuss with SBR if the coverage of frame (the inclusion of the entrepreneurs) could be improved. This implies that the sampling parameters (including the minimum threshold) should be assessed to limit the number of enterprises in sample.*
2. *Create action plan for developing common web questionnaires for BiH SBS.*
3. *The SBS questionnaires should be assessed every year. To find if there are variables, which could be deleted. Assessing the questionnaires means that for each variable it should be marked whether it is collected for the use of SBS, National Accounts, Financial Accounts etc. Same time the new needs should be analysed.*
4. *Create action plan for developing common data controls, selective and automatic editing routines and tools for BiH SBS.*
5. *Start the co-operation with tax authorities to analyse the possibilities to access to the administrative data sources.*
6. *To foster the co-operation between BHAS, FIS and RSIS a rolling plan is needed (rolling plan refers to a plan which is confirmed for each year separately). That is, two joint meetings between the institutions per year would be good to organise. It is preferred to have one meeting in Sarajevo and one in Banja Luka.*

Topics for the next meeting, action 1.2.3
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The next mission in this component will be mission 1.2.3 from the plan. This mission will take place in the period 25th - 30th June 2012. The main activities during this mission will be

1. *Going through the selective editing idea and solutions*
2. *Going through the automatic editing routines such as logical edits and outlier detection including theory and practical solutions.*

3. *Going through imputation methods such as cold deck and hot deck imputation including theory and practical solutions.*
4. *Going through the electronic forms.*

Signatures

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

Date: 2/3/2012

Component leader, BHAS

Component leader, FIS

Component leader, RSIS

RTA

Expert, Statistics Finland