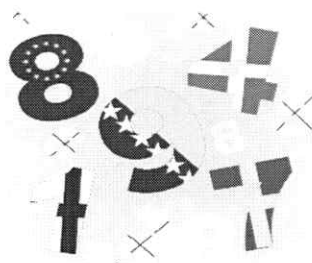
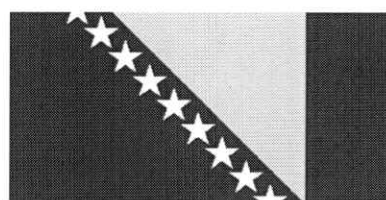


TWINNING CONTRACT

BA 17 IPA ST 01 20



Further Support to the Reform of Statistics System in Bosnia and Herzegovina



MISSION REPORT

Activity 3F: Use of administrative Data (VAT data for the production of STS turnover indices in Bosnia and Herzegovina II)

Component 3 - Administrative Data Sources

Mission carried out by
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28 – 30 March 2023

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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
ITA	Indirect Tax Authority of BiH
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 "Further Support to the Reform of the Statistics System in Bosnia and Herzegovina". It was the sixth mission to be devoted to the work on Administrative Data Sources Component of the Project and the second to be devoted to the specific use of VAT data.

The purposes of the mission were:

- Presentation on the used methods for utilising VAT data in the compilation of STS turnover statistics in Statistics Finland
- Discussion on draft methodology for using administrative data in production of STS turnover indices for Bosnia and Herzegovina
- Presentation of conducted activities on comparison of VAT with survey turnover time series including both total values and year-on-year growth rates, conducted by BHAS and FIS
- Practical work on individual level comparison of Survey and VAT Turnover data (possible reasons for discrepancies between the VAT and survey data)
- Exercise: Importing a sample VAT dataset and excel sheet into the R-Program, an actual data processing step and exporting results to Excel (example script)
- Updating of detailed Plan of activities for Component 3, Activity: Use of administrative VAT turnover data for production of STS turnover indices in BiH
- Information regarding data exchange between three statistical institutions in BiH
- Preparation of the list of activities that will be conducted prior the next mission
- Preparation of ToR for next activity
- Preparation of Mission report for the mission

The consultants would like to express their thanks to all officials and individuals from Bosnia and Herzegovina met for the kind support and valuable information, and which highly facilitated the work of the consultant.

These 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, Statistics Finland, Statistics Sweden and The Italian National Institute of Statistics.

2. Assessment and results

The purpose of the second mission in this activity was to assess the current situation with regards the production of STS statistics in BiH. Currently STS is produced at three statistical institutions in BiH using surveys and national STS turnover statistics are produced and reported to Eurostat at monthly and quarterly frequency. The transitional period for complying with EBS regulations concerning STS turnover ends 2023 after which reporting should be monthly. Assisting the beneficiary meet this requirement is the overall objective of this activity and integrating VAT administrative data in this process is the overall objective of this activity.

STS surveys are currently carried out in paper format and no electronic solutions exists. The three statistical institutions in BiH are responsible for their own STS production, and these are aggregated for national statistics by BHAS.

At present VAT administrative data is delivered monthly to BHAS but has yet to be utilized in the production process. Currently RSIS and FIS do not have access to this data resulting in their use of VAT administrative data for STS production not possible. The situation for RSIS is very promising as negotiations have been carried out with ITA and verbal agreements reached. It is very probable that the data exchange agreement can be signed in the coming months. FIS has aimed to also reach agreement, but their progress has not been as rapid. They are currently in the process to formulate another official request for access to this information. Without this agreement, the whole process is in danger of being delayed and EUROSTAT requirements for monthly statistics of services can not be achieved at the national level using administrative data. Monthly surveys will place a huge response burden on the respondents as well as the staff of the statistical offices. Every effort should be made to reach an agreement also for FIS.

The suitability of VAT data to replace parts of the STS surveys has been investigated and results are very promising for many NACE categories. Identified differences can only be investigated once access to micro-level data is possible. These should increase the number of NACE categories where VAT data could be used to replace survey data, reducing response burden and freeing up staff resources at the statistical institutions in BiH.

Description and assessment of the situation as basis for conclusions and recommendations in section 3 below.

- Methods used for utilising the VAT data in Finland were presented
- Using the R program, example code was generated to import VAT data, combine the VAT data from the three statistical institutions in BiH, aggregate and manipulate this data and export the modified data to excel for further analysis was carried out
- Practical work on individual level comparisons of survey and VAT data was analysed and discussed
- Activities on comparison of VAT data with survey data by BHAS and FIS were presented and discussed
- The current situation of data exchange between the three statistical institutions in BiH was discussed
- Software development process at Statistics Finland and in Bosnia were presented and discussed
- Different alternatives and preliminary plans for using VAT data in BiH were investigated
- Further practical work on individual level comparison of survey and VAT Turnover data was carried out.

The activities were fruitful and productive. No problems or delays were identified in carrying out the activities. The participants were highly active and involved.

3. Conclusions and recommendations

Based on the preliminary analysis of VAT data compared to survey data, many NACE categories show full or strong correlation. For some categories, results clearly identify some discrepancies. The root causes can only be investigated once access to micro-level administrative data is made available, but expectations are that more categories could be then added to the list of “strongly suitable” list. As in most countries, specific NACE divisions (eg: L68: Real Estate) are not ideal candidates for the use of VAT data in turnover calculations and will likely continue to rely on survey data.

The deadline for the implementation of monthly STS statistics in services is the end of 2023. As a first step to reach this deadline in BiH and after further analysis of the correlation between VAT turnover data and survey turnover data, certain industries (services and trade) monthly STS turnover data might be produced quite effectively using mainly VAT data.

It would be extremely important that micro-level VAT data is made available to all statistical institutions in BiH in good collaboration with the Indirect Tax Authority (ITA) before the next mission.

Difficulties in reaching data delivery agreements have been the main bottleneck to moving forward with this process and thus all three statistical institutions in BiH should continue to push forward with these procedures. All assistance from their management as well as the Twinning Project should be made to facilitate this process.

Since statisticians are entitled to access administrative data by law and they have each signed individual non-disclosure agreements they should be granted wider permissions to access all micro level data within their statistical institutions needed for them to carry out their duties. Wherever possible, bureaucracy should be streamlined to this regard. This would reduce the workload burden on already limited IT resources and speed up the work of individual statisticians.

Not only for STS statistical experts, but throughout the different statistical institutions in BiH a decision should be made on standardising the software used for carrying out the different processes in statistical production. The R-Program could be a viable alternative as it is well suited for statistical programming and includes numerous statistical modules that can be incorporated into the statistical production process quickly and for free. A common solution would increase efficiency for all statistical institutions in BiH as process modules developed for one can be shared across the three statistical institutions. This also has the additional benefit of uniform procedures within their production processes.

Common IT solutions, methodologies and IT programs for the statistical production processes would benefit all statistical institutions in BiH. These goals are also common within the NSI's of the EU.

For the effective national production of STS statistics in BiH, it is recommended that the three statistical institutions increase their collaboration and interaction further. This could include regular status meetings, cooperation on the development of new methods and sharing experiences as well as findings. This might additionally include transferring knowledge learned from STS WG meetings (new EU regulations and recommendations).

4. What to do before the next mission for the BC Counterpart

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

Action	Deadline	Responsible person
Priority focus on contractual agreements between all statistical institutions and ITA for VAT microdata	ASAP	BHAS, FIS, RSIS experts and management
Direct access to statistical databases for statistical experts		BHAS, FIS, RSIS experts and IT

Further comparison analysis of survey and VAT data at the unit level as soon as the data is available	by next mission	BHAS, FIS, RSIS and STS experts
Classification of NACE categories by how well VAT Turnover data can be used to replace survey data (eg. well-suited, minor issues, problematic)	by next mission	BHAS, FIS, RSIS STS experts

Added by the RTA: The next (third VAT mission) was tentative planned for June 2023. However, in order to give the entity statistician's sufficient time to try to get access to VAT micro data, it has been postponed to the end of the currently known project period: end of September (week 39).

Annex 1. Terms of Reference for the current mission

Terms of Reference

EU Twinning Project BA 17 IPA ST 01 20

**Component 3 – Administrative data sources
28th March (10 a.m.) – 30st March 2023**

On-site meeting

Venue: Agency for Statistics of Bosnia and Herzegovina, Zelenih beretki 26

Room: 1st Floor

Activity 3F: Use of administrative Data (VAT data for the production of STS turnover indices in Bosnia and Herzegovina II)

1. Mandatory results

Inventory of administrative sources for all statistical domains prepared.

Indicator / Relevant Milestones / Internal deadlines:

Inventory of administrative sources available

Overall purpose of VAT activities:

Analysis of available monthly/quarterly statistical data and monthly VAT turnover data from Indirect Taxation Authority of Bosnia and Herzegovina (ITA BiH) conducted

Revised methodology for calculation of STS turnover indices in Bosnia and Herzegovina by using statistical and monthly VAT turnover data developed

Experimental calculation of STS turnover indices for Industry, Construction, Trade and Services for Bosnia and Herzegovina based on available administrative data sources performed

Outcome of VAT activities:

Methodology for using administrative data in production of STS turnover indices for Bosnia and Herzegovina prepared

2. Purpose of the activities planned for the second mission

- Presentation on the used methods for utilising VAT data in the compilation of STS turnover statistics in Statistics Finland
- Discussion on draft methodology for using administrative data in production of STS turnover indices for Bosnia and Herzegovina
- Presentation of conducted activities on comparison of VAT with survey turnover time series including both total values and year-on-year growth rates, conducted by BHAS
- Practical work on individual level comparison of Survey and VAT Turnover data (possible reasons for discrepancies between the VAT and survey data)
- Exercise: Importing a sample VAT dataset and excel sheet into the R-Program, an actual data processing step and exporting results to Excel (example script)
- Updating of detailed Plan of activities for Component 3, Activity: Use of administrative VAT turnover data for production of STS turnover indices in BiH
- Information regarding data exchange between three statistical institutions in BiH
- Preparation of the list of activities that will be conducted prior the next mission
- Preparation of ToR for next activity
- Preparation of Mission report for the first mission

3. Expected output of the activity

- Experiences of Statistics Finland in using methods for utilising VAT data in the compilation of STS turnover statistics presented
- Draft methodology for using administrative data in production of STS turnover indices for Bosnia and Herzegovina discussed
- Results of conducted activities on comparison of VAT with survey turnover time series including both total values and year-on-year growth rates presented
- Work on individual level comparison of Survey and VAT Turnover data presented
- Conducted exercise: Importing a sample VAT dataset and excel sheet into the R-Program, an actual data processing step and exporting results to Excel
- Detailed Plan of activity on use of VAT turnover data for production of STS turnover indices for BiH updated
- Data exchange between three statistical institutions in BiH discussed
- Mission report prepared

- ToR for the next mission/activity defined

Annex 2. Persons met

BHAS:

Alen Bajramovic, Head of Department for Services Statistics
 Maja Hadzi-Stojanov, Senior Officer in Department for Services Statistics
 Mirza Agic, Senior Adviser in Department for Services Statistics

FIS:

Ademira Velicanin, Senior advisor for Home Trade statistics
 Merima Beganovic, Senior Adviser for Business Statistics
 Nusreta Imamovic, Head of Department for Industry, Construction and Energy Statistics

RSIS:

Sanela Borojevic, Senior Statistician
 Andrea Erak Latinovic, Head of Department for Industry, Construction and Energy Statistics
 Jelena Glamocika, Head of Department for Services Statistics

MS experts:

Ulla Virtanen, Statistics Finland
 Ville-Matti Pilviö, Statistics Finland

RTA Team:

Niels Madsen, RTA
 Larisa Muslimović, RTAA
 Haris Imamovic, Interpreter

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:



 Component leader, BHAS

Ademira Veličanin

 Component leader, FIS

Sanela Borojevic

 Component leader, RSIS

Niels Madsen

 RTA

Maja Hadzi-Stojanov

 MS Expert Ulla Virtanen



 MS Expert