Sector Review on Business Statistics in Bosnia and Herzegovina

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LIST OF ABBREVIATIONS

AGA	Adapted Global Assessment
BHAS	Agency for Statistics of Bosnia and Herzegovina
BiH	Bosnia and Herzegovina
CoE	Centre of Excellence
CPPI	Construction Producer Price Index
CPA	Classification of Products by Activities
CROS Portal	Portal on Collaboration in Research and Methodology for Official Statistics
EG	Enterprise Group
ESA	European System of National and Regional Accounts
ESCoP	European Statistics Code of Practice
ESS	European Statistical System
ESSnet	Collaborative ESS networks
EU	European Union
FATS	Foreign Affiliates Statistics
FAQ	Frequently Asked Questions
FIS	Federation of Bosnia and Herzegovina Institute for Statistics
FRIBS	Framework Regulation on Integrated Business Statistics
GIS	Geographical Information System
ICT	Information and Communication Technologies
IPA	Instrument for Pre-accession Assistance
IT	Information technology
ITA	Indirect Taxation Authority of Bosnia and Herzegovina
KAU	Kind-of-activity unit
KD	Klasifikacija djelatnosti (Classification of Activities)
KPPD	Klasifikacija proizvoda po djelatnosti (Classification of Products by Activities)
KM	Konvertibilna marka (Convertible Mark)
Memobust	Handbook on Methodology of Modern Business Statistic
MPI	Import Price Index
NACE	Statistical Classification of Economic Activities
QAF	Quality Assurance Framework
PPI	Producer Price Index
R&D	Research and Development
RSIS	Republika Srpska Institute for Statistics
SAQ	Self-Assessment Questionnaire
SBR	Statistical Business Register
SBS	Structural Business Statistics
SPPI	Service Producer Price Index
STS	Short-Term Statistics
VAT	Value-added tax
XPI	Export Price Index

Executive summary

(1) Compared to the situation described in the Adapted Global Assessment (AGA) 2011[1] it is evident that in the last few years considerable progress was made in the area of business statistics in Bosnia and Herzegovina (BiH). Nevertheless, to achieve the goal of full compliance with the European Union (EU) standards, additional efforts and resources will be needed.

(2) In the field of statistical infrastructure, there is a need to upgrade and extend the business register so that it might become the backbone of business statistics. The register should include enterprises, enterprise groups, kind-of-activity units and local kind-of-activity units; information on foreign control, classification by institutional sectors, etc. Because of the decentralised organisation of business statistics in BiH, a high degree of standardisation of all activities in the field of the business register is crucial for consistency.

(3) As regards data requirements in the domains of Structural Business Statistics (SBS) and Short-Term Statistics (STS), a certain degree of compliance with EU standards was already reached. In order to reach full compliance with SBS data requirements, it will be necessary to extend the scope of the survey and to incorporate data on small enterprises (called entrepreneurs) which are not covered at present. In the case of STS, quite a number of additional efforts are needed, in particular as regards price indices and labour related indicators.

(4) As far as compliance with the principles laid down in the European Statistics Code of Practice (ESCoP)[2] is concerned, a number of additional efforts are required. In general terms, four main problem areas were identified, which are closely interrelated.

Harmonisation - coordination

(5) Business statistics in BiH are - like the entire statistical system – organised in a decentralised manner, reflecting the administrative and political organisation of the country. Three statistical institutions are engaged in the production and dissemination of business statistics. The Agency for Statistics of Bosnia and Herzegovina (BHAS) at the state level has to coordinate the work of the statistical authorities on entity level and is responsible for the international representation of BiH. The statistical authorities have their own legal acts for statistics on entity level and are in charge of carrying out the surveys. The results achieved on entity level are then forwarded to BHAS.

(6) In such a decentralised system for data collection and data processing, a high degree of harmonisation and standardisation of concepts and processes is crucial to ensure consistency. The level of harmonisation reached so far is not always sufficient. There is also an obvious need for standardisation in the development and provision of metadata and in the dissemination policy.

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[1] See http://ec.europa.eu/eurostat/documents/45004/6182541/BIH_AGA_Final+Report_complete.pdf/.

[2] See http://ec.europa.eu/eurostat/web/quality/european-statistics-code-of-practice.

(7) In order to increase cost-efficiency and reduce response burden, the intensive use of available administrative data seems indispensable. In particular, social security data and VAT data are important sources that should be exploited. So far only the Amendments to the Law on Indirect Taxation[3], adopted in December 2013, established legal conditions for access to individual VAT data for statistical purposes (Article 52 3i of this Law). Despite these legal provisions so far no use can be made of VAT data because data are not delivered.

(8) Only entity-level statistical authorities can access some administrative data (e.g. financial accounts) for updating the statistical business register. A general provision in the Law on Statistics of Bosnia and Herzegovina[4] and in the laws of the entities allowing statistical authorities to use administrative data for statistical purposes is missing and therefore, urgently needed.

(9) Electronic means of reporting are so far not offered in BiH. Electronic questionnaires and automatized systems of editing could help to considerably increase cost-efficiency and reduce response burden. In addition, there is a high potential to improve the quality of statistical results.

Human resources

(10) In order to comply with EU standards it would be necessary that staff would have time to develop specialized knowledge in specific fields, and that human resources would be sufficient to carry out analyses, provide metadata, etc. The present organisational environment for business statistics does not provide the necessary resources to carry out such tasks.

(11) The use of electronic means of reporting and an increased use of administrative data would change the data generating process and improve the resource situation. However, such a transformation will require a restructuring of the organisation and different, new qualifications of staff.

International cooperation

(12) International cooperation has been and will be important for major progress towards full compliance with EU standards. External expertise is essential for avoiding duplication of efforts and to ensure access to already existing know-how.

(13) However, in order to make full use of the benefits of external expertise, it is crucial for the statistical authorities in BiH to be in the position to implement the proposed solutions and to keep them up-to-date. At present this is not always the case. For example an outdated software version is in use for seasonal adjustment.

(14) The key issues identified for the field of business statistics are closely related to the 'Strategic priorities' outlined in the Strategy for Development of Statistics of Bosnia and Herzegovina

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[3] See http://www.new.uino.gov.ba/bs/UIO.

[4] See http://www.bhas.ba/dokumenti/stat.zakon-en.pdf.

2020[5]. The first three priorities stressed in this document (dealing with the entire statistical system of BiH) are "Strengthening coordination mechanisms and the exchange of data between the Agency for Statistics of BiH and the Entity Statistical Institutes", "Alignment of the Statistics of BiH to international legislation, standards and practice" and "Use of administrative sources for statistical purposes". The need to modernise the data collection method by using electronic reporting services is also mentioned, among the measures to optimise processes in the production of statistics.

(15) Major steps towards full compliance with EU standards call for a change in paradigms. In order to solve the key problems outlined above, a number of strategic decisions have to be taken.

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[5] See
http://www.bhas.ba/planiprogram/STRATEGY%20FOR%20DEVELOPMENT%20OF%20STATISTICS%20OF%20BIH.pdf.

1.   Introduction

1.1   Objectives of the review

(16) This Sector Review was carried out with the objective of analysing the current situation of business statistics in Bosnia and Herzegovina (BiH). The review focused on the backbones of business statistics, on Structural Business Statistics (SBS) and Short-Term Statistics (STS), as well as on the statistical infrastructure of business statistics. SBS provide the empirical basis for all types of structural analyses and are one of the most important sources for National Accounts. STS supply activity-related and price data and are of crucial importance for assessing the situation of the economy in the business cycle.

(17) As stated by Eurostat, the Sector Review in business statistics has the following specific objectives:

- to assess the administrative and technical capacity of the reviewed statistical systems to produce business statistics;
- to assess the statistical production against EU standards;
- to review the medium and long-term planning within the sector; and
- to propose a list of recommendations to be undertaken in order to improve business statistics.

1.2   The statistical system in BiH

(18) The statistical system of BiH is characterised by a high degree of regional decentralisation, reflecting the administrative and political organisation of the country.

(19) The following provisions of the Law on Statistics of Bosnia and Herzegovina[6] (referred to as the Law) are of particular relevance for understanding and assessing the situation of business statistics. Three statistical institutions, called 'competent authorities' are distinguished in the Law and are in charge of business statistics:

- the Agency for Statistics of Bosnia and Herzegovina (BHAS)[7] at the state level;
- the Federation of Bosnia and Herzegovina Institute for Statistics (FIS)[8], and the Republika Srpska Institute for Statistics (RSIS)[9] at the level of entities.

(20) Following a governmental decision, the statistical office of the autonomous District of Brčko has been an integral part of BHAS since 2006. The roles and relations between the entity statistical institutes and BHAS are regulated by the Law.
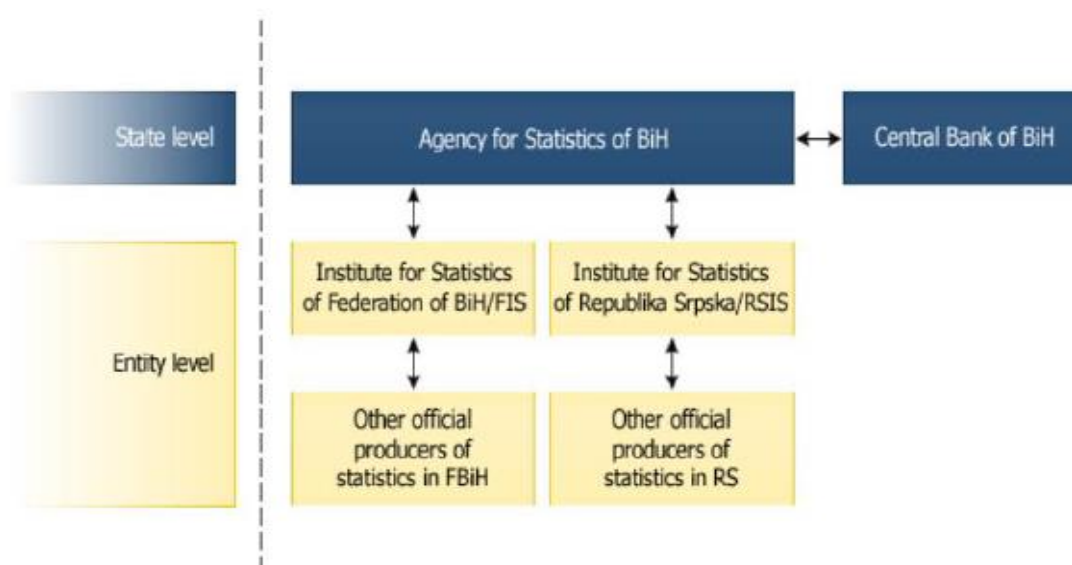
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[6] See http://www.bhas.ba/dokumenti/stat.zakon-en.pdf.

[7] See http://www.bhas.ba/index.php?lang=en.

[8] See http://www.fzs.ba/eng/index.htm.

[9] See http://www.rzs.rs.ba/.

Figure 1 - Diagram: Statistical system of BiH[10]

(21) BHAS is in charge of coordinating the work of the statistical authorities on the entity level. In particular BHAS shall be responsible for international representation and co-operation with international organisations and other bodies and carry out Bosnia and Herzegovina's international responsibilities in the field of statistics (Article 8 2a of the Law).

(22) The entities have their own laws on statistics defining the mandates of the statistical authorities in terms of collection, production, processing and dissemination of entity-level statistics.

(23) In the laws in force a general provision allowing statistical authorities to use administrative data for statistical purposes is missing. In one area access to administrative tax data is granted by Article 52 of the Amendment to the Law on Indirect Taxation. According to this provision data, records or reports obtained as a result of fulfilling obligations related to indirect taxes are confidential and may be used only for the purposes of indirect taxation or for the enforcement of sanctions related to indirect taxes. Data cannot be disclosed or published by any other party, except in the cases of cooperation with BHAS and with the statistical institutes of the entities for the submission of data necessary to perform activities in their jurisdiction.

(24) BHAS may, where it considers necessary for the performance of its functions, collect statistical data from any statistical authority in the entities and from other BiH institutions for its statutory functions.

(25) BHAS may require entities to provide any or all data within entities' statistics, including cells of individual statistical units, which BHAS deem relevant to implement the Statistical Programme (Article 3 of the Law). Such data may include confidential data within the meaning of the Law or data that the entities' legislations may classify as confidential (Article 8 2f of the Law).

(26) When implementing the statistical programme, staff of the BHAS, FIS and RSIS shall not seek or take instructions from governments, other state's authorities, political parties or any other interest

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[10] See http://www.bhas.ba/?option=com_content&view=article&id=46&lang=en

groups in the selection of data sources, statistical methods and procedures, in the contents, form and time of dissemination, and in the application of statistical confidentiality" (Article 20 of the Law).

(27) Business statistics are organised in quite different ways in the three statistical authorities.

(28) In BHAS, the "Sector for business statistics" comprises four departments:

- Department for Industry and Construction Statistics;
- Department for Services Statistics;
- Department for Structural Business Statistics; and
- Department for Statistical Business Register.

(29) In FIS, the "Sector for business statistics" comprises six departments:

- Department for Industry and Construction Statistics;
- Department for Foreign Trade and Services;
- Department for Structural Business Statistics;
- Department for Statistical Business Register;
- Department for Geographical Information System (GIS) and Register of Spatial Units; and
- Department for Agriculture, Fishery, Forestry and Environment.

(30) In RSIS, business statistics organisationally belong to the three following sectors:

- Economic Statistics Sector (Production Statistics Division and Services Statistics Division);
- National Accounts, Registers and Samples Sector (National Accounts Division and Division for Registers, Samples and Classifications); and
- Labour, Prices, Living Standard and Environment Statistics Sector (Labour and Environment Division, Prices and Living Standard Statistics Division).

(31) The relations between BHAS and entities' institutes are regulated by the "Agreement on the implementation of harmonized methodologies and standards in preparing the statistical data of BiH"[11]. This agreement includes inter alia the following provisions:

- Statistical institutions in BiH should use statistical standards, methodologies, classifications and nomenclatures prescribed by BHAS, which are compliant with EU and international standards;
- BHAS and entity institutes for statistics should cooperate in the development of statistical standards, methodologies, classifications and nomenclatures.
- The multi-year programme and the annual work plans of BHAS determine the priorities of all statistical activities in BiH. The implementation of priority activities, and other activities related to production of statistics relevant to BiH, have priority in relation to production of statistical data relevant to the entities;

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[11] See http://www.bhas.ba/dokumenti/Sporazum_o_primjeni_jedinstvenih_standarda_eng.pdf.

- Dissemination of statistical data for the level of BiH (including data for Brčko District) is under the exclusive competence of BHAS; and
- BHAS is in charge of monitoring all activities related to the production of statistics for the BiH level.

(32) Access to external expertise and international cooperation has so far been important and will remain very relevant for the development of business statistics. Within the framework of the EU Twinning Project in Bosnia and Herzegovina, phase V (September 2011 to December 2013)[12], a number of major improvements were accomplished. Major progress was made in the field of the statistical business register; the methodology of SBS was improved and SBS results have been transmitted to Eurostat for the first time in August 2013. In the domain of STS, pilot surveys on building permits for construction statistics were conducted and regular surveys in the domains of construction and retail trade were improved. A metadata strategy was outlined, and a number of methodological documents, such as the one on building permits and the one on the index of production in construction, were drafted[13].

(33) A major achievement was the development of the "Strategy 2020: Strategy for Development of Statistics of BiH"[14], which was signed by the directors of all three statistical authorities in BiH. In the current EU Twinning project[15] (from September 2014 to September 2016), further improvements of the business register are envisaged. The development of a methodology of business demography and the development of price indices in the fields of construction and services are also planned.

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[12] See http://www.dst.dk/en/consulting/projects/Bosnia-Herzegovina2011.

[13] These preliminary documents were not yet published.

[14] Strategy for Development of Statistics of Bosnia and Herzegovina 2020, Sarajevo 2013.

[15] See http://www.dst.dk/en/consulting/projects/bosnia-herzegovina2014.

2.   Findings

2.1   Infrastructural elements

(34) Business statistics are based on a number of concepts and methodological elements the relevance of which goes beyond business statistics. Because of this fundamental role, common methodological elements such as statistical units, classifications and business registers in the EU are all based on Regulations. Any assessment of a system of business statistics which does not cover the compliance of the infrastructural elements of business statistics with EU standards would be quite incomplete.

(35) The gaps towards EU standards as reported in the following paragraphs may considerably reduce the comparability of results of business statistics for BiH and for EU Member States.

2.1.1   Statistical units

(36) Regulation (EEC) No 696/93[16] on statistical units for the observation and analysis of the production system is one of the most influential of all legal acts governing the European Statistical System (ESS).

(37) At present, the main statistical unit in business statistics in BiH de facto is the legal unit, although the publications always refer to enterprises, a fact that might lead to misinterpretations. In SBS, according to Regulation (EC) No 295/2008[17] enterprise results are based on the legal unit, while information on the kind-of-activity unit (KAU) level is missing. In STS, the enterprise is used "as approximation of the kind-of-activity unit (KAU)", although Regulation (EC) No 1165/98[18] calls for the use of the statistical unit KAU for Annexes A and B. This situation is neither compliant with the provisions governing SBS nor with the ones in force for STS.

2.1.2   Classifications

(38) As regards activities, business statistics in BiH are based on the new national classification of activities KD BiH 2010, which is completely harmonised with NACE Rev. 2. CPA is used as the central classification scheme on product level. Also in the case of products, a national version of the classification of products by activities (KPPD BiH 2010) was prepared, and is completely harmonised with CPA 2008.

(39) The economic classifications in use and some background information related to the classifications are accessible in local language on the BHAS website[19].

2.1.3   Business register

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[16] Council Regulation (EEC) No 696/93 of 15 March 1993 on the statistical units for the observation and analysis of the production system in the Community.

[17] Regulation (EC) No 295/2008 of the European Parliament and of the Council of 11 March 2008 concerning Structural Business Statistics.

[18] Council Regulation (EC) No 1165/98 of 19 May 1998 concerning Short-Term Statistics.

[19] For more information see http://www.bhas.ba/?option=com_content&view=article&id=86&lang=en.

(40) The Statistical Business Register (SBR) in BiH was developed as part of the Twinning Project[20] with the help of experts from Statistics Denmark. A data model and an IT application were established at state level, as well as on the level of both entities and the Brčko district. The SBR is maintained by BHAS in cooperation with the two statistical institutes in the entities. Updating of the SBR is based on using data from administrative registers (available on the entity level only), from other administrative sources and from statistical surveys carried out in the entities and the Brčko district.

(41) The exchange of information on the unit level between all statistical institutions is done on a quarterly basis, in clearly defined periods of time. Data on turnover and number of persons employed are exchanged only in size categories. These variables are currently updated annually on the basis of annual financial statements.

(42) Basic data on enterprises by NACE Rev. 2 and size classes contained in the SBR are published[21]. A methodological document is available in local language[22].

(43) The SBR includes the following information:

Administrative Units:

Legal Unit

- Identification characteristics: statistical identity number, tax identity number, name, address, phone, e-mail, etc.;
- Demographic characteristics: date of registration, date of cessation, date of last change;
- Economic/stratification characteristics: activity code, legal form, origin of capital, type of ownership, transaction accounts of Central Bank of BiH (active/blocked/closed).

Local Legal Unit

- Identification characteristics: tax identification number, name, address, phone, e-mail, etc.;
- Demographic characteristics: date of registration, date of cessation, date of last change;
- Economic/stratification characteristics: activity code.

*Statistical Units***:**

Enterprise (including entrepreneurs/crafts)

- Identification characteristics: statistical identity number, name, address (street, house number, postal code, administrative-territorial unit), phone, e-mail, etc.;
- Tax identification number of the legal unit to which the enterprise belongs;
- Demographic characteristics: date of registration, date of cessation, date of last change;
- Economic/stratification characteristics: principal activity code and secondary activities code (possibly 1 - 3), number of persons employed, turnover;
- Status (active/inactive).

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[20] Support to the European Union's statistical sector in Bosnia and Herzegovina - Phase III.

[21] See http://www.bhas.ba/saopstenja/2014/SPR_001_01_bos.pdf; Sarajevo 2014.

[22] BHAS, Improvement of the quality of Business Register; Sarajevo 2014.

Local Unit

- Identification characteristics: statistical identity number, name, address (street, house number, postal code, administrative-territorial unit);
- Statistical identity number of the enterprise (this number is not visible from the local unit, but there is a link showing which local unit belongs to which enterprise);
- Demographic characteristics: date of registration, date of cessation, date of last change;
- Economic/stratification characteristics: principal activity code and secondary activity code (possibly 1 - 3);
- Status (active/inactive).

(44) Despite all efforts a number of major weaknesses exist:

- A one-to-one relation is assumed between legal units and enterprises. *De facto* the SBR does not include information on enterprise level.
- The SBR neither includes KAUs nor local KAUs. According to present EU legislation it is not mandatory to include KAUs and local KAUs, but it is nevertheless highly recommendable to incorporate them.
- Maintenance procedures need to be improved. Direct access to administrative data such as VAT and social insurance information would allow keeping the SBR up-to-date in a much better way than at present. At the moment, the timeliness of key stratification variables is insufficient.
- Maintenance is done at entity level; coordination still seems to be a severe problem. BHAS should be provided with detailed information (turnover, employment) on unit level.
- The method of assigning a NACE code for a unit according to its principal economic activity is based on either employment or turnover. The procedure needs to be refined and standardised.
- Small units, called *entrepreneurs* (natural persons conducting an economic activity), are not included in the SBR in a way that can be considered as sufficient according to EU standards.
- The SBR does not include systematic information on foreign control which would permit compiling Inward and Outward FATS[23].
- The SBR does not contain information on enterprise groups (EG), although it is evident that multi-national enterprises are active in BiH.
- The classification of units to institutional sectors according to ESA 2010 is not available in the SBR.
- So far no links to other registers in related fields exist. Nevertheless, the process to establish a link to the register in use for foreign trade statistics was started.

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[23] On the basis of a list of enterprises under foreign control received from the National Bank a first attempt was made to compile Inward FATS for the reference year 2012. For the results see http://bhas.ba/saopstenja/2015/Inward%20FATS_2012_001_01-bos.pdf.

2.2 Compliance with EU data requirements

2.2.1 SBS

(45) The assessment concentrated on the data requirements according to the Common module for annual structural statistics (Annex I) of Regulation (EC) No 295/2008.

(46) SBS for 2013[24] covered all activities from NACE Rev. 2 Sections B to J and L to N, private enterprises from Sections P and Q and Section S, except division 94 from Section S. Information on insurances, credit institutions and pension funds are therefore missing. No data is provided on the KAU level, no data is available on regional level. The list of available characteristics does not include 15 44 1 Investment in purchased software, 18 11 0 Turnover from principal activities at NACE Rev. 2, 18 12 0 Turnover from industrial activities, 18 15 0 Turnover from service activities, 18 16 0 Turnover from trading activities of purchase and resale and 23 11 0 Payments to subcontractors.

(47) There is an urgent need to include entrepreneurs in SBS. According to a pilot study carried out for the reference year 2013[25], there are about 42 000 entrepreneurs in BiH, a remarkable number compared to the 24 000 enterprises covered by SBS in this reference year. The share of entrepreneurs in total employment is approximately 15%.

(48) SBS are based on the survey "Annual structural business statistical survey for the enterprises"; this survey covers all enterprises (rather legal units) with 20 or more persons employed, stratified random sampling techniques are employed for the enterprises with less than 20 persons employed. This combination of full coverage of big units and the use of sampling techniques for medium- and small-size entities can be seen as a very good strategy to guarantee a high quality of the totals of a population which is characterised by a skew distribution.

(49) As part of the IPA 2012 project, work started to establish a system of business demography according to Annex IX of the SBS Regulation.

(50) A quality report for SBS according EU standards is not yet available.

2.2.2 STS

(51) As in the case of SBS the specific data requirements are laid down in Annexes to the STS Regulation (EC) No 1165/98. Four annexes are distinguished:

- Industry – Annex A;
- Construction – Annex B;
- Retail trade and repair – Annex C; and
- Other services – Annex D.

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[24] BHAS, Structural business statistics 2013; Sarajevo 2015.

[25] At present a methodological document for internal use is available. It is planned to publish the results at the end of 2015.

(52) In the domain of Industry, so far only the production indicator (Variable 110) is delivered to Eurostat. The price indices (Variables 310, 311, 312 and 313) are available, but not yet transmitted. The labour-related indicators (Variables 211 and 230) are produced by a different organisational unit of BHAS, the Labour Department. According to the plans of BHAS, the indicators related to turnover (Variables 120, 121 and 122) will be produced and transmitted to Eurostat by the end of 2015. It deserves mentioning that all indicators are based on the statistical unit "enterprise" and not on data at the KAU level as requested by Regulation (EC) No 1165/98.

(53) In the domain of Construction, all the production-related indicators (Variables 110, 115 and 116) and the information on building permits (Variables 411 and 412) are regularly produced and transmitted to Eurostat. As in the case of Industry the labour related indicators (Variables 211 and 230) are produced by a different organisational unit of BHAS, the Labour Department. Work to produce the price indicators (Variables 320, 321 and 322) has already been started. Again, all indicators are based on the statistical unit "enterprise" and not on data on the KAU level as requested by Regulation (EC) No 1165/98.

(54) In Trade, the indicators on turnover (Variable 120) and volume of sales (Variable 123) are regularly produced. It is planned to transmit them to Eurostat by the end of 2015. The labour-related indicators (Variables 211 and 230) are again produced by the Labour Department. The fact that the basic data is collected on the enterprise level is consistent with the present legal provisions. For Other services the situation is similar. The turnover indicator (Variable 120) is available and will be transmitted to Eurostat by the end of 2015. The labour related indicators (Variables 211 and 230) are produced by the Labour Department. It deserves mentioning that in all domains the legal unit is used instead of the enterprise.

(55) The majority of indicators regularly produced and published by BHAS are compliant with EU standards as regards periodicity, dissemination and definitions. However, there are important deficiencies in the case of some price indices (i.e. export and import unit value indices are produced only quarterly) and labour-related indicators (definitions are not in line with EU standards and the indicator "hours worked" is missing). The production of labour-related indicators is not harmonised with STS.

(56) The very limited use of administrative data sources for the production of STS causes a quite high burden on the reporting units. One of the reasons for this burden can be seen in the reluctance of the Indirect Taxation Authority (ITA) to deliver data, based on submitted VAT declarations, to BHAS. A high priority task is to improve cooperation with the ITA, which would significantly reduce the burden on statistics and reporting units.

2.3 Institutional environment

2.3.1 Principle 2 – Mandate for data collection

(57) The mandate of the statistical institutions in BiH to collect information for the production and dissemination of business statistics are included in three legal acts:

- Law on Statistics of Bosnia and Hercegovina ("Official Gazette of Bosnia and Herzegovina", No. 26/04 and 42/04);
- Law on Statistics of the Federation of Bosnia and Hercegovina ("Official Gazette of the Federation Bosnia and Herzegovina", No. 63/03 and 9/09); and
- Law on statistics of the Republika Srpska, ("Official Gazette of the Republika Srpska", No. 85/03).

(58) Because data are collected by entity institutes and the Branch Office of BHAS in Brčko District, the obligation to reply to business surveys is included in specific laws:

- Article 31 of the Law;
- Articles 29 and 31 of the Law on Statistics of the Federation of BiH; and
- Article 8 of the Law on Statistics of Republika Srpska.

(59) The Law and the statistical laws of the entities allow statistical authorities to penalise reporting units if they do not respond or they do not respond in time. So far, only FIS makes use of this possibility in practice.

(60) A general and unambiguous legal basis for the use of administrative data sources for business statistics is missing in BiH. In particular, the Law does not include such provisions.

(61) As already mentioned above, access to tax data is granted by the Amendment to the Law on Indirect Taxation (Article 52), which states that data obtained by the tax authorities may be made available to BHAS and entity statistical institutes to perform activities in their jurisdiction. This provision is seen as an exception from the general rule determining that data obtained as a result of fulfilment of obligation on the basis of indirect taxes, are confidential and may be used only for the purposes of indirect taxation or for the enforcement of sanctions related to indirect taxes.

(62) As a state institution, ITA is responsible for taxation and collection of indirect taxes (VAT and duties) in BiH. BHAS obtains individual data on international trade from ITA in line with the Protocol on Cooperation agreed and signed between these two institutions[26]. Based on these administrative data from ITA, BHAS regularly publishes foreign trade statistics. But so far BHAS and the statistical authorities in the entities have no access to VAT data.

(63) For the purpose of updating the SBR, the entity statistical institutions already use data from entities' tax authorities and other administrative information. Guidelines for using administrative data sources are published on the BHAS website (in local language)[27].

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[26] This protocol is not published and only available internally.

[27] BHAS; Guidelines for taking over data from administrative sources.

(64) In order to reduce burden on respondents and increase cost-efficiency, the Law and the entity-specific laws on statistics should include provisions in analogy to Article 24 of Regulation (EC) No 223/2009. This article stipulates that the NSIs and other national authorities shall have access to administrative data sources, from within their respective public administrative system, to the extent that these data are necessary for the development, production and dissemination of statistics.

(65) As already recommended in the AGA from 2011 (item 40) the legal provisions "should clearly oblige the owners of administrative data to make their data available for use, free of charge, in accordance with the requirements of the producers of statistics". Moreover, the statistical institutions should be given the right to influence the contents of administrative records to be used for statistical purposes. Furthermore, they should also be provided with all information regarding the implementation of any new administrative data files or of any changes in the existing data files". This recommendation, which is important for the efficient use of administrative data, is still valid.

(66) The amendment of the legal provisions and the full implementation of the already-existing provisions are essential to strengthen the mandate for data collection.

2.3.2 Principle 3 – Adequacy of resources

(67) In the present institutional environment the resources available in BiH cannot be considered adequate. The insufficient magnitude of staff resources does not allow for the level of specialisation that would be necessary to meet national and EU quality requirements.

(68) In all three statistical authorities 34 persons (in full-time equivalents) are engaged in STS, 12,4 persons in SBS. When interpreting these figures it needs to be taken into account, that the system is very decentralised, that no use is made of administrative data and that no means of electronic reporting and editing are yet available.

(69) The statistical authorities are competitive on the national labour market as regards salaries, although the reputation of other fields of public services is higher and the chances for a career are considered to be better compared to statistical authorities. There are few fluctuations in the labour force in the statistical authorities.

(70) The overall costs for business statistics of BiH are estimated to be in the order of 1.780.000 KM (approximately EUR 900.000). The estimates provided by BHAS for FIS (740.000 KM, ca. EUR 378.000), RSIS (500.000 KM, ca. EUR 255.000) and BHAS (540.000, ca. EUR 276.000) are based on the total number of people employed in business statistics and their net wages and salaries. Because the estimates are based on net wages and salaries and do not include overheads, the total costs are probably considerably higher.

(71) Based on these estimates, the total costs for business statistics per 100,000 population are approximately 46.000 KM (approximately EUR 23.500), the share of the costs for business statistics in GDP amounts to 0.0066%.

(72) Additional resources (and external expertise) will be required because of the need to expand the programme of business statistics, in particular in the field of STS, to improve the quality and to provide metadata.

(73) The recommended introduction of electronic means of reporting and the envisaged increase in the use of administrative data will change the data-generating process and might improve the situation as regards the total number of staff in the medium term. However, such a transformation will require restructuring the labour force and will ask for different, new knowledge and skills.

(74) Most surveys are developed with the aim to be compliant with the data requirements laid down in EU regulations for business statistics, but in order to meet the needs of users in BiH the STS surveys as well as the SBS questionnaire include a number of additional questions.

(75) No established internal training programme is offered to the staff so far.

2.3.3   Principle 4 – Commitment to Quality

(76) The quality policy concerning business statistics is part of an overall quality policy; general methodological guidelines to be used for quality measurement are available on the website[28]. Nevertheless, no specific guidelines for business statistics exist. BHAS has started preparing quality reports for established business surveys; RSIS already produced a number of quality reports for business surveys[29].

(77) No harmonised procedures are in place to monitor the quality of the statistical production process. As in many other fields such as in the area of the revision policy, coordination needs to be improved. The strengthening and involvement of the methodological unit might help to improve the situation. Because of constraints in available resources, the existing methodological unit is not in the position to make major contributions.

(78) Quality reports according to EU standards are not yet available.

2.3.4   Principle 6 – Impartiality and Objectivity

(79) According to Article 20 of the Law, staff of BHAS and entity institutes, shall not seek or take instructions from Governments, other State authorities, political parties or any other interest groups notably in the selection of data sources, statistical methods and procedures, in the contents, form and time of dissemination, and in the application of statistical confidentiality. These provisions are fully in line with the ESCoP and also stressed in the mission statement available on the BHAS website[30]. A related document is published on the RSIS website[31].

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[28] See http://www.bhas.ba/statistickistandardi/QRMetodology_ENG.pdf.

[29] For more information see http://www.rzs.rs.ba/front/article/1340/?left_mi=284&add=284.

[30] See http://www.bhas.ba/index.php?option=com_content&view=article&id=81&Itemid=55&lang=en.

[31] See http://www2.rzs.rs.ba/static/uploads/dokumenti/kvalitet/CoP_RZSRS_EN.pdf.

(80) There are no signs that these principles are not respected in the production and dissemination of business statistics. However, the decentralised system and the difficulties in getting access to administrative data sources reflect the political organisation of the country.

(81) Guidelines on the handling of confidential data[32] are available on the website and all staff members have to sign a declaration stating that they have read and understood the Guidelines. The detailed Guidelines inter alia include rules for the release of micro-data to institutions in government bodies (1.3.2): by providing micro-data to government bodies (i.e. users that have great and specific needs for micro-data) statistical institutions and other producers of statistics will facilitate their work regarding policy and decision making.

(82) In this context the Guidelines state that micro-data are transmitted to the government bodies if the purpose of using micro-data use is research or analysis. The procedure to obtain such data should be the same as for scientific research institutions. This part of the Guidelines should be changed, because it might be misinterpreted in a way that government bodies have a privileged access to statistical data.

(83) A Committee for Statistical Confidentiality and Data Protection, with the task to coordinate and harmonise measures and recommendations on data protection in the statistical institutions and other producers of statistics in BiH has not yet been established. The creation of such an advisory body was foreseen in the Guidelines on the handling of confidential data, published in 2010.

(84) The Guidelines are devoted to statistical confidentiality and thus to Principle 5 of the ESCoP, which is not covered by the SAQ. Nevertheless, a revision of some parts of the Guidelines is recommended in order to increase trust in impartiality and objectivity.

(85) Errors discovered in published documents are corrected immediately. The corrected version of the document is published on the website with the mark "Corrected version". Explanations on the reason for correction are also provided on the website. Guidelines for correcting mistakes are published on the BHAS website[33].

(86) A fully coordinated revision policy for STS and SBS surveys has not yet been developed. The policy differs between the statistical authorities, for example in RSIS the preliminary data for STS are at the same time considered as final data and data revisions are only foreseen for annual statistics.

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[32] BHAS, Fundamental Principles and Guidelines on statistical confidentiality and data protection to be implemented by relevant statistical institutions and other producers of statistics in Bosnia and Herzegovina, Sarajevo 2010

[33] See http://www.bhas.ba/statistickistandardi/Uputstvo_ispravljanje_gresaka_en.pdf.

2.4   Statistical processes

2.4.1   Principle 7 – Sound methodology[34]

(87) A number of methodological-oriented documents for SBS and STS are published on the website by BHAS and by the entities[35], some of them only in local language. A number of related documents are also made available by RSIS and FIS[36].

(88) Definitions, concepts and classifications relevant for SBS and STS are available and published for all established surveys on the websites of all three statistical institutions. Rather detailed "Notes on Methodology" are included in publications such as the one on SBS for the reference year 2013.

(89) In 2012, a manual for preparing quality reports called "Quality Report for Statistical Survey – methodological guidelines for preparation" was prepared and published[37]. A standardised metadata system has not yet been developed.

(90) The methodological/technical infrastructure for defining and monitoring implementation, as well as validating the results of processes such as sampling, data collection, data editing, etc. is not well developed in BiH. The involved methodological units are very small, also on the level of the entities. Coordination is primarily based on ad hoc meetings of small internal working groups. The lack of such a methodological/technical infrastructure and of sufficient resources in this field can result in major deficiencies as regards consistency.

(91) Staff of the statistics institutes of BiH is recruited openly and based on competence. No adequate structure ensuring continuous vocational training of the staff is in place. Staff members have the possibility to attend local seminars and workshops, as well as seminars and workshops provided by different international organisations, in particular if the participation is financed by these organisations.

(92) Cooperation with the scientific community is weak and needs to be improved. BHAS has signed a Memorandum of Understanding with the School for Economics and Business of the Sarajevo University in 2014[38], but there are no regular contacts with the scientific community (e.g. through conferences, workshops, task forces, etc.) to discuss developments in methodology, IT and innovation.

(93) All business statistics are based on the SBR. The SBR is regularly updated (see 2.1.3). The frame for SBS and STS is the same and refers to the status of the SBR at the end of the previous year. For STS purposes the frame is a "frozen frame". Entrepreneurs are not included in the frame.

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[34] The assessment referring to items 2.2, 2.3 and 2.7 of the SAQ were treated under Chapter 2.2.

[35] See http://www.bhas.ba/metodoloskidokumenti/STS_2012-001_01-bh.pdf and http://www.bhas.ba/metodoloskidokumenti/BHAS_Metodoloski_dokument_Eng.pdf.

[36] See http://www2.rzs.rs.ba/static/uploads/metodologije/strukturne_poslovne_statistike/SPS-Metodologija_2014.pdf and http://www2.rzs.rs.ba/static/uploads/metodologije/strukturne_poslovne_statistike/SBS_2014.pdf.

[37] See http://www.bhas.ba/statistickistandardi/QRMetodology_ENG.pdf.

[38] This memorandum is not published and only available internally.

(94) As already mentioned in section 2.2, in SBS the underling statistical unit is not the enterprise but the legal unit, no information is available on the KAU level. In STS the enterprise (rather the legal unit) is used as approximation for the KAU in the modules for Industry and Construction. The samples are not coordinated with the objective to reduce response burden.

(95) As already mentioned above, in SBS large units are surveyed with full coverage, while small and medium-size units are surveyed using stratified random sampling methods. There is full geographical coverage.

(96) Data is collected on the basis of traditional questionnaires; in STS respondents receive the questionnaires for all twelve months of a reference year in advance in January. Electronic means of reporting are not yet available. A number of checks are built-in and performed in the data entry process. No administrative data is used for SBS and STS purposes so far.

(97) Standard errors are calculated only at the entity level by the entity authorities and not on the state level, because BHAS has no access to individual data.

2.4.2 Principle 8 – Appropriate Statistical Procedures

(98) As mentioned before, administrative data are not used for compiling STS or SBS, only some variables are checked with the help of information from financial statements. Financial statements are used by the entities and Brčko District for updating the information in the SBR on the number of person employed.

(99) Because the systematic integration of administrative data in business statistics has not yet started, differences between administrative and statistical definitions and concepts have not been studied in detail.

(100) SBR staff in the entities and the Brčko District is responsible for updating the NACE codes. This decentralised procedure might well result in a lack of consistency.

(101) All new questionnaires are tested through pilot surveys before the start of regular surveys. Questionnaires are designed in a coordinated manner by staff members responsible for each statistical domain, also as regards explanatory notes. Electronic questionnaires have not been introduced yet.

(102) Data collection techniques are not monitored on a regular basis, and no regular training courses are offered to survey managers. Respondents are provided with necessary support for filling in questionnaires. The letters sent to the reporting units include the name of domain statistician who may be contacted and the respective phone number and e-mail address.

(103) Reporting units, which did not answer or submitted incomplete questionnaires, are contacted by telephone by the responsible authorities. The reasons for non-response are documented and reported to the experts engaged in keeping the SBR up-to-date.

(104) Questionnaires are controlled visually by cantonal/regional offices and prepared for data entry by the central offices of the statistical institutes in the entities. In the validation process, a

distinction is made between ''soft" and "hard" errors. In case "hard'' errors are detected, the information needs to be corrected either by contacting the reporting unit or by using some other data source.

(105) In SBS surveys there is full coverage of all enterprises (legal units) with twenty or more persons employed. The sampling techniques for the random sample of the small and medium size units are well established. Inter alia the territorial affiliation (entities or Brčko District), activity and employment class are used as stratification criteria. The sample size for units with 0 to 19 persons employed is 36.3% of the units included in the SBR. In total the survey addresses approximately 11.000 units.

(106) In STS, the indices calculated for Industry and Construction (Annex A and B of Regulation (EC) No 1165/98) are based on cut-off samples (more than twenty persons employed or turnover of 500.000 KM or more). For the indices for Retail trade and Other services (Annexes C and D), a combination of full coverage of large enterprises and stratified random sampling for medium and small size enterprises is used.

(107) For Industry and Construction the sampling rate is approximately 90% of total turnover, for Retail trade and Other services the sampling rate is even higher and reaches approximately 98% of turnover. More than 7.680 enterprises provide data for STS, about 4.600 are located in the Federation of Bosnia and Herzegovina, more than 2.550 in the Republika Srpska and only about 520 in the Brčko District.

(108) The available methodological documents and methodological notes included in the publications of results comprise descriptions of the approaches applied for survey sampling, sample selections and estimation.

(109) There is a clear strategy for dealing with unit non-response: for all enterprises in census strata and other strata with low response rates, imputations on unit level on the basis of historical data (previous month/quarter, the same period of previous year, average of previous period) of the same reporting unit are made. Historical information is updated with the help of growth rates of similar enterprises (in the same strata); in STS seasonal effects are taken into account. Non-response in all other cases is taken into account by adjusting the initial grossing-up weights for non-response.

(110) The effects of imputations are not analysed in a systematic way, and detailed metadata is missing. Controls by BHAS concentrate on longitudinal plausibility, and only a few cross-sectional checks are carried out.

(111) Some STS indicators are revised on an annual basis when additional information becomes available, but the revision policy differs between entities. In some cases the reasons for major revisions are explained in footnotes.

(112) Surveys include a remarkable number of additional variables for national users, but not all of the results are published. The questionnaires also include questions on the time used for filling in the questionnaire.

2.4.3　Principle 9 – Non-excessive burden on respondents

(113) Not all of the data collected from the business surveys are published; this refers in particular to information collected for users within the statistical system.

(114) One of the key objectives in the process of revising questionnaires is to avoid double-reporting and eliminate redundant questions. As already mentioned, questionnaires include questions on the time used for filling in the questionnaire. Results have never been published. No attempts were made to quantify the response burden caused by business statistics and to analyse the distribution of burden and factors causing changes in the response burden.

(115) The potential to reduce the response burden in BiH is very high. So far administrative data sources are not widely used, and electronic means of reporting are not yet offered to respondents.

2.4.4　Principle 10 – Cost Effectiveness

(116) The effective use of resources for the production of business statistics is not subject to internal or external control. There is no systematic recording of costs related to business statistics.

(117) Measures aiming at improving the efficiency of data collection and data analysis in the recent past include the implementation of IT applications, which facilitate data editing after the data entry process and allow the automatic generation of tables for analytical purposes.

(118) As already highlighted in context of the need to reduce response burden, cost effectiveness could be considerably increased by making extensive use of administrative data sources and by introducing electronic means of reporting.

2.5　Statistical outputs[39]

2.5.1　Principle 11 – Relevance

(119) The Law does not include an obligation to consult users. In the field of business statistics there are no permanent working groups which could stimulate cooperation with major stakeholders. The high level Statistical Council of Bosnia and Herzegovina (established according to the Law) cannot fulfil this role. It is highly recommended to create an advisory board dealing with methods and aiming at improving the cooperation with data providers and users.

(120) In BiH the statistical authorities in the entities have their own release calendars; the release calendar of BHAS is available on the website in local language[40]. The release of results is not coordinated between the different statistical authorities in the entities. In some cases the results for one entity were published a few days before the results on the state level were made available to the public. No pre-release of any statistical results is granted.

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[39] The information related to item 3.4 of the SAQ was already covered in Chapter 2.2.

[40] See http://bhas.ba/statistickistandardi/KALENDAR_PUBLIKOVANJA_ba.pdf.

(121) The tables below show, which SBS and STS indicators are disseminated by BHAS. For the majority of indicators, periodicity and timeliness is in line with the current legal requirements in the fields of STS and SBS. An exception is V313 Unit value index, where the periodicity should be monthly. For some STS indicators approximations by other indicator are used i.e. for V210 Number of persons employed - V211 Number of employees is used, for V330 Deflator of sales - V123 Volume of sales is used and for V340 Import prices - V313 Unit value index is used.

Table 1 – STS indicators disseminated by BHAS

STATISTICS		List of indicators	Variables	Periodicity	Timeliness in days
STS indicators	Industry	Production	V110	Monthly	T+25
		Turnover, domestic turnover, non-domestic turnover	V120, V121, V122	Monthly; under development	
		Producer prices, domestic producer prices, non-domestic producer prices	V310, V311, V312	Monthly	T+20
		Unit value index	V 313	Quarterly	T+50
		Number of employees, gross wages and salaries	V211, V230	Monthly	T+50
	Construction	Production, production of buildings, production of civil engineering	V110, V115, V116	Quarterly	T+50
		Building permits: No. of dwellings, building permits: useful floor area in m^2	V411 and V412	Quarterly	T+50
		Construction costs, material costs, wage costs	V320, V321 and V322	Quarterly; under development	
		Number of employees, gross wages and salaries	V211, V230	Monthly	T+50
	Trade	Turnover, Volume of sales	V120, V123	Monthly	T+28
		Number of employees, gross wages and salaries	V211, V230	Monthly	T+50
	Other services	Turnover	V120	Quarterly	T+55
		Producer prices	V310	Quarterly; under development	
		Number of employees, gross wages and salaries	V211, V230	Monthly	T+50

Table 2 - SBS indicators disseminated by BHAS

STATISTICS	List of indicators	Variables	Periodicity	Timeliness in days
Main SBS indicators	Number of enterprises Turnover Production value Value-added at factor cost Gross operating surplus Total purchases of goods and services Personnel costs Number of persons employed	V11 110, V12 110, V12 120, V12 150, V12 170, V13 110, V13 310, V16 110	Annually	T+270 preliminary and T+540 final

(122) STS indicators are expressed in the form of indices and growth rates and published as original (unadjusted), seasonally and calendar adjusted indices. An old software version is used for seasonal adjustment.

(123) A national online dissemination database does not yet exist. So far no user satisfaction survey specifically dealing with business statistics was carried out. However, the results of a general user satisfaction survey implemented in January and February 2012 are available[41].

2.5.2   Principle 12 – Accuracy and Reliability

(124) Data sources, intermediate and final results are regularly controlled, but a standardised and well documented procedure is missing. Coefficients of variation are calculated on entity level. Results are released in methodological documents.

(125) Under-coverage is present because entrepreneurs are not included in the frame. The various types of possible measurement errors are not assessed in a systematic way.

(126) The overall non-response rates for SBS are considerably high (21,6% for 2013) and much higher than the rates for STS: as regards the surveys for STS purposes, the rates differ remarkably by regions and by surveys with a range between 0,5 % and 17%. Miscoding of the activity and wrong addresses are the most relevant reasons for non-response, at least in the case for STS in FBIH, for which this kind of evidence was provided.

(127) The methods for dealing with unit non-response were already described above. Detailed imputation rates on the level of variables are not available.

(128) So far, the quality of business statistics is not analysed and documented systematically, but evidence on some dimensions of quality is available and published in methodological documents.

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[41] BHAS: http://www.bhas.ba/ankete/azk/AZK_2012M02-en.pdf;
   FIS: http://www.fzs.ba/fzssurvey/index.php/survey/index/sid/543895/newtest/Y;
   RSIS: http://www.rzs.rs.ba/front/article/1374/.

2.5.3 Principle 13 – Timeliness and Punctuality

(129) BHAS respects deadlines and submits SBS and STS data in time according to the relevant EU Regulation.

Table 3 - Main phases of the SBS and STS data production process in BiH

Monthly/ Quarterly and Annual results for the year 2013	Main dates in the national production process					Reasons for late delivery if this has occurred
	Date of start of data collection	Date of end of data collection	Date of end of quality check and weighting for statistics published in press release	Date of national publication of press release	Date of national dissemination of micro data and metadata	
SBS	April	July	August	October	-	-
STS	First day of next month/ quarter for previous month /quarter	10th in the current for the previous month 20th in the month for the previous quarter	18th/20th in the current month for the previous month and 40/45 days for the previous quarter (for quarterly surveys)	25th/28th in the current month for the previous month (for monthly surveys) and 55 days for the previous quarter (for quarterly surveys)	-	-

(130) In cases where the target dates included in the release calendar cannot be met, an announcement is published on the website in advance, providing an explanation for the reason of the delay. This procedure is part of the dissemination policy.

2.5.4 Principle 14 – Coherence and Comparability

(131) Internal data coherence is monitored in various ways, but not systematically documented. STS results for Industry and Construction are analysed and compared with other monthly, quarterly and annual data. Preliminary SBS data are compared with the results of the previous year on two digits level of NACE Rev. 2 and with value added estimates of National Accounts. The numbers of employees according to SBS are compared with the results of Labour Market Statistics.

(132) No systematic evidence is available for changes at concept level that affect comparability across years, although the various steps towards compliance with EU standards resulted in a number of

modifications in concepts during the last years. Systematic evidence is also missing for changes in processes affecting comparability over time.

(133) The major deviations in concepts from EU standards causing major consequences for comparability are the use of the legal unit instead of the enterprise as the key unit in SBS, the use of this unit instead of KAU in the Industry and Construction modules of STS and the under-coverage because of the exclusion of entrepreneurs.

(134) The key problem of internal consistency in BiH is not directly addressed in the SAQ. Because of the decentralised data-generating process and the limited possibility to control this process in all its aspects, results for the different entities will probably not always be fully compatible.

2.5.5   Principle 15 – Accessibility and clarity

(135) The results of business statistics are disseminated using traditional communication means such as printed publications as well as modern instruments. Many results are accessible to users on the websites, many of them also in English. On the entity level results are also offered as Excel files.

(136) The provision of metadata is not satisfactory. As a consequence, users are not well informed about the quality of data in all dimensions such as for example comparability with EU Member States' data. The available documentation for some domains is not always up-to-date.

(137) Custom-designed analyses can be provided on request on entity level. Access to micro-data for research purposes is also possible only on entity level.

(138) A hotline answers questions related to statistical results and provides background information such as on methods, dates of publications etc. A section with FAQ is not yet offered.

3.   Recommendations

3.1   Statistical infrastructure

3.1.1   Statistical units

Rec. 1 There is a **strong need to integrate enterprises, KAUs and local units into business statistics** according to the concepts laid down in Regulation (EEC) No 696/93. The ongoing discussions on the European level on the implementation of Regulation (EEC) No 696/93 should be taken into account.

3.1.2   Business register

Rec. 2 The role of the business register as the backbone of business statistics should be further strengthened.

1. *The SBR should include enterprises, KAUs and local KAUs although the inclusion of KAUs and local KAUs is not mandatory according to present EU legislation. The ongoing discussions at European level on the implementation of Regulation (EEC) No 696/93 should be taken into account.*
2. *Because of the decentralised organisation more coordination and standardisation of all activities in the field of SBR is urgently needed. All statistical authorities should have access to all individual data on entity level as contained in the SBR.*
3. *Maintenance procedures need to be improved by making use of administrative data sources such as VAT and social insurance information. A regular data exchange with the owners of these sources is highly recommended.*
4. *The SBR should cover all active units including entrepreneurs.*
5. *The method of assigning a NACE code according to its principal economic activity has to be refined; it is recommended to proceed in accordance with the proposals put forward in the Eurostat Manual "NACE Rev. 2 - Statistical classification of economic activities in the European Community".*
6. *The register should contain complete and up-to-date information on foreign control of domestic legal units.*
7. *The identification of multinational enterprise groups is recommended.*
8. *All entities should be coded according to the institutional sectors distinguished in the ESA 2010. The codes need to be checked annually.*
9. *It is advisable to establish a task force with experts from all statistical authorities, experts working in the field of National Accounts and in other institutions such as the Central Bank for the classification of big units.*
10. *Links to all other statistical registers in related fields should be established.*

3.2 Meeting EU data requirements

3.2.1 SBS

Rec. 3 Aligning SBS to EU standards and requirements as planned in FRIBS.

1. *This process of step-wise alignment to EU standards should take future data requirements as included in FRIBS into account in order to avoid duplications in efforts and too many breaks in time series. The first steps should however be taken very soon. The necessary steps include:*
   a. *Extension of the scope; inclusion of small enterprises (entrepreneurs).*
   b. *Extension of the scope; inclusion of all activities classified in for Sections B to N and division 95 of NACE Rev. 2.*
   c. *Integration of characteristics currently missing.*
2. *Proposals for annual statistical domains/projects closely related to SBS:*
   a. *Development of a system of business demography.*
   b. *Coordination with planned and ongoing activities in the fields of FATS, ICT, Innovation, R&D and Labour cost statistics.*

3.2.2 STS

Rec. 4 Full implementation of the requirements concerning STS as laid down in the current Regulation (EC) No 1165/98 as well as requirements planned in FRIBS.

1. *This process of step-wise implementation of EU standards should take the future data requirements as included in FRIBS into account in order to avoid duplications in efforts and too many breaks in time series. The first steps should however be taken very soon. The necessary steps include:*
   a. *Adjustment of definitions for labour indictors to EU standards.*
   b. *Provision of fully coordinated labour related indicators.*
   c. *Development of all price indices in Construction and Other services (CPPI and SPPI).*
   d. *Production of an Export Price Index (XPI) as a part of Producer Price Index (PPI) with monthly frequency.*
   e. *Production of an Import Price Index (MPI) with monthly frequency and based on CPA 2008.*
2. *Making full use of all administrative data sources.*
3. *Continuation of work in close cooperation with price statistics and National Accounts.*
4. *In the area of working day and seasonal adjustment use should be made of best practice, and the newest versions of software should be implemented.*
5. *The development of current and missing STS indicators will require additional resources and expertise, including external expertise.*

3.3 Institutional environment

Rec. 5 **Revision of the laws governing statistics** aiming at providing a general and unambiguous legal basis for the use of administrative data sources for statistical purposes.

Rec. 6 **Full implementation of the already existing legal provisions** as regards access to administrative data sources and exchange of information on unit level between statistical authorities.

Rec. 7 **It is recommended to seek and to intensify cooperation with the owners of administrative data.** Staff responsible for administrative data should be fully aware of the role that their information plays for high-quality statistical evidence.

Rec. 8 **Self-commitment of the three statistical authorities** engaged in business statistics towards developing an integrated and harmonised statistical system for BiH.

Rec. 9 **Information on existing provisions** which allow statistical authorities to **penalise** reporting units if they do not respond or they do not respond in time should be made available on the website.

Rec. 10 **Provision of additional resources;** staff should be in a position to specialise and to carry out analyses of the data. Additional resources and external expertise are required to expand the programme, to improve quality and to provide metadata. The reorganisation of the data generating process with the help of electronic means of reporting and editing and the increased use of administrative data might help to create the necessary capacities.

Rec. 11 In the interest of increasing the confidence in the objectivity of the statistical system it is advised to **revise the Guidelines on handling confidential data**, making clear that government bodies have no privileged access to micro-data and the same rules are to be applied for providing micro-data for research to both government users and scientific research institutions.

Rec. 12 The **establishment of a Committee for Statistical Confidentiality and Data Protection** might contribute to the trust in statistical confidentiality and is recommended. Trust in statistical confidentiality is essential for the quality of primary information from the reporting units.

Rec. 13 The development of **a coordinated and explicitly formulated revision policy** is highly advisable. A document outlining the revision policy for business statistics should be prepared and made available on the website.

Rec. 14 **Major changes in concepts and processes should be announced** on the website in advance**.** If possible, estimates of the impacts of such changes on key results should be made available.

3.4 Statistical processes

Rec. 15 The **development of general standards for sampling, editing, etc. is recommended**. The development of such detailed standards is of special relevance in the decentralised system of BiH in order to ensure consistency. Use should be made of well-established best practice and the know-how included in documents such as the Memobust Handbook.

Rec. 16 It is advisable **to establish an organisational framework for the assessment of all statistical processes**. It is recommended to establish a standing working group consisting of experts in business statistics and other organisational units of BHAS and the entity authorities. External experts from the academic world and from among main stakeholders should be invited to participate in this process as well.

Rec. 17 **More training** should be offered to staff in all institutions involved in the production of business statistics on a regular basis. Internal training programmes should be based on Eurostat Manuals and on ESSnet results such as Memobust, the Centre of Excellence (CoE) on seasonal adjustment and the CoE on statistical confidentiality.

Rec. 18 **Cooperation with the scientific community should be** intensified by all institutions involved in the production of business statistics in BiH**.**

Rec. 19 BHAS should aim at a stronger **involvement in the international community** through the participation in conferences and workshops. More contacts would facilitate the transfer of existing know-how.

Rec. 20 It is recommended to **harmonise the revision policy** and to publish it on the website to increase transparency (see also Rec. 13).

Rec. 21 **Substitution of information collected with the help of direct surveys from respondents by administrative data.** In order to increase cost-efficiency and reduce response burden, administrative data should be exploited to a bigger extent. In particular social security data and VAT data are important sources in this respect.

Rec. 22 It is highly recommended to **establish an inventory of all administrative data** sources which might be of interest for business statistics. The identified sources should be analysed carefully whether and to which extent they are compatible with the concepts and definitions of business statistics.

Rec. 23 In the interest of consistency the **design of survey questionnaires and the texts of explanatory notes need to be well coordinated**. Although the accounting systems in the entities are not fully comparable, the use of the same questionnaires and the same explanatory notes (with some additional clarifications) in all entities should be envisaged.

Rec. 24 The implementation of a system of **electronic instruments of reporting** with built-in checks, easy access to explanatory notes etc. should have top priority. In the interest of consistency and cost-effectiveness it is recommended to put into practice the same basic system in all entities, allowing for entity specific versions. Use should be made of the rich experience already available in many countries.

Rec. 25 All **data collected in business surveys should be published**, at last in the form of "working tables" available on the website.

Rec. 26 It is strongly recommended to measure **response burden and the development of the response burden** (and its determining factors) in a systematic way and to develop indicators

assessing the reduction of response burden. Basic data on the time necessary for filling in questionnaires are already available. The results of response burden indicators compiled according to the standards already in use in many Member States should be published on the website in regular intervals.

Rec. 27 The necessity to include additional questions (going beyond EU data requirements) in the questionnaires should be assessed annually.

Rec. 28 The **implementation of a time recording system** can help to monitor costs of the various steps in the data generating process and might become of special relevance in the recommended transformation phase towards a system increasingly based on electronic instruments and the use of administrative data sources.

3.5 Statistical outputs

Rec. 29 **The dialogue with users needs to be intensified**. The high-level Statistical Council of Bosnia and Herzegovina (established according to the Law) cannot fulfil this role. It is recommended to create a specific **working group for business statistics,** which should meet regularly. This permanent working group should consist of all major stakeholders, users as well as providers of data.

Rec. 30 P**olicies regarding the time of publication of data in the different entities should be harmonised**; statistical results should be released in all entities at the same time. A harmonised policy also calls for harmonising release calendars.

Rec. 31 It is recommended to **develop a national online database** to facilitate access to statistical information.

Rec. 32 Methods applied for working day and **seasonal adjustment** of time series should be based on the most up-to-date versions of software.

Rec. 33 It is advisable **to carry out user satisfaction surveys** in regular intervals; such surveys should include business statistics specific questions.

Rec. 34 **Quality reports according to EU standards should be developed and published**; they should include detailed descriptions of the processes used for dealing with unit and item non-response and contain quantitative information on imputation rates. The system of metadata to be developed also needs to document changes in concepts and in processes in a systematic way.

Rec. 35 The **Eurostat Quality Assurance Framework (QAF)**[42] ought to be fully implemented.

Rec. 36 **Guidelines on handling of confidential data** to be revised (see Rec. 11) should include detailed rules for the access to micro-data for scientific research purposes and procedures for customs-designed analyses. The rules should be the same in all entities.

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[42] See http://ec.europa.eu/eurostat/documents/64157/4372717/Eurostat-Quality-Assurance-Framework-June-2013-ver-1-1-EN.pdf/352234ca-77a0-47ca-93c7-d313d760bbd6.

4.   Roadmap and priorities

This chapter includes a few considerations concerning priorities and a roadmap towards the implementation of the recommendations presented in the previous chapter. The chapter is not 'exhaustive' and is limited to the most relevant and interrelated recommendations.

The first group of measures contains the ones that are of strategic importance, and are necessary conditions for the implementation of other measures. They are dependent on changes in the legislation and require decisions by the top management. The implementation of SBS and STS according to FRIBS concepts is crucially dependent on the implementation of the recommendations related to statistical infrastructure.

Priority should be given to all measures aiming at the increased use of administrative data sources and the implementation of electronic instruments for data collection and editing.

4.1   Measures that require changes in the legislation and coordinated decisions by top management in all entities

- Revision of the laws governing statistics aiming at providing a general and unambiguous legal basis for the use of administrative sources for statistical purposes (Rec. 5).
- Full implementation of the already existing legal provisions as regards the access to administrative data sources (Rec. 6).
- Self-commitment of the three statistical authorities engaged in business statistics towards developing an integrated and harmonised statistical system for BiH (Rec. 8).
- The implementation of a harmonised system of electronic reporting (Rec. 24).

4.2   Top priority measures - implementation should be started in 2015

- Delineation of enterprises, KAUs etc. (Rec. 1).
- Measures related to the business register (Rec. 2).
- Development and publication of the CPPI and the SPPI (Rec. 4).
- Development of coordinated labour indicators (Rec. 4).
- Measures aiming at strengthening the coordination role of BHAS (Rec. 8).
- Increase in human resources; need for additional external expertise (Rec. 10).
- Publication of all data collected on the website (Rec. 25).
- Harmonisation of dates of publications and of the release calendars (Rec. 30).

4.3 High priority measures - implementation should at least be started in 2016

- Aligning SBS to EU standards and orientation on the future data requirements as planned in FRIBS (Rec. 3).
- Full implementation of the requirements concerning STS as well as taking the requirements planned in FRIBS (Rec. 4).
- Information on the system of sanctions in place in case of non-reporting (Rec. 7).
- Development of general and harmonised standards for statistical processes such as inter alia for sampling, editing (Rec. 15).
- Organisational framework for the assessment of all statistical processes (Rec. 16).
- Additional training efforts (Rec. 17).
- Intensification of cooperation with the scientific community (Rec. 18).
- Development of a coordinated and explicitly formulated revision policy (Rec. 20).
- First steps towards substitution of information collected with the help of direct surveys from respondents by administrative data (Rec. 21).
- Inventory and analysis of all administrative data (Rec. 22).
- First steps towards the introduction of electronic reporting (Rec. 24).
- Measurement of the response burden on a regular basis (Rec. 26).
- Establishment of a permanent working group on business statistics (Rec. 29).
- Development of a national online database (Rec. 31).
- Stepwise establishment of a system of quality reporting (Rec. 34 and 35).
- Publication of an official policy for the access to micro-data for scientific purposes and for customs-made statistical analyses (Rec. 36).

4.4 Top priority measures - implementation in the medium term

- Full implementation of SBS according to FRIBS concepts (Rec. 3).
- Full implementation of STS according to FRIBS concepts (Rec. 4).
- Extensive substitution of information collected with the help of direct surveys from respondents by administrative data (Rec. 21).
- Extensive substitution of paper questionnaires by electronic reporting (Rec. 24).
- Implementation of a comprehensive system of quality reporting (Rec. 34 and 35).

ANNEXES

ANNEX I
Organisation of the Sector Review

The meeting in Sarajevo was well organised by representatives from BHAS. Prior to the meeting, BHAS experts in cooperation with experts from the authorities on the entity level (FIS and RSIS) had provided the completed Self-Assessment Questionnaire (SAQ). The filled-in questionnaire and answers to a short list of additional questions (primarily dealing with organisational questions and the infrastructural basis of business statistics, such as statistical units, classifications and the business register) were the starting points of the Sector Review. These documents, as well as numerous others relevant for assessing the present situation of business statistics in BiH were made available in advance and in a timely manner.

In addition to the representatives of BHAS, experts from the FIS and RSIS were also present and actively participated in the discussion.

As might be derived from the Agenda (please refer to Annex 2), the Sector Review primarily followed the structure of the SAQ developed by Eurostat. This SAQ is organised according to the principles of the European Statistics Code of Practice (ESCoP) and covers almost all of its principles.

ANNEX II
Material available

The main sources for carrying out the Sector Review were:

- The SAQ, provided by BHAS;
- Answers to additional questions raised provided also by BHAS;
- BHAS, Mission statement;
- BHAS, Statistical council;
- BHAS, Structural business statistics 2012; Sarajevo 2014;
- BHAS, Structural business statistics 2013; Sarajevo 2015;
- BHAS, Methodological Document; Structural business statistics 2012, Annexes I-IV and Foreign Affiliates Statistics (FATS); Sarajevo 2014;
- BHAS, Quality report for statistical surveys - Methodological Guidelines for Preparation; Sarajevo 2012;
- BHAS, Improvement of the quality of Business Register; Sarajevo 2014;
- BHAS, Units of the Statistical Business Register, Data as of June 30, 2014; Sarajevo 2014;
- BHAS, Statistical Business Register Basic data on enterprises for 2013; Sarajevo 2014;
- BHAS, FIS, RSIS, Methodological guidelines retail trade turnover index; Short-term statistics, Sarajevo 2014;
- BHAS, Foreign Affiliates in Bosnia and Herzegovina (Inward FATS) in 2012, Sarajevo 2015;
- BHAS, Building permits issued in the Brčko District, first quarter 2015, Sarajevo 2015;
- BHAS, Building permits issued in the BIH, first quarter 2015, Sarajevo 2015;
- Methodological Document – Building Permits, preliminary 2013;
- BHAS, Fundamental Principles and Guidelines on statistical confidentiality and data protection to be implemented by relevant statistical institutions and other producers of statistics in Bosnia and Herzegovina, Sarajevo 2010;
- BHAS, Guidelines for correcting mistakes in published releases, Sarajevo 2010;
- BHAS, Guidelines for taking over data from administrative sources, (local language) Sarajevo 2010;
- BHAS, Volume index of industrial production in Brcko District May 2015- Preliminary results, Sarajevo 2015;
- BHAS, Volume index of industrial production in BIH May 2015- Preliminary results, Sarajevo 2015;
- BHAS, Monthly indices of industrial production for Bosnia and Herzegovina, May 2014 – May 2015, Sarajevo 2015;
- BHAS, Indices of production in construction in Bosnia and Herzegovina; first quarter 2015, Sarajevo 2015;
- BHAS, Indices of production in construction in Brčko District; first quarter 2015, Sarajevo 2015
- Methodological Document – Index of production in construction; preliminary 2013;
- Law on Statistics of Bosnia and Herzegovina, Official Gazette of Bosnia and Herzegovina, Monday, 7. 6. 2004;
- The Law on Changes and Amendments to the Law on Statistics of Bosnia and Herzegovina, Official Gazette of Bosnia and Herzegovina, Friday, 10. 9. 2004;
- BHAS, FIS, RSIS; Agreement on implementation of harmonized methodologies and standards in producing the statistical data of Bosnia and Herzegovina, 2005.

Additional background information:

- Adapted Global Assessment of the National Statistical System of Bosnia and Herzegovina, September 2011;
- Report on sector review of the Labour Force Survey in Bosnia and Herzegovina, 2014;
- Strategy for Development of Statistics of Bosnia and Herzegovina 2020, Sarajevo 2013;
- BHAS, Country report for the Agency for Statistics of Bosnia and Herzegovina, 2014;
- Dženita Mustafić; Agency for Statistics of Bosnia and Herzegovina; Statistical Business Register in Bosnia and Herzegovina, 24th Meeting of the Wiesbaden Group on Business Registers, Vienna 2014.