

Report on sector review of the Business statistics in Montenegro

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List of abbreviations

BS	Business Statistics
CARDS	Community Assistance for Reconstruction, Development and Stabilisation
CV	Coefficient of variation
EU	European Union
GDP	Gross Domestic Product
IPA	Instrument for Pre-Accession Assistance
IT	Information Technologies
KAU	Kind-of-activity-unit
KD 2010	Klasifikacija Djelatnosti 2010 / Classification of economic activities 2010
MONSTAT	Statistical Office of Montenegro
NA	National Accounts
NACE	Statistical Classification of Economic Activities
NSI	National Statistical Institute
NSS	National Statistical System
NUTS	Nomenclature of Territorial Units for Statistics
PC	Personal Computer
PRODCOM	<i>FR.</i> Production Communautaire, <i>EN.</i> Community Production
SAQ	Self-assessment questionnaire
SAS	Statistical Analysis System
SBS	Structural business statistics
SIDA	Swedish International Development Cooperation Agency
SR	Sector Review
STS	Short-term statistics

Preface

1. The Sector Review (SR) on business statistics (BS) in Montenegro was undertaken in the framework of the Eurostat funded project '*Assessment of the statistical systems and selected statistical areas of the enlargement and ENP countries*'. ICON-INSTITUT in consortium with DevStat, contracted by Eurostat (contract no. 14472.2013.002-2013.694), was responsible for the organisation of all activities and tasks related to the SR. The SR process was initiated by Eurostat on the basis of a request made by the Statistical Office of Montenegro (hereinafter MONSTAT).
2. Within the assessment the following fields of business statistics were covered: Structural business statistics (SBS) and Short-term statistics (STS).
3. The review was conducted by two experts: Mr Roberto Gismondi, who acted as leading expert, and the supporting expert Ms Virginia Balea.
4. Prior to the mission MONSTAT provided the completed self-assessment questionnaire (SAQ) which has been drawn up to assess the compliance of business statistics with the principles of the European Statistics Code of Practice and with specific EU Regulations for business statistics. The filled-in questionnaire was the starting point of the review, which was carried out in Podgorica on 2-5 December, 2014.
5. The questionnaire was designed according to the needs of MONSTAT and covered the following aspects: institutional environment, statistical processes, statistical outputs and orientation on future actions.
6. The review findings were based on the analysis of the documents provided by MONSTAT as well as the documents available on their website and information collected and discussed during the in-country mission.
7. The discussions complemented the information provided in the questionnaire. An additional set of written documents was provided during the first day of the mission.
8. The overall collaboration between review experts and the MONSTAT team involved has been very constructive throughout all phases of the SR.

Executive summary

9. The SR was tailored to MONSTAT that aims at aligning business statistics with European and international standards. The business statistics domains covered by the SR were: Structural Business Statistics (SBS) and Short-term statistics (STS)
10. The main goals of the SR were:
 - to assess the administrative and technical capacity of the National Statistical System (NSS) of Montenegro to produce SBS and STS;
 - to assess the level of compliance with the EU requirements;
 - to assess the statistical production of the SBS and STS;
 - to propose a list of recommendations to be undertaken in order to improve the actual business statistics system.
11. The review was based on documentation provided by MONSTAT and on information collected and discussed during the mission.
12. The actual surveys of STS have a good methodological asset and are developed according to the main EU Regulations, although some additional developments are needed in regards to the data editing processes, the economic analysis of indicators produced and the comparison of short-term data with the corresponding structural data.
13. The main characteristics required by the STS Regulation are currently sent to Eurostat. However, there are important gaps mainly concerning industrial production (at the moment only production and turnover indices are calculated and sent, while no data are provided for the breakdown by domestic / non domestic for turnover, labour market data and producer prices) and the Annex D on other services (no data are provided so far). Hours worked are not available for any annex of the STS Regulation. Except for retail trade, indices are not deflated and no index is seasonally adjusted.
14. Regarding the SBS, shifting from survey data collection to use of administrative data will allow better estimates and reduction of burden on respondents. Nevertheless, for large and complex enterprises surveys should be conducted. The administrative sources do not provide any breakdown by kind of activity. Data on kind of activity unit or by local units need to be collected for the SBS regulation purpose and for the other national users (National Accounts and STS).
15. Further analysis of the available administrative data sources has to be carried out in order to assure the consistency of structural business statistics with other business statistics and national accounts.
16. The commitment of the staff engaged in business statistics is very high, but their capacities are used closely to 100% and, as a consequence, the number of statisticians working in this area should be increased.
17. The STS and SBS data compiled and produced by MONSTAT are available free of charge on their website, as annexes to web publications. Dissemination of data is done in a centralised manner through Excel files. There is a single entry point through a dedicated email address.

1. Legal and institutional basis

1.1 Mandate for data collection

18. The legal basis is the Law on Official Statistics and Official Statistical System No 01-374/2, 26 March, 2012¹ (the Law). The task of official statistics is to provide quantitative and representative information on economic, demographic, social and environmental issues in Montenegro to all users in accordance with the internationally defined methodology and highest professional standards.
19. The mandate of MONSTAT (and of the other producers of official statistics) to collect statistical data for the production and dissemination of official statistics is clearly specified in the Law.
20. Article 9 of the Law gives MONSTAT explicitly the responsibility for the *'Production and dissemination of macroeconomic statistics and national accounts; production of business statistics; production of demographic and social statistics; conduct of censuses; conduct of household surveys; implementation of surveys related to economy, environment and agriculture, as well as other surveys set under the Programme except for surveys under the responsibility of the Central Bank of Montenegro, with the exception of certain surveys in the finance sector'*.
21. The Development Strategy of Official Statistics 2014-2018² determines the long-term goals based on the current state of affairs, needs and future development.
22. For the purpose of full harmonisation of official statistics with the EU regulations in the area of statistics and for the medium-term planning of the development of official statistics, the Programme of Official Statistics³ has been prepared for the period 2014-2018. The Annual Survey Plan, which is derived from the Programme, is a short-term document elaborating statistical activities up to the level of statistical surveys.
23. The Annual Plan shall include the list of statistical surveys to be conducted, the list of administrative sources and data obtained by constant monitoring and observation to be used in official statistics, as well as developmental and infrastructural activities. The Law stipulates that the Annual Plan shall also include information on the funds required for the implementation of each statistical survey and censuses shall be regulated by special laws.
24. Article 27 of the above mentioned Law states that, if administrative data sources are available and may be used for meeting user needs, statistical surveys shall not be undertaken.
25. The classification of economic activities in Montenegro KD 2010 is the national classification which is harmonised with the European classification NACE Rev. 2. The legal basis for the classification is the statistical Law on the Classification of Activities which was adopted on 8 April 2011 by the Montenegrin Parliament. The Law, together with the structure and explanatory notes, was published in Official Gazette No. 18/11 from 30 March 2012. All administrative bodies are obliged to use this classification.
26. All business statistics carried out by MONSTAT are compulsory according to the same Law.
27. At the EU level the SBS are compiled under European Parliament and Council Regulation [295/2008](#) concerning structural business statistics (recast), and in accordance with the definitions, breakdowns, deadlines for data delivery, and various quality aspects specified in their implementing regulations (250/2009 and 251/2009).
28. The legal base for the European STS is Regulation [1165/98](#), as amended by Regulation [1158/2005](#) and other implementing and amending regulations.

¹ http://www.monstat.org/userfiles/file/o%20nama/11_04_12_Law%20on%20Official%20Statistics.pdf

² <http://www.monstat.org/userfiles/file/o%20nama/Development%20Strategy%20of%20Official%20Statistics%202014%20-%202018%20ENG.pdf>

³ http://www.monstat.org/userfiles/file/Program2014_2018_engleski.pdf

1.2 Adequacy of resources

29. The Department for foreign trade statistics, foreign affiliate's statistics and SBS within the sector for macroeconomic statistics, national accounts and prices is responsible for SBS. One employee only is working on SBS while the organisation chart states that 2 people should be available to work in this area. SBS does not have any person assigned for data collection because the production of SBS is based on administrative data. STS are managed within the Department for business statistics and short-term indicators, where very few staff is assigned to the task of compiling short-term statistics.

1.3 Commitment to Quality

30. MONSTAT recognises the importance of a quality policy. One of the strategic areas and objectives of official statistics is the implementation of the European Statistics Code of Practice and a Quality policy. BS follows the overall quality policy which is defined in official statistics (Law on official statistics and official statistical system Art. 6).
31. So far MONSTAT did not appoint any staff for implementing the quality policy. In the new legal act of systematisation it is defined that for this issue the main responsible body is the Department for quality management and development of methodology. However, MONSTAT produced many internal manuals and rulebooks (managed by sector experts) which have relevant impact on quality policy.

2. Main findings

2.1 General overview

32. According to the organigram, SBS is under the sector of macroeconomics statistics, national accounts and prices while STS is part of the Sector for Agriculture Statistics, Fisheries, Business Statistics and Forestry. MONSTAT is organised in five separate sectors. The persons responsible for different surveys interact and exchange information and methodologies easily among themselves. MONSTAT has access to micro-data derived from the Tax Authority through the Central Bank of Montenegro. This kind of administrative source is currently used in SBS and gives the possibility to reduce paper questionnaires.
33. The staff of the National Accounts department, who are the main users of SBS and STS, seems to be satisfied with the actual business statistics system. However, additional data will be needed in order to improve specific NA topics such as, Supply and Use Table and NA by institutional sectors.
34. MONSTAT does not compile regional business statistics. This is mostly due to the fact that Montenegro corresponds to one single NUTS for all three levels, and lacks specific requests from the main users.
35. The IT activities are managed both in the sector of IT data processing and inside the single operational units. MONSTAT uses modern IT software such as SAS and Blaise and is attending the specific training on seasonal adjustment procedures. However, at the moment no seasonal adjusted data are released in the field of business statistics and national accounts. The security of databases is guaranteed through the daily storage of PC micro-data into specific servers.
36. The BR is updated continuously on the basis of administrative data and information received from statistical surveys. The main variables refer to the identification of the units and additional variables used for the purpose of business demography and sampling. Within the BR there is information about local units as well as activity units. In Montenegro the enterprise is the basic statistical unit and is equivalent to the legal unit.
37. The number of human resources engaged in business statistics is very limited, and this might put some of the business statistics processes at high risk.

2.2 Sound methodology

Structural Business Statistics

38. MONSTAT regularly produces and publishes annual statistics based on the data processed by the SBS staff. Experts in business statistics are committed to produce reliable and high quality statistics aligned with EU and international standards.
39. From 2007 to 2012 SBS were produced based on the data collected through statistical surveys. The questionnaires were assessed and validated by experts from the SIDA project.
40. From statistical reference year 2012 onwards SBS data are produced and compiled based on administrative sources, namely the annual financial statements of the enterprises which are provided by the Tax Administration. In addition to the balance sheet and Income Statement (profit and loss account), the Tax Administration introduced an annex, called Statistical Annex. The purpose of the Statistical Annex is to complement the data existing in the Profit and Loss account and to be used for the compilation of SBS and National Accounts.
41. The observation unit in SBS survey is the enterprise and it is equivalent to the legal unit. This allows the use of administrative data. Taking into account the total area of Montenegro and the structure of Montenegrin economy, the '*enterprise approach*' does not introduce significant error. There are no differences between administrative and statistical processes in coverage, considering that every enterprise in Montenegro is obliged to submit financial statements to the Tax Administration of Montenegro.
42. The documents for all classifications (methodology, structure and explanatory notes as well as correspondence tables) which are used in MONSTAT are prepared and are available only in Montenegrin on their official website <http://www.monstat.org/cg/page.php?id=1190&pageid=105>.
43. Concepts, definitions and classifications used are documented in the metadata and methodology for each business statistics. The Metadata glossary published on the website covers definitions of key concepts, variables and terminology underlying the statistical data; definitions of statistical units, populations, elements, indicators and indices and etc. MONSTAT uses/or presents metadata in SDMX format. The metadata can be found on their official website <http://www.monstat.org/eng/page.php?id=1000>.
44. The individual data produced by the Tax Administration are delivered to MONSTAT and the Central Bank of Montenegro in June every year. The Central Bank is in charge of logical and mathematical checks. The second set of individual data is sent to MONSTAT at the end of July by the Central Bank. The data are already corrected by the Central Bank and are used by the SBS staff to produce aggregates. The checks and the logical algorithm applied by the Central Bank are not known by the MONSTAT staff. The Central Bank, upon request, may provide MONSTAT with the algorithm and system used for checking the consistency of the information. Based on data delivered by the Central Bank, statisticians responsible for SBS apply logical and mathematical controls on micro-data level. The data for each enterprise are checked with the data from the previous year.
45. In order to calculate the investment variables, data are collected through the Investment survey. The information collected within this survey relates to the following variables "*Investment in tangible goods*", "*Investments in machines and equipment*", "*Sales of tangible investment goods*". The variable "*gross investment in buildings and other structures*" includes investments in new capacity and expansion, reconstruction, modernisation, upgrades or replacements of worn / damaged capacities.
46. The employment data (number of employees) is computed based on administrative data received from the Tax Administration. The Tax Administration collects data concerning the number of employees on the monthly basis, but for the purpose of SBS the average annual number of employees is calculated by MONSTAT colleagues working on social statistics and delivered to SBS department.

47. Although the memorandum of understanding between MONSTAT and the Tax Administration establishes the exchange of several other variables, only the number of employees was transmitted so far.
48. Among the variables included in the Statistical Annex the following variables are used for the SBS purpose:
- Income by types – sales of merchandises and sales of goods and services (as proxy for turnover)
 - Capitalised production
 - Stocks
 - Gross wages and salaries (proxy for personnel cost)
 - Cost of materials
 - Fuel and energy costs.
49. MONSTAT did not deliver any SBS data to Eurostat, so far. There were several activities undertaken in order to prepare the first data transmission to Eurostat. The first data transmission will be done in the first half of 2015, for the reference year 2013, covering the general series ‘*Annual enterprise statistics*’ and a limited number of variables (turnover, employment, value added).
50. According to the SBS Regulation requirements some series can be produced and disseminated. Annex 1 ‘*Services*’, the following series out of 6 series can be compiled to some extent:
- 1A Annual enterprise statistics for Services
 - 1B Annual enterprise statistics by size class for Services
 - 1C Annual regional statistics for services
 - 1P Annual preliminary results for services
51. Not all variables of the series above and not all level of breakdowns (NACE and size class) are available. The following aggregates can be calculated and provided:
- NACE Rev. 2 division level
 - Size class: small (0-49 employees), medium (50-249 employees) and large (+250 employees).
- Regarding regional data, Montenegro is one region on NUTS 1-3 levels.
52. The available variables are: Number of enterprises, Turnover, Production Value, Value Added, Gross operating surplus, Total purchases of goods and services, Purchases of goods and services for resale in the same condition as received, Personnel costs, and Gross investment in tangible goods and Number of persons employed.
53. For Annex 2 ‘*Industry*’, the following series out of 12 can be compiled to some extent:
- 2A Annual enterprise statistics for Industry
 - 2B Annual enterprise statistics by size class for Industry
 - 2C Annual regional statistics for Industry
 - 2P Annual preliminary results for Industry
54. Similar variables as for Annex 1 are available and in addition two investments variables can be compiled. Details are not available for level of breakdowns by NACE and size class.
55. For Annex 3 ‘*Distributive trade*’, the following series out of 12 can be compiled to some extent:
- 3A Annual enterprise statistics for Distributive Trade
 - 3B Annual enterprise statistics by size class for Distributive Trade
 - 3C Annual regional statistics for Distributive Trade
 - 3P Annual preliminary results for Distributive Trade
56. Similar variables and breakdown as for Annex 1 are available. Details are not available for level of breakdowns by NACE and size class.

57. For Annex 4, the following series out of 9 can be compiled to some extent:
 - 4A Annual enterprise statistics for Construction
 - 4B Annual enterprise statistics by size class for Construction
 - 4C Annual regional statistics for Construction
 - 4P Annual preliminary results for Construction
58. Similar variables and breakdown as for Annex 1 are available. Details are not available for level of breakdowns by NACE and size class.
59. Annexes 5 to 8 (Financial services) are not covered at all. The questionnaires to collect the data for Annex 8 (Business services) are being developed within the current IPA project.
60. Annual data on newly created enterprises and active enterprises (Annex 9) were produced and are being delivered to Eurostat since 2012.

Short-term statistics

61. The surveys are mostly based on paper questionnaires, which are clear and well understood by respondents. However this implies a further step of data registration (time consuming) and may become obsolete within a few years, taking into account that in the EU countries the use of paper questionnaires is significantly reduced.
62. The main variable observed and used for index calculation is turnover. One of the main gaps is that no data on hours worked and producer prices for Annex D of the STS Regulation⁴ are available, with the exception of the variable '*deflators in retail trade*'.
63. The samples are drawn according to the basic survey sampling methodology, through stratified sampling designs where strata are mainly identified on the basis of number of persons employed (Industry and Constructions) or volume of turnover (Retail trade and Other services) and NACE codifications. In this context methodological support is fundamental, and the availability of only one expert in this field represents a serious constraint. The cooperation between survey experts and the methodological support experts is quite good. The survey expert can carry out autonomously the main estimation procedures, built up by the methodological support staff. Enterprises are selected on the basis of their main economic activity, even though for Industry and Constructions also KAUs of enterprises having different main activities are considered. In some cases the reference population does not include all existing enterprises, since '*small*' units are not taken into account⁵. Some strata are '*take-all*', while others are pure sampling strata. Overall, this approach is coherent with the most common EU methodologies.
64. The data editing process is normally carried out by the survey responsible himself or herself, who substitutes erroneous data with corrected ones. This process may be too subjective and there is no trace of the original raw database, which is automatically substituted with the corrected database. This strategy implies difficulties to evaluate the impact of some non-sampling errors (measurement errors) in the future. Moreover different survey experts may apply different rules for detecting and correcting errors. Improvements of data editing and imputation may be achieved through record linkage between STS and SBS databases. This could be applied for big firms, whose data should be completely available from SBS. Normally, problematic units are very often re-contacted by telephone. Despite of that, the data editing process is operating quite well and final processed micro-data is of good quality. When data editing is completed, the corrected databases are sent to SBS and to the BR staff to be used as additional supporting information and for updating, respectively.
65. The estimation process is carried out on the basis of classical sampling theory, since sample micro-data are weighted using weights corrected for taking into account non-responses (which

⁴ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006R1503&from=EN>.

⁵ Small units are those with less than 5 persons employed for Annex A on Industry (NACE sections B, C, D) and for Annex B on Constructions (section F); as regards Annex C on Retail trade (division 47) and Annex D on Other services (sections H, I, J, K, L, M, N, P, Q, R, S) only entrepreneurs are not taken into account.

contribute to increase sampling weights). The industry indices (turnover index and production index) are not based on weighting since they are based on cut-off samples (all the enterprises having at least 5 persons employed are included in the sample). Actually, there is no specific analysis on the potential bias of estimates derived by the different profile of non-respondent units with respect to respondent ones.

66. The sampling error is calculated according to well-known formulas related to sampling theory. However, the sampling error is calculated for levels instead of ratios (the STS Regulation concerns index numbers instead of levels). That is what normally the EU countries do, but it was recommended to start the estimation of sampling errors concerning ratios as well⁶.
67. Data released are not deflated, except retail trade indices which are produced at current and constant prices as well, using the consumer price index as deflator. As regards the calculation of price indices for industry, construction and other services there is support by IMF and IPA projects, which should produce first results by the end of 2015.
68. Data released are not seasonally adjusted. In order to tackle the gap, some training activities concerning theoretical and practical issues (software, preparation of time series) have been already launched. Training must be continued and enforced in 2015 and 2016.
69. In most cases data are released and sent to Eurostat respecting the STS Regulation deadlines.
70. Data and metadata are published on the MONSTAT website once the business statistics director approves and gives the permission. The access to the data is free of charge.
71. Data released are not the object of deep economic analyses. Main users do not ask MONSTAT to carry out economic analyses, but this task may be requested in future.
72. MONSTAT does not have a specific data revision policy. However, when important changes in time series occur, methodological explanations are published on the website. For instance, that happened in 2012, when the transition from NACE Rev. 1.1 to NACE Rev. 2 implied some changes in definitions and / or level of details of short-term data released.
73. Data are normally released on the national level, and only in a very few cases there are estimates on the local level. Even though this strategy depends on the fact that Montenegro is equivalent to the lowest NUTS level recognised by the EU territorial classification, it may become a limit, since much more regional data might be requested by main users, Government and National Accounts.
74. At the end of the process, micro-data and macro-data are saved on specific servers, with daily update, in order to guarantee data safety.
75. There are a few cases for which data are the object of statistical comparisons: they may concern, for instance, the comparison of STS vs SBS, retail trade vs wholesale trade, construction index vs building permits.
76. Construction statistics are based on a sample of about 300 enterprises with at least 5 persons employed. A random sample is selected in the stratum of 5-50 persons employed (size 100), while all the largest units are interviewed. There is a low intensity/fluctuation in business demography, so that the number of new or closed enterprises is normally very low. This is an important sector representing 4,1% of GDP 2013. The response rate is about 60%.
77. Retail trade data do not include individual entrepreneurs. Other sector surveys may be affected by this (for instance, many service activities covered by Annex D). The response rate is about 63%.
78. As regards other services, the sample includes 670 enterprises and the response rate is similar to retail trade. The survey is currently managed by the MONSTAT expert responsible for industrial production, industrial turnover and PRODCOM: It is recommended to appoint different experts and separate the management of “other services” and “industrial production”.
79. Employment data derive from 2 main sources: labour force survey and administrative data provided by the Tax Administration. MONSTAT receives data on employment from the Tax

⁶ For instance, it may be based on the Taylor’s linear approximation for ratios.

Authority and the main goal is to get data on earnings as well (according to the STS Regulation). There is a memorandum of understanding with the Tax Administration which determines the exchange of the data. The wage and salary survey managed by the Social statistics sector is still on-going and the collected data are not published yet, even though it was planned to publish the data in 2015. The short-term statistics questionnaires contain questions regarding employment, but they are used for data checking and correction only. Overall, there is a need for investing into the development of capacity for merging data sources on the labour market.

80. Basically, the current short-term statistics production complies with EU standards related to sector coverage (industry, construction, retail trade and other services), timeliness and, partially, the number of characteristics calculated and published. The main missing variables are hours worked (number 220 in the EU nomenclature) and gross wages and salaries (230), as well as output prices (310) related to the Annex D on other services. The new surveys on labour market are foreseen to fill-up the existing gaps.
81. Apart from the existing gaps commented so far, the overall existing STS framework is satisfactory. The STS staff is fully committed, however the number of staff should be increased soon. MONSTAT is aware of what is necessary to increase the compliance with the STS Regulation. For this purpose, new surveys need to be launched.

2.3 Appropriate statistical procedures

82. Administrative data: According to the Law on Official Statistics and Official Statistical System, the Article 27 (Art. 27 – Administrative sources and burden on respondents) states the following: *'If administrative data sources are available and may be used for meeting user needs, statistical surveys shall not be undertaken. When conducting statistical surveys, burden on respondents shall be considered'*.
83. Article 9 of the same Law states that: *'State administration body responsible for statistics is taking part in all activities related to setting up new or modifying the existing administrative data sources or in activities related to sources whose data are based on continuous monitoring and observation, and which are relevant for the official statistics'*.
84. For legal units, the Business Register department uses the identification number as key variable assigned by the Central Register of business entities. For statistical units, identification numbers are automatically created during the creation of units in application of the BR. SBS is one of the main users of administrative data and there seem to be no differences between administrative and statistical processes as regards coverage, considering that every enterprise in Montenegro is obliged to submit financial statements to the Tax Administration. To a lesser extent, also in the STS framework (where few administrative sources exist) no major differences with respect to survey data have been noticed.
85. In addition to the financial statements, each enterprise is requested to fill in a form called *'Statistical Annex'*. The annex contains a breakdown of turnover by type of incomes (sales of goods, production of goods and services), capitalised production and cost of material by categories.
86. Non-response: In SBS for a large part of variables the coverage is total and therefore non-response is not common (administrative sources). If one enterprise does not provide data on financial statements (big enterprise in industry activities), but the same enterprise submits the data on industry statistics (turnover, number of employees), statistical data is used for imputing missing data by using ratios of the previous year. In the STS framework missing data are recovered by telephone calls or are estimated on the basis of time series available for the single unit as well as for other similar units.
87. Data processing: Although a preliminary set of checks are applied by the Central Bank, SBS staff validate the data by comparing the data with data from the previous year or cross-checking between variables. The statistician responsible for SBS applies logical and mathematical control at micro (enterprise) level. When differences and inconsistencies are detected the enterprises are

contacted to confirm the correctness of the data. Basically, the same procedure is applied to the STS framework as well.

2.4 Non-excessive burden on respondents

88. In recent years the main aim of MONSTAT was to harmonise the entire BS with EU requirements. Important efforts to introduce and produce all required variables were done.
89. A very good example of reducing the burden on respondents is the structural business survey, data being compiled by utilising already available sources (administrative sources and available sources within MONSTAT).
90. The aim of this approach is: (1) to reduce the burden on the reporting unit (avoid duplicating requests), (2) to reduce the burden on the department for data collection, (3) to shorten the period of data collection and (4) to reduce financial costs of research.

2.5 Relevance

91. The release calendar is published on the official website of MONSTAT and consists of all statistical products. The Law on Official Statistics (Art. 50 Calendar of statistical data dissemination) states that *'Official statistics producers shall be obliged to prepare and maintain Calendar of statistical data dissemination with the data on type of survey and dates of statistical data dissemination, no later than 20th December of the current year for the following year. The Calendar shall be posted on the internet page of the competent body. Any deviation from deadlines set out in the Calendar must be announced and explained'*.
92. Annual indicators concerning SBS are published on the website and are available in pdf format.
93. Information on user satisfaction is collected through an on-line survey on the website of MONSTAT (<http://MONSTAT.org/cg/anketa.php>).
94. Survey results are published on the website and are available via the following link <http://monstat.org/cg/page.php?id=575&pageid=575>.
95. Furthermore, through AWSTAT software it is possible to obtain information about the visits of the website, available by hours, days and months: flows by country visitors, IP address, most downloaded documents, most frequently visited pages etc.
96. SBS and STS indicators are relevant for all main users such as policy makers, media, researchers and students. The degree of relevance has been assessed as medium by MONSTAT, with the exception of STS indicators considered as highly relevant for policy makers. MONSTAT could not assess the relevance for business users.

2.6 Accuracy and Reliability

97. In order to assure a high level of quality, source data, intermediate results and outputs are regularly assessed and validated prior to publication. The SBS quality report is prepared according to the Methodological Guidelines for the Preparation of a Quality Report for Statistical Surveys. Coefficient of Variation (CV) for national SBS data is not calculated. For STS, CVs are calculated from the beginning of 2013 for Retail trade (monthly data) and other services (quarterly data). It is not possible to calculate CVs for Industry and Constructions since the related surveys are based on deterministic (not probabilistic) samples. Under-coverage and over-coverage rates are also calculated for all the STS Regulation annexes. Non response rates are calculated on a regular basis, too.
98. Measurement and processing errors are identified by comparing the data of the current period with the corresponding data of previous periods (year, quarter or month depending on the kind of past data available).
99. There is no automatic system for the identification of measurement errors, but they are identified and removed by direct observation of the questionnaire. MONSTAT plans to develop a software which will enable automatic identification and correction of measurement errors.

2.7 Timeliness and Punctuality

100. MONSTAT respects deadlines and submits SBS and STS data in time according to the EU Regulation.

101. In case of delay the users are informed in advance and the new date of the release is published. The information is available on the website of MONSTAT.

102. The table below shows the main phases of the SBS and STS data production process.

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 data collection beginning	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 microdata and metadata	
SBS	Beginning of the year	September	November	December	Metadata are updated regularly	No delays
STS – Annex A	1 st of the month	10 th of the month	18 th of the month	20 th of the month	Metadata are updated regularly	No delays
STS – Annex B	15 days after end of reference period	30 days after end of reference period	38 days after end of reference period	40 days after end of reference period	Metadata are updated regularly	No delays
STS – Annex C	1 day after end of reference period	20 days after end of reference period	33 days after end of reference period	35 days after end of reference period	Metadata are updated regularly	No delays
STS – Annex D	1 day after end of reference period	35 days after end of reference period	55 days after end of reference period	60 days after end of reference period	Metadata are updated regularly	No delays

Annual data on SBS are published respecting the release calendar. Although data can be compiled at NACE class level, they are released at division level because of confidentiality. The main compiled and published SBS indicators are the following:

- Gross output/Production
- Intermediate consumption
- Gross value added
- Turnover
- Purchases of goods and services
- Purchases of energy products
- Gross investments in tangible goods

2.8 Coherence and Comparability

103. Until reference year 2012, SBS data were collected through a special questionnaire based on a sampling survey, while since 2013 administrative sources are used. According to the analysis done by MONSTAT staff, the methodological change did not have a significant impact on the final output.

104. The current IPA project provided assistance on analysis of the consistency of defining the variables between the SBS and financial statements. An algorithm to calculate SBS turnover derived from profit and loss data has been provided within the project. For the other outputs SBS

variables (production, value added etc.), proxies have been identified. However, regarding the value added it is not very clear whether subsidies are included or not.

105. As regards the coherence between national and European concepts, it can be stated that for the definition of statistical units there is no full compliance with the EU standards, since actually the statistical unit is equal to the legal unit.
106. As mentioned before-hand, not all the variables and breakdowns required by the SBS regulation are computed.
107. Until 2011, economic entities were classified according to the national activity classification which was harmonised with NACE Rev. 1.1, while since 2012 the revised classification NACE Rev. 2 is used.
108. The comparability between SBS preliminary and final results is not an issue because the data published in December are considered final. Provisional data are neither computed nor disseminated.
109. The comparability of STS data is satisfactory. Nevertheless, there were some structural changes due to the already mentioned introduction of NACE Rev. 2 and to the change of the base year for indices to 2010. Short-term data on production, turnover and employment are coherent and correspond to the yearly structural data.

2.9 Accessibility and clarity

110. SBS results are disseminated through a specific publication, which is available in PDF format on the website of MONSTAT:
<http://www.monstat.org/userfiles/file/publikacije/Poslovanje%20preduzeca%20u%20Crnoj%20Gori%20-2013%20-engl.pdf>.
111. The results by activities are not presented for all variables, but the variables were selected according to the public interest. More detailed analysis can be provided upon request.
112. SBS data are presented in the form of absolute figures, expressed in thousands of euro and percentages. SBS data are available in electronic (Excel) format.
113. On the basis of specific users' requests, custom-designed analyses are performed and results are released.
114. STS data are available on the website in the form of statistical tables and graphs. It is easy to search and find any specific short-term indicator available. For instance, the main monthly indicators (*Monthly statistical review*, which includes monthly and quarterly data related to business and social statistics) for November 2014 can be found on the following website:
http://www.monstat.org/eng/publikacije_page.php?id=1233.
115. With regard to the possibility of releasing individual data, it is important to mention Article 58 of the Law (Art. 58 – Providing individual data with no identifier) which states that '*Official statistics producers may provide, upon written request, individual statistical data, without identifiers, to scientific-research institutions for purpose of carrying out scientific and research activities as well as to international statistical organisations and statistics producers from other countries. Scientific and research organisations are: Montenegrin Academy of Sciences and Arts, scientific and research institutions of high education, and other legal and natural persons carrying out scientific and research activities in accordance with special law*'.
116. Metadata are documented in a standardised metadata system. The SBS⁷ and STS⁸ methodologies are available on the website of the MONSTAT.
117. If users need more information about the survey, its methodology and available data they can contact the responsible person. Contact information (phone, email, fax) is available at the end of each publication.

⁷ <http://www.monstat.org/eng/page.php?id=1232&pageid=67>

⁸ <http://www.monstat.org/eng/page.php?id=1001&pageid=1001#SS>

3. International organisations and activities related to the BS

118. Since more than 10 years MONSTAT is a beneficiary of the CARDS and IPA programmes. These programmes have been designed, among others, to support candidate and potential candidate counties to produce statistics in line with the EU acquis.
119. MONSTAT has implemented 5 multi-beneficiary IPA programmes (during the last 7 years) which have covered business statistics through data collection projects and a huge number of meetings, trainings, workshops on the development and harmonisation of business statistics towards EU standards. MONSTAT appoints subject-matter staff members to attend the meetings and trainings. Internally these meetings and trainings are considered as an upgrade of the capacities and qualifications of the employees.
120. In addition, MONSTAT has implemented 2 national IPA programmes (IPA 2007 and IPA 2010). Both programmes cover a separate component on business statistics. Within these programmes the staff of MONSTAT working on business statistics have received constant support of international long-term experts.
121. MONSTAT will continue to be a beneficiary of the IPA programme through which it will receive continuous expert support and training in all statistical fields until European standards are applied in all statistical products.

4. Further developments

122. It is necessary to continue the progressive approach towards full compliance with STS and SBS regulations. Therefore, it is necessary to adopt a very detailed plan of activities containing information on tasks, experts involved and timing. This plan must be constantly monitored and should be used as a tool for informing / updating Eurostat about the main results.
123. In parallel to that, it is absolutely necessary to increase the number of MONSTAT staff to avoid risks for the current production and to improve the current coverage, which is not fully aligned with the EU standards.
124. In SBS the use of administrative data should be improved. Additional surveys should be carried out for large and complex enterprises. High priority should be given to the analysis of additional data sources to be used in order to increase the number of compiled variables.
125. In STS the calculation of appropriate price indices for all the STS regulation's annexes needed to calculate constant price indices should be tackled first. Furthermore, seasonal adjustment is a priority. Training activities in this field should be continued and increased. Another high priority is short-term labour data, with particular reference to wages (earnings) and salaries.

5. Conclusions and recommendations

126. The main conclusions of the SR of the business statistics are:
- There is high compliance with European requirements in terms of concepts, content and list of variables as well as in the classifications used;
 - The commitment of staff engaged in business statistics is very high;
 - The use of administrative data allows for better estimates and reduction of burden on respondents;
 - STS and SBS data compiled and produced by MONSTAT are available free of charge on the website, either through databases or in the form of various publications.
127. The main recommendations of the SR for Montenegro's business statistics are:
- To increase the use of administrative data apart from the Tax Administration, such as from Social Security Funds. This goal is becoming increasingly important in the EU, because of the possibility to reduce human and financial resources and the response burden. Administrative data could for instance be used for labour statistics data (employment, wages, social security), which could be integrated with survey data (e.g. hours worked).

- To develop a strategy for increasing the number of staff and closing the current data gaps. Compliance with the SBS and STS regulations should be a first priority. Additional human resources are needed 1) to support the current SBS and STS production; 2) to plan new surveys to comply with the SBS and STS Regulations.
 - STS and SBS data should be treated more consistently. The risk that the same statistical unit may be treated differently in STS and SBS is high and leads to inefficiency (double and potentially inconsistent data editing actions, for instance) and reduced data quality.
 - In order to improve timeliness, it is necessary to increase human and financial resources and to modernise data collection and data processing. Paper questionnaires should be progressively reduced in favour of administrative data and/or use of centralised data collections systems (for instance: internet portal managed by MONSTAT).
 - To ensure further support from international experts, for supporting the ongoing efforts of MONSTAT to comply with the SBS and STS Regulations.
 - To extend the volume of data for dissemination and data analysis. Modern national statistical institutes are progressively developing integrated data release tools (for instance: data warehouses), which provide users with the possibility to create *ad hoc* statistical tables. Time series need to be analysed, commented and compared with other data sources.
128. Currently, MONSTAT does not have experts for the economic analysis of data. There was no need to have an expert possessing the economic analysis skills so far, but it may become a strategic issue in the future and contribute to the deeper analysis of BS data.

Annexes

Annex 1: Agenda of the expert mission in Montenegro

Annex 2: List of representatives met during the mission in Montenegro

Annex 3: Self-assessment questionnaire

AGENDA

Statistical Office of Montenegro

Sector Review – Business Statistics

2-5 December, 2014

Draft version

International Review Team

Experts: Mr Roberto Gismondi and
Ms Virginia Balea

Day 1, 2 December 2014		
09:30 – 10:00	Opening and welcome, introduction to the review and the review team	MONSTAT Business statistics unit R. Gismondi, V. Balea
10:00 – 10:45	<p>Introductory meeting with the representatives of the MONSTAT</p> <p>Discussions on the general institutional framework related to the business statistics</p> <p>General discussions on the institutional framework related to the business statistical sector: general rules; MONSTAT internal organisation, roles and functions; human resources; relations with other national stakeholders and data sources (actors in the national statistical system); multiannual statistical programs; dissemination / publication issues and policies; relations with external stakeholders.</p> <p>Provision of related official documents / material</p>	<p>Director General, International cooperation office, other relevant units (e.g., Directorate of Public Relations & Information; Directorate of HR and Administrative Affairs; Directorate of Information Technology)</p> <p>MONSTAT team:</p> <ol style="list-style-type: none"> 1. Gordana Radojevic 2. Jelena Zvizdojevic 3. Ernad Kolić 4. Jelena Marković 5. Bojana Radojević 6. Ana Vasiljević 7. Radmila Šišević
10:45 – 11:00	<i>Coffee break</i>	
11:00 – 12:00	<p>Discussions with the responsible unit on methodological aspects with reference to the information in the assessment questionnaire.</p> <p>This includes: business register management, classifications and coding, sampling, main estimation procedures, quality indicators, metadata provision, IT issues, the role of regional offices</p>	<p>MONSTAT Business statistics unit, Statistical Methodologies Unit</p> <ol style="list-style-type: none"> 1. Jelena Zvizdojević 2. Ernad Kolic, 3. Marijana Popović Rončević, 4. Milica Pavlović, 5. Nataša Šaranović, 6. Branka Raičević, 7. Tatjana Popović, 8. Milena Jolić, 9. Suzana Gojčaj, 10. Mašan Raičević
12:15 – 12.30	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
12:30 – 14:00	<i>Lunch break</i>	
14:00 – 15:00	<p>Discussions on methodological aspects with reference to the information in the assessment questionnaire.</p> <p>Continuation</p>	<p>MONSTAT Business statistics unit, Statistical Methodologies Unit</p> <ol style="list-style-type: none"> 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Marijana Popović Rončević, 4. Milica Pavlović, 5. Nataša Šaranović, 6. Branka Raičević, 7. Tatjana Popović, 8. Milena Jolić, 9. Suzana Gojčaj, 10. Mašan Raičević

Day 1, 2 December 2014		
15:00 – 15:15	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
<i>15:15 – 15:30 Coffee break</i>		
15:30 – 16:30	<p>Relations between MONSTAT and other national sources and institutions</p> <p>Discussions on the interaction (based on rules and praxis) between MONSTAT and other data sources and institutions in the national statistical system related to the domain with reference to the information in the assessment questionnaire. Focus will be on the use of administrative data, data from other surveys, National statistical laws (obligation to respond and confidentiality), the National statistical system.</p>	<p>MONSTAT Business statistics unit, Statistical Methodology unit</p> <ol style="list-style-type: none"> 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Bojana Radojević 4. Tatjana Popović, 5. Milena Jolić, 6. Suzana Gojčaj, 7. Mašan Raičević
16:30 – 16:45	Preliminary conclusions and recommendations	R. Gismondi, V. Balea

Day 2, 3 December 2014		
09:15 – 10:15	<p>Structural business statistics (SBS)</p> <p>Overall system of business statistics Kind of surveys (direct, CATI, WEB,...) Classifications used Survey organisation Sampling criteria Estimation criteria Non sampling errors management Quality evaluation Data release policy Main indicators produces and disseminated Comparison with other sources Feedback from main users</p>	<ol style="list-style-type: none"> 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Marijana Popović Rončević, 4. Milica Pavlović, 5. Nataša Šaranović 6. Branka Raičević, 7. Tatjana Popović
10:15 – 10:30	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
<i>10:30 – 10:45 Coffee break</i>		
10:45 – 11:45	Continuation	
11:45 – 12:00	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
<i>12:00 – 13:30 Lunch break</i>		
13:15 – 14.15	<p>Short-term business statistics (STS)</p> <p><i>Same list of topics of SBS</i></p>	<ol style="list-style-type: none"> 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Marijana Popović Rončević, 4. Milica Pavlović, 5. Nataša Šaranović

Day 2, 3 December 2014		
		6. Branka Raičević, 7. Milena Jolić, 8. Suzana Gojčaj, 9. Mašan Raičević,
14:15 – 14:30	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
14:30 – 14:45	<i>Coffee break</i>	
14:45 – 15:30	Continuation	
15:30 – 15:45	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
15:45 – 17:45	Review of the work Review Team will meet separately for preparing conclusions and recommendations of the first two days	R. Gismondi, V. Balea

Day 3, 4 December 2014		
09:15 – 10:15	Data processing: entry, editing and coding Discussions with the responsible unit on data processing (entry, editing and coding): consistency and routing checks, imputation rate, imputations methods, related calculations, coding procedures, software applications used for data entry, editing and coding with reference to the information in the assessment questionnaire.	MONSTAT Business statistics unit 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Marijana Popović, 4. Milica Pavlović, 5. Nataša Šaranović 6. Branka Raičević, 7. Tatjana Popović, 8. Milena Jolić, 9. Suzana Gojčaj, 10. Mašan Raičević
10:15 – 10:30	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
10:30 – 10:45	<i>Coffee break</i>	
10:45 – 11:45	Compliance with European and international standards Discussions with the responsible unit on compliance with European and international standards: classifications used (NACE etc.), definition of variables, norms/standards (coverage, reference period, frequency), main issues arising from alignment to international classifications/definitions/standards with reference to the information in the assessment questionnaire.	MONSTAT Business statistics unit + other relevant directorates (e.g., Directorate of Public Relations & Information; Directorate of Statistical Studies; Directorate of Information Technology) 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Marijana Popović Rončević, 4. Nataša Šaranović 5. Tatjana Popović, 6. Milena Jolić, 7. Suzana Gojčaj, 8. Mašan Raičević
11:45 – 12:00	Preliminary conclusions and recommendations	R. Gismondi, V. Balea

Day 3, 4 December 2014		
<i>12:00 – 13:30 Lunch break</i>		
13:15 – 14:15	Data estimation and quality Discussions with the responsible unit on the data estimation (non-response rates, weighting procedures, software packages used, level estimates for main variables, standard errors and non-sampling errors) and quality (timeliness and accuracy) with reference to the information in the assessment questionnaire.	MONSTAT Business statistics unit, Statistical Methodology unit 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Milica Pavlović, 4. Nataša Šaranović 5. Tatjana Popović, 6. Milena Jolić, 7. Suzana Gojčaj, 8. Mašan Raičević
14:15 – 14:30	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
<i>14:30 – 14:45 Coffee break</i>		
14:45 – 15:30	Data dissemination Discussions with the responsible unit on dissemination issues and policies: micro-datasets, bulletins, publications, calendar release, type of tables produced, data accessibility, data revision, metadata available, data transmission to external institutions / agencies and data quality (coherence) with reference to the information in the assessment questionnaire.	MONSTAT Business statistics unit + other relevant directorates (e.g., Directorate of Public Relations & Information) 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Radmila Šišević 4. Jelena Marković 5. Nataša Šaranović 6. Tatjana Popović, 7. Milena Jolić, 8. Suzana Gojčaj, 9. Mašan Raičević,
15:30 – 15:45	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
15:45 – 17:45	Review of the work Review Team will meet separately for preparing conclusions and recommendations	R. Gismondi, V. Balea

Day 4, 5 December 2014		
09:15 – 10:00	Management of users' requests Discussions with the responsible unit on procedures adopted to manage users' requests: main users, tools for satisfying specific users' needs, time needed, tools for measuring users' satisfaction with data; major constraints and quality (relevance) with reference to the information in the assessment questionnaire	MONSTAT Business statistics unit 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Boro Durković 4. Bojana Radojević 5. Jelena Marković 6. Tatjana Popović, 7. Milena Jolić, 8. Suzana Gojčaj, 9. Mašan Raičević
10:00 – 10:15	Preliminary conclusions and recommendations	R. Gismondi, V. Balea

Day 4, 5 December 2014		
10:15 – 10:30	<i>Coffee break</i>	
10:30 – 11:30	Relations with international organisations Discussions with the responsible unit on interactions between the same unit and international organisations such as Eurostat, OECD. Focus will be given to projects, partnerships and programs relating to BS; participation and contributions to international meetings; main issues arising from such events and suggestions for changes in LFS with reference to the information in the assessment questionnaire.	MONSTAT Business statistics unit R. Gismondi, V. Balea 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Jelena Marković 4. Ivana Tanjević
11:30 – 11:45	Preliminary conclusions and recommendations	R. Gismondi, V. Balea
12:00 – 13:30	<i>Lunch break</i>	
13:30 – 14:15	Discussions on main conclusions and recommendations on the business statistics	R. Gismondi, V. Balea 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Marijana Popović Rončević 4. Jelena Marković 5. Branka Raičević 6. Nataša Šaranović 7. Milica Pavlović 8. Bojana Radojević
14:15 – 15:30	Views of the management on the recommendations	MONSTAT Business statistics unit 1. Jelena Zvizdojević 2. Ernad Kolić, 3. Marijana Popović Rončević 4. Jelena Marković 5. Branka Raičević 6. Nataša Šaranović 7. Milica Pavlović 8. Bojana Radojević
15:30 – 16:00	Closing of the meeting	MONSTAT
	Administrative rounding off: afterwards, the review Team will meet separately for collecting the list of participants (by day and topic), discussing and defining the next assessment steps, including the contents of the forthcoming summary report of findings. All collected material (institutional documents, reports, metadata, additional notes, etc.) will be ordered for following further in-depth analysis	R. Gismondi, V. Balea

Annex 2: List of representatives met during the mission in Montenegro

Annex 3: Self-assessment questionnaire