Quality Report for the

MONTHLY SURVEY ON RETAIL TRADE, 2013

Republika Srpska Institute of Statistics,
Banja Luka, 2014

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1. Introduction into the statistical survey and its output – Survey methodology

1.1. Purpose and periodicity of survey implementation

Monthly report on retail trade in Republika Srpska serves to monitor turnover indices in retail trade and to measure the dynamics of their changes.

The aim of monthly survey on retail trade is to provide data necessary for the monitoring of changes in turnover of goods in retail trade, in order to review the overall economic trends. On the basis of calculated turnover indices, trends in the fields of turnover of goods and consumption of population are monitored, as well as trends on the consumer goods market. It is also possible to monitor effects of seasonal and other changes that can be observed based on monthly data on trends in volume of trade in goods.

Accordingly, the survey serves to collect data on turnover of goods in retail trade and data on total turnover from other activities, for two months (pre-reporting month and reporting month).

1.2. Legal basis and responsibility of statistical institutions

Statistical Monthly survey on retail trade in Republika Srpska is carried out pursuant to the Statistical Programme of Republika Srpska for the period 2013 – 2017, which is based on the Law on Statistics of Republika Srpska ("Official Gazette of Republika Srpska", No. 85/03), and the current annual Work Plan of the Republika Srpska Institute of Statistics.

1.3. Observation unit

Observation units are business entities whose prevailing activity is retail trade and units of business entities whose prevailing activity is not retail trade, but which realise considerable turnover from retail trade.

1.4. Data collection

The Republika Srpska Institute of Statistics carries out the survey through its six regional offices. Data are collected using the reporting method, at the class level (NACE Rev 2). At the beginning of the year, the Republika Srpska Institute of Statistics sends to the regional offices letters, questionnaires, letters to reporting units and instructions for completion. These are in turn sent by post to reporting units covered by the sample. Reporting units submit two copies of completed reports until the 10th of the current month for the previous month, to the addresses of the Institute's regional offices. After the regional offices carry out logical controls, reports are sent to the Republika Srpska Institute of Statistics, for further survey phases.

1.5. Coverage

The survey is carried out using the sampling method. The framework for sample selection is the Statistical Business Register.

The survey covers all large and medium enterprises whose turnover in retail trade exceeds 2,000,000 KM and randomly selected small enterprises. The sample does not cover enterprises whose turnover is below 100,000 KM per year. On the basis of sample-based results, the entire set is assessed.

1.6. Definitions

Retail trade refers to purchase of goods for further sale to individuals for personal consumption, for household use and for the performance of activities through personal work, using own resources. Retail trade also covers sale through consignment stores or warehouses, mostly of imported goods for personal consumption, provided that the enterprises is registered to perform retail trade activities.

Turnover in retail trade excluding VAT refers to the value of total realised turnover from retail sale of goods, excluding value added tax which is included in the selling price, for the previous and reporting month. Value of turnover is entered without decimal places.

Turnover from other activities refers to the value of all other sold products and services at the market (wholesale trade, intermediation in wholesale trade, repair, hotels and restaurants, transport, industry and other activities).

1.7. Data processing

Data collected from reporting units covered by this survey represent the basis for evaluation of data for the entire population. Based on microdata on turnover of reporting units and through their aggregation at the stratum level within activity – KD BiH 2010, total turnover is calculated. Aggregation of turnover to higher levels (group, division, special aggregates – a combination of a number of classes or combination of a class and a group) of activities is carried out prior to compilation of indices.

1.8. Data publishing

The Republika Srpska Institute of Statistics publishes the nominal retail trade index in the form of regular monthly release of the retail trade statistics. Beside that, data are published in the Monthly statistical review, Statistical Yearbook, and the publication “This is Republika Srpska”.

Turnover indices of retail trade are published at the group level. Data are published monthly. Survey results are published as final 26 days after the end of the reference period.

All publications are available in electronic form, at the official website of the Institute.

1.9. Key variables

- turnover in retail trade (excluding VAT),
- VAT amount in KM,
- turnover from other activities (excluding VAT),
- VAT amount in KM from other activities,

1.10. Key statistics

- monthly (chain) index, showing the change in turnover index in the current month compared to the previous month,
- index, showing the change in turnover index in the current month compared to the previous base year average,
- index, showing the change in turnover index in the current month compared to the base year 2010 average,
- annual index, showing the change in turnover index in the current month compared to the same month of the previous year.

1.11. Questionnaire

The questionnaire of monthly survey on retail trade is available at the Institute’s website, at: http://www2.rzs.rs.ba/static/uploads/obrasci/unutrasnja_trgovina/TRG_1_Obrazac.pdf.

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1.12. Contact information

Services Statistics Division of the Institute is responsible for the implementation of Monthly survey on retail trade.

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2. Relevance

2.1. Relevance of variables

Monthly variables of retail trade required by the STS Regulation are the turnover variable (120) and the deflator of sales (330). The turnover variable in accordance with the STS Regulation is calculated, while the deflator of sales is not. Monthly turnover indices of retail trade serve the needs of external users as well as the needs of internal users (national accounts).

2.1. Quality and performance indicator – Rate of available ESS statistics (R1)

Based on item 2.1, the rate of available statistics is 50.0% [(1/2x100)].

3. Accuracy

3.1. Sampling errors

3.1.1. Method of calculating sampling errors

A sample (full coverage of all large enterprises and a random sample of small enterprises) is used for the implementation of monthly survey on retail trade. Since unknown parametres of the entire target population are estimated using only a part of it (selected sample), it is impossible to avoid errors that occur by sampling. The design and size of the sample, as the most significant factors that define the size of sampling error, are controlled by statisticians, in order to reduce the sampling error to the lowest level possible, in accordance with the resources available for the survey implementation.

Taking into account all samples which can theoretically be selected from the framework, different samples will result in different estimates of parametres of the target population. In order to avoid incorrect interpretation of estimated parametres, it is necessary to have a quantified measure of the variability of estimates from all possible theoretical samples. The measure of such variability in this survey is a variance, which is calculated as follows:

$$\hat{V}_h = \sum_{h=1}^{H} N_h{}^2 \frac{1-f_h}{m_{rh}} S_{yh}{}^2$$

where:

$$f_h = \frac{n_h}{N_h} \; ; \quad S_{yh}{}^2 = \frac{1}{m_{rh}-1} \sum_{j=1}^{m_{rh}} \left(y_j - \bar{y}_h\right)^2 \; ; \quad \bar{y}_h = \frac{1}{m_{rh}} \sum_{j=1}^{m_{rh}} y_j$$

f_h - sampling rate in the stratum *h (h=1...H)*

n_h - number of units in the stratum *h* sample
N_h - number of units in the framework of stratum *h*
m_{rh} – number of units in the response set of the stratum *h*
$\bar{y}_h$ - average y_i at the stratum *h* level

S_h^2 - squared standard deviation y_i at the stratum *h* level

Total variance represents the sum of calculated variances at the level of each stratum:

$$\hat{V} = \sum_{h=1}^{H} \hat{V}_h$$

Standard error (*SE*) is calculated as the square root of the variance.

The coefficient of variation (*CV*) is a relative measure of accuracy of estimates and it represents the ratio between the standard error and the value of the estimated parametre:

$$CV = \frac{SE}{\hat{\theta}} \cdot 100$$

3.1.2. Sampling error – Quality and performance indicator – Coefficient of variation (A1)

Table 1 CV% for estimates of totals of monthly turnover in retail trade

NACE REV2 group	January 2013	February 2013	March 2013	April 2013	May 2013	June 2013	July 2013	August 2013	September 2013	October 2013	November 2013	December 2013
471	0.74	0.61	0.93	1.09	0.94	0.95	0.84	0.94	1.22	1.30	1.11	1.62
472	3.68	4.83	5.24	5.48	4.54	4.29	4.03	4.13	4.91	4.61	4.79	3.65
473	0.63	0.55	1.10	1.32	0.80	0.70	0.53	0.56	0.37	0.66	0.48	0.82
474	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
475	3.33	4.71	4.45	4.96	4.53	3.62	3.62	3.71	4.29	3.78	2.87	3.25
476	0.90	0.61	0.84	0.77	1.44	1.03	0.86	1.34	1.01	0.72	0.47	0.87
477	3.61	3.72	3.85	3.44	3.25	2.99	3.13	3.42	3.34	3.26	3.34	3.59
479	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.1.3. Explanations

Parametres of the target population are estimated using the method of ratio estimation, using data on total turnover available in the sample framework for all enterprises as auxiliary information.

3.1.4. Activities to reduce sampling errors

In accordance with users' requirements, coefficients of variation are analysed periodically and the design and size of the sample are modified.

3.2. Non-sampling errors

3.2.1. Coverage errors

Coverage errors were not identified.

3.2.1.1. Quality and performance indicator – Overcoverage rate (A2)

Overcoverage was not identified.

3.2.1.2. Undercoverage error

Undercoverage was not identified.

3.2.1.3. Measures to reduce coverage errors

Regular updating of business register.

3.2.2. Measurement errors

3.2.2.1. Controls to detect measurement errors

The first control of data is done immediately after data collection. This is the so-called visual control (data not entered, errors in submitted data). After that, logical controls are performed during data entering. Once the data are entered into the database, automatic controls are performed. These serve to control the completeness of entered turnover, whether certain turnover amounted to 0, as well as to control turnovers in which major changes were recorded in comparison with the previous reference period (increase or decrease in turnover by 30%).

3.2.2.2. Reasons for the occurrence of measurement errors

Measurement errors may occur only in the stage of completing the questionnaires. Therefore, these may only be made by the reporting unit, that is, by the person who fills out the questionnaire.

3.2.2.3. Procedures in cases of measurement errors

If an error is made while the questionnaire is completed, the reporting unit is contacted in order to correct the data. If an error is made while data are entered, submitted questionnaires are checked, in order to enter the corrected, accurate data. Errors are corrected prior to the calculation of turnover indices in retail trade; therefore, there are no subsequent revisions of data.

3.2.2.4 Quality and performance indicator – Data editing rate (A3)

No records of data editing are kept. Therefore, the editing rate is not available.

3.2.2.5 Measures to reduce measurement errors

The methodology of data collection and instructions sent to reporting units are detailed and accurate, which contributes highly to a decrease in the number of errors made while questionnaires are completed. In addition, logical controls built into the application prevent data entry errors.

3.2.3. Non-response errors

3.2.3.1. Quality and performance indicator – Non-response rate of reporting unit (A4)

Non-response rate of reporting units are sporadic and insignificant. All enterprises selected into the sample at the beginning of the year are obliged to submit completed statistical reports. Non-response rate amounts to approximately 1%.

3.2.3.2. Quality and performance indicator – Non-response rate of variable (A5)

There was no item non-response.

3.2.3.3. Procedures in cases of non-response

In cases of non-response, corrections are performed on initial ponders for the stratum the enterprise belongs to.

3.2.3.4. Procedures to reduce non-response rates

If a reporting unit does not submit a completed questionnaire withing the defined deadline, it is contacted by phone, urgencies are sent, while major reporting units are visited.

3.2.3.5. Quality and performance indicator – Rate of imputed data (A6)

No imputations were done.

3.2.3.6. Quality and performance indicator – Number of errors, by type (A7)

As already noted, errors in microdata are eliminated during data processing, which means that there are no subsequent revisions. If an error is observed in the microdata, in the calculation or presentation and interpretation, there is a procedure to explain it.

3.2.3.7. Quality and performance indicator – Average size of revision (A8)

Revisions are not implemented.

4. Timeliness and punctuality

4.1. Timeliness of release

4.1.1. Quality and performance indicator – Timeliness of preliminary results (T1)

Timeliness of the first release of survey results is defined as the difference between the date of first release and the end of reference period - in our case, 26 days after the end of reference month.

Table 2. Timeliness of results of Monthly survey on retail trade for 2013

	Monthly survey on retail trade												
Reference period	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Average
Date of release	13.03.	27.03.	26.04.	26.05.	27.06.	26.07.	26.08.	01.10.	30.10.	26.11.	26.12.	26.01.	
Number of days between the end of reference period and date of release	41	27	26	26	27	26	26	31	30	26	26	26	28,2

4.1.2. Quality and performance indicator – Timeliness of final results (T2)

Preliminary results are also final results.

4.2. Punctuality of release

4.2.1. Quality and performance indicator – Punctuality of release (T3)

In 2013, the releases were delayed for January, February, May, August and September. Other monthly releases were published on the pre-defined date of release.

Table 3. Puncuality of release of the results of Monthly survey on retail trade for 2013

	Monthly survey on retail trade												
Reference period	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Average
Planned date of release according to the Release Calendar	26.02.	26.03.	26.04.	26.05.	26.06.	26.07.	26.08.	26.09.	26.10.	26.11.	26.12.	26.01.	
Actual date of release	13.03.	27.03.	26.04.	26.05.	27.06.	26.07.	26.08.	01.10.	30.10.	26.11.	26.12.	26.01.	
Deviation of the planned date of release from the actual one	15	1	-	-	1	-	-	5	4	-	-	-	2

4.3. Reasons for significant delays and measures to improve timeliness and punctuality of release

The reason for a significant delay of January release was the switch to the new methodology, which involved a new method of sampling and data processing and publishing. Delays of the releases in February, May and September were caused by corrections of technical errors occurred during the data processing and aggregation. The delay in August released was due to the engagement of the subject matter specialist in the training of entity instructors for the Census.

5. Accessibility and clarity

5.1. Accessibility

5.1.1. Dissemination channels

Number	Dissemination channels	Used
1	Website of the Institute – Internet release	YES
2	Written requests of users according to their specification	NO
3	Data published via telephone	YES
4	Digital media (CD, floppy disk, etc.)	NO
5	Data presented at press conferences	NO
6	Thematic bulletin	NO
7	Special printed publications	YES
8	Databases available to external users	NO
9	Statistically protected microdata	YES

5.1.2. Quality and performance indicator – Rate of used dissemination channels (AC1)

The rate of used channels of dissemination is 44.4% (4/9X100).

5.1.3. Methods of dissemination

The following methods of dissemination were used to publish results:

Number	Method of dissemination	Used
1	Website of the Institute – Internet release	YES
2	Websites of other institutions	NO
3	Websites of international institutions	NO
4	Written requests	NO
5	Telephone mediation	YES
6	Digital media (CD, floppy disk, etc.)	NO
7	Data presented at press conferences	NO
8	Statistical Yearbook	NO
9	This is Republika Srpska	NO
10	Statistical Yearbook	YES
11	Thematic bulletin	NO
12	Special publications	YES
13	Eurostat's publications	NO
14	Publications of other international organisations (OECD, IMF)	NO
15	Databases for internal use	NO
16	Databases available to external users	NO

5.1.4. Quality and performance indicator – Rate of used dissemination methods (AC2)

The rate of used methods of dissemination is 25.0% (4/16X100).

5.1.5. Quality and performance indicator – Number of accesses to the online database (AC3)

Database of the monthly statistical survey is not available online.

5.2. Clarity

5.2.1. Printed publications and Internet publication

- Monthly release of retail trade
- "Monthly Statistical Review" in the part referring to retail trade

5.2.1.1. Disseminated results

Survey results are presented as index numbers (monthly release and monthly review). Data are not seasonally adjusted.

In addition to the presentation of data in tables, the abovementioned publications also present data in the form of graphs.

5.2.1.2. Level (level of detail) of dissemination

Statistical publications for Republika Srpska present retail trade indices at the level of groups of NACE Rev. 2 and as special aggregates (a combination of classes or a combination of a class and a group).

5.2.1.3. Metadata

Data on turnover indices of retail trade in Republika Srpska are the official data of the Republika Srpska Institute of Statistics. Services Statistics Division is responsible for the organisation of collection, processing and analysis of data, stat@rzs.rs.ba, 051 332 758.

Series of data have been published at the Institute's website www.rzs.rs.ba since 2006, pursuant to the annual release calendar. The release calendar is also available to users, at the homepage of the website. Data are published in the form of short releases, which cover major output data (turnover indices of retail trade at the level of groups and special aggregates by statistics cited in item 1.10, comments on changes in indices, brief description of methodology and main definitions).

5.2.1.4. Measures to improve clarity of disseminated results

Data at the website of the Republika Srpska Institute of Statistics are presented clearly, in PDF format, in Excel tables and in graphs, in order to enable users to analyse and use the data.

5.2.2. Quality and performance indicator – Rate of metadata completeness (AC4)

Not subject to special analyses.

6. Comparability and coherence

6.1. Comparability over time

6.1.1. Quality and performance indicator – Length of comparable time series (CC1)

Data on trends of monthly turnover indices of retail trade in Republika Srpska have been collected and published since January 2006, on the monthly basis.

The value of indicator, these being monthly time series, amounts to 95 (11+7x12).

6.1.2. Breaks in time series

Until 2012, the survey was partially in line with the EU Regulation referring to STS and it was carried out based on the territorial principle, while since January 2013 it complies with the EU STS Regulation. Data were revised back to 2006 and there have been no breaks in the time series.

6.1.3. Other factors affecting comparability over time

There were no significant factors affecting comparability over time.

6.2. Geographical comparability

6.2.1. Comparability with other members of the European Statistical System

Data are collected according to the STS Regulation No. 1165/98, and thus, comparable with other EU countries.

6.3. Seasonal adjustment

Seasonal adjustments were not done in the monthly survey on retail trade.

6.4. Coherence between preliminary and final data

6.4.1. Dissemination policy for preliminary data

When results of the monthly survey on retail trade in Republika Srpska are published, dissemination policy for preliminary data of this survey is not used.

6.4.2. Quality indicator – Coherence between preliminary and final data (CC2)

Preliminary results are also final results; therefore, this indicator is not calculated.

6.4.3. Reasons for significant differences between preliminary and final data

There are no differences between preliminary and final data, since preliminary data are also final.

6.5. Coherence with results of the reference survey

6.5.1. Brief description of the reference survey

Reference survey is the quarterly survey on distributive trade. The quarterly survey on distributive trade is carried out on the sample basis and it complies with the EU STS Regulations. Since both these surveys comply with the EU STS Regulation, it is possible to compare the obtained data.

6.5.2. Quality and performance indicator – Compliance with the reference data (CC3)

The following formula is used to calculate indicators of compliance with the reference survey:

CC3= $CC3 = \frac{X-Y}{Y}$ where ***x***-value of the variable in the observed survey, and ***y***- value of the variable in the reference survey.

Observation of the variable of turnover in the observed and reference surveys results in the following:

Turnover: $CC3 = \frac{X-Y}{Y}$ **= (2,778,217– 2,499,909) / 2,499,909 = 0.11**

Turnover in the monthly survey on retail trade is 11% higher than turnover in the quarterly survey on distributive trade as the reference survey.

6.5.3. Reasons for significant discrepancies

There were no significant discrepancies.

7. Concessions – compromises between output quality components

Not subject to special analyses.

8. Assessment of users' needs and perceptions

8.1. Classifying and understanding users

User requirements are met in a way that, in addition to PDF format, the Institute's website also provides Excel tables with turnover indices of retail trade, for easier data management and analysis. To facilitate interpretation of data, each monthly release, in additiion to data tables, also contains a brief comment and methodological explanations in Serbian and English.

Main users of monthly retail trade indices are:

- Government and other public administration institutions, such as Ministry of Finances of Republika Srpska, Ministry of Economic Relations and Regional Cooperation of Republika Srpska, Ministry of Trade and Tourism of Republika Srpska, Banking Agency of Republika Srpska, municipal administration, as well as institutions at the BiH level, Insurance Agency of BiH, Directorate for Economic Planning
- Business entities (enterprises, lawyers and bar associations, Republika Srpska Chamber of Commerce)
- Faculties and research centres, citizens' associations
- General public (physical entities)
- Media (broadcasters and printed media)
- Foreign users (EUROSTAT, WB, IMF, embassies of foreign countries)

8.2. Measuring users' perceptions and user satisfaction

Measuring of user satisfaction related to data of the monthly survey on retail trade could be done using other methods, as there is no specific user satisfaction survey.

8.2.1. Quality and performance indicator – User satisfaction index (US1)

Since there is no specific user satisfaction survey, user satisfaction index is not calculated either.

8.2.2. Quality and performance indicator – Time elapsed since the last user satisfaction survey (US2)

There is no specific user satisfaction survey.

9. Costs and burden on respondents/reporting units

9.1. Costs of the Republika Srpska Institute of Statistics

9.1.1 Quality and performance indicator – Annual operating costs, average by main cost components (PCR1)

Costs of the implementation of Monthly survey on retail trade refer to a 12-month period (one year).

Material costs (KM)	Labour costs (KM)	Costs, total (KM)
700	46,000	46,700

9.2. Burden and costs of respondents/reporting units

9.2.1. Quality and performance indicator – Annual burden on respondents in hours and/or financial indicators (PCR2)

Costs and burden on reporting units during 12 months

Number of reporting units	Annual number of questionnaires per unit	Time spent to complete one questionnaire (hours)	Total time spent (hours)
665	12	0.5	3,990

9.3. Measures to reduce costs and burden

Continue to insist on the submission of data on VAT by the Indirect Taxation Agency of BiH, which would enable us to fully use administrative sources.

10. Confidentiality, transparency and protection

10.1. Confidentiality

The data collected for survey purposes are subject to legal frameworks of confidentiality and are used exclusively for statistical purposes.

The Law on Statistics of Republika Srpska defines the legal framework for the protection and confidentiality of data. Thus, Article 17, item 3 stipulates: "Confidential data collected for statistical purposes must not be used for other purposes."

In the part VIII DATA CONFIDENTIALITY AND PROTECTION OF PERSONAL INFORMATION, the Law on Statistics of Republika Srpska regulates this field.

In addition, Rules of the protection of confidential data of the Republika Srpska Institute of Statistics regulate the confidentiality of individual data, as well as procedures for the provision, exchange and transfer of these data to users and/or groups of users.

10.2. Transparency

Users are familiar with the method of use of data provided by the statistical survey on monthly retail trade.

Errors observed in released publications are corrected. Given that these errors have not been essential so far, errors are not indicated in the publications. Instead, the given publication is replaced by a new version, with the title stating that the release was corrected.

10.3. Protection

See chapter 10.1.

11. Conclusion

In the next period, it is necessary to:

- Produce real, seasonaly and working-day adjusted indices at the level of aggregate for publishing;
- Additonaly work on application for keeping records on number of edited and imputed data;
- Develop web application.