QUALITY REPORT
FOR STATISTICAL SURVEY

EXPORT AND IMPORT PRICE INDICES OF BiH 2014

Bosnia and Herzegovina

BHAS
Agency for Statistics of Bosnia and Herzegovina

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1 Introduction – the statistical process and its results – survey methodology

1.1 Purpose of the survey

In order to better cover international trade in goods flows, determine export and import prices in domestic market, economy competitivness and real flows of goods, besides nominal indices, export and import price indices are used.

Export and import price indices can be based on »real« prices of goods (obtained by enterprise surveys) and unit value of goods (obtained by using administrative sources – Customs). Since it is difficult to conduct enterprise surveys and due to a lack of other suitable sources to obtain »real« prices, most of the countries in the world use export and import price indices based on unit value of goods. The main difference is that one does not use market price of goods, but unit value which is defined as a ratio between total value and total quantity of goods in the market. Export and import price indices based on unit values are not just price indices since their change depends upon price as well as quantity of goods. Unit value in the context of international trade is defined as the price paid for one unit of a given product, when it is sold and exported to or imported from a given country. An advantage of these indices is that they effectively enlarge the number of observations that are used for indices calculation which leads to variance reduction since all export and import transactions of a given product are used.

In Bosnia and Herzegovina export and import price indices are calculated using unit value method. Data sources for calculation of unit values are Single Administrative Documents (SAD) which Agency for Statistics of BiH obtains from Indirect Taxation Authority for monthly data processing and production of BiH international trade in goods statistics. Agency for Statistics of BiH produces export and import price indices (unit values) on a quarterly basis since 2011.

1.2 Legal basis and the duties of the statistical institutions

- Law on Statistics of Bosnia and Herzegovina;
- Multi-annual statistical programs and annual work plans for BiH;
- Methodology Export and import price indices of BiH
- International recommendations and manuals (Eurostat, MMF, UN)

This statistical survey is a part of the annual programme of operations of the Agency for Statistics of Bosnia and Herzegovina.

1.3 Observation unit

Observation unit is unit value of any delivery of goods, exported or imported, i.e. unit value of goods in Single Administrative Document. In Single Administrative Document, goods are classified according to Customs tariff of BiH, which is in line with Combined Nomenclature (CN) used in the European Union. Customs tariff of BiH comprises around 10 000 products, and thus for that number of records the export and import price indices (unit values) can be calculated. However, the prices (unit values) at such a low level of data aggregation are less significant for the analysts, and it is necessary to calculate the group index for a particular activity or the economy as a whole.

1.4 Data collection

Data source is Indirect Taxationa Authority. Every month Indirect Taxation Authority provides Agency for Statistics of BiH with data from Single Administrative Documents.

Single Administrative Document is a document lodged by declarer (business entity or other authorized person, i.e. freight forwarder) to a customs office for customs clearing. Every Single Administrative Document comprises, among other data, data on flow of goods (export or import), tariff code (ten digit code in line with Customs tariff of BiH and Combined Nomenclature at eight digit level), statistical value in KM and quantity in kilograms. The afore-mentioned data are sufficient for calculation of export and import price indices (unit values).

1.5 Scope

The statistical survey is not based on sampling. Every Single Administrative Document i.e. export and import transaction is processed. The following records/transactions are excluded from calculation:

- products without any information on the amount (whether of net mass or value) or which do not appear during some of the observation periods,
- records whose elementary unit value index is outside the interval (0.5, 2), i.e. the interval [0.5* median, 2* median], where the median is calculated according to divisions of Classification of Activities in BiH 2010 (NACE rev.2),
- electricity - because the calculation is conducted on the net mass, not the supplementary unit.

1.6 Definitions

Export of goods means flow of goods where goods physically leave customs teritorry of BiH.

Import of goods means flow of goods where goods physically enter customs teritorry of BiH.

Goods mean every tangible movable product.

Statistical value represents value of goods according to FOB term of delivery for export and CIF term of delivery for import.

Statistical value for export (FOB – Free On Board) is defined in the following way:

- if the place of delivery is abroad, statistical value comprises invoice value minus transport, insurance and other costs from the border of BiH to the place of delivery abroad,
- if the place of delivery is in BiH, statistical value comprises invoice value plus transport, insurance and other costs from the place of delivery in BiH to the border of BiH.

Statistical value for import (CIF – Cost, Insurance, Freight) is defined in the following way:

- if the place of delivery is abroad, statistical value comprises invoice value plus transport, insurance and other costs from the place of delivery abroad to the border of BiH,
- if the place of delivery is in BiH, statistical value comprises invoice value minus transport, insurance and other costs from the border of BiH to the place of delivery in BiH.

Quantity of goods represents net weight of goods in kilograms.

Unit value of goods means value of goods in KM per kilogram.

Export price index (unit value index) represents indicator of change of export prices (unit values).

Import price index (unit value index) represents indicator of change of import prices (unit values).

Base year represents the year which data are used as a base for calculation of indices.

1.7 Data processing

The indices are calculated according to the Paasche formula, as follows:

$$P_k(1Q,Y) = \frac{\sum_{\{cn8\}_k} val(cn8,1Q,Y)}{\sum_{\{cn8\}_k} \frac{val(cn8,1Q,Y)}{Ind(cn8,1Q,Y)}}$$

where:

cn8 – the Combined Nomenclature product classification
Q – quarter
Y – year
Val – value
Ind – elementary index calculated by using the formula:

$$Ind(cn8,1Q,Y) = \frac{unit_value(cn8,1Q,Y)}{unit_value(cn8,Y-1)}$$

(unit value – a unit value for a given CN code in a given quarter, in a given year)

Base year is 2010.

Export and import price indices (unit values) are calculated quarterly from the data expressed in KM and U.S. dollars and in comparison to the previous year, while all other indices are calculated from them. Annual indices represent the arithmetic average of quarterly indices.

1.8 Publishing of results

Agency for Statistics of BiH disseminates export and import price indices of BiH (unit values) in KM and USD in quarterly Press Releases. The following indicators are disseminated: indices of total export and import, indices according to sections and divisions of Classification of Activities in BiH 2010 (NACE rev.2) and indices according to sections of Standard International Trade Classification (SITC rev.4). Provisional annual data are disseminated in the same Press Release as data for the fourth quarter. Annual data represents the aritmetic average of quarterly data.

Press Releases are published 50 days after the end of reference period.

Final data in KM, EUR and USD are published in the Thematic Bulletin on July 20.

The afore-mentioned publications can be found on web site www.bhas.ba.

1.9 Key variables

The main variable is export and import unit value of goods at quarterly basis.

1.10 Key statistics

- Quarterly indices for total export and import indicate price changes (unit value changes) in a given quarter comparing to base year 2010.
- Quarterly indices for sections and divisions of Classification of Activities in BiH indicate price changes (unit value changes) in sections and divisions of Classification of Activities in BiH in a given quarter comparing to base year 2010.
- Quarterly indices for sections of Standard International Trade Classification indicate price changes (unit value changes) in sections of Standard International Trade Classification in a given quarter comparing to base year 2010.
- Average annual indices of total export and import, sections and divisions of Classification of Activities in BiH and sections of Standard International Trade Classification indicate price changes (unit value changes) in a given year comparing to base year 2010.

1.11 Questionnaire

Statistical survey Export and import price indices of BiH (unit values) is not based on sampling and questionnaires.

1.12 Contacts

Department for International Trade Statistics is responsible for production of export and import price indices of BiH (unit values).

Contact persons:

Adisa Maljanović (Email address: adisa.maljanovic@bhas.ba; phone number +387 33 911 959)
Goran Slatinšek (Email address: goran.slatinsek@bhas.ba; phone number +387 33 911 965)

2 Relevance

2.1 Quality and performance indicator – the rate of the ESS statistics available (R1)

Export and import price indices of BiH (unit values) are produced in accordance to methodological guidelines of Eurostat and UN. Key statistics for this statistical survey are produced, in accordance to international standards.

3 Accuracy

3.1 Sampling errors

Statistical survey is not based on sampling. Sampling errors do not exist.

3.2 Non-sampling errors

3.2.1 Coverage errors

Coverage errors do not exist. All Single Adiministrative Documents i.e. transactions are processed (except transactions regarding electricity).

3.2.2 Mesurement errors

3.2.2.1 Controls used to detect the measurement errors

Indirect Taxation Authority and Agency for Statistics of BiH perform validity and credibility checks on data regarding statistical value in KM and quantity in kilograms. In addition, transactions that do not meet certain conditions are excluded from calculation (see chapter 1.5).

3.2.2.2 Causes of measurement errors

Errors can arise while inputing data i.e. inputing and submitting Single Administrative Documents.

3.2.2.3 Procedures in cases of measurement errors

If errors arise, they are corrected or records i.e. Single Administrative Documents are excluded from processing/calculation (see chapter 1.5).

3.2.2.4 Quality and performance indicator – editing rate (A3)

Subsequent data revisions and corrections can be performed by Indirect Taxation Authority and Agency for Statistics of BiH, but they do not have major impact on first results.

3.2.2.5 Measures taken in order to reduce the number of measurement errors

Primary data checks are performed by Indirect Taxation Authority. Agency for Statistics of BiH perform subsequent validity and credibility checks on data from Single Administrative Documents. This part of data processing should be further improved.

3.2.3 Non-response errors

Statistical survey is not based on sampling. Non-response errors do no exist.

4 Timeliness and the accuracy of the release

4.1 Timeliness of the release

4.1.1 Quality and performance indicator – timeliness of first result releases (T1)

Timeliness of the first release of results is defined as the difference between the date of the first release and the end of the reference period – in our case it is 50 days from the end of the reference period (quarter).

4.1.2 Quality and performance indicator – timeliness of final results release (T2)

The final quarterly and annual results are disseminated in the Thematic Bulletin 200 days after the end of reference year. The difference between first and final results is negligible.

4.2 Accuracy of the release

4.2.1 Quality and performance indicator – accuracy of the release (T3)

There were no deviations in terms of the announced date in the annual publication calendar and the actual date of the release.

4.2.2 Reasons for major delays and the measures taken to improve the timeliness and accuracy of releases

There were no delays.

5 Availability and clarity

5.1 Availability

5.1.1 Dissemination channels

Following dissemination channels are used to publish the results of export and import price indices of BiH (unit values):

No.	Dissemination channels	Used
1	Web page – Internet release	YES
2	Written requests from users according to the specification they provide	YES
3	Data published via phone	YES
4	Digital media (CD, discs, etc...)	YES
5	Data presented at the press conference	NO
6	Thematic Bulletin	YES
7	Specialized printed publications	NO
8	Databases, available to external users	NO
9	Statistically protected microdata	NO

5.1.2 Quality and performance indicator – the rate of the dissemination channels used (AC1)

The rate of the dissemination channels used is 55,6% (5/9X100).

5.1.3 Dissemination modalities

Following dissemination modalities are used for the publishing of data on export and import price indices of BiH (unit values):

No.	Dissemination modalities	Used
1	Web page – internet release	YES
2	Web pages of other institutions	YES
3	Web pages of international institutions	NO
4	Thematic web pages (i.e. Census)	NO
5	Written requests	YES
6	Phone facilitation	YES
7	Digital media (CD, disks, etc...)	YES
8	Data presented at the press conference	NO
9	Yearbook	NO
10	BiH in Numbers	NO
11	First Release	YES
12	Thematic Bulletin	YES
13	Specialized publications	NO
14	Eurostat publications	NO
15	Publications of other international organizations (OECD, IMF)	NO
16	Databases, for internal use	NO
17	Bases available to external users	NO

5.1.4 Quality and performance indicator – the rate of the dissemination modalities (AC2)

The rate of the channels used for the dissemination is 41,2% (7/17X100).

5.1.5 Quality and performance indicator – number of visits to online database (AC3)

There is no on-line database for the indices.

5.2 Clarity

5.2.1 Printed publications and internet publications - releases

- Quarterly First Release »Export and import price indices of BiH«
- Annual First Release »Export and import price indices of BiH«
- Thematic Bulletin »International Trade in Goods of BiH« (part »Export and import price indices of BiH« - final data)
- BiH in Numbers (part »Foreign Trade«).

5.2.1.1 Disseminated results

The results of statistical survey Export and import price indices of BiH (unit values) are presented in the form of indices.

Data are presented in PDF file format only.

5.2.1.2 Level (of details) of dissemination

Aggregated quaterly and annual indices are disseminated. The following indicators are published: indices of total export and import, indices according to sections and divisions of Classification of Activities in BiH 2010 (NACE rev.2) and sections of Standard International Trade Classification (SITC rev.4).

5.2.1.3 Metadata

Reference metadata - ESMS: Contact (organization, organizational unit, mail address); Metadata Updating - Dates; Statistical Presentation (data description, classification system, sectoral coverage, statistical concepts and definitions, statistical unit, statistical population, reference domain, coverage in terms of time, baseline period); Measurement Unit; Reference Period; Institutional Jurisdiction (Mandate) (legal documents and other agreements, data provision); Confidentiality (confidentiality – policy, confidentiality – data processing); Publication Policy (publication calendar, calendar of access to publications, user access); Dissemination Frequency; Dissemination Format (releases – news, publications, on-line data base, access to micro-data, other); Availability of Documents (methodology documents, quality related documents); Quality Management (quality assurance, quality assessment); Relevance (user needs, user satisfaction, completeness); Accuracy and Reliability (overall accuracy, sampling error, non-sampling error - a) coverage error - b) measurement error - c) processing error - d) non-response error); Timeliness and Release Accuracy (timeliness, release accuracy); Comparability (comparability – geographical, comparability – within time); Coherence (coherence – between domains, coherence with i.e. population statistics, coherence with i.e. employment estimates in national accounts, coherence with the employment estimates derived from buss. surveys, coherence – internal); Costs and Laud; Data Revision (data revision – policy, data revision - practice); Statistical Processing (data sources, data collection frequency, data collection, data validity control, data compilation, adjusting).

5.2.1.4 Measures used to improve the clarity of disseminated results

Data posted at the new BHAS web page are shown in PDF file format only. Data should be presented using tables and graphs in Excel as well, in order to allow users to analyse and use data in an easier manner.

5.2.2 Quality and performance indicator – metadata completeness rate (AC4)

The total number of metadata elements from the Reference ESMS used is 56. The number of available metadata elements for statistical survey Export and import price indices of BiH (unit values) is 47. Thus, the metadata completeness rate for the mentioned survey is 83,9 % (47/56x100).

6 Comparability and compliance

6.1 Comparability over time

6.1.1 Quality and performance indicator – the length of comparable time series (CC1)

The data on export and import price indices of BiH (unit values) are published from 2011.

By 2014, there is a 4 year long data time series for BiH. The value of this indicator, considering that these are quarterly series is 4x4=16.

6.1.2 Interruptions within the time series

There have been no interruptions in export and import price indices of BiH (unit values) series, since their introduction in 2011.

6.1.3 Other factors affecting comparability over time

There were no other relevant factors that would affect the comparability over time.

6.2 Geographic comparability

6.2.1 Comparability with other members of the European Statistical System

Export and import price indices of BiH (unit values) are produced in accordance to international recommendations. Data are comparable to data of other members of European Statistical System. However, indices are primarily used for national purposes.

6.3 Deseasonalization

The data on export and import price indices of BiH (unit values) are not seasonally adjusted.

6.4 Compliance between the interim (temporary) and final data

6.4.1 Interim data dissemination policy

The Interim data dissemination policy does not apply to the presentation of results of the export and import price indices of BiH (unit values).

6.4.2 Quality indicator – compliance between the interim and final data (CC2)

The difference between the first and final results is negligible.

6.4.3 Reasons for significant differences between the interim and final data

The differenece between the first and final results is negligible.

6.5 Compliance with the reference survey results

6.5.1 Short description of the reference survey

No reference survey is being implemented.

7 Trade-offs between the quality output components

No trade-offs (trade-off between the quality output components) were analysed within this statistical survey.

8 Assessment of the needs and perceptions of users

First Releases can be found on web page in PDF file format only, but Excel tables will soon be provided, to manage and analyse the data in an easier way. In order to facilitate the interpretation of the data presented, each release includes a short comment and the methodology instructions in all three official languages used in Bosnia and Herzegovina and in English as well – to assist the foreign users. Thematic Bulletin is provided in English as well.

8.1 Classification and understanding of users

Institutions such as Directorate for Economic Planning under Council of Ministers of BiH and International Monetary Fund are listed as the primary users of the export and import price indices of BiH (unit values). Additional users are business enterprises and media.

Internally, the indices are used in the National Accounts Statistics for production of gross domestic product (GDP).

8.2. User perception and satisfaction monitoring

Satisfaction of users is mainly monitored based on the frequency of their requests and petitions sent to the Agency for Statistics of BiH – in terms of frequency of similar requests for indicators which are, later on, being introduced into release itself (if these requests are found to be legitimate and if they do not refer to data we are obliged to protect).

8.2.1 Quality and performance indicator – the user satisfaction index (US1)

No specific survey in terms of the user satisfaction with regard to this product is being conducted.

8.2.2 Quality and performance indicator – time elapsed from the previous user satisfaction survey (US2)

No specific survey in terms of the user satisfaction with regard to this product is being conducted.

9 Respondents/reporting units costs and workload

9.1 Survey costs for the statistics office

9.1.1 Quality and performance indicator – annual operational costs, averages as per main cost components (PCR1)

Information on costs cannot be determined.

9.2 Respondents/reporting units costs and workload

9.2.1 Quality and performance indicator – respondents' annual workload in hours and/or financial indicators (PCR2)

Administrative data are used. Source of data is Indirect Taxation Authority and data from Single Administrative Documents are used. Information on respondents' annual workload and costs is not available at the Agency for Statistics of BiH. Only Indirect Taxation Authority has information regarding these indicators.

9.3 Measures taken to reduce the costs and workload

Administrative data are used. Source of data is Indirect Taxation Authority. This institution is responsible for introducing measures to reduce respondents costs and burden.

10 Confidentiality, transparency and protection

10.1 Confidentiality

Statistical data confidentiality is required by law, while the staff in charge of the statistical survey is also, according to the same legislation, bound to protect that confidentiality.

Thus the Article 27 of the Law on Statistics of BiH states that »All measures of organisational, regulatory, administrative and technical nature necessary to protect Confidential Data against unauthorised access, disclosure and use, shall be taken by the Competent Authorities in collecting, processing, transmitting and dissemination of Statistics of Bosnia and Herzegovina including at the Entity level«, while the Article 28 of the same Law states that »Persons having access to Confidential Data in the performance of their tasks shall be subject to compliance with the provisions of this law, even after the cessation of their functions«.

In addition, the document called the »Rulebook on the Protection of Statistical Data at the Agency for Statistics of BiH« states the procedures to secure confidentiality during collection, processing and dissemination – including protocols to safeguard individual accessible data, rules to define confidential cells in output tables as well as procedures to detect and prevent disclosure and the access to microdata by external users for research purposes.

10.2 Transparency

Users are informed of the way of how to use the data from the statistical survey Export and import price indices of BiH (unit values).

Statements at the press conference related to survey results are absolutely impartial and politically neutral.

No errors were detected in the publications regarding export and import price indices of BiH (unit values), thus there was no need for any corrections and for the publishing of such changes.

10.3 Protection

Listed in the Chapter 10.1.

11 Conclusion

Export and import price indices of BiH (unit values) calculation method is being further tested and improved.

Improvement of Single Administrative Documents data quality should be a priority. This will have a direct impact on improvement of inidices quality.

Data presented in Excel tables should be put on web site of the Agency for Statistics of BiH.