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**AGENCY FOR STATISTICS OF**  
**BOSNIA AND HERZEGOVINA**

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**Document**

**METHODOLOGICAL GUIDELINES**  
**DISTRIBUTIVE TRADE TURNOVER INDEX**  
Short-term statistics

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## Distributive trade turnover index

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## TABLE OF CONTENTS

<b>ABBREVIATIONS.....</b>	<b>5</b>
<b>1. INTRODUCTION .....</b>	<b>6</b>
<b>2. CONCEPTUAL FRAMEWORK .....</b>	<b>7</b>
2.1. Objective.....	7
2.2. Purpose.....	7
2.3. Classifications .....	7
2.4. Legal basis.....	7
2.5. Regulators.....	8
<b>3. SURVEY METHODOLOGY.....</b>	<b>9</b>
3.1. Definitions .....	9
3.2. Statistical population.....	11
3.2.1 Observation unit .....	11
3.2.2 Reporting unit.....	11
3.2.3 Geographical Scope .....	11
3.3. Sample frame.....	11
3.4. Stratification .....	12
3.5. Sample selection.....	14
3.6. Non-response treatment.....	16
3.7. Other inclusions or exclusions .....	18
3.8. Reliability of estimates .....	18
<b>4. SURVEY ORGANISATION .....</b>	<b>20</b>
4.1. Jurisdiction of statistical institutions .....	20
4.2. Data source.....	20
4.3. Data collection method .....	21
4.4. Data processing .....	21
4.5. Index compilation .....	23
4.5.1. „Backcasting“ .....	24
4.5.2. Nominal and real indices .....	<b>Error! Bookmark not defined.</b>
4.5.3. Calendar and seasonal adjustment of gross indices.....	25
4.5.4. Seasonally- adjustment methods .....	26
4.6. Periodicity.....	27
4.7. Data dissemination.....	27
4.8. Planned changes in method of indicator calculation .....	27
4.9. Data revision.....	28
4.10. Data protection.....	28
4.11. International comparability of data .....	29
<b>APPENDICIES.....</b>	<b>30</b>

## ABBREVIATIONS

<i>APIF</i>	Agency for mediation, IT and financial services
<i>BHAS</i>	Agency for Statistics of Bosnia and Herzegovina
<i>COICOP</i>	Classification of individual consumption by purpose
<i>CPA</i>	European Classification of Products by Activities
<i>CPC</i>	United Nation's Central Product Classification
<i>CPI</i>	Consumer Price Index
<i>CV</i>	Coefficient of variation
<i>ESS</i>	European statistical system
<i>EUROSTAT</i>	Statistical Office of the European Communities
<i>FIA</i>	Financial and IT Agency
<i>FIS</i>	Federal Institute of Statistics of the Federation of Bosnia and Herzegovina
<i>ISIC</i>	United Nation's International Standard Industrial Classification of all Economic Activities
<i>KD BiH 2010</i>	Classification of Activities of Bosnia and Herzegovina 2010
<i>KPPD BiH 2010</i>	Classification of products by Activities of BiH 2010
<i>NACE Rev.2</i>	European Classification of Economic Activities
<i>VAT</i>	Value Added Tax
<i>PEEI</i>	Principal European Economic Indicators
<i>RSIS</i>	Republic of Srpska Institute of Statistics
<i>RTI</i>	Retail Trade Index
<i>SA</i>	Seasonal adjustment
<i>SE</i>	Standard deviation (standard error)
<i>SBR</i>	Statistical Business Register
<i>STS</i>	Short Term Statistics
<i>V</i>	Variance
<i>WDA</i>	Working-day adjustment

## 1. INTRODUCTION

Services statistics take an important place in the national economy and have major role in recent decades. Reason for this is the large number of business entities engaged in services, especially in trade activities, whose turnover has a significant contribution in realized turnover of BiH as well as the fact that a large number of people are employed in these sectors.

In total value added of EU services share is amounted to 70%. Although in BiH this percentage is much lower than in developed countries, it is still important to monitor service statistics indicators in order to provide timely, complete and accurate information necessary for making business decisions. About the significance of turnover index for other services (including Distributive trade turnover index) is the fact that it is one of the main European economic indicators (PEEI - Principal European Economic Indicators)<sup>1</sup>, with the purpose to provide timely information to the European Central Bank (ECB) and growing importance and use of official statistical data, primarily as support to economic and social reforms.

Services statistics in Bosnia and Herzegovina is in early stage of development, and the complexity of identifying and monitoring services makes this process challenging, so it is necessary to make great efforts to achieve the set goals. Distributive trade survey is part of a comprehensive statistical study of short-term business statistics which are successively developed under a unified methodological framework for all sectors of business economics in accordance with the "Methodological framework for the development of short-term business statistics in BiH".

Through the common project of the three statistical institutions in BiH existing methodological provisions are harmonized and based on a common questionnaire (K KPS TRG 02) and directions for filling in, since January 2013 the redesigned quarterly survey on distributive trade have been conducted. The aim of conducting modified distributive trade survey is to harmonize the production of quarterly statistics on distributive trade in BiH with EU STS regulation. Methodological framework for the compilation of the distributive trade turnover index and other indicators in this area are set out in Annex D of Council Regulation (EC) No. 1165/98 concerning short-term statistics from 1998, as well as its subsequent amendments (hereinafter EU-STS regulation).

The statistical institutions in BiH are making great efforts in order to develop modern statistical system. This publication is intended for all users who are interested in the way of conducting distributive trade survey on territory of Bosnia and Herzegovina. This primarily refers to the domestic institutions and users of statistical data, such as decision-makers in our country, business entities, research institutions and the general public, as well as key members of the EU and other international organizations. In addition, this methodological document is intended for people directly involved in the process of conducting the survey, or employees in the statistical institutions of BiH, as well as reporting units.

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<sup>1</sup> Turnover index for other services

## 2. CONCEPTUAL FRAMEWORK

### 2.1. Objective

One of the main goals of Distributive trade turnover index compilation is to describe the changes in the level of turnover and other relevant indicators from the trade section. The distributive trade turnover index is a key indicator of economic activity of the country, which helps government bodies and companies from the private sector in the decision-making process.

The significance of this indicator, among other, is in fact that turnover from trading activities plays an important role in the overall GDP in BiH and according to official statistics share of trade in GDP for 2012 is amounted to 13%. Also, distributive trade turnover index is used for estimation of results of retail trade sector, wholesale and motor vehicles sectors, estimation of household consumption, as well as in calculation of quarterly GDP.

### 2.2. Purpose

The purpose of this statistical survey is to obtain information on the movement of distributive trade turnover index, i.e., to determine dynamics of realized turnover (revenues of goods sold/services provided) and other indicators required by EU-STS regulation. As with other short-term statistics, absolute value is not the best indicator of changes, however, through monitoring of the phenomena movement dynamics, some conclusions can be drawn, as well as projections for the future.

### 2.3. Classifications

In the calculation of the distributive trade turnover index, the Classification of Activities of Bosnia and Herzegovina **KD BiH 2010** has been used. It is fully harmonized with the European Classification of Economic Activities **NACE Rev. 2** and United Nation's International Standard Industrial Classification of all Economic Activities (**ISIC**). Due to the fact that Classification of Activities of BiH is harmonized with European and global classification of activities, the comparison of statistical data is enabled and an important step is made in strengthening and improving the statistical system in BiH.

### 2.4. Legal basis

The following legislation represents the legal basis for conducting survey on Distributive trade turnover index:

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

In addition to these laws, the survey is subject to other guidelines and instructions contained in: Mid-term statistical program of Bosnia and Herzegovina for period 2013-2016, the corresponding programs on entity levels and annual statistical plans. The above mentioned programs and plans



contain detailed information on the content of survey, responsibilities, deadlines and results. Survey methodology is harmonized with the EUROSTAT's regulations for short-term statistics. All EU countries follow these regulations as well as those countries with ambition to become a part of that system in the future. In order to achieve that goal, it is necessary to harmonize all national regulations and methodologies with those in force in EU.

Regulations related to segment of short-term business statistics are:

- Council Regulation (EC) No 1165/98 of 19 May 1998 concerning short-term business statistics<sup>2</sup>;
- Regulation No 1882/2003 and 1158/2005 of the European Parliament and Council (EC) on amendments to the Council Regulation 1165/98;
- Commission Regulation (EC) No 1503/2006 and of European parliament and Council (EC) No 1893/2006 on implementation and amendments on Council Regulation (EC) No 1165/98 concerning short-term statistics as regards definitions of variables, list of variables and frequency of data compilation.
- Commission Regulation (EC) No. 1178/2008 and 329/2009 and Regulation of the European Parliament and of the Council No 596/2009.

## 2.5. Regulators

In accordance with administrative constitution and law it is determined that there are three government statistical institutions on the territory of Bosnia and Herzegovina:

- Agency for Statistics of BiH (BHAS), headquartered in Sarajevo - responsible for the production of statistics on BiH level;
- Federal Institute of Statistics of the Federation of BiH (FIS), headquartered in Sarajevo - responsible for producing statistics on the level of Federation of Bosnia and Herzegovina;
- Republic of Srpska Institute of Statistics (RSIS) headquartered in Banja Luka - responsible for the production of statistics on the level of Republika Srpska.
- Branch office of the Agency for statistics of BiH in the Brčko District, responsible for the production of statistics at the District level.

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<sup>2</sup> Full text of Regulation can be found at the end of the Publication in Annexes

### 3. SURVEY METHODOLOGY

#### 3.1. Definitions

**Trade** represents a set of activities regarding sale of goods and/or provision of services to make a profit or to obtain other socio-economic benefits.

**Distributive (total) trade** includes all forms of trade activities, procurement goods from manufacturers, intermediation, resale, and delivery of goods to the final consumer in the domestic market. It includes: wholesale trade for own account, mediation in wholesale trade, retail trade and repair of motor vehicles and motorcycles, as well as retail of goods for personal or household consumption. This section includes wholesale trade (division 46), retail trade (division 47) as well as a division of wholesale, retail trade and repair of motor vehicles and motorcycles (division 45).

**Wholesale trade** is resale of new and used goods to retailers, industrial, commercial or professional users and organizations or to other wholesalers, including intermediation or sale of goods to third parties. Wholesalers are those who buy and sell goods on their own account, such as industrial distributors, exporters, importers, trade associations, sales branches and offices (but not retail stores). Wholesalers are operated by manufacturing units, separated from their factories or coal mines, and exist because of placement of their products (orders to be carried out by direct shipments from the factories or coal mines are not included). Sale activities of various intermediaries in trading goods and products as well as agents and cooperative organization for farm products placement are also included in wholesale.

**Retail trade activity** includes activities of selling new and used goods to final consumers for personal or household consumption, which is carried out in stores, department stores, stalls, by postal services and e-mail, street vendors, selling door to door, through consumer cooperatives, in auction houses, etc.

**Wholesale and retail trade; repair of motor vehicles and motorcycles** includes all activities (except manufacture and renting) related to motor vehicles and motorcycles, including lorries and freight trucks, such as wholesale and retail trade of new and used vehicles, repair and maintenance of vehicles and the wholesale and retail sale of parts and accessories for motor vehicles and motorcycles. Commission agents activities in wholesale and retail trade of vehicles are included.

**Turnover** comprises the total invoices charged by the enterprise as observation unit, during the reference period and this corresponds to market sales of goods or services supplied to third parties.

Realized turnover also includes all other charges related to sales (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Value added tax (VAT) and other similar deductible taxes directly linked to turnover as well as all duties and taxes on the goods or services invoiced by the unit are excluded from turnover. Reduction in prices, rebates and discounts as well as the value of returnable packaging must be deducted. Price reductions, rebates and bonuses conceded later to clients (for example at the end of the year) are not taken into account.

According to this definition, the items included are:

- Sales of manufactured products,
- Sales of products manufactured by subcontractors,
- Sales of goods purchased for resale in the same condition as received,
- Invoiced services provided,
- Invoiced charges for packaging and transport,
- Hours worked invoiced to third parties for labour - subcontracting only,
- Invoiced mounting, installations and repairs,
- Invoiced instalments (stage payments),
- Subsidies on products <sup>3</sup>

Income classified as other operating income, financial income and extraordinary income in enterprises accounts are excluded from realized turnover.

This group includes:

- VAT and other deductible taxes directly similar and related to turnover and all customs and taxes on goods and services invoiced per unit,
- Commissions,
- Leases and rentals,
- Leases for own production units and machines if used by third parties,
- Leases of enterprise-owned dwellings,
- Receipts for license-fees,
- Receipts from staff facilities (for example from a factory canteen),
- The supply of products and services within the observation unit,
- Sales of own land and fixed assets,
- Sales or leases of own properties,
- Sales of shares,
- Interest receipts and dividends,
- Other extraordinary income.

The above items can be included in turnover if it is generated within the basic activity of reporting unit.

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<sup>3</sup> Due to the difficulty to calculate subsidies on product they are excluded in calculation of Distributive Trade Turnover Index

## 3.2. Statistical population

### 3.2.1 Observation unit

Statistical survey on distributive trade comprises business entities/legal units which are, by the main activity, registered to perform activities from section G - KD BiH 2010:

45- Wholesale and retail trade of motor vehicles and motorcycles, repair of motor vehicles and motorcycles;

46 - Wholesale trade, except of motor vehicles and motorcycles;

47 - Retail trade, except of motor vehicles and motorcycles.

Business entities that are, according to their main activity, registered in other activities (industry, construction, catering, etc.) but also perform trade activities are also represented.

### 3.2.2 Reporting unit

- Businesses entities/ legal units which are, by the main activity in Statistical Business Register registered within activities of section G- KD BiH 2010<sup>4</sup> and
- Businesses entities/ legal units which are, by the main activity registered in other industries but realize a significant turnover in trade activities.
- The entrepreneurs are not included in survey.

### 3.2.3 Geographical Scope

The survey covers business entities/legal units engaged in wholesale trade, retail trade, wholesale trade and retail trade of motor vehicles and motorcycles, repair of motor vehicles and motorcycles on the territory of Bosnia and Herzegovina.

## 3.3. Sample frame

For determination of the sample frame Statistical Business Register – SBR<sup>5</sup> is used. Statistical Business Register is a unique framework of all administrative business registers and is used as primary data source in conducting statistical surveys in BiH.

The main sources of SBR data are administrative business registers managed by entity statistical institutes together with the relevant tax authorities:

- Federal Institute of Statistics with the Tax Authorities of FBiH,
- Republic of Srpska Institute of Statistics with the Tax Authorities of the RS
- Branch office of the Agency of Statistics in Brčko District and the Tax Authorities of DBBiH.

Data on operating income and number of persons employed in the Federation are obtained through the Financial Information Agency (FIA) on the basis of the Statistical Annex of the annual financial statements, while in the Republic of Srpska data are obtained through the Agency for intermediary, IT and financial services (APIF) based on the annual financial statements.

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<sup>4</sup> Extract from Classification of activities KD BiH 2010 (section G) can be found at the end of publication in Annexes

<sup>5</sup> SBR is jointly managed and updated by all three statistical institutions in BiH.

Data sources for the SBR is information obtained from regular statistical surveys: a monthly survey of retail trade (questionnaire M KPS TRG 01) and a quarterly survey of distributive trade (questionnaire K KPS TRG 02). Information about the main activities of business entities in the SBR in the continuously updated throughout the year and are taken into consideration when creating the pattern for the coming year.

Since it is necessary that the sample for this research is to be chosen at the beginning of the calendar year it was decided that, as the base for making frame, state of SBR on the 31.12. is used, in which, among others, are the data from the final accounts for the previous year. This means that the sampling units are active businesses entities/legal units that have data from the annual accounts for the previous year (number of employees and financial information) and which are, by main activity, registered within the section G - KD BiH 2010.

Prior to the design and selection of the sample detailed analysis of available data from SBR is carried. Since the survey collects data on turnover, methodologists have decided that primary stratificational variable is the financial information from the frame and as second stratificational variable the number of employees is used. Therefore, it was decided that business units/legal entities with annual financial data less than 100,000 KM should be excluded from the frame because they have insignificant participation in total turnover. Based on that analysis, a decision on creation of frame and sample design was made.

For selected enterprises/legal units, following conditions have to be met:

- to be active (data are filled in from the annual financial statement for 2012);
- to be legal entities – enterprises (entrepreneurs are not included);
- that code letter of their main activity belongs to the section G – KD BiH 2010

### 3.4. Stratification

In order to ensure representativeness of the sample and reduce sample errors stratification is done according to pre-defined criteria. Stratification is the process of forming strata, smaller groups that are internally homogeneous and heterogeneous among themselves. This is followed by the sampling process.

Stratification of the target population for this survey is done according to the class of financial information (financial report for the previous year) and activity of legal unit within trade. As an extra stratificational variable the number of employees is used.

Marks of stratum in this survey are introduced in the following form:

***Entity Mark\_3 digit Nace Rev2\_Class of financial data\_Census mark for financial class\_Outlier Condition***

- *Entity mark* has the following values: 1- Republic of Srpska, 2- Federation of BiH, 3- Brčko District BiH

- 3 digit Nace Rev2- Data collection and processing is done on group level of KD BiH 2010
- Class of financial data – size of the enterprise according to the total annual turnover has the following values:

Class of financial data	Realised annual turnover of the enterprise
1	0 – 99. 999 KM
2	100.000 – 499.999 KM
3	500.000 – 3.999.999 KM
4	4.000.000 KM and more

- Census mark has the following values:
  - 1- if the census is applied (full coverage)
  - 0- in other cases
- Outlier condition has the following values:
  - 1- if one of the 2 criteria's are fulfilled:
    - number of employees is 20 or more
    - number of enterprises in stratum is 10 or less
  - 0- in other cases

For non-census strata, it is necessary to perform identification of outliers, according to following criteria:

1. number of persons employed is 20 and more,
2. number of enterprises in stratum is less or equal 10.

In order to properly classify enterprises that meet specified criteria in the appropriate strata, following rules are used:

- a) Enterprise that meets criteria 1, should be transferred to the appropriate stratum of class 4 (if that class exists for the same activity). If there is no class 4 of same activity, it is necessary to test the rule b) which relates to the second criteria. In the case the rule b) has not been satisfied, the enterprise will remain in the corresponding (outlier) stratum.
- b) For strata that meets criteria 2 and in which the number of units is less than or equal to 5, at least in one of these strata with the same activity, it is necessary to join the enterprise from the appropriate class 2 (outlier) stratum of class 3 (if that class exists for the same activity). If there is no (outlier) stratum of class 3 for the same activity, then the enterprise will remain in the corresponding (outlier) stratum of class 2.

Note: First is examined criteria 1 and the corresponding rule a) for companies that are not in full coverage. After that, the temporary stratum is formed, for which criteria 2 and the corresponding rule b) is tested.

These rules are not referred to the Brčko District, for which full coverage for all classes is used.

**Table 3.4.1: Final frame in 2014**

	Number of units in frame
<b>Bosnia and Herzegovina</b>	<b>7033</b>
Federation of Bosnia and Herzegovina	4703
Republic of Srpska	2065
Brčko District of Bosnia and Herzegovina	265

**Table 3.4.2: Sample frame according to activities and classes of financial data on BiH level**

Activity of KD BiH 2010	Class of financial data			TOTAL
	2	3	4	
451	92	89	43	224
452	94	36	17	147
453	182	130	33	345
454	1	5	0	6
61	190	132	32	354
462	38	39	16	93
463	124	178	151	453
464	297	260	122	679
465	54	50	18	122
466	97	80	13	190
467	310	435	176	921
469	252	260	125	637
471	382	250	148	780
472	62	43	14	119
473	33	179	123	335
474	56	18	4	78
475	278	240	74	592
476	52	30	7	89
477	443	295	87	825
478	2	0	0	2
479	8	28	6	42
<b>TOTAL</b>	<b>3047</b>	<b>2777</b>	<b>1209</b>	<b>7033</b>

### 3.5. Sample selection

In process of data collection and processing the combined method of sample and full coverage is used depending on size of the enterprise (using classes of financial data). The sample is representative part of the statistical set, which is used as a base for estimation of entire observed population, by statistical inference. Final allocation and distribution of the sample by strata is done using merged data from the entities, while for Brčko District full coverage is applied.

The allocation is made as follows:

- According to the Neyman using financial information  
 Neyman's (optimal) allocation is calculated by the following formula:

$$n_h = n \frac{N_h S_h}{\sum_{h=1}^H N_h S_h}$$

Where:

$n$  - Number of units in sample

$H$  - Number of strata

$N_h$  - Number of units within stratum  $h$  ( $h = 1... H$ )

$S_h$  - Standard deviation of financial information on the level of stratum  $h$

- According to the proportions  
 Proportional allocation is calculated by the following formula:

$$n_h = n \frac{N_h}{N}$$

Where:

$n$  - Number of units in sample

$N$  - Number of units in frame

$N_h$  - Number of units within stratum  $h$  ( $h = 1... H$ )

$H$  - Number of strata

- Average of Neyman's and proportional allocation
- The maximum between Neyman's allocation and the average value of Neyman's and proportional allocation is taken
- Rule applied to the sample is at least 8 units in the stratum, as well as the rule of 15% coverage by the number of enterprises per stratum, which leads to an increase in sample size. The reasons for the application of these rules are reducing the small number of allocated units within strata, as well as minimizing the appearance of empty strata, which occur due to the inability to collect data, and represent a problem in the further processing of the data.
- It was decided to take the allocation for which total sample size at the state level would be about 20% of the total frame size (non census part)

The final sample was performed using the "sampling" package of software application "R".



**Table 3.5.1: The final sample in 2014**

Number of units in sample	
<b>Bosnia and Herzegovina</b>	<b>2534</b>
Federation of Bosnia and Herzegovina	1489
Republic of Srpska	780
Brčko District Bosnia and Herzegovina	265

Selected sample of retail trade in 2014 is representative at the level of Bosnia and Herzegovina as well as on the level of the Federation of Bosnia and Herzegovina, Republic of Srpska and Brčko District.

**Table 3.5.2: Final sample by activities and classes of financial data for BiH**

Activity of KD BiH 2010	Class of financial data			TOTAL
	2	3	4	
451	24	26	43	93
452	23	16	17	56
453	39	25	33	97
454	1	5	0	6
461	34	26	32	92
462	22	21	16	59
463	26	42	151	219
464	69	54	122	245
465	18	18	18	54
466	20	18	13	51
467	59	90	176	325
469	41	48	125	214
471	69	47	148	264
472	20	24	14	58
473	20	38	123	181
474	19	16	4	39
475	54	46	74	174
476	11	24	7	42
477	85	56	87	228
478	2	0	0	2
479	8	21	6	35
<b>TOTAL</b>	<b>664</b>	<b>661</b>	<b>1209</b>	<b>2534</b>

### 3.6. Non-response treatment

Despite the continuous efforts of the statistical institutions to maximize the number of responding units, there is still a certain number of them which are treated as non-response. Non-response is considered if the reporting unit: does not submit completed questionnaire K KPS TRG 02, submit partially completed questionnaire, or it is determined that the information supplied is not

accurate. Units in response are only those who submit a duly completed questionnaire in a predetermined period.

If the legal unit does not submit a questionnaire within a predefined deadline, it is again contacted by the relevant statistical institution in accordance with established procedures.

Non-response of the unit has two impacts on the data:

1. affects the accuracy of the estimates, especially when the characteristics of the companies in the set of response and non-response are different,
2. it contributes to increasing of sample variance estimates, because then the sample is smaller than that initially sought.

Non-response unit is treated in one of the following ways:

- *Imputation of missing data* – based on historical data. Depending on availability of historical data (previous quarter, the same quarter of previous year, average of previous period), additional information and referent quarter, the best imputation method will be defined. Imputation will be done for all enterprises from turnover class IV, for small strata from classes II and III as well as for classes of activities in which there is no enterprise with response. There are three main ways for imputation:

- a) Imputation is performed by using data from the enterprise (non-response units), the same quarter of previous year, adjusted for the growth rate. It is a convenient way of imputation for large enterprises, which have their own matrix of seasonal effects. It avoids possible errors and outliers of other enterprises in the response.

$$\text{Formula: } T_t = T_{t-1} \cdot \frac{T_{t-4}}{T_{t-5}}$$

Main disadvantages of this method are: data from previous period must be available, trend component among similar enterprises is not taken into consideration, method is not applicable for moving holidays, structural changes etc.

- b) During the imputation process, growth rate of similar enterprises is used (the same activity and size), which were in response for the reference quarter. If the enterprise data for the previous year are not available, this method has great benefits. It can be used for the quarter with moving holidays, structural changes during the previous year etc.

$$\text{Formula: } T_t = T_{t-1} \cdot \frac{\sum_{i \in M} T_t^i}{\sum_{i \in M} T_{t-1}^i}$$

Where M is the size of the matched part of the sample.

The main disadvantages of this method are: it does not take into account the enterprise's seasonal component, mistakes and outliers of similar enterprises in response are incorporated, etc.

- c) During the imputation the average data of similar enterprise (the same stratum) for the previous year, adjusted for non-response is used. This method applies only if it is not possible to use the first two methods.

$$\text{Formula: } T_i = \frac{\sum_{i=1}^4 T^i}{4}$$

In some cases it is possible to combine the previously mentioned methods in order to obtain the best possible estimates.

- *correction of weights* - for enterprises for which the data imputation was not performed it is necessary to correct the initial weights for stratum which the enterprise belongs to;
- *In special cases* – if the enterprise has not started with operations, currently does not perform operations, is in the liquidation process, or the enterprise activity is misclassified, the imputation of zero value will be performed for all items (financial data). However, for these enterprises weights correction will not be made, and they will be treated as enterprises in response.

### 3.7. Other inclusions or exclusions

Entrepreneurs registered within section G - KD BiH 2010 are not included in the survey. Statistical Business Register is still not updated regularly, thus it is difficult to confirm the activity/inactivity of registered business entities. Also, all statistical units of the population, which are classified in class I according to their turnover financial class, are excluded, i.e. enterprises with annual turnover less than 100.000 KM.

### 3.8. Reliability of estimates

In conducting distributive trade survey the combined method of full coverage and stratified random sampling is used. As a consequence possibility of sampling errors that can not be avoided arises. Among the most important factors that have influence on the size of sampling errors are sample size, sample design and data variability.

Since the characteristics of the population are estimated based on the sample, different samples chosen from the same population frame gives different estimation values. Of course, during the survey process it has to be considered that the sample should be as credible as to the population from which is chosen, in order to get estimated values of the characteristic as correct as they can be. In order to determine the representativeness of the sample, as well as the accuracy of the results, various statistical indicators are used. The most important ones are the standard deviation and coefficient of variation.

Standard deviation ( $\sigma$ ) is an absolute measure of dispersion and shows dispersion of the estimated results with respect to the actual value, and it also shows the characteristics of the population. It is

also called the standard error. The aim is to minimize standard deviation value as much as possible, because it means that the characteristics are estimated correctly.

The standard error (SE) is calculated as the square root of the variance.

At the level of the stratum variance is calculated as:

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

where:

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

$f_h$  - fraction of the sample in stratum  $h$  ( $h = 1... H$ )

$n_h$  - number of units in the sample stratum  $h$

$N_h$  - number of units within stratum  $h$

$m_{rh}$  - the number of responding units in stratum  $h$

$\bar{y}_h$  - average financial data  $y_i$  at the level of stratum  $h$

$S_h^2$  - squared standard deviation of financial information on the level of stratum  $h$

The total variance is the sum of the calculated variance at the level of each stratum:

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

The coefficient of variation (CV) is a relative measure of estimation accuracy and it shows ratio between the standard error and the arithmetic mean. It is shown as a percentage value. If the estimation accuracy is small, it is necessary to indicate that matter, and if it is determined that the estimation is not precise enough, it may not be published.

$$CV = \frac{SE}{\bar{y}} \cdot 100, \quad \bar{y} \neq 0$$

Coefficient of variation values, and actions taken:

CV	Precision
CV < 0.15	Precise estimations, to be published
0.15 ≤ CV < 0.30	Less precise estimations, to be entered in brackets
CV ≥ 0.30	Non precised estimations, will not be published. Dot is entered (.)

## 4. SURVEY ORGANISATION

### 4.1. Jurisdiction of statistical institutions

The official statistical institutions in BiH are involved in process of conducting the survey. Based on harmonized statistical standards and instruments for conducting survey Agency for Statistics of BiH processes the data, publishes and disseminate results to final users. The Entity institutes and Branch Office in Brčko District perform preparatory work necessary for the successful survey implementation: printing of questionnaires and delivery to regional/cantonal offices, providing instructions for filling in the questionnaires, collection of the completed questionnaires, performing data controls (completeness, logical and computational accuracy of the data filled in questionnaires), preparing the questionnaires for processing, entering the data up to a certain deadline and send them to the Agency for statistics of BiH.

### 4.2. Data source

The data source for filling in the questionnaire K KPS TRG 02<sup>6</sup> is accounting data or other relevant documentation. If the reporting unit does not have available precise accounting data, it is necessary to make the best possible estimation.

The main observed variable is turnover of business entity registered within section G - Wholesale trade, retail trade, wholesale trade and retail trade of motor vehicles and motorcycles, repair of motor vehicles and motorcycles (KD BiH 2010), excluding VAT. In accordance with EU-STS regulations VAT is calculated and shown separately. In addition, the collected data on retail trade turnover is broken down by commodity groups of KPPD BiH 2010 to determine their participation on class level of activities of a business entity. This structure is used to calculate deflator of sales of retail trade using adjusted consumer price index. Also, through the survey data on: employed persons, working hours, wages and salaries, stocks as well as investments in fixed assets are collected.

For reporting units that are, by main activity registered within section G - KD BiH 2010 data on the questionnaire (K KPS TRG 02) refer to the total turnover, which means that it includes turnover from *trade activities as well as turnover from secondary activities*, if the business entity performs them. Enterprises whose main activity is registered outside section G - KD BiH 2010 disclose *only turnover from trade activities* on the questionnaire .

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<sup>6</sup> Questionnaire is attached at the end of this publication, in part Appendices.

### 4.3. Data collection method

The survey is conducted by reporting method, which means that the legal entity submits filled questionnaire (within a certain deadline) to cantonal statistical office of Federal Institute of Statistics of the Federation of BiH, regional statistical office of the Republic of Srpska Institute for Statistics, or to the branch office of the Agency for Statistics in Brčko District.

At the beginning of the year 4 sets of questionnaires are sent to all reporting units, with the aim to get necessary information on quarterly basis.

Deadlines for conducting distributive trade survey:

1. Deadline for submission of questionnaire for reporting units to cantonal/regional offices is 15 days from the end of reference period ( $t + 15$ );
2. Deadline for submission of data for cantonal/regional offices to entity statistical institutions is 20 days from the end of reference month ( $t+20$ );
3. Deadline for submission of data for entity statistical institutions to Agency for statistics of BiH is 50 days from the end of reference period ( $t+50$ );
4. Deadline for publication of data by statistical institutions is 60 days from end of reference period ( $t+60$ ).

Participation in the survey is mandatory. The response rate (response of reporting units) is slightly different per entities. In total, i.e. on the level of BiH, response rate ranges from 85% to 97%.

### 4.4. Data processing

Data collected from the reporting units which are involved in the survey are the basis for the data assessment for the entire population. Based on micro data on reporting units turnover, and their aggregation at the group level (3-digit) of KD BiH 2010, total turnover by classes is calculated. Turnover aggregation on higher levels (division, section) of activity classification is carried out before index compilation.

The process of Distributive trade turnover index calculation on the level of BiH can be presented in few steps:

- 1) Individual turnover data per enterprises is the basis ( $X_i$  – administrative financial data). Weighting is performed due to different probability level of dealing a unit in the sample. The weight calculation is performed per sample stratum.
- 2) Stratum ( $h$ ) are defined by activities (KD BiH 3 digit) and the enterprise size (financial data classes (I-IV)). Initial weights represent reciprocal probability value of dealing a unit in the sample. It is calculated as quotient of number of units in the frame and number of units in the sample.
- 3) However, in cases of non-response, certain corrections of weights are necessary. If the data imputation has not been performed for reporting unit in non-response, then the weight correction is performed for stratum in which the non-response enterprise belongs. The

weight corrected for non-response is calculated as quotient of number of units in the frame of stratum  $h$  and number of responding units in stratum  $h$ .

$$\text{Formula: } W_i = \frac{N_h}{m_{rh}}$$

Where:

$w_i$  – unit weight  $i$ ,  $i=1\dots n$  (final  $w_i$  is calculated on the stratum level according to the above formula, and is joint to each unit  $i$  from stratum  $h$ )

$N_h$  – number of units in stratum frame  $h$ ,  $h=1\dots H$

$m_{rh}$  – number of response population units of stratum  $h$

- 4) In order to calculate totals of enterprises per stratums, ratio estimator  $r_h$  is used for final correction. It represents the quotient between administrative financial data (enterprise's annual financial data from SBR) and estimated financial data of responding units which has to be joined to each unit  $i$  from stratum  $h$ .

$$\text{Formula: } r_h = \frac{t_h}{\hat{t}_h}$$

- 4.1) Administrative financial data is calculated only for units from the frame ( $i=1\dots n$ ) on the level of stratum  $h$  as a sum of unit's administrative financial data  $X_i$  for each stratum.

$$\text{Formula: } t_h = \sum_{i=1}^{N_n} x_i$$

- 4.2) Estimated financial data is calculated by using only the responding units ( $i=1\dots m$ ) on the level of stratum as a sum of product  $w_i x_i$ .

$$\text{Formula: } \hat{t}_h = \sum_{i=1}^{m_{rh}} w_i x_i$$

- 5) Total estimated turnover on each unit  $i$  level is product ( $y_i w_i r_h$ ) of realised turnover  $y_i$  for unit  $i$ ; weight of such unit  $w_i$ ; and ratio  $r_h$  for stratum to which unit  $i$  belongs. Total estimated turnover is sum of all individual turnovers for each responding unit.

#### 4.5. Index compilation

Process of index compilation for the level of BiH is comprised of following phases:

1. The first step is to calculate distributive trade total turnover on 3-digit level class of KD BiH 2010 for Federation of Bosnia and Herzegovina, Republic of Srpska and Brčko District;
2. Data on turnover on the level of BiH is calculated by combining the data for all three geographical units;
3. Turnover totals on class level are summed, and in that way aggregated on higher classification levels (group, division, section);
4. Indices are calculated as quotient of current period turnover (for different level of activities) and turnover realised in the base year or other prior period.

- 4.1 Base indices – show relative turnover change rates in the current period ( $y_t$ ) in comparison with average base year ( $y_b= 2005$  or  $2010$ ).

$$\text{Formula: } i_t = \frac{y_t}{y_b} \cdot 100$$

- 4.2 Chain indices – represent percentage change of turnover between current and previous period. There are two types of chain indices calculated in Distributive trade:

- 4.2.1 Chain index (same period of previous year): quotient of turnover from current period ( $y_t$ ) and turnover from the same period of previous year ( $y_{t-4}$ )

$$\text{Formula: } i_t = \frac{y_t}{y_{t-4}} \cdot 100$$

- 4.2.2 Chain index (previous period): quotient of turnover from current period ( $y_t$ ) and turnover from previous period ( $y_{t-1}$ )

$$\text{Formula: } i_{t-1} = \frac{y_t}{y_{t-1}} \cdot 100$$

Therefore, indices are primarily compiled in lower classification levels of KD BiH 2010 and as previously mentioned survey results can be presented in the form of growth rates. Growth rates represent the percentage rate of change in the level of turnover in the current period as compared to the previous period.

Quarterly growth rates are calculated by the formula:  $s_t = \frac{\Delta y_t}{y_{t-1}} \cdot 100 = \frac{y_t - y_{t-1}}{y_{t-1}} \cdot 100$

If we need information on quotient of turnover from the current period and turnover from the same period of previous year we use annual growth rate.



Annual growth rates are calculated by the formula:  $s_t = \frac{\Delta y_t}{y_{t-4}} \cdot 100 = \frac{y_t - y_{t-4}}{y_{t-4}} \cdot 100$

#### 4.5.1. „Backcasting“

With the aim of developing a statistical system of Bosnia and Herzegovina, supported through IPA 2008 Twinning project, all three statistical institutions in BiH since first quarter 2013 have conducted redesigned quarterly survey on distributive trade on the basis of a unified methodology that is harmonized with the EU regulations for short-term business statistics.

In process of index calculation, especially when the data are obtained from survey conducted based on a sample, major changes in methodology (switch on the sample based survey, the change of classification, evaluation, etc.) can cause large variations in the obtained data and visible breaks in data series. However, these changes do not reflect real changes in the observed population, but they are the result of the used estimation methods, sample design, coverage, etc.

In case of such significant methodological changes that cause large deviations of estimated totals, there is a need for „backcasting“ - recalculation of the historical data serie in order to avoid disruption and maintain consistency and continuity of the available data series. One way to solve this problem is to do a re-evaluation of the data for the previous period. The recalculation can be done using „**overlapping**“ or using the "**matched sampling**".

First step is recalculation of historical data series according to the new classification of economic activities – KD BiH 2010, using correlation tables between KD BiH 2006 and KD BIH 2010. Afterwards, the aggregation of data at specified levels of strata activities is done, and quarterly growth rates for the period 2006 - 2012 are calculated.

The method of "**overlapping**" means that the data on turnover for last quarter of 2012 are collected from those enterprises that were in the sample for the 2013 year. In this way the estimation of data for last quarter of 2012 using weights from the new sample (2013.) can be done so that the new estimate for 2012 is comparable with the data obtained in first quarter of 2013.

If the method of overlapping can not be used, another way to recalculate data series is to apply the method of "**matched sampling**" which implies that firstly the estimation of data for first quarter of the year 2013 (at the level of required aggregates) has to be done, and to identify responding enterprises in both observed periods, i.e. in last quarter of 2012 and first quarter of 2013.

On the basis of matched units new weights are calculated at the level of strata and estimation is done for both periods so they are comparable. The obtained values are underestimated, but in the same way, so that the effect on the calculated growth rates is almost negligible. Estimated data for last quarter 2012 we get by applying new growth rates on the total estimated value for first quarter of 2013.

Backcasting process is conducted according to following phases:

1. Historical data series is recalculated according to new classification of activities- KD BiH 2010;
2. Turnover is shown at the level of the stratum of activities as defined by sample design on distributive trade in 2013;
3. Growth rates are calculated for period 2006 –2012;
4. The new data series was obtained using the method of "overlapping" and "matched sampling".

#### *4.5.2. Calendar and seasonal adjustment of gross indices*

Distributive trade indices are shown in three forms which comply with Eurostat requirements. Other countries have harmonized their methodologies, concepts, definitions and classifications, as well as the manner of presentation of indices so the international comparability of survey results is enabled.

Statistical institutions in BiH, taking into account the way of data dissemination in the EU, indices publish in the following forms:

- original (unadjusted) indices,
- seasonally adjusted indices – SA and
- working-day adjusted indices - WDA

Base indices are published in gross, non-adjusted form as well as seasonally adjusted indices. The base year according to EU STS regulations is revised every five years (years ending 0 or 5).

Distributive trade turnover index is also, in addition to the base year, calculated in relation to the same quarter of a previous year (working-day adjustment). Data that are compared to the same period of previous year are presented and interpreted in working-day adjusted form.

The data compared with the same period of the previous year are presented and interpreted in the calendar adjusted form. This means that the data is adjusted for the number of working days during the reference month, the impact of leap years, holiday impact etc. If these effects significantly affect the observed time series, then it is necessary to eliminate them.

The data compared with data from previous quarter are presented and interpreted in seasonally adjusted form. Basically this means that the series is broken down into three components: trend, seasonal and irregular component. Series are adjusted for effects of different number of calendar days and season influence.

Calendar and seasonal adjustment is performed in Demetra application (version 2.2) using the TRAMO-SEATS method in the series of quarterly data and in accordance with the ESS guidelines (European Statistical System). Adding new quarterly observations in the series may lead to certain changes in indices for the previous period.

### 4.5.3. Seasonally- adjustment methods

EU legislation in the area of short-term business statistics requires that in addition to the gross (unadjusted) series that are to be sent to Eurostat, also submit working-day adjusted series. Seasonal adjustment of the series is not necessarily and it is carried out on a voluntary basis, but Eurostat prefers that seasonal adjustment is performed by national statistical institutions.

In BiH, seasonal and working-day adjustment is done, using Demetra 2.2 application, by combining direct and indirect method on entity level and BiH level. The direct method means that seasonal adjustment is performed on the aggregated series, while indirect method means that each component of the series is seasonally adjusted separately, and then aggregated on higher level. For the series without calendar effect, unadjusted series are submitted as they are working-day adjusted.

Whenever possible, it is recommended to use the indirect method. This means that the entity level aggregate series are consisted of at least two other series indirectly adjusted (if the defined aggregation level of the series consists of more components). All other series will be directly adjusted as the adjustment is performed on the aggregated level, and not for the individual components. At the state level all the adjustments are made by an indirect method, prior summarizing seasonally and working-day adjusted series for the level of entities and Brčko District.

The following table shows the aggregation levels of data for transmission to Eurostat, as well as adjustment methods:

Aggregation level	Entity level, Brčko District	Indirect method components	BiH level	Indirect method components
<b>45</b>	Indirect	45.1, 45.2, 45.3, 45.4	Indirect	Sum SA/WDA series of entities and Brčko District
45.1	Direct		-"-	-"-
45.2	Direct		-"-	-"-
45.3	Direct		-"-	-"-
45.4	Direct		-"-	-"-
<b>46</b>	Indirect	46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.9	-"-	-"-
46.1	Direct		-"-	-"-
46.2	Direct		-"-	-"-
46.3	Direct		-"-	-"-
46.4	Direct		-"-	-"-
46.5	Direct		-"-	-"-
46.6	Direct		-"-	-"-

46.7	Direct		-"	-"
46.9	Direct		-"	-"
<b>47</b>	Indirect	47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9	-"	-"
47.3	Direct		-"	-"
47 - 47.3	Indirect	47, 47.3	-"	-"

#### 4.6. Periodicity

Distributive trade survey is conducted on a regular quarterly basis in accordance with the requirements of EU-STS regulations. Results of the survey are published after the end of reference period, in accordance with the pre-defined publishing calendar. Deadline for data submission to Eurostat is 60 days (t+60) from the end of reference period at the level of detail defined in paragraph 1 of Annex D, EU-STS regulation.

#### 4.7. Data dissemination

Results of the distributive trade survey are expressed as an index or growth rate on a regular quarterly basis and in the form of press releases on official website of Agency for Statistics of BiH ([www.bhas.ba](http://www.bhas.ba)) and websites of the entity Institutes ([www.fzs.ba](http://www.fzs.ba), [www.rzs.rs.ba](http://www.rzs.rs.ba)). In the past the practice was to collect and disseminate data as absolute values. It is planned to make data available through online database in the form of predefined tables which would give an overview on short-term indicators on distributive trade statistics.

#### 4.8. Planned changes in method of indicator calculation

In effort to simplify the process of data collecting, processing and publishing as much as possible, various activities are planned. First of all, the development of IT platform which would enable reporting units to electronically fill in questionnaire K KPS TRG 02 (CAWI), which would facilitate the process of data collection. Besides that, further development of IT application is planned, especially in segment of control and data editing which would enable more efficient insight in the data and their processing at the level of primary variables (micro-editing) and derived variables at different levels of aggregation (macro-editing). This would reduce the number of errors incurred during data entry, and pointed out to possible inconsistencies in analysis of results.

In addition, it is planned to improve the timeliness of the SBR, as well as the quality of the records, particularly in the following segments: code of the main activity of business entity and information on secondary activities, updating the available data, inclusion of data on entrepreneurs, etc. The common goal of statistical institutions in BiH is to fulfil the other EUROSTAT's requirements, so that BiH could become a full member of the European statistical system.

#### 4.9. Data revision

Press releases on distributive trade are published on a quarterly basis and contain preliminary data related to the previous quarter. First regular data revision implies that in publication of data for the reference quarter (t), already published preliminary data for the previous quarter (t-1) are revised in accordance with the information provided by the reporting units, and it is possible that the data published after revision differ from previously published preliminary data. In press release it is clearly stated which data is about so that users of statistical data can properly interpret them.

Second regular revision of previously published data is annual revision, which includes all changes in data submitted after the first revision in order to ensure the accuracy of published data. If new statistical standards and concepts are introduced, major changes in survey methodology are made which may affect the quality of results obtained, it is necessary to revise data. This ensures consistency and comparability between earlier historical data series and the new data series based on implementation of new standards and methodologies.

Information on changes in data and reasons for doing so, users will get in an appropriate and transparent manner in regular quarterly press releases and other publications for public, as well as on websites of the Agency and entity statistical institutions.

#### 4.10. Data protection

Individual data represent confidential business information and is used only for statistical purposes. While performing their duties statistical institutions in BiH operate in accordance with the following legal requirements:

- Law on statistics of Bosnia and Herzegovina („Official Gazette BiH“ No 26/04 and 42/04);
- Law on the protection of Personal Data ("Official Gazette of BiH" No 32/01);
- Law on statistics of Federation of Bosnia and Herzegovina („Official Gazette of Federation of BiH“ No 63/03 and 9/09);
- Law on free access to information in Federation of Bosnia and Herzegovina ("Official Gazette of Federation of BiH" No 32/01);
- Law on statistics of Republic of Srpska („Official Gazette of Republic of Srpska“ No 85/03);
- Law on free access to information in Republic of Srpska (" Official Gazette of Republic of Srpska", No 20/01).

Legislation in BiH is harmonized regarding protection of confidential information. Several articles of Law on Statistics of BiH are given below:

##### **Article 19.**

Confidential data collected for statistical purposes must not be used for any other purpose, unless otherwise is provided by this law.

**Article 23.**

Data collected, processed and stored for the production of statistics of Bosnia and Herzegovina shall be considered as confidential when such data can be used to identify statistical units directly or indirectly, thereby disclosing individual information.

- The statistical unit is directly identified by name and address, or by an officially allocated and judicially noticed identification number.
- Indirect identification is the possibility of determining the identity of a statistical unit by deduction on the basis of the information mentioned in paragraph 2 of this Article. In order to determine whether a statistical unit is indirectly identifiable, all measures that might reasonably be used to identify statistical unit shall be taken into account.

**Article 26.**

Statistical data of Bosnia and Herzegovina must not be disseminated to users if contain or disclose confidential information. Groups are composed of at least three units and the share of one unit in the group shall not exceed 85%.

**4.11. International comparability of data**

Thanks to harmonisation of basic STS variables and methodology used in DT survey with Eurostat's regulations in the segment of short-term indicators, the comparability of the data with the one from EU is enabled. By applying new classification of activities KD BiH 2010, the harmonization process is continued but the national needs and limitations are still respected regarding the collection, processing and publication of data. Regular quarterly transmission of results of distributive trade survey to Eurostat is planned from 2015.

## APPENDICIES

### Appendix 1 – Questionnaire K KPS TRG 02<sup>7</sup>

BOSNA I HERCEGOVINA  
AGENCIJA ZA STATISTIKU  
BOSNE I HERCEGOVINE  
PODRUŽNICA/EKSPOZITURA BRČKO



БОСНА И ХЕРЦЕГОВИНА  
АГЕНЦИЈА ЗА СТАТИСТИКУ  
БОСНЕ И ХЕРЦЕГОВИНЕ  
ЕКСПОЗИТУРА БРЧКО

K KPS TRG 02  
3 | 0 | 2 | 0 | 3 | 0

Law on Statistics of BiH "Official Gazette of BiH" No.26/04 and 42/04

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#### QUARTERLY DISTRIBUTIVE TRADE SURVEY

YEAR

2 | 0 | 1 | 3

QUARTER

□

The obligation of enterprises to provide the data to statistical institutions is based on article 8. paragraph 2. e) of the Law on Statistics of BiH "Official Gazette of BiH" No 26/04 and 42/04. Any refusal of giving the data, giving the partial or incorrect data or non-observance of the deadlines for data supply implies penal provisions according to the Article 31. and 32. of the above-mentioned Law.  
The obligation of the statistical institution on protection of the delivered confidential data is based on article 19, paragraphs 3 and 6 of the Law on Statistics. It means that, data collected for the statistical purposes, cannot be used for the other purposes by statistical institutions or published as an individual.

Data presented in this questionnaire are data for current quarter. It should write summary data for enterprise including the data for all local units of the enterprise. If you don't have a real records of data on which you can complete the data in questionnaire, it is necessary to perform additional calculations or to do the best possible estimates.

Please, read Instructions before filling this form

#### IDENTIFICATION DATA ON THE ENTERPRISES

1) Enterprise name \_\_\_\_\_

2) ID number of enterprise \_\_\_\_\_

3) Address \_\_\_\_\_  
\_\_\_\_\_ (Municipality code)

4) Main Activity (by KD BiH 2010) \_\_\_\_\_  
\_\_\_\_\_ (Activity code)

Table 1. Turnover and VAT data

S 1	Name of item	Statistical code	Total turnover, excluding VAT, in KM	VAT, in KM
1	Turnover from trade activities (2 + 3 + 4)	11100		
2	Wholesale and retail trade and repair of motor vehicles and motorcycles	11110		
3	Wholesale trade, excluding motor vehicles and motorcycles	11120		
4	Retail trade, excluding motor vehicles and motorcycles	11130		
5	Turnover from other activities	11200		
6	Total turnover (1 + 5)	11000		

Table 2. Number of persons employed, quarterly average

S 2	Name of item	Statistical code	Number
1	Number of persons employed in trade activities (2 + 3 + 4)	21100	
2	Wholesale and retail trade and repair of motor vehicles and motorcycles	21110	
3	Wholesale trade, excluding motor vehicles and motorcycles	21120	
4	Retail trade, excluding motor vehicles and motorcycles	21130	
5	Number of persons employed in other activities (non-trade)	21200	
6	Total number of persons employed (1+ 5)	21000	

Table 3. Hours worked, wages and salaries

S 3	Name of item	Statistical code	Data
1	Total number of hours worked in the quarter	30000	
2	Wages and salaries of employees (excluding social contributions paid by employer), in KM	23000	

Table 4. Stocks

S 4	Name of item	Statistical code	Value, in KM
1	Stocks of raw materials and materials	At the beginning of quarter	41101
		At the end of quarter	41102
3	Commodities	At the beginning of quarter	41201
		At the end of quarter	41202
5	Total stocks	At the beginning of quarter (1+3)	41001
		At the end of quarter (2+4)	41002

<sup>7</sup> Content in the questionnaire of the entity statistical institutions is the same, with a different layout of tables

**Table 5. Gross investments in fixed assets**

S 5	Name of item	Statistical code	Value, in KM
1	Total investments in fixed assets in the quarter	50000	

**Table 6. Distribution of retail trade turnover by commodity groups\* (BH KPPD 2010/EU COICOP)**

*Total turnover in retail trade shown in Table 1, item 4, is broken down by commodity groups*

S 6	Name of item	Statistical code	Turnover excluding VAT, in KM
1	<b>Total turnover in retail trade, (sum equal to the item 4 in Table 1.)</b>	<b>47</b>	
2	<b>Retail trade services of fruit, vegetables, meat, fish, bakery and dairy products and eggs (sum of 3 - 11)</b>	<b>47.00.1</b>	
3	Retail trade services of fresh fruit and vegetables	47.00.11	
4	Retail trade services of processed fruit and vegetables	47.00.12	
5	Retail trade services of meat	47.00.13	
6	Retail trade services of meat products	47.00.14	
7	Retail trade services of fish, crustaceans and molluscs	47.00.15	
8	Retail trade services of bakery products	47.00.16	
9	Retail trade services of sugar confectionery	47.00.17	
10	Retail trade services of dairy products	47.00.18	
11	Retail trade services of eggs	47.00.19	
12	<b>Retail trade services of other food products, beverages and tobacco (sum of 13 - 20)</b>	<b>47.00.2</b>	
13	Retail trade services of coffee, tea, cocoa and spices	47.00.21	
14	Retail trade services of edible oils and fats	47.00.22	
15	Retail trade services of homogenised food preparations and dietetic food	47.00.23	
16	Retail trade services of other food products n.e.c.	47.00.24	
17	Retail trade services of alcoholic beverages	47.00.25	
18	Retail trade services of mineral spring water	47.00.28	
19	Retail trade services of other beverages	47.00.26	
20	Retail trade services of tobacco products	47.00.27	
21	<b>Retail trade services of information and communication equipment (sum of 22- 24)</b>	<b>47.00.3</b>	
22	Retail trade services of computers, peripheral units and software	47.00.31	
23	Retail trade services of telecommunications equipment	47.00.32	
24	Retail trade services of audio and video equipment	47.00.33	
25	<b>Retail trade services of construction materials and hardware (sum of 26 - 33)</b>	<b>47.00.4</b>	
26	Retail trade services of hardware	47.00.41	
27	Retail trade services of paints, varnishes and lacquers	47.00.42	
28	Retail trade services of flat glass	47.00.43	
29	Retail trade services lawn and garden equipment	47.00.44	
30	Retail trade services of plumbing and heating equipment and supplies	47.00.45	
31	Retail trade services of sanitary equipment	47.00.46	
32	Retail trade services of hand tools	47.00.47	
33	Retail trade services of construction materials n.e.c.	47.00.49	
34	<b>Retail trade services of household articles (sum of 35 - 43)</b>	<b>47.00.5</b>	
35	Retail trade services of textiles	47.00.51	
36	Retail trade services of curtains	47.00.52	
37	Retail trade services of wallpaper and floor coverings, carpets and rugs	47.00.53	
38	Retail trade services of electrical household appliances	47.00.54	
39	Retail trade services of furniture	47.00.55	
40	Retail trade services of articles for lighting	47.00.56	
41	Retail trade services of wooden ware, cork goods and wickerwork goods	47.00.57	
42	Retail trade services of musical instruments and music scores	47.00.58	
43	Retail trade services of crockery, glassware, china, pottery, cutlery and non-electrical household appliances, articles and equipment	47.00.59	



S 6	Name of item	Statistical code	Turnover excluding VAT, in KM
<b>44</b>	<b>Retail trade services of cultural and recreational goods (sum of 45 - 53)</b>	<b>47.00.6</b>	
45	Retail trade services of books	47.00.61	
46	Retail trade services of newspapers and magazines	47.00.62	
47	Retail trade services of stationery	47.00.63	
48	Retail trade services of music and video recording (including blank disks and tapes)	47.00.64	
49	Retail trade services of sporting equipment	47.00.65	
50	Retail trade services of camping equipment	47.00.66	
51	Retail trade services of games and toys	47.00.67	
52	Retail trade services of stamps and coins	47.00.68	
53	Retail trade services of souvenirs and arts (excluding antiques)	47.00.69	
<b>54</b>	<b>Retail trade services of clothing, pharmaceutical and medical goods, toilet articles, flowers, plants, pet animals and pet food (sum of 55 - 64)</b>	<b>47.00.7</b>	
55	Retail trade services of clothing	47.00.71	
56	Retail trade services of footwear	47.00.72	
57	Retail trade services of leather goods and travel accessories	47.00.73	
58	Retail trade services of pharmaceutical goods	47.00.74	
59	Retail trade services of medical and orthopaedic goods	47.00.75	
60	Retail trade services of cosmetic and toilet articles	47.00.76	
61	Retail trade services of flowers, plants and seeds	47.00.77	
62	Retail trade services of fertilisers and agro-chemical products	47.00.78	
63	Retail trade services of pet animals and pet food	47.00.79	
<b>64</b>	<b>Retail trade services of automotive fuel and other new goods n.e.c. (sum of 66 - 75)</b>	<b>47.00.8</b>	
65	Retail trade services of automotive fuel	47.00.81	
66	Retail trade services of watches and jewellery	47.00.82	
67	Retail trade services of photographic, optical and precision equipment, services of opticians	47.00.83	
68	Retail trade services of cleaning materials	47.00.84	
69	Retail trade services of household fuel oil, bottled gas, coal and wood	47.00.85	
<b>70</b>	<b>Retail trade services of other new products (sum of 71-74)</b>	<b>47.00.80</b>	
71	Retail trade services of other non-food consumer products n.e.c.	47.00.86	
72	Retail trade services of grains, oilseeds, agricultural seeds and agricultural animal feed	47.00.87	
73	Retail trade services of machinery and equipment n.e.c.	47.00.88	
74	Retail trade services of non-food non-consumer products n.e.c.	47.00.89	
<b>75</b>	<b>Retail trade services of second-hand goods (sum of 77 - 79)</b>	<b>47.00.9</b>	
76	Retail trade services of antiques	47.00.91	
77	Retail trade services of second-hand books	47.00.92	
78	Retail trade services of other second-hand goods	47.00.99	

**Table 7. Measuring of burden for completing questionnaire**

S 7	Name of item	Statistical code	Number
1	Time required to complete the questionnaire, in minutes	60000	

**Comments** (Please provide explanations for any unusual changes in the data compared to the previous period) :

Questionnaire completed by:			
_____			
(Name and surname)			
Tel./Fax: _____		Report approved by person responsible:	
E-mail: _____	L.S.	_____	
Date: _____			

**Appendix 2: Extract from Classification of activities KD BiH 2010 (section G)**

Code	Activity KD BiH 2010
<b>G</b>	<b>Wholesale and retail trade; repair of motor vehicles and motorcycles</b>
<b>45</b>	<b>Wholesale and retail trade and repair of motor vehicles and motorcycles</b>
45.1	Sale of motor vehicles
45.2	Maintenance and repair of motor vehicles
45.3	Sale of motor vehicle parts and accessories
45.4	Sale, maintenance and repair of motorcycles and related parts and accessories
<b>46</b>	<b>Wholesale trade, except of motor vehicles and motorcycles</b>
46.1	Wholesale on a fee or contract basis
46.2	Wholesale of agricultural raw materials and live animals
46.3	Wholesale of food, beverages and tobacco
46.4	Wholesale of household goods
46.5	Wholesale of information and communication equipment
46.6	Wholesale of other machinery, equipment and supplies
46.7	Other specialised wholesale
46.9	Non-specialised wholesale trade
<b>47</b>	<b>Retail trade, except of motor vehicles and motorcycles</b>
47.1	Retail sale in non-specialised stores
47.2	Retail sale of food, beverages and tobacco in specialised stores
47.3	Retail sale of automotive fuel in specialised stores
47.4	Retail sale of information and communication equipment in specialised stores
47.5	Retail sale of other household equipment in specialised stores
47.6	Retail sale of cultural and recreation goods in specialised stores
47.7	Retail sale of other goods in specialised stores
47.8	Retail sale via stalls and markets
47.9	Retail trade not in stores, stalls or markets

**Appendix 3 –Annex D (Other services) of Council Regulation (EC) on short-term business statistics No. 1165/98<sup>8</sup>**

**ANNEX D  
OTHER SERVICES**

**(a) Scope**

This Annex applies to all activities listed in Divisions 45 and 46 and Sections H to N and P to S of NACE Rev. 2.

**(b) Observation unit**

1. The observation unit for all variables in this Annex is the enterprise.
2. The use of other observation units may be decided by the Commission. Those measures, designed to amend non-essential elements of this Regulation by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3).

**(c) List of variables**

1. The statistics in this Annex comprise the following variables:

Variable	Name
120	Turnover
210	Number of persons employed
220	Hours worked
230	Gross wages and salaries
330	Deflator of sales

2. Starting from the beginning of the first reference period the information on persons employed (No 210) may be approximated by the number of employees (No 211). This approximation is permitted for a period of five years from the date of entry into force of the Regulation. The period shall be extended up to five years more unless decided differently by the Commission. Those measures, designed to amend non-essential elements of this Regulation by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3).
3. The output price variable (No 310) covers services delivered to customers that are enterprises or persons representing enterprises.
4. Member States shall carry out studies instituted by the Commission and set up in consultation with the Member States. The studies shall be carried out taking into account

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<sup>8</sup> Regulation is changed and amended in accordance with regulations: 1158/2005 of European Council (EC) and European Parliament, 1503/2006 (EC) and 1893/2006 (EC)

the benefits of collecting the data in relation to the cost of collection and burden on business, in order to:

- a) assess the feasibility of transmitting a quarterly variable of hours worked (No 220) for other services;
- b) assess the feasibility of transmitting a quarterly variable of gross wages and salaries (No 230) for other services;
- c) define a suitable methodology for data collection and index calculation;
- d) define a suitable level of detail. The data shall be broken down by economic activities defined by NACE rev 2 Sections and by further dis-aggregations, not beyond the level of NACE rev 2 Divisions (two-digit level) or groupings of Divisions.

Member States shall submit a report on the results of the studies to the Commission no later than 11 August 2007.

The Commission shall decide no later than 11 August 2008 whether to invoke Article 17(b) so as to include the variable hours worked (No 220) and the variable gross wages and salaries (No 230) with effect from base year 2010. 1. Those measures, designed to amend non-essential elements of this Regulation by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3).

#### **(d) Form**

1. All of the variables are to be transmitted in an unadjusted form, if available.
2. The turnover variable (No 120) is also to be transmitted in working-day adjusted form. Wherever other variables show working-day effects, Member States may also transmit those variables in working-day adjusted form. The list of variables to be transmitted in working-day adjusted form may be amended by the Commission. Those measures, designed to amend non-essential elements of this Regulation by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3).
3. In addition Member States may transmit the variables seasonally adjusted and may also transmit the variables in the form of trend-cycles. Only if data are not transmitted in these forms, then Commission (Eurostat) may produce seasonally adjusted and trend-cycle series for these variables.
4. The output price variable (No 310) is to be transmitted as an index. All other variable are to be transmitted as an index or as absolute figures.

#### **(e) Reference period**

A reference period of a quarter shall apply to all variables in this Annex.

Member States shall carry out studies instituted by the Commission and set up in consultation with the Member States. The studies shall be carried out taking into account the benefits of a reduced reference period in relation to the cost of collection and burden on business in order to assess the feasibility of reducing the reference period of a quarter for the turnover variable (No 120) to a reference period of a month.

Member States shall submit a report on the results of the studies to the Commission no later than 11 August 2007.

The Commission shall decide no later than 11 August 2008 whether to invoke Article 17(e) in connection with a revision of a frequency of compilation of the turnover variable. Those measures, designed to amend non-essential elements of this Regulation by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3).

**(f) Level of detail**

1. The turnover variable (No 120) is to be transmitted according to following groupings of NACE Rev 2:

46 at three-digit level;

45, 45.2, 49, 50, 51, 52, 53, 58, 59, 60, 61, 62, 63, 71, 73, 74, 78, 79, 80, 81.2 i 82;

Sum of (45.1, 45.3 i 45.4);

Sum of (55 i 56);

Sum of (69 i 70.2).

2. The persons employed variable (No 210) is to be transmitted according to the following groupings of NACE Rev 2:

Divisions 45, 46, 49, 50, 51, 52, 53, 58, 59, 60, 61, 62, 63;

Sum of (69, 70.2, 71, 73 and 74);

Sum of (55 and 56);

Sum of (78, 79, 80, 81.2 and 82).

The hours worked variable (No 220) and the gross wages and salaries variable (No 230) are to be transmitted according to the following groupings of NACE Rev 2:

Divisions 45 and 46;

Sections H, I and J;

Sum of (69, 70.2, 71, 73 and 74);

Sum of (78, 79, 80, 81.2 and 82).

3. For Divisions 45 and 46 of NACE Rev. 2, the turnover variable need only be transmitted at the 2 digit level by those Member States whose turnover in those Divisions of NACE Rev. 2 in a given base year represents less than 4% of the European Community total.
4. For Sections H and J of NACE Rev. 2, the number of persons employed variable (No 210) need only be transmitted at Section level by those Member States whose total value added in Sections H and J of NACE Rev. 2 in a given base year represents less than 4 % of the European Community total.

5. The output price variable (No 310) is to be transmitted according to the following activities and groupings of NACE Rev. 2:  
 49.4, 51, 52.1, 52.24, 53.1, 53.2, 61, 62, 63.1, 63.9, 71, 73, 78, 80, 81.2;  
 Sum of (50.1 and 50.2);  
 Sum of (69.1, 69.2 and 70.2).  
 NACE Rev. 2 Division 78 covers the total price of labour recruited and personnel provided.
6. The list of activities and groupings may be amended no later than 11 August 2008. Those measures, designed to amend non-essential elements of this Regulation by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 18(3).
7. For Division 63 of NACE Rev. 2, the output price variable (No 310) need only be transmitted at the 2 digit level by those Member States whose turnover in this Division of NACE Rev. 2 in a given base year represents less than 4% of the European Community total.

**(g) Deadlines for data transmission**

The variables shall, after the end of the reference period, be transmitted within the following deadlines:

Variable	Deadlines
120	2 months
210	2 months
220	3 months
230	3 months
310	3 months

**(h) Pilot studies**

The priorities for the pilot studies are as follows:

1. collect wages and salary information;
2. collect information on deflators;
3. assess the feasibility and relevance of collection data on:
  - (i) management activities of holding provide a more detailed activity breakdown companies NACE Rev. 2 Groups 64.2 and 70.1;
  - (ii) real estate NACE Rev. 2 Division 68;
  - (iii) research and development NACE Rev. 2 Division 72;
  - (iv) renting activity NACE Rev. 2 Division 77
  - (v) NACE Rev. 2 Sections K, P, Q, R, S.
4. produce a more detailed breakdown;
5. assess the possibility of earlier data transmission;

6. collect information on the number of employees;
7. use the kind-of-activity unit as observation unit;
8. collect short-term information on the births and deaths of enterprises.

#### **(i) First reference year**

The first reference period for which all variables are to be transmitted is the first quarter 1998.

The first reference period for transmission of the output price variable No 310 is not later than the first quarter of 2006. A derogation of a further year may be granted for the first reference period in accordance with the procedure laid down in Article 18, on condition that a base year not later than 2006 is applied.

The first reference period for which all variables are to be transmitted in NACE Rev. 2 is the first quarter 2009.

The first reference period for the hours worked variable (No 220) and the gross wages and salaries variable (No 230) is not later than the first quarter of 2010 with effect from the introduction of base year 2010 in 2013.

#### **(j) Transition period**

A transition period ending no later than 11 August 2008 may be granted for variable No 310 in accordance with the procedure laid down in Article 18(2). A further transition period of one year may be granted for the implementation of variable No 310 for the NACE Rev. 2 Divisions 52, 69, 70, 71, 73, 78, 80 and 81 in accordance with the procedure laid down in Article 18(2). In addition to those transition periods, a further transition period of one year may be granted, in accordance with the procedure laid down in Article 18(2), to those Member States whose turnover in the NACE Rev. 2 activities referred to under heading (a) Scope in a given base year represents less than 1% of the European Community total.