



~ Methodology ~

QUARTERLY GROSS DOMESTIC PRODUCT

INTRODUCTION

Quarterly Gross Domestic Product (GDP) is the most important short-term indicator on the level of total economy. It is an indicator which is particularly important and necessary for the analysis of economic trends in the current year, as well as for a reliable early estimate of GDP for the previous year.

Republika Srpska Institute of Statistics revised previously published data in accordance with the international methodology of the European System of Accounts ESA 2010. The calculation of quarterly gross domestic product for Republika Srpska is based on the same principles and definitions as the annual calculation, i.e. on methodological basis of ESA 2010 as well as on quarterly national accounts manuals of the International Monetary Fund and Eurostat

SOURCES OF DATA

All available and accessible sources of data referring to the economic, financial and other trends of a period are used for the calculation of the quarterly GDP.

Main sources of data are results of official statistical surveys (agriculture, industry, construction, trade, hotels and restaurants, transport, wages and employees, prices, external trade, etc.) and administrative sources of data (quarterly financial reports of enterprises, Ministry of Finance of RS, Banking Agency of RS, Insurance Agency of RS, etc.).

METHODOLOGICAL BASIS

Quarterly GDP is calculated using the production approach and it is presented at current prices, at previous year prices and at prices of the year 2015 (chain-linked values). The calculation is performed on the level of divisions and sections of the Classification of Economic Activities KD BH 2010, which is in its content and structure completely harmonized with the EU Statistical Classification of Economic Activities NACE Rev.2.

Gross domestic product represents the sum of gross value added (GVA) of all activities of the total economy, minus financial intermediation services indirectly measured (FISIM) and plus net taxes on products (taxes on products minus subsidies on products).

Series of quarterly data have been calculated since the first quarter of 2006, on the level of divisions of the Classification of Economic Activities. Extrapolation method on gross value of production and intermediate consumption is used for the calculation.

Quarterly GDP at constant prices is calculated in two ways:

- Calculation of constant prices – previous year = 100, and
- Calculation of constant prices – reference year 2010 = 100.

For the quarterly GDP at constant prices – previous year = 100, the method of calculation at prices from the previous year is used, which means that for each year the year before is the base year. The calculation is performed through extrapolation, using relevant indicators on the level of divisions of the Classification of Economic Activities. Calculation for the level of sections of the Classification of Economic Activities is performed by summing up the GVAs for the corresponding divisions.

The series of data given at constant prices – previous year = 100 may be used for the calculation of real growth rates only between two consecutive years, since the data are not comparable in a longer time series.

For the comparison of data in a longer time series, chain-linking method is used, which means that the data at constant prices – previous year = 100 are linked and reduced to the reference year. Reference year is the year in which the data equal 100 if presented in the index form or they equal the data at current prices if presented in terms of value. Changing the reference year does not cause changes in the previously calculated real growth rate.

Reference year is 2015, in accordance with the Eurostat's recommendation.

Calculation of the quarterly GDP at current prices is performed through extrapolation of quarterly values in the current year, given at constant prices, using relevant indicators. Calculation for the level of sections of the Classification of Economic Activities is performed by summing up the GVAs for the corresponding divisions.

The series of data given at current prices and at constant prices – previous year = 100 is additive, which means that GDP and GVA equal the sum of individual categories and subcategories at all levels of the Classification of Economic Activities, and that the data for a higher level of aggregation according to the Classification of Economic Activities equal the sum of data on lower levels of aggregation.

The series of data given at constant prices – reference year = 100 is non-additive:

- Because of the use of chain-linked indices method on the value of production and intermediate consumption to the lowest level of the Classification of Economic Activities, in which case the sum of data for lower levels does not equal the data on the higher level of aggregation;
- Because when the chain-linked indices are used, GVA is calculated as a separate category, in which case it is not a difference between the value of production and intermediate production.

SEASONAL ADJUSTMENT

Seasonal adjustment is a process of decomposition of time series, used to remove the effects of seasonal fluctuations (seasonal and working-day effects) on their trends. Series of data are seasonally adjusted on the highest level of aggregation, using the DEMETRA programme, TRAMO/SEATS method. When data are seasonally adjusted by adding the data for the following quarter, due to the characteristics of the applied seasonal adjustment method, changes occur in the

previously calculated seasonally adjusted data. The sum of quarterly seasonally adjusted data in a year does not equal the sum of data which were not seasonally adjusted.

PUBLISHING AND REVISION

Data are published in the release “Quarterly Gross Domestic Product”, 60 days after the reference quarter.

Quarterly data for the current year are subject to change until the fourth quarter data are published. After the fourth quarter data are published, quarterly data are subject to change only with the aim of harmonization with the annual data. Harmonisation of the GDP calculated in quarterly and annual periodicity is performed after the annual data are published, using the proportional Denton method (by minimizing the absolute differences through the relative adjustment of quarterly data – current quarter compared to the previous one). Thus, the consistency of quarterly and annual series of data is achieved, with the sum of the four quarters being equal to the value obtained through the annual calculation.

PROTECTION OF DATA

Individual data are protected pursuant to the Law on Statistics of Republika Srpska (“Official Gazette of Republika Srpska”, No.85/03) and in accordance with the Rules of protection of confidential data.

Prepared by:

National Accounts Division

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