

## Methodological Notes

### Labour productivity, national level – definitions and computational procedures

Labour productivity is an economic indicator that compares the result achieved (newly created product) with input labour factor when carrying out an economic activity of an economic territory for a specified period. This indicator provides estimates of the growth rate of labor productivity.

The main components of labor productivity are indicators measuring the results of production activity practiced (numerator) and indicators of labor input in the production process (the denominator).

At national level, the result of productive activity is measured by Gross Domestic Product (GDP) and value added (VA) generated by all manufacturing sectors in the national economy. GDP is a key indicator in the system of national economic accounts, which presents the outcome of the productive activity of all resident producer units (ESA<sup>1</sup> 2010). The relationship between GDP and GVA is determined by the method of valuation of the final product. GDP is valued at market prices, including taxes on products and imports net of subsidies on products. GVA measures the outcome of productive activity at basic prices before taxes, including subsidies on products and services.

For the purposes of international comparisons of labor productivity, the use of GDP is accepted - Eurostat website / General Economic Background, Labour productivity per person employed: <http://epp.eurostat.ec.europa>

GVA is an indicator that is applicable to the calculation of labor productivity at national level and at level of production activities or regions.

Using this indicator in national practice conforms to the specific methodological scope of the activity "Renting of real estates, activity 68.2 of NACE.BG<sup>2</sup> 2008 - in the composition of GVA includes an assessment of imputed rent for owner-occupied dwellings, which is dominant in Bulgaria - 90% of the population live in their own dwellings. The VA of imputed rent for owner-occupied dwellings are classified entirely as operating surplus in the composition of the account Generation of income and is not directly related to employment. Therefore, the VA resulting from the c imputed rent for owner-occupied dwellings is excluded in calculating the productivity of labor for the service sector and the economy as a whole.

Labor production factor in the composition of labor productivity is measured by the number of persons employed in resident production units of the national economy and hours worked - man-hours.

The measurement of the number of persons employed and man-hours worked is done under the definitions and concepts of ESA 2010, as these concepts and definitions applied in the evaluation of indicators for the outcome of the economically active.

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<sup>1</sup> ESA 2010 - European System of National and Regional Accounts, 2010

<sup>2</sup> NACE.BG - National Classification of Economic Activities

When comparing the data with the results of the labor force is necessary to consider differences in definitions and methodological characteristics. Fundamental, conceptual differences are:

- Object of the Labour Force Survey is the permanent population of the country, including temporary workers abroad, while the employment data in the ESA 2010 are defined in terms of resident production units that can hire labor both from the country and abroad;

- Persons on temporary military service are part of the employees under the ESA 2010, but not recorded by the Labour Force Survey.

The preferred indicator for the assessment of the labor factor in the composition of the labor productivity is Man hours worked - this indicator represents more accurately actual work input in the production process - the Eurostat website: Socio-economic Development, Innovation, Competitiveness and eco-efficiency, Labour productivity per hour worked - <http://epp.eurostat.ec.europa>.

Comparison of indicators of labor productivity over time requires the elimination of the influence of prices in the value of indicators for the results from the economic activity. For this purpose, GDP and GVA of the current period are presented at constant prices of the base period.

Data on labor productivity are published in the NSI annual publication - "Social economic development" and on the NSI website – time series, quarterly and annual data.