

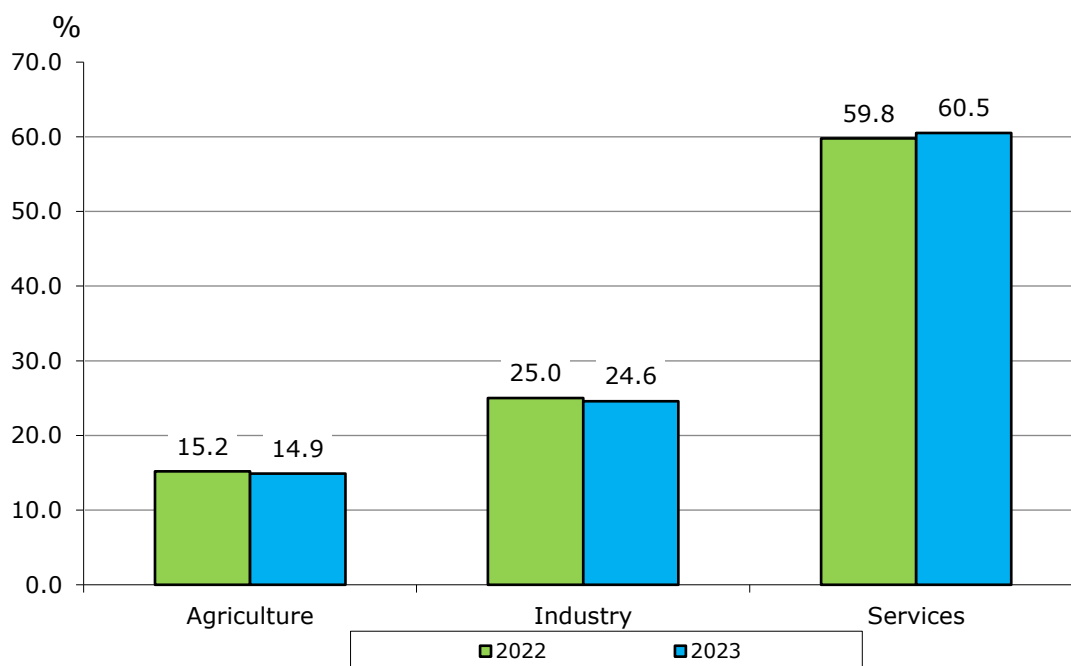


**LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED
FOR 2023
(UPDATED DATA)**

According to the update data, Gross domestic product (GDP) per person employed increased in real terms by 0.8% in 2023 compared to the previous year.

The number of persons employed in the economy is 3 481.4 thousand and the total number of hours worked is 5 776.8 million. Compared with the previous year the structure of employment by economic sectors in 2023 shows increase in the relative share of the service sector and decrease in the agriculture and industrial sectors.

Figure 1. Structure of the persons employed by economic sector in 2022 and 2023¹



GDP per person employed is 53 206.1 BGN and GDP per hour worked is 32.1 BGN.

Gross value added (GVA) per person employed increased in 2023 in real terms by 0.2% and per hour worked decreased in real terms by 2.3% compared to the previous year.

¹ Data for employed persons, hours worked and labour productivity for the period 2019 – 2023 year is revised due to updated LFS estimates for same period, which have been recalculated with population data, based on 2021 Census.

LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED FOR 2023

GVA per person employed in service sector is 50 126.2 BGN and GVA per hour worked is 29.5 BGN according to the final data for 2023. In the industrial sector GVA per person employed is 48 942.8 BGN and GVA per hour worked is 28.6 BGN. The lowest labour productivity is in the agricultural sector - 9 019.7 BGN GVA per person employed and 6.4 BGN per hour worked.

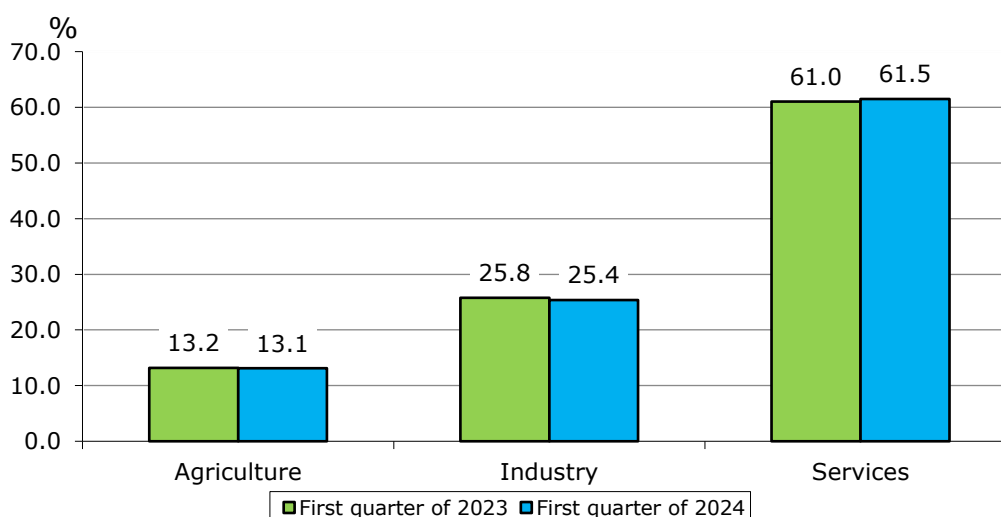
Quarterly changes in the first and second quarters of 2024

First quarter of 2024

According to the preliminary data, in the first quarter of 2024 the gross domestic product (GDP) per employed person increased by 1.2% in real terms compared to the corresponding period of 2023.

The number of persons employed in the economy is 3 428.2 thousand and the total number of hours worked is 1 429.6 million in the first quarter of 2024. Compared with the first quarter of 2023 the structure of employment by economic sectors in the first quarter of 2024 shows increase in the relative share of the service sector, a decrease in the relative share in the agricultural sector and in the industry sector.

Figure 2. Structure of the persons employed by economic sector in the first quarters of 2023 and 2024



GDP per person employed is 12 648.7 BGN and GDP per hour worked is 30.3 BGN in the first quarter of 2024.

LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED FOR 2023

Gross value added per person employed increased in real terms by 4.5% in the first quarter of 2024 compared to the first quarter of 2023. GVA per hour worked increased in real terms by 7.7%.

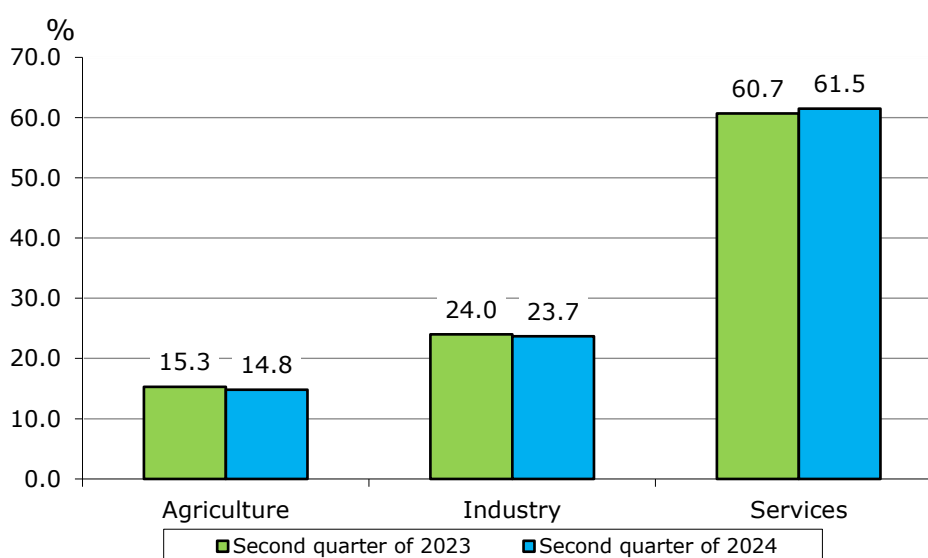
GVA per person employed in industrial sector is 11 942.3 BGN and GVA per hour worked is 27.6 BGN according to preliminary data for the first quarter of 2024. In the service sector an average of 11 895.3 BGN Gross value added is produced by person employed or an average of 27.4 BGN GVA per hour worked. The lowest labor productivity is in agricultural sector - 1 107.0 BGN GVA per person employed and 3.6 BGN per hour worked.

Second quarter of 2024

According to the preliminary data, in the second quarter of 2024 the gross domestic product (GDP) per employed person increased by 0.6% in real terms compared to the corresponding period of 2023.

The number of persons employed in the economy is 3 582.2 thousand and the total number of hours worked is 1 422.5 million in the second quarter of 2024. Compared with the second quarter of 2023 the structure of employment by economic sector in the second quarter of 2024 shows increase in the relative share of the service sector, while it decreases in the industry sector and in the agricultural sector.

Figure 3. Structure of the persons employed by economic sector in the second quarters of 2023 and 2024



GDP per person employed is 13 439.3 BGN and GDP per hour worked is 33.8 BGN.

LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED FOR 2023

Gross value added per person employed increased in real terms by 1.6% in the second quarter of 2024 compared to the second quarter of 2023. GVA per hour worked increased in real terms by 3.7%.

GVA per person employed in industrial sector is 13 607.0 BGN and GVA per hour worked is 33.3 BGN according to preliminary data for the second quarter of 2024. In the service sector an average of 12 369.5 BGN Gross value added is produced by person employed or an average of 30.7 BGN GVA per hour worked. The lowest labor productivity is in the agricultural sector - 1 966.1 BGN GVA per person employed and 5.6 BGN per hour worked.

LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED FOR 2023

Methodological Notes

1. Labour productivity is a compound economic indicator that compares the achieved result (created product) with the input labour factor when performing an economic activity on a given economic territory for a given period.
2. The main elements of labour productivity are indicators that measure the result of the underlying economic activity (numerator) and indicators for input labour in the production process (denominator).
3. At national level the result of production activity is measured with the Gross domestic product (GDP) and the Gross value added (GVA), created by all sectors of the national economy. GDP is the main indicator in the system of national economic accounts (ESA 2010) and it represents the final result of the production activity of all resident production units. The link between GDP and GVA is defined by the method of valuating the end product. GDP is valued at market prices including taxes on products and imports, net of subsidies on products. GVA measures the result of production activity using basic prices before taxation, including subsidies on products.
4. For the purposes of international comparisons of labour productivity between national economies the GDP per person employed (hour worked) is used: see <http://ec.europa.eu/eurostat> - General Economic Background. Labour productivity per person employed.
5. GVA per person employed (hour worked) is an indicator that is applicable for calculation of labour productivity on both national level and the level of the production activity.
6. The use of this indicator in national practice is in compliance with the specific methodological range of the sector 'Renting and operating of own or leased real estate' - activity type 68.2 of NACE.BG-2008 - GVA includes an estimate of the imputed rent on real estates used by the owners which in Bulgaria has a dominating share - close to 90% of the population lives in their own houses. The value added from imputed rent of own real estate is classified entirely as operating surplus in the compilation of 'Generation of income' account and is not directly related to labour participation. Because of this, the value added due to imputed housing rent has to be excluded when calculating labour productivity both for the services sector and for the economy as a whole.

LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED FOR 2023

7. The labour production factor in the labour productivity indicator is measured by the number of person employed in resident production units of the national economy and the time that they were employed - hours worked.
8. The measurement of number of persons employed and hours worked is according to the definitions and concepts of ESA 2010 as they are applied in estimation of the indicators for economic activities.
9. When comparing the data with the results of the labor force survey it is necessary to consider differences in definitions and methodological characteristics. The main 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.
10. 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 - <http://ec.europa.eu/eurostat>.
11. 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.
12. Data for labor productivity are published on the NSI website and INFOSTAT - quarterly and annual time series.
13. Data for employed persons, hours worked and labor productivity for the period 2019 – 2023 year is revised due to updated LFS estimates for same period, which have been recalculated with population data, based on 2021 Census.

**LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED
FOR 2023**

Annex

Table 1

BGN

Year	2019	2020	2021	2022	2023
GDP per person employed - current prices, BGN	34 578	35 550	40 958	48 879	53 206
GDP per hour worked - current prices, BGN	21.0	22.1	25.3	30.2	32.1
Volume index ² of GVA per person employed - previous year = 100, %	105.4	98.5	107.7	103.0	100.8
Volume index ² of GDP per hour worked - previous year = 100, %	105.2	100.9	107.0	103.0	98.4

Table 2

GDP per person employed - current prices, BGN

BGN

Year	First quarter	Second quarter	Third quarter	Fourth quarter
2019	7449.2	8372.9	8756.3	10040.1
2020	7754.6	8117.7	9282.5	10428.8
2021	8722.2	9378.6	10651.5	12194.9
2022	10180.8	11262.8	12584.1	14841.1
2023	11747.7	12319.6	13478.0	15695.9
2024*	12648.7	13439.3		

Table 3

GDP per hour worked - current prices, BGN

BGN

Year	First quarter	Second quarter	Third quarter	Fourth quarter
2019	18.3	20.0	21.8	23.8
2020	19.0	20.9	23.1	25.3
2021	21.4	23.5	26.8	29.3
2022	24.9	28.1	32.0	35.7
2023	27.3	30.4	33.7	36.9
2024*	30.3	33.8		

**LABOR PRODUCTIVITY, PERSONS EMPLOYED AND HOURS WORKED
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Table 4

GDP per person employed - volume index compared to the corresponding quarter of previous year, %**

BGN

Year	First quarter	Second quarter	Third quarter	Fourth quarter
2019	106.6	106.2	104.5	104.6
2020	101.4	94.2	100.8	98.0
2021	105.7	107.3	107.4	109.4
2022	103.5	103.9	102.4	102.4
2023	99.8	100.5	102.2	100.7
2024*	101.2	100.6		

Table 5

GDP per hour worked - volume index compared to the corresponding quarter of previous year, %**

BGN

Year	First quarter	Second quarter	Third quarter	Fourth quarter
2019	106.1	106.1	104.5	104.5
2020	101.3	101.3	100.7	100.2
2021	105.8	104.4	108.4	108.0
2022	102.8	103.6	103.5	102.7
2023	95.1	99.5	100.5	98.4
2024*	104.2	102.7		

* Preliminary data.

** The volume indices are calculated based on the values of the corresponding indicator at constant prices of 2020.