



TRENDS

Q1 Q2 Q3 Q4

Q3

TRENDS

Trends, Quarter III of 2022

Published and printed by: Statistical Office of the Republic of Serbia, Milana Rakica 5

Responsible person: Miladin Kovacevic, director

Editor: Katarina Stancic

Prepared by:

Goran Katic (Macroeconomic forecasts, Prices)

Marina Pavlovic and Sanja Bradaric (Gross domestic product)

Katarina Stancic (Industrial production)

Jasmina Jotev (Economic sentiment indicator, Regional economic asymmetries, Labour market, Indicators for monitoring macroeconomic imbalances in the EU – results for Serbia), Salaries and wages)

Milos Pavlovic (Agriculture, Construction, Tourism)

Andjela Vucinic (External trade, Domestic trade)

Dusko Bumbic (International investment position over 2013-2021)

Vladimir Sutic and Sanja Radonjic (Model of estimation of electricity balance for 2022)

Translated by: Vesna Aralica and Katarina Kalicanin

Design and editing: Division for Development, Preparation and Visualization of Statistical Outputs



INTRODUCTION

The Statistical Office of the Republic of Serbia, main producer and disseminator of statistics, publishes a large number of releases, indicators, bulletins, etc. A multitude of publications often gives rise to confusion with users who, on the other hand, use data to assess their performances and adapt them to other economic subjects and trends.

As many users, apart from specialists, are statistically and economically illiterate, they may be confused by the diversity of data, unable to understand and prioritize them correctly, which often results in reluctance towards information.

As the statistical system is very complex and generalised, designed to meet the specific sub-sector needs for information, statistical data are often incomprehensible in modern society. Informing the users with „dry“ statistical data is often not sufficient as they provide only a partial picture about macroeconomy. Namely, it has been proved that traditional concepts of data (tables, statistical releases, etc.) do not facilitate quick understanding of the socio-economic reality and fail to transmit the key message, particularly when there is a large amount of data.

Having in mind all the above and following world trends in presenting statistical data, as well as the interest shown by professionals, the redesigned Trends traditionally provide quarterly and annual data, but also use new concepts of presenting the most important economic signals via modern and advanced graphical solutions for presenting and dissemination.

The issue for the third quarter of 2022 presents the movement of major statistical areas: Gross domestic product, Industrial production, Construction, External trade, Domestic trade, Prices, Labour market, Salaries and Wages, Tourism, Economic Sentiment Indicator, Regional economic asymmetries and Agriculture. This issue presents, as a novelty, Macroeconomic Imbalance Procedure - results for Serbia. Namely, the procedure in the case of MIP represents the main mechanism for the surveillance and correction of harmful macroeconomic imbalances in EU countries and their final objective is to strengthen their resilience and the resilience of the whole economy of the European Union to similar stresses in the future. Indicators for monitoring macroeconomic imbalances — MIP indicators are shown in the form of tables of achievements. There are 14 stock and flow main indicators (MIP Scoreboard), which should point out the emergence of macroeconomic imbalances occurring in the short-term and imbalances occurring due to structural and long-term trends. The analysis of the results for Serbia covers eight indicators for which data are directly available. As they represent an important mechanism of alert proclaimed by the European Commission, MIP indicators will be regularly published once a year in the December issue of Trends.

This issue of Trends deals with two major topics, through analytical papers: international investment position (MIP position) of Serbia over 2013-2021 (by Dusko Bumbic) and model of estimating electricity balance for Q22 (by Sanja Radonjic and Vladimir Sutic).

Since 1999, the Statistical Office of the Republic of Serbia has no available data for AP Kosovo and Metohia, therefore they are not included in the data for the Republic of Serbia (total).



TABLE OF CONTENT

| | |
|---|----|
| Paper : Model of estimating electricity balance for 2022 | 7 |
| Paper : International investment position over 2013–2021 | 11 |
| 1. Macroeconomic forecasts | 24 |
| 2. Gross domestic product | 29 |
| 3. Industrial production | 31 |
| 4. Construction | 35 |
| 5. External trade | 40 |
| 6. Domestic trade | 48 |
| 7. Prices | 51 |
| 8. Labour market | 54 |
| 9. Salaries and wages | 59 |
| 10. Tourism | 63 |
| 11. Economic sentiment indicator | 66 |
| 12. Regional economic asymmetries | 72 |
| 13. Agriculture | 77 |
| 14. Indicators for monitoring macroeconomic imbalances in the European Union – results for Serbia | 83 |



Authors: Vladimir Sutic and Sanja Radonjic

MODEL OF ESTIMATION OF ELECTRICITY BALANCE FOR 2022

Energy balance is the most exhaustive statistical account of energy products and their flows in the economy, which provides a complete picture of the energy stock in a country and allows having an insight in the total amount of energy obtained from the environment, generated by transformation, consumed by end consumers during a calendar year.

In addition, a balance is a review of relationships between energy delivery and needs for energy in the form of a matrix, where columns refer to energy products (fuels), and rows the flows of energy products (production, transformation and consumption).

MAJOR COMPONENTS (AGGREGATES) OF ELECTRICITY BALANCE

- **Total gross generation of electricity** – electricity generated in all plants (hydro plants, wind turbines, solar plants, thermal power plants, thermal and heating power plans and energy plants) measured at the output of the main generators.
- **Import and export** – amount of electricity is deemed imported or exported when crossing border, whether customs clearing is performed or not..
- **Total supply of electricity (totally available)** – electricity needed for household consumption. It represents the gross generation of electricity, augmented by import and reduced by export.
- **Electricity consumed for pumping** – electricity consumed for the operation of reversible hydro power plants (pumping water from the lower to the upper accumulation).
- **Own consumption in the energy sector** – electricity consumed to obtain energy (mining, petroleum and gas extraction of petroleum and gas) or to make functioning installations in activities dealing with energy production.
- **Losses** cover losses in the transmission process and distribution of electricity.
- **Final consumption** refers to electricity destined to end consumers. In the energy balance, the final consumption of electricity for energy purpose is further broken down into consumption sectors: manufacturing, construction, transportation, households, agriculture and other consumers (public and commercial activities). It is calculated as the total supply of electricity (totally available) reduced by electricity consumed for pumping, own consumption and losses.

Table 1. Energy balance of electricity, 2011–2021 (u GWh)

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| TOTAL GROSS GENERATION | 38.600 | 36.799 | 39.877 | 34.060 | 38.298 | 39.342 | 37.045 | 37.426 | 37.600 | 37.956 | 38.235 |
| Hydro power plants | 9.243 | 9.914 | 10.853 | 11.617 | 10.783 | 11.520 | 9.752 | 11.393 | 10.198 | 9.749 | 11.984 |
| Wind turbines | - | - | - | - | - | 26 | 48 | 150 | 898 | 976 | 1.085 |
| Solar power energy | - | - | - | 6 | 11 | 12 | 13 | 13 | 14 | 13 | 14 |
| Thermal power plants | 28.672 | 26.275 | 28.620 | 22.073 | 27.133 | 27.191 | 26.414 | 24.975 | 25.546 | 26.429 | 23.734 |
| Thermal power and heating plants | 455 | 439 | 202 | 75 | 53 | 140 | 291 | 351 | 474 | 317 | 893 |
| Energy plants | 230 | 171 | 202 | 289 | 318 | 453 | 526 | 543 | 470 | 474 | 527 |
| Import | 6.701 | 5.781 | 4.077 | 7.008 | 6.303 | 5.068 | 6.549 | 6.400 | 5.417 | 5.070 | 6.984 |
| Export | 6.979 | 5.392 | 6.614 | 5.445 | 7.221 | 6.990 | 5.724 | 6.284 | 5.341 | 5.675 | 6.333 |
| TOTALLY AVAILABLE | 38.322 | 37.188 | 37.340 | 35.623 | 37.380 | 37.420 | 37.870 | 37.542 | 37.676 | 37.351 | 38.886 |
| Consumption for pumping | 860 | 874 | 1.007 | 898 | 1.090 | 1.029 | 938 | 1.065 | 1.097 | 1.077 | 952 |
| Own consumption in the energy sector | 3.415 | 3.365 | 3.757 | 3.337 | 3.932 | 3.981 | 4.002 | 3.896 | 4.252 | 4.009 | 4.253 |
| Losses | 5.844 | 5.609 | 5.501 | 5.163 | 5.169 | 4.808 | 4.806 | 4.532 | 4.332 | 4.385 | 4.481 |
| FINAL CONSUMPTION | 28.203 | 27.340 | 27.075 | 26.225 | 27.189 | 27.602 | 28.124 | 28.049 | 27.994 | 27.881 | 29.200 |
| Manufacturing | 7.359 | 6.787 | 6.941 | 6.917 | 7.221 | 7.680 | 8.062 | 8.396 | 8.444 | 8.295 | 9.035 |
| Construction | 326 | 317 | 310 | 306 | 318 | 321 | 340 | 339 | 339 | 322 | 345 |
| Transportation | 529 | 492 | 478 | 336 | 351 | 352 | 375 | 375 | 375 | 358 | 384 |
| Households | 14.665 | 14.517 | 14.146 | 13.802 | 14.062 | 13.931 | 13.815 | 13.415 | 13.340 | 13.718 | 13.877 |
| Agriculture | 321 | 309 | 301 | 298 | 317 | 313 | 342 | 341 | 342 | 331 | 358 |
| Other consumers | 5.003 | 4.918 | 4.899 | 4.566 | 4.920 | 5.005 | 5.190 | 5.183 | 5.154 | 4.856 | 5.201 |

Model of estimation of electricity for 2022 (hereinafter: model) is calculated on the basis of annual changes of **three inputs**:

1. Total gross generation of electricity,
2. Consumption of electricity in construction sector, and
3. Consumption of electricity in household sector.

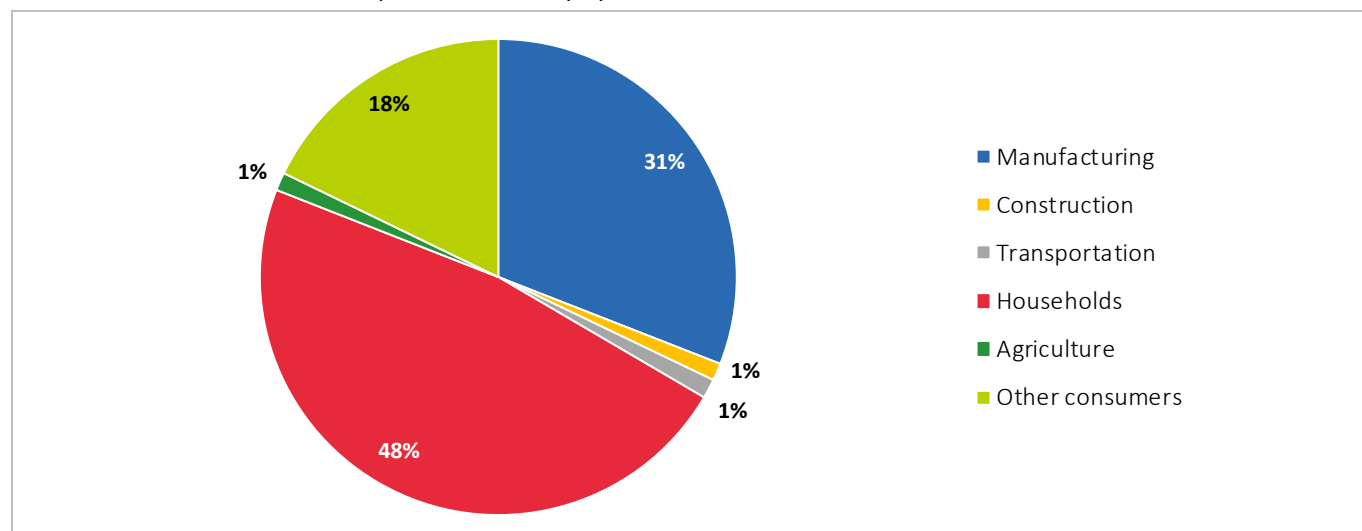
Other items of the balance sheet are estimated on the basis of their historical trends (2011–2021), except for electricity import, which amount is calculated so that it establishes balance of the electricity balance sheet. In the scope of the model, **five scenarios** have been developed based on different percentage changes in the total gross generation of electricity, consumption in manufacturing, consumption in households, in relation to 2021. The scenarios are presented from the most favourable (*scenario 1*) to the least favourable (*scenario 5*). The scenarios are shown in table 3.

1. **Total gross generation of electricity** in the first nine months of 2022 saw a fall of 10,5%, compared with the same period of the previous year. Growth of generation is expected in the remaining two months, relative to the same period of the previous year. Starting from this assumption, scenarios have been conceived based on the changes in the total generation from **-8.5% (scenario 1)** to **-10.5% (scenario 5)** in relation to the gross generation in 2021.

The model is based also on the estimate of consumption trends in manufacturing and household sector, knowing that the mentioned two sectors dominantly account for 79% (*manufacturing 31%; households 48%*) of the structure of final consumption of electricity (*picture 1*).

It is also assumed that these two sectors will see fall (saving) of consumption, considering that from 1 September 2022 to 31 March 2023 government recommendations on saving on electricity consumption in the economy, households, government and public institutions, and local authorities are applied.

Chart 1. Structure of final consumption of electricity by sectors, 2021



2. **Decreased (saved) electricity consumption in manufacturing** in the scope of the scenarios is based on the projections of trends of possible savings in relation to 2021, ranging from **-2.0% (scenario 1)** to **0% (scenario 5)**.
3. **Decreased (saved) electricity in households** in the scope of the scenarios is based on the projections of trends of possible saving in relation to 2021, ranging from **-3.8% (scenario 1)** to **-1.0% (scenario 5)** and is based on the following:
 1. That the trend of decreasing the share of electricity in the structure of total energy consumption in households will also continue in 2022 (amounting to 40% in 2019 and to 33% in 2021).
 2. That the trend of increasing the share of fuelwood (firewood and pellet) in the structure of the total energy in households will also continue in 2022 (amounting to 30% in 2019 and to 40% in 2021).

Table 2. Structure of the total energy consumption in households, 2019–2021

| | 2019 | 2020 | 2021 |
|-------------------------------------|------------|------------|------------|
| Electricity | 40% | 33% | 33% |
| Coal | 8% | 8% | 4% |
| Natural gas | 8% | 8% | 9% |
| Fuelwood | 30% | 38% | 40% |
| Thermal energy | 13% | 12% | 13% |
| Petroleum and petroleum derivatives | 2% | 1% | 1% |

3. By saving electricity in households by 3.8% (*scenario 1*), in relation to 2021, the consumption is at the 2019 level, when a historical minimum of electricity consumption was reached over 2011–2021.

Table 3. Changes of the inputs in the model according to the scenarios (on annual level, %)

| | Scenrios (2022/2021) | | | | |
|------------------------|----------------------|------|------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 |
| Total gross generation | -8,5 | -9,0 | -9,5 | -10,0 | -10,5 |
| Manufacturing | -2,0 | -1,5 | -1,0 | -0,5 | 0,0 |
| Households | -3,8 | -3,0 | -2,0 | -1,5 | -1,0 |

The estimate of the energy balance for 2022 is obtained on the basis of inputs, in the form five scenarios that illustrate the attained balance of the balance sheet. These scenarios show that establishing the balance depends on electricity import. In the first scenario, the most favourable), the balance of the balance sheet is achieved with the smallest import because this is where the largest savings are expected in manufacturing and households, while for the fifth scenario (where the savings in the two mentioned sectors were minimum) one needs the highest import in order to enable stable supply and balance. As the result of the scenarios in the model, table 4 present the estimate of electricity balance for 2022.

Table 4. Estimate of electricity balance for 2022 – according to the scenarios (in GWh)

| | Scenarios | | | | |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|
| | 1 | 2 | 3 | 4 | 5 |
| TOTAL GROSS GENERATION | 34.985 | 34.794 | 34.603 | 34.412 | 34.221 |
| Import | 8.212 | 8.460 | 8.835 | 9.140 | 9.446 |
| Exports | 5.400 | 5.300 | 5.300 | 5.300 | 5.300 |
| TOTALLY AVAILABLE | 37.797 | 37.954 | 38.138 | 38.252 | 38.367 |
| Consumption for pumping | 971 | 971 | 971 | 971 | 971 |
| Own consumption in energy sector | 4.172 | 4.172 | 4.172 | 4.172 | 4.172 |
| Losses | 4.300 | 4.300 | 4.300 | 4.300 | 4.300 |
| FINAL CONSUMPTION | 28.354 | 28.511 | 28.695 | 28.809 | 28.924 |
| Manufacturing | 8.854 | 8.900 | 8.945 | 8.990 | 9.035 |
| Construction | 336 | 336 | 336 | 336 | 336 |
| Transport | 373 | 373 | 373 | 373 | 373 |
| Households | 13.349 | 13.460 | 13.599 | 13.668 | 13.738 |
| Agriculture | 343 | 343 | 343 | 343 | 343 |
| Other consumers | 5.099 | 5.099 | 5.099 | 5.099 | 5.099 |



Author: Dusko Bumbic

INTERNATIONAL INVESTMENT POSITION OVER 2013–2021

This paper¹ describes briefly the changes in the international position (IIP) of the Republic of Serbia over 2013–2021, including their breakdown according to functional categories². It also presents the mechanisms that impacted most strongly the external balance sheet: financial flows (transactions) in Serbia, as well as other changes in foreign financial assets and liabilities of the Republic of Serbia. The other changes include those in the ratio of foreign currencies and the effects of price changes that do not reflect the change in the volume of foreign receivables and liabilities, but that in their valuation.

CURRENT ACCOUNTS AND CAPITAL ACCOUNT OF THE BALANCE OF PAYMENT

The balance of payment registers economic transactions over a selected period between the residents of an economy and abroad. It covers current account, capital account and financial account.

Current account is the statistics of primary economic importance and **together with capital account**³ **it determines whether a country is a net creditor or net borrower**. If a country is a net borrower, as it is traditionally the case of Serbia, then the financial account should contain cash inflow for financing this deficit.

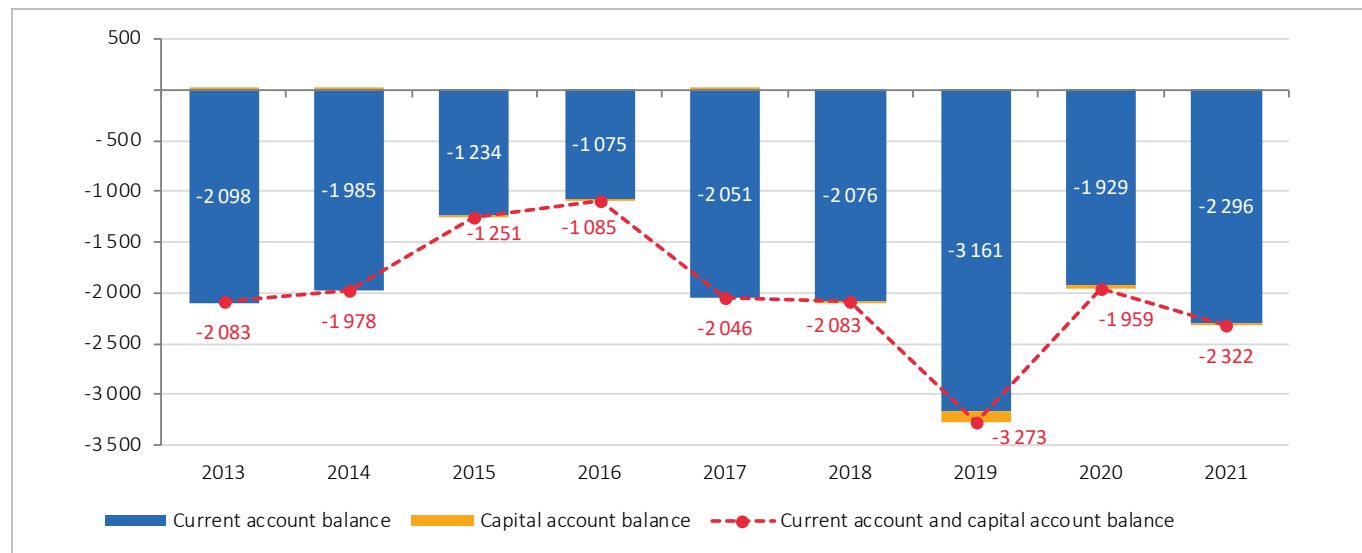
¹ The structure of the paper relies partly on a similar IIP analysis of Great Britain, produced by the British Office of National Statistics in 1999–2014.

² **IIP** of the Republic of Serbia in the scope of financial assets and liabilities **presents the following functional categories**: direct investments (DI), portfolio investments (PI), financial derivatives (FD) other investments (OI) and foreign currency reserves. **Foreign financial assets** includes DI, PI, FD, OI and foreign currency reserves, while **foreign financial liabilities** include the same components, except foreign currency reserves. **Changes in the IIP structure** are changes of the mentioned categories in the scope of assets and liabilities.

³ **Capital account** of the balance of payment records **net non-financial non-produced assets** (e.g. land, licenses, natural resources, goodwill) and **capital transfers**, while balance is the sum of net acquisition of non-financial non-produced assets and net inflow of capital transfers.

Chart 1 presents the sum of the balance of the current account and capital account of the balance of payments by years, over 2013–2021.

Chart 1. Sum of the balance of the current account and capital account, 2013–2021, in mill. EUR



Source: National Bank of Serbia.

It is customary to show together the **current account and capital account balance**, because such balance in our case represents a **deficit financed by inflows in the financial account**. As can be seen in chart 1, in the case of the Republic of Serbia, in each of the observed years this total balance is almost completely determined by the current account balance. Theoretically, the financial account balance should equal the sum of the current account and capital account balance, but this is not the case in practice, therefore the balance of payment is closed with the item *Net errors and omissions*, where the balancing is performed, that is:

$$\text{current account balance} + \text{capital account balance} - \text{financial account balance} +/\text{- net errors and omissions} = 0$$

If changes in foreign currency reserves⁴ are shown separately, which are registered as changes in assets in the scope of the balance of payment financial account, then the equality obtained in such a way would be presented as follows:

$$\text{Changes in foreign currency reserves} = \text{current account balance} + \text{capital account balance} - \text{financial account balance} +/\text{- net errors and omission}$$

Table 1 presents the components⁵ of this equality in million euros.

Table 1. Balance of payment of the Republic of Serbia, 2013–2021, in mill. EUR

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|
| Current account balance | -2 098 | -1 985 | -1 234 | -1 075 | -2 051 | -2 076 | -3 161 | -1 929 | -2 296 |
| Capital account balance | 15 | 7 | - 18 | - 10 | 5 | - 7 | - 112 | - 30 | -25 |
| Financial account balance | -2 327 | 92 | -1 086 | - 233 | -1 876 | -2 867 | -4 977 | -2 350 | - 4 765 |
| Of which: foreign currency changes | 697 | -1 797 | 166 | - 302 | 228 | 1 123 | 1 873 | 270 | 2 619 |
| Net errors and omission | 453 | 273 | 332 | 549 | 398 | 339 | 169 | - 121 | 176 |

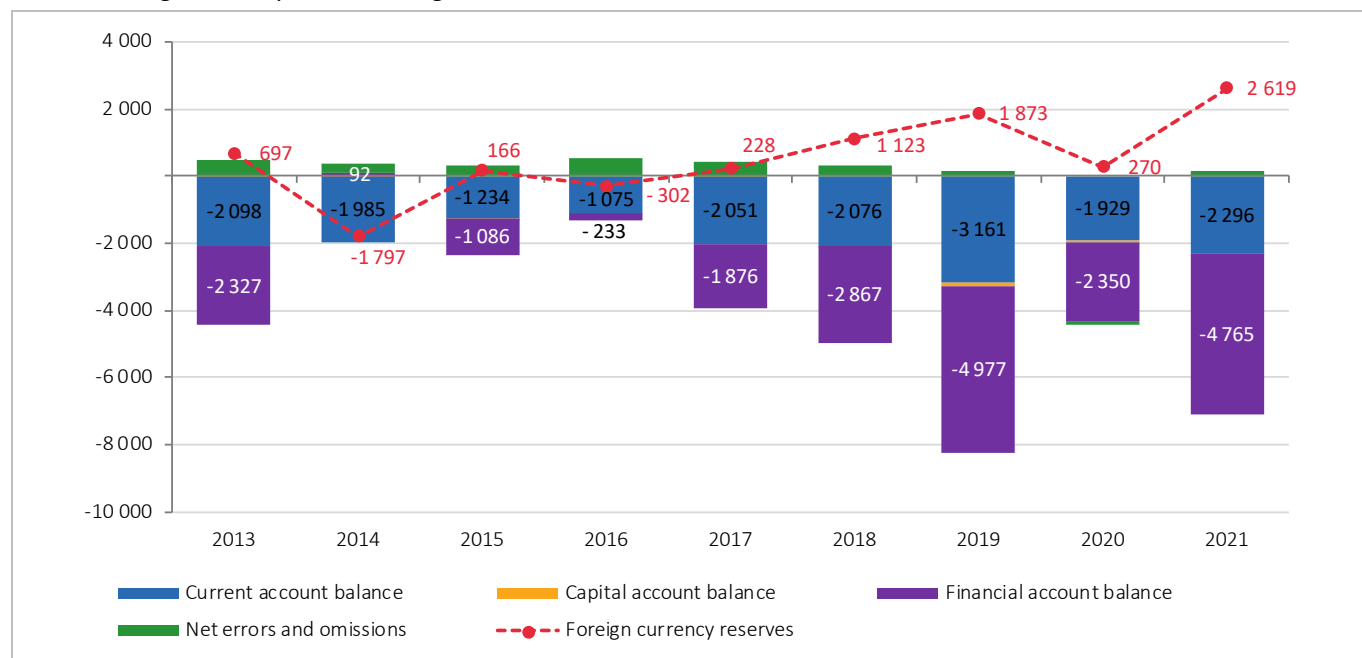
Source: National Bank of Serbia.

⁴ Balance of payment changes of foreign currency reserves, shown in the assets of the financial account balance of apyment, do not include changes between foreign currencies and changes in the value of the price of gold and securities.

⁵ The financial account balance, shown in table 1 and chart 2, is reduced by foreign currency reserve changes.

Chart 2 presents changes in foreign currency balance, shown in the balance of payment, as well as their ratio according to the components **Error! Unknown switch argument.** of the aforesaid equalities.

Chart 2. Foreign currency reserve changes, 2013–2021, in mill. EUR



Source: National Bank of Serbia.

FINANCIAL ACCOUNT OF THE BALANCE OF PAYMENT

As Serbia is traditionally a net borrower, it is necessary for her to service this outflow by a cash inflow in her financial account. The financial account records net acquisitions of financial assets as well as net taking on financial liabilities over a certain period of time. The financial account balance is the difference between net financial assets acquisition and net taking of financial liabilities. The difference between the flows on the financial account and the sum of current account and financial account balance is attributed to net errors and omissions in the accounts.

STRUCTURE OF THE INTERNATIONAL INVESTMENT POSITION

Table 2 presents the structure of net IIP over 2013–2021, according to functional categories, in million euros and as the percentage of GDP. The percentage share in GDP is the best indicator of the relative significance of IIP and its integral functional categories, observed in relation to the size of the economy.

Table 2. Structure of IIP according to functional categories, 2013–2021

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| In mill. EUR | | | | | | | | | |
| Net IIP | -30,605 | -32,464 | -33,877 | -34,672 | -35,579 | -37,555 | -40,478 | -42,274 | -44,294 |
| Direct investments | -20,773 | -22,026 | -24,060 | -25,941 | -28,510 | -31,868 | -35,388 | -38,849 | -42,112 |
| Portfolio investments | -6,129 | -6,915 | -7,147 | -6,453 | -5,184 | -4,500 | -4,836 | -6,517 | -8,178 |
| Financial derivatives | 35 | 29 | 32 | 38 | 28 | 49 | 50 | 53 | 29 |
| Other investments | -14,927 | -13,460 | -13,081 | -12,520 | -11,875 | -12,497 | -13,682 | -10,452 | -10,489 |
| Foreign currency reserves | 11,189 | 9,907 | 10,378 | 10,205 | 9,962 | 11,262 | 13,378 | 13,492 | 16,455 |
| Gross domestic product | 36,427 | 35,467 | 35,740 | 36,779 | 39,235 | 42,892 | 46,005 | 46,796 | 53,329 |

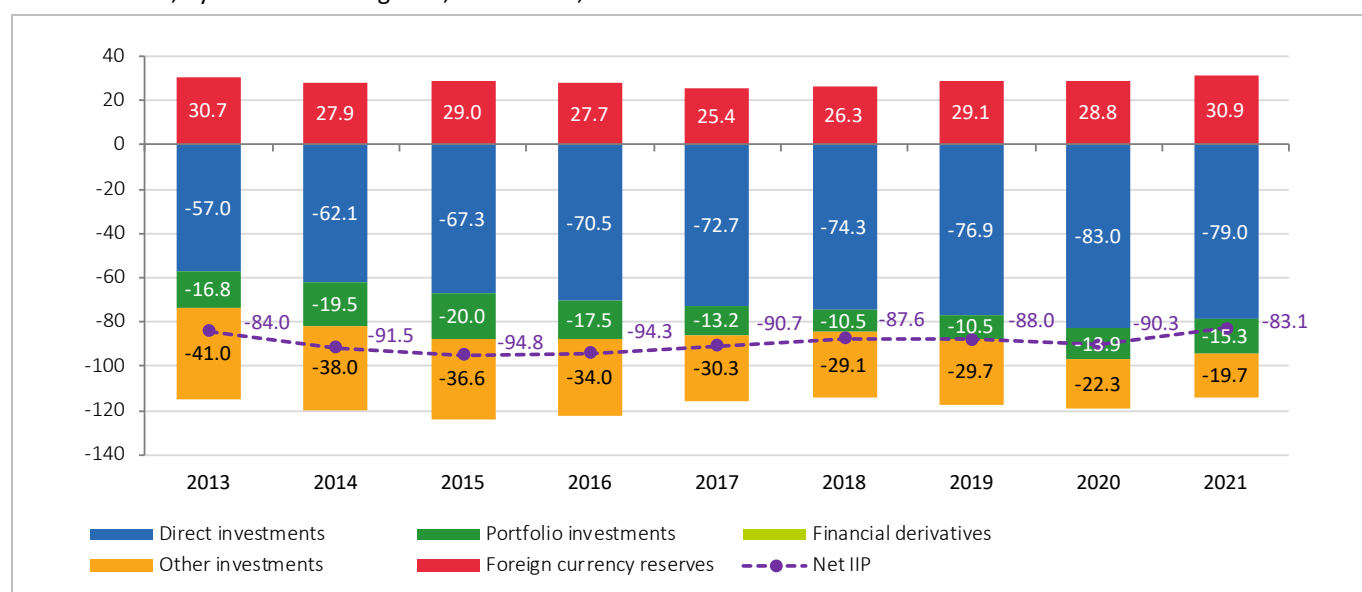
Table 2. Structure of IIP according to functional categories, 2013–2021 (continued)

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| % GDP | | | | | | | | | |
| Net IIP | -84.0 | -91.5 | -94.8 | -94.3 | -90.7 | -87.6 | -88.0 | -90.3 | -83.1 |
| Direct investments | -57.0 | -62.1 | -67.3 | -70.5 | -72.7 | -74.3 | -76.9 | -83.0 | -79.0 |
| Portfolio investments | -16.8 | -19.5 | -20.0 | -17.5 | -13.2 | -10.5 | -10.5 | -13.9 | -15.3 |
| Financial derivatives | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Other investments | -41.0 | -38.0 | -36.6 | -34.0 | -30.3 | -29.1 | -29.7 | -22.3 | -19.7 |
| Foreign currency reserves | 30.7 | 27.9 | 29.0 | 27.7 | 25.4 | 26.3 | 29.1 | 28.8 | 30.9 |

Source: National Bank of Serbia⁶.

NET IIP

Chart 3 presents the structure of the net IIP of the Republic of Serbia over 2013–2021, by functional categories and as the percentage of GDP.

Chart3. Net IIP, by functional categories, 2013–2021, % of GDP

Source: National Bank of Serbia.

In all the years of the observed period Serbia had a **high negative net IIP**, which **share in GDP**, as the result of the changes on the level of assets and liabilities, ranged **between 83.1% and 94.8%**. This means that in each observed years the accumulations of foreign financial liabilities exceeded significantly the corresponding accumulation of foreign financial liabilities. Such a IIP trend complies completely with the deficit of the current account of the balance of payment that was recorded in all the years in the period 2013–2021.

The largest share of the negative net IIP in GDP was recorded in 2015 and 2016 (94.8% and 94.3%, respectively), and in the second part of the observed series, this share was reduced in the period 2017–2021 and amounted to 90.7% of GDP. When looking in absolute amounts, IIP of Serbia, as a net borrower, increased from 30.6 billion euros at the end of 2013 to 44.3 billion euros at the end of 2021, which is an increase of 13,7 billion euros, while its **share in GDP fell from 84.0% at the end of 2013 to 83.1% at the end of 2021**.

⁶ The share presented in the table is calculated based on the available SORS data.

The main catalyst of the negative IIP in all the years is **direct investments**. The share of the negative position of direct investments in GDP ranged between 57.0% and 90.0%, where a constant annual growth of this share over 2013-2020 was noticeable. It is only in the last year of the observed period, 2021, that the share of the negative position of direct investments in GDP decreased, which coincided with the decrease of the share of net IIP in GDP in the same year. It is worth mentioning that this decrease is partly due to the recovery of economic activity in 2021, which made the value of the denominator (GDP) to increase significantly, based on which the cited shares were calculated.

The negative position in all the observed period was recorded also in **other** (between 22.3% and 41.0% of GDP) and **portfolio investments** (between 10.5% and 20.0% of GDP). In contrast with direct investments, the share of the negative position of other investments in GDP shows a constant annual fall during the whole observed period, thus its maximum and minimum values, i.e. 41.0% and 19.7%, were registered at the end of 2013 and 2021. In no year of the observed period, except in 2013, did the aggregate share of the negative positions of other and portfolio investments in GDP exceed the corresponding share of direct investments.

The positive net position was recorded in all the years with **foreign currency reserves**, which share in GDP in the observed period ranged between 25.4% and 30.9%, and the maximum values, 30.7% and 30.9%, were registered at the end of 2013 and 2021, respectively. Even though the positive net position was noted in all the years and with financial derivatives, it is worth mentioning that in the case of the Republic of Serbia the relative significance of this category is negligible.

STRUCTURE OF FOREIGN NET FINANCIAL ASSETS

Table 3 presents the structure of foreign net assets over 2013–2021. When observed in absolute amounts, the position of foreign net financial assets^{Error! Bookmark not defined.} increased from 17,8 billion euros at the end of 2013 to 33,4 billion euros at the end of 2021, being an increase of 15,6 billion euros.

Table 3. Structure of foreign net financial assets of the Republic of Serbia, 2013–2021

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| In mill.EUR | | | | | | | | | |
| Total | 17 831 | 18 314 | 19 548 | 20 824 | 21 112 | 24 037 | 26 681 | 28 539 | 33 418 |
| 1. Direct investments | 2 078 | 2 343 | 2 656 | 2 884 | 3 014 | 3 339 | 3 641 | 3 723 | 4 014 |
| <i>Equity capital</i> | 1 823 | 2 053 | 2 327 | 2 533 | 2 608 | 2 925 | 3 218 | 3 277 | 3 569 |
| <i>Equity capital, excluding reinvested gain</i> | 1 573 | 1 608 | 1 667 | 1 729 | 1 758 | 2 028 | 2 251 | 2 310 | 2 519 |
| <i>Reinvested gain</i> | 250 | 445 | 660 | 803 | 850 | 897 | 967 | 967 | 1 049 |
| <i>Debt instruments</i> | 255 | 290 | 330 | 351 | 406 | 415 | 422 | 446 | 446 |
| 2. Portfolio investments | 52 | 137 | 199 | 306 | 237 | 249 | 290 | 438 | 618 |
| 3. Financial derivatives | 35 | 29 | 32 | 39 | 29 | 50 | 51 | 54 | 54 |
| 4. Other investments | 4 477 | 5 898 | 6 282 | 7 391 | 7 870 | 9 137 | 9 321 | 10 832 | 12 277 |
| <i>Cash and deposits⁷</i> | 3 933 | 4 876 | 4 746 | 4 924 | 4 423 | 4 999 | 4 774 | 5 374 | 6 319 |
| <i>Credits</i> | 65 | 74 | 101 | 116 | 265 | 399 | 447 | 470 | 521 |
| <i>Commercial credits and advances</i> | 443 | 879 | 1 377 | 2 301 | 3 143 | 3 617 | 4 006 | 4 930 | 5 375 |
| <i>Other</i> | 36 | 69 | 58 | 50 | 38 | 122 | 94 | 59 | 62 |
| 5. Foreign currency reserves | 11 189 | 9 907 | 10 378 | 10 205 | 9 962 | 11 262 | 13 378 | 13 492 | 16 455 |

Source: National Bank of Serbia.

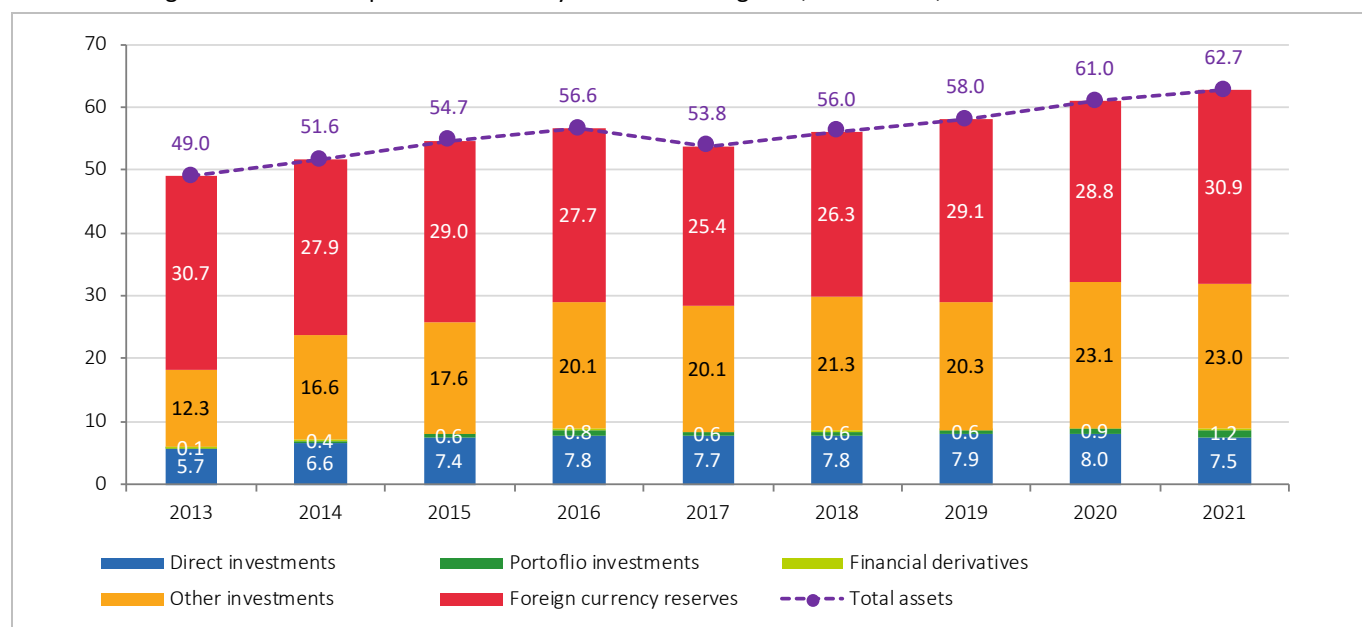
⁷ **Cash** is made of banknotes and coins with a fixed nominal value, issued or approved by central banks or governments and are in circulation. Deposits include all receivables by a central bank, commercial banks (as for our receivables, in some cases, by other institutional units (enterprises or NPISH); and are presented by justifications about deposits. As for Serbia, in the assets these are deposits of domestic commercial banks abroad, and in a lesser extent, deposits of enterprises, while in liabilities these are exclusively deposits by commercial banks in Serbia.

Table 3. Structure of foreign net financial assets of the Republic of Serbia, 2013–2021 (continued)

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| % of total assets | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1. Direct investments | 11.7 | 12.8 | 13.6 | 13.8 | 14.3 | 13.9 | 13.6 | 13.0 | 12.0 |
| <i>Equity capital</i> | 10.2 | 11.2 | 11.9 | 12.2 | 12.4 | 12.2 | 12.1 | 11.5 | 10.7 |
| <i>Equity capital, excluding reinvested gain</i> | 8.8 | 8.8 | 8.5 | 8.3 | 8.3 | 8.4 | 8.4 | 8.1 | 7.5 |
| <i>Reinvested gain</i> | 1.4 | 2.4 | 3.4 | 3.9 | 4.0 | 3.7 | 3.6 | 3.4 | 3.1 |
| <i>Debt instruments</i> | 1.4 | 1.6 | 1.7 | 1.7 | 1.9 | 1.7 | 1.6 | 1.6 | 1.3 |
| 2. Portfolio investments | 0.3 | 0.8 | 1.0 | 1.5 | 1.1 | 1.0 | 1.1 | 1.5 | 1.8 |
| 3. Financial derivatives | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 |
| 4. Other investments | 25.1 | 32.2 | 32.1 | 35.5 | 37.3 | 38.0 | 34.9 | 38.0 | 36.7 |
| <i>Cash and deposits</i> | 22.1 | 26.6 | 24.3 | 23.6 | 21.0 | 20.8 | 17.9 | 18.8 | 18.9 |
| <i>Credits</i> | 0.4 | 0.4 | 0.5 | 0.6 | 1.3 | 1.7 | 1.7 | 1.6 | 1.6 |
| <i>Commercial credits and advances</i> | 2.5 | 4.8 | 7.0 | 11.0 | 14.9 | 15.0 | 15.0 | 17.3 | 16.1 |
| <i>Other</i> | 0.2 | 0.4 | 0.3 | 0.2 | 0.2 | 0.5 | 0.4 | 0.2 | 0.2 |
| 5. Foreign currency reserves | 62.7 | 54.1 | 53.1 | 49.0 | 47.2 | 46.9 | 50.1 | 47.3 | 49.2 |

Source: National Bank of Serbia⁶.

Chart 4 presents the **position of foreign financial assets** of the Republic of Serbia over 2013–2021, broken down by functional categories and expressed as the percentage of GDP

Chart 4. Foreign assets of the Republic of Serbia by functional categories, 2013–2021, % of GDPSource: National Bank of Serbia⁸.⁸ The share shown in the chart is calculated based on available data of the National Bank of Serbia.

In the observed period, the **share of foreign financial assets in GDP** increased from 49.0% at the end of 2013 to 62.7% at the end of 2021, being at the same time its largest share in GDP in the observed series. In the first part of the series, from 2013 to 2016, this share saw stable growth (from 49.0% of GDP in 2013 to 56.6% of GDP in 2016), which after fall in 2017 (from 53.8% of GDP) it continued to go up, reaching a maximum value at the end of the series (the share of 62.7% in 2021).

The growth of financial assets over 2013–2021 was mostly affected by **other investments of residents abroad**, which share in GDP went up to 23.0% at the end of 2021 relative to 12.3% at the end of 2013, owing primarily to the **strong increase in receivables based on commercial credits and advances**.

Over the whole observed period **foreign currency reserves kept a dominant share in the structure of assets**. The largest share of this functional category in GDP was recorded in 2021 (30.9%), and the smallest in 2017 (25.4%), which is at the same the only year in the observed period when an annual fall of the share of total financial assets in GDP was recorded. After 2017, the share of foreign currency reserves in GDP increased again and reached at the end of the observed period, in 2021, the maximum value of 30.9%.

A growth of relative importance in the observed period was recorded in **direct and portfolio investments**, which respective shares in GDP went up to 7.5% and 1.2% in 2021, relative to 5.7% and 0.1% in 2013.

STRUCTURE OF FOREIGN NET FINANCIAL LIABILITIES

Table 4 presents the structure of foreign net financial liabilities over 2013–2021. When looking in absolute amounts, **the position of net financial liabilities** Error! Bookmark not defined. increased from 48,4 billion euros at the end of 2013 to 77,7 billion euros at the end of 2021, being an increase of 29,3 billion euros.

Table 4. Structure of foreign net financial liabilities of the Republic of Serbia, 2013–2021

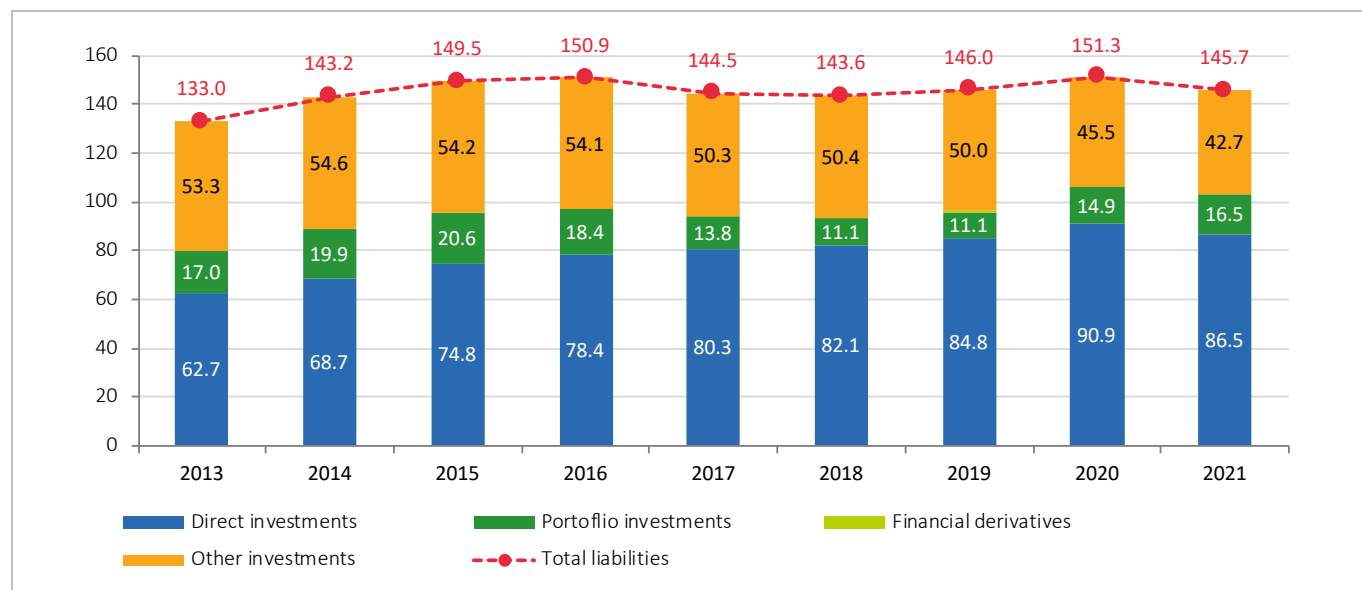
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| In mill.EUR | | | | | | | | | |
| Total | 48 436 | 50 779 | 53 426 | 55 496 | 56 691 | 61 591 | 67 158 | 70 813 | 77 713 |
| 1. Direct investments | 22 851 | 24 368 | 26 717 | 28 825 | 31 524 | 35 208 | 39 029 | 42 572 | 46 126 |
| <i>Equity capital</i> | 19 177 | 20 721 | 22 837 | 24 490 | 26 248 | 29 507 | 32 944 | 35 009 | 37 226 |
| <i>Equity capital, excluding reinvested gain</i> | 18 051 | 19 142 | 20 423 | 21 162 | 21 725 | 23 841 | 26 092 | 27 776 | 29 287 |
| <i>Reinvested gain</i> | 1 127 | 1 579 | 2 415 | 3 328 | 4 523 | 5 665 | 6 852 | 7 233 | 7 939 |
| <i>Debt instruments</i> | 3 674 | 3 647 | 3 879 | 4 335 | 5 275 | 5 701 | 6 085 | 7 563 | 8 900 |
| 2. Portfolio investments | 6 182 | 7 052 | 7 346 | 6 759 | 5 421 | 4 749 | 5 126 | 6 955 | 8 796 |
| 3. Financial derivatives | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 25 |
| 4. Other investements | 19 403 | 19 358 | 19 363 | 19 911 | 19 745 | 21 634 | 23 002 | 21 284 | 22 766 |
| <i>Cash and deposits</i> | 738 | 850 | 879 | 833 | 996 | 1 029 | 1 086 | 984 | 1 256 |
| <i>Credits</i> | 17 235 | 16 765 | 16 631 | 16 461 | 15 885 | 17 439 | 18 579 | 17 908 | 19 138 |
| <i>Commercial credits and advances</i> | 853 | 1 170 | 1 257 | 1 967 | 2 297 | 2 572 | 2 741 | 1 810 | 951 |
| <i>SDR allocation</i> | 497 | 530 | 565 | 566 | 529 | 541 | 549 | 521 | 1 327 |
| <i>Other</i> | 81 | 43 | 32 | 84 | 39 | 53 | 47 | 61 | 94 |

Table 4. Structure of foreign net financial liabilities of the Republic of Serbia, 2013–2021 (continued)

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| % of total liabilities | | | | | | | | | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1. Direct investments | 47.2 | 48.0 | 50.0 | 51.9 | 55.6 | 57.2 | 58.1 | 60.1 | 59.4 |
| <i>Equity capital</i> | 52.6 | 58.4 | 63.9 | 66.6 | 66.9 | 68.8 | 71.6 | 74.8 | 69.8 |
| <i>Equity capital, excluding reinvested gain</i> | 49.6 | 54.0 | 57.1 | 57.5 | 55.4 | 55.6 | 56.7 | 59.3 | 54.9 |
| <i>Reinvested gain</i> | 3.1 | 4.5 | 6.8 | 9.0 | 11.5 | 13.2 | 14.9 | 15.5 | 14.9 |
| <i>Debt instruments</i> | 10.1 | 10.3 | 10.9 | 11.8 | 13.4 | 13.3 | 13.2 | 16.2 | 16.7 |
| 2. Portfolio investments | 12.8 | 13.9 | 13.8 | 12.2 | 9.6 | 7.7 | 7.6 | 9.8 | 11.3 |
| 3. Financial derivatives | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Other investments | 40.1 | 38.1 | 36.2 | 35.9 | 34.8 | 35.1 | 34.3 | 30.1 | 29.3 |
| <i>Cash and deposits</i> | 1.5 | 1.7 | 1.6 | 1.5 | 1.8 | 1.7 | 1.6 | 1.4 | 1.6 |
| <i>Credits</i> | 35.6 | 33.0 | 31.1 | 29.7 | 28.0 | 28.3 | 27.7 | 25.3 | 24.6 |
| <i>Commercial credits and advances</i> | 1.8 | 2.3 | 2.4 | 3.5 | 4.1 | 4.2 | 4.1 | 2.6 | 1.2 |
| <i>SDR allocation</i> | 1.0 | 1.0 | 1.1 | 1.0 | 0.9 | 0.9 | 0.8 | 0.7 | 1.7 |
| <i>Other</i> | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |

Source: National Bank of SerbiaError! Unknown switch argument..

Chart 5 presents the position of **foreign financial liabilities** of the Republic of Serbia over 2013–2021, broken down by functional categories and expressed as the percentage of GDP

Chart 5. Foreign liabilities of the Republic of Serbia by functional categories, 2013–2021, % of GDP

Source: National Bank of SerbiaError! Unknown switch argument..

In the observed period, the **share of foreign financial liabilities in GDP** increased from 133.0% (the lowest value in the observed series) at the end of 2013 to 145.7% at the end of 2021.

In the first part of the observed series, from 2013 to 2016, the share of foreign financial liabilities in GDP saw stable growth (from 133.0% of GDP in 2013 to 150.9% of GDP in 2016), and after a fall in 2017 it continued to go up reaching the maximum value of 151.3% at the end of 2020. In the last year of the observed period, 2021, a new fall of the share of financial liabilities in GDP was recorded (145.7%), which primarily resulted from the decrease of corresponding shares of liabilities based on direct and other investments, but also from recovery of economic activities in 2021, making the value of the denominator grow significantly, based on which these two shares were calculated.

The largest influence on the growth of financial liabilities was that of **direct investments of non- residents** in Serbia, and of equity investment within the latter. The share of liabilities based on direct investments in GDP grew constantly over 2013–2020, reaching the maximum value of 90.9% of GDP at the end of 2020, being significantly higher than the 62.7% at the end of 2013. It was only in the last year of the observed period, 2021, that this share recorded fall in relation to the previous year, which impacted also the decrease in the share of total foreign financial liabilities in GDP of the same year.

In contrast to direct investments, in the observed period there was a fall of the relative importance of liabilities based on **other and portfolio investments**, which respective shares in GDP went down by 42.7% and 16.5% in 2021, relative to 53.3% and 17.0% in 2013. This fall was particularly marked over 2017–2018, when the share of total financial liabilities in GDP saw a decrease.

CHANGES OF NET IIP BASED ON TRANSACTIONS AND OTHER CHANGES

The trend of net IIP of the Republic of Serbia over 2013–2021 can be also explained by breaking down the changes to their components: **net acquisition of financial assets and net taking on of financial liabilities** in a selected period (by financial transactions), as well as by **other changes**⁹, which include changes in the ratio of currencies, changes in prices and other changes in volume.

Looking at the long-term trend of cumulative financial transactions, it is possible to see and appraise the IIP and long-term trend of cumulative transactions over 2013–2021. Even though long-term cumulative transactions¹⁰ are the main catalyst of changes in the net IIP of the Republic of Serbia, it is worth mentioning that there are also short-term fluctuations, where the trend of the net IIP deviates significantly from cumulative transactions, i.e. where the other changes have a considerable influence on the total net IIP.

⁹ **Financial transactions** represent net acquisitions of financial assets and net taking of financial liabilities in a selected period. They show how surplus or deficit are financed on a current account and how they are recorded in the financial account of the balance of payment. **Other changes** are not recorded in the balance of payment and are the results of **revalorisation effects** (revalorisation effects do not reflect the change of the assets and liabilities themselves, but they record change in their valuation, which include changes in currency ratio (foreign currency exchange) and other price changes, as well as **other changes in volume** (debt cancellation and writing off, reclassification, change of entity's residence, and changes of actuarial assumptions).

¹⁰ Data on cumulative financial transactions and their share in GDP are calculated based on available data of the NBS balance of payment statistics.

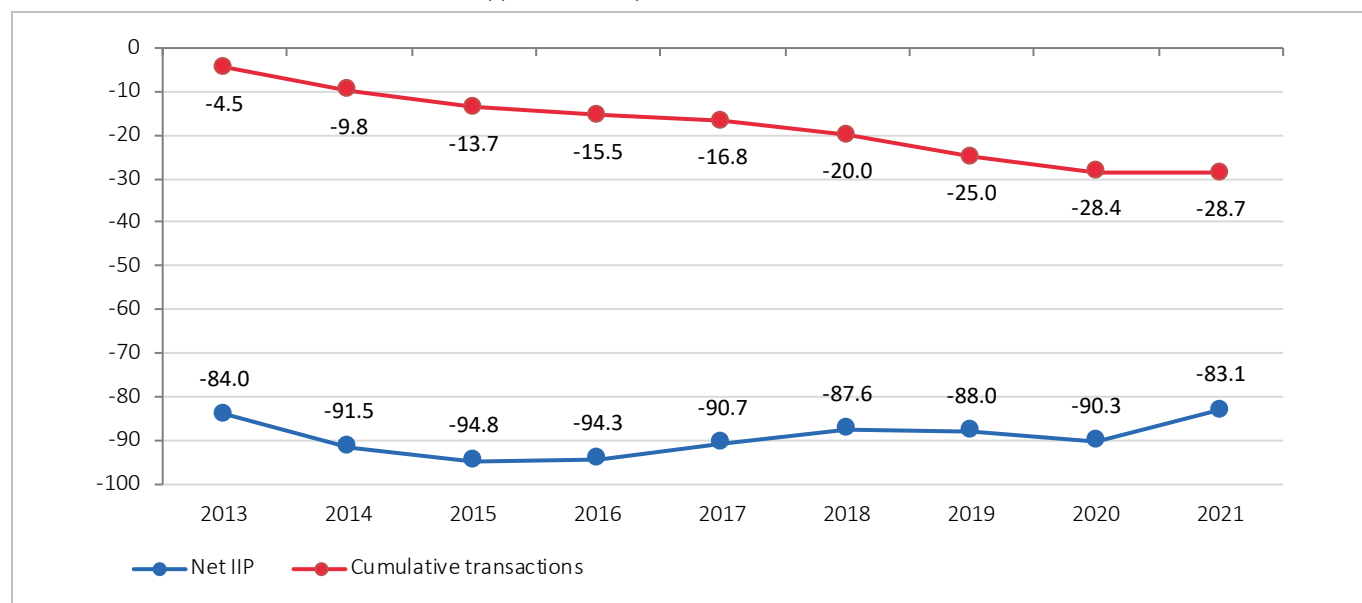
Chart 6. Net IIP and cumulative transactions, , 2013–2021, % of GDP

Table 5 presents the net IIP and the structure of changes over 2014–2021. The first column shows the net IIP, calculated by subtracting liabilities from assets. The changes relative to IIP from the previous year, i.e. differences in absolute amount between the value of the net IIP in the current and previous year are presented in the second column. Changes are then broken down to transactions and other changes. The last two columns contain the structure of total changes in the net IIP, expressed in percentages.

Table 5. Structure of changes in net IIP, 2014–2021

| | Net IIP | Changes in net IIP in absolute amount | Transactions | Other changes | Transactions | Other changes |
|------------|--------------------|---------------------------------------|--------------|---------------|--------------------|---------------|
| | Value in mill. EUR | | | | % of total changes | |
| 2014 | -32 464 | -1 859 | -1 705 | - 154 | 91.7 | 8.3 |
| 2015 | -33 877 | -1 413 | - 920 | - 493 | 65.1 | 34.9 |
| 2016 | -34 672 | - 795 | - 535 | - 259 | 67.4 | 32.6 |
| 2017 | -35 579 | - 907 | -1 648 | 741 | 181.7 | -81.7 |
| 2018 | -37 555 | -1 975 | -1 743 | - 232 | 88.3 | 11.7 |
| 2019 | -40 478 | -2 923 | -3 104 | 181 | 106.2 | -6.2 |
| 2020 | -42 274 | -1 797 | -2 079 | 283 | 115.7 | -15.7 |
| 2021 | -44 294 | -2 020 | -2 146 | 126 | 106.2 | -6.2 |
| Cumulative | | -13 689 | -13 881 | 192 | 101.4 | -1.4 |

Source: National Bank of Serbia¹¹.

¹¹ Data on the break down of total change to transactions and other changes are calculated based on available data of the National Bank of Serbia (balance of payment statistics and international investment position).

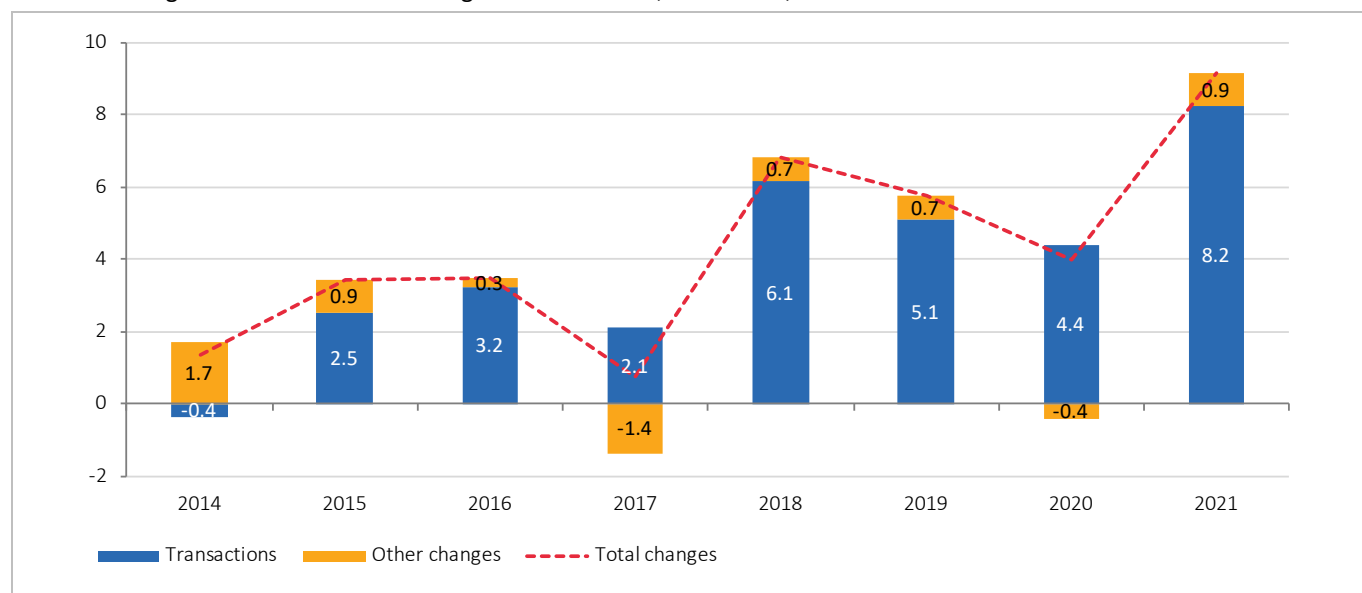
Table 5 shows that the net IIP of the Republic of Serbia was negative during all the year in the period 2014–2021, as shown in chart 3, with a cumulative fall of the net IIP of 13,7 billion euros. During this period, based on financial transactions, net financial liabilities saw a cumulative growth of 13,9 billion euros, while the other changes increased cumulatively by 192 million euros. Observed cumulatively, it is obvious that the negative IIP over 2014–2021 is the result, first of all, of the negative balance of financial transactions recorded in each of the observed years.

The structure of net IIP changes is somehow different if individual years are scrutinized within the observed period, but here also the negative balance of financial transactions exceeded the balance of other changes in each of the observed years, the balance of the other IIP changes being positive in four of eight years of the observed period.

Chart 7 presents the structure of the changes in the assets of the Republic of Serbia, as GDP percentage, over 2014–2021. The total change in the level of financial assets was positive in all observed years.

Changes in the structure of financial asseets, 2014-2021, % of GDP

Chart 7. Changes in the structure of foreign financial assets, 2014-2021, % of GDP

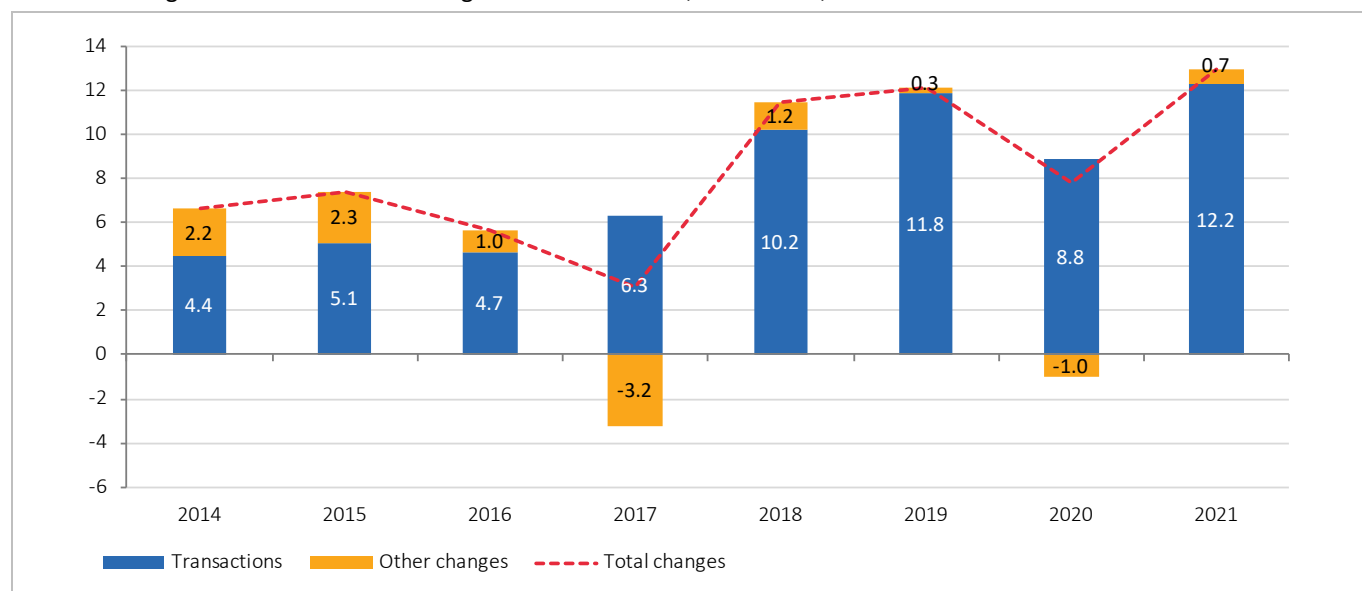


Source: National Bank of Serbia

Net transactions contributed most to the changes in assets in all the years of the observed period, except for 2014. Nevertheless, in 2014 the total level of financial assets saw growth owing to the positive balance of other changes (share of 1.7% of GDP), which was more than sufficient to neutralize the negative balance of financial transactions (share of 0.4% of GDP). In all other years of the observed period the transactions were the main catalyst of the growth of financial assets, with the largest individual change of 8.2% of GDP, recorded in 2021, owing primarily to a significant increase in foreign currency reserves and increase in deposits of domestic commercial banks abroad. Except in 2014, **other changes** in financial assets were of less importance, but appeared as a compensable factors in two of eight years of the observed time series, i.e. in years where a negative balance was recorded based on these changes.

Chart 8 presents the structure of changes in the liabilities of the Republic of Serbia, as GDP percentage, over 2014–2021. The total change in the level of financial liabilities was positive in each individual year of the observed period.

Chart 8. Changes in the structure of foreign financial liabilities, 2014–2021, % of GDP



Source: National Bank of Serbia. Error! Unknown switch argument..

Net transactions were the main catalyst of growth of the level of financial liabilities in all the years of the observed period, with the largest individual change of 12.2% of GDP in 2021. As in the changes in financial assets, **other changes** in financial liabilities were of minor importance when compared with transactions, and appeared as a compensating factor in 2017 and 2020.

SUMMARY

- Observed in absolute amounts, the IPP of Serbia as a net borrower increased from 30,6 billion euros at the end of 2013 to 44,3 billion euros at the end of 2021, being an increase of 13.7 billion euros, while its **share in GDP** decreased from 84.0% at the end of 2013 to 83.1% at the end of 2021.
- In all the years of the period 2013–2021 Serbia had a **high negative net IIP**, which **share in GDP**, as the result of changes in the level of assets and liabilities, ranged between 84.0% and 94.8%. The high net debt position complies completely with the deficit of the current account of the balance of payments that is present in all the years of the period 2013–2021, and which is financed by inflows within the financial account of the balance of payments.
- The main catalyst of the negative IIP in all the years is **direct investments of non-residents**. The share of the **negative position of direct investments in GDP** over 2013–2021 ranged between 57.0% and 90.0%, and a considerable and constant annual growth of this share is noted in this functional category, with the exception of 2021 when a year-on-year fall was recorded for the first time as the result of a significant growth of economic activity, and thus of the value of the denominator (GDP) in relation to the calculated share.
- In the observed period, **the share of foreign financial assets in GDP** increased from 49.0%, at the end of 2013, to 62.7%, at the end of 2021, which is at the same time its largest share in GDP in the observed series.
- Growth of the level of financial assets over 2013–2021 was mostly impacted by **other investments of residents abroad**, which share in GDP went up to 23.0% at the end of 2021, in relation to 12.3% at the end of 2013, owing primarily to the strong **increase based on commercial credits and advances**.
- In the observed period, **the share of foreign financial assets in GDP** increased from 133.0% (the lowest value in the observed series) at the end of 2013 to 145.7% at the end of 2021.
- The largest influence on the growth of financial assets was that of **direct investments of non-residents** in Serbia, in the scope of equity investments. The share of liabilities based on direct investments in GDP recorded constant growth over 2013–2020, reaching the maximum value in the series of 90.9% of GDP at the end of 2020, which was considerably more than 62.7% at the end of 2013. It is only in the last year of the observed period, 2021, that this share noted a fall compared with the previous year, which influenced also the fall of the share of total foreign financial liabilities in GDP in the same year.
- Cumulatively, **the negative IPP** over 2014–2021 is the **result first of all of the negative balance of financial transactions** recorded in each of the observed year, while the influence of net other changes was of minor relative significance.
- Foreign direct investments (non-residents) are the only way towards industrialization and technological transition. The issue of investment quality is important from the point of view of stimulating measures.

1. MACROECONOMIC FORECASTS

The developed SORS system of leading composite indicators is, on average, one to two quarters at most ahead of economic activity cycles. When combined with econometric models, it allows making a quantitative evaluation of the dynamics of the annual growth rate of economic activity in the short term. The family of leading indicators by sections and corresponding forecasts are presented below.

1.1. FORECASTS OF THE CONSTRUCTION ACTIVITY OF SERBIA

The year-on-year fall of construction GVA in Q3 2022. (-12.4%) was mostly determined by the fall of the value of the construction of non-residential buildings, pipelines, communication and electric power lines, and residential buildings. In the first two quarters of 2022, the most significant current building sites were: modernisation of the railway Novi Sad – Subotica, highway Belgrade – South Adriatic (section Preljina-Pozega); Morava corridor; production plant Toyo Tyers in Indjija and the high-speed route Ruma – Sabac - Loznica. By applying the forecast model, **in Q4 2022 a fall of construction GVA of 16.0% is expected.**

Table 1.1. Structure of the contribution to the annual construction GVA growth rate

| | 2020 | | | | 2021 | | | | 2022 | | |
|---|------|------|-------|------|------|------|------|------|------|------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Construction GVA, annual growth rate, % (1+2) | 24.0 | -0.2 | -14.7 | -7.5 | 19.8 | 18.3 | 19.4 | 14.4 | -5.6 | -7.1 | -12.4 |
| 1. Buildings, pp. (1a+1b) | 7.8 | -0.4 | 1.7 | 0.1 | 13.4 | 7.2 | 5.3 | 5.8 | -4.6 | -2.9 | -6.8 |
| 1a. Residential buildings | 0.3 | -0.3 | 3.1 | 1.5 | 10.4 | 3.7 | 1.1 | -0.1 | -4.7 | -1.5 | -2.1 |
| 1b. Non-residential buildings | 7.4 | -0.2 | -1.4 | -1.3 | 3.0 | 3.6 | 4.2 | 5.8 | 0.1 | -1.4 | -4.7 |
| 2. Other buildings, pp. (2a+2b+2c+d) | 16.2 | 0.2 | -16.4 | -7.6 | 6.4 | 11.0 | 14.1 | 8.7 | -1.0 | -4.2 | -5.6 |
| 2a. Transport infrastructure | 4.0 | 0.3 | -7.4 | -3.5 | 1.1 | 13.9 | 14.3 | 12.9 | 5.1 | 0.4 | -0.2 |
| 2b. Pipelines, communication and electric power lines | 11.4 | 0.1 | -11.0 | -7.3 | 2.9 | -4.5 | 1.4 | -2.3 | -4.7 | -2.5 | -4.1 |
| 2c. Complex construction on building sites | -0.1 | 0.0 | 0.2 | 2.5 | 2.2 | 1.8 | -0.5 | -2.5 | -1.5 | -1.8 | -0.7 |
| 2d. Other civil engineering, not elsewhere classified | 0.9 | -0.2 | 1.8 | 0.7 | 0.3 | -0.1 | -1.2 | 0.5 | 0.1 | -0.3 | -0.6 |
| Contribution to construction GVA growth rate, pp. | 0.9 | 0.0 | -1.0 | -0.5 | 0.8 | 1.0 | 1.1 | 1.0 | -0.3 | -0.4 | -0.8 |

1.2. INDUSTRY INDICATOR OF THE ECONOMIC ACTIVITY OF SERBIA - INDIPAS

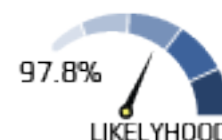


Chart 1.1. Comparison of the cycle of the leading indicator INDIPAS and the physical volume of total industry, seasonally adjusted, detrended, leveled out and standardised data, deviation from the average for the period (%)

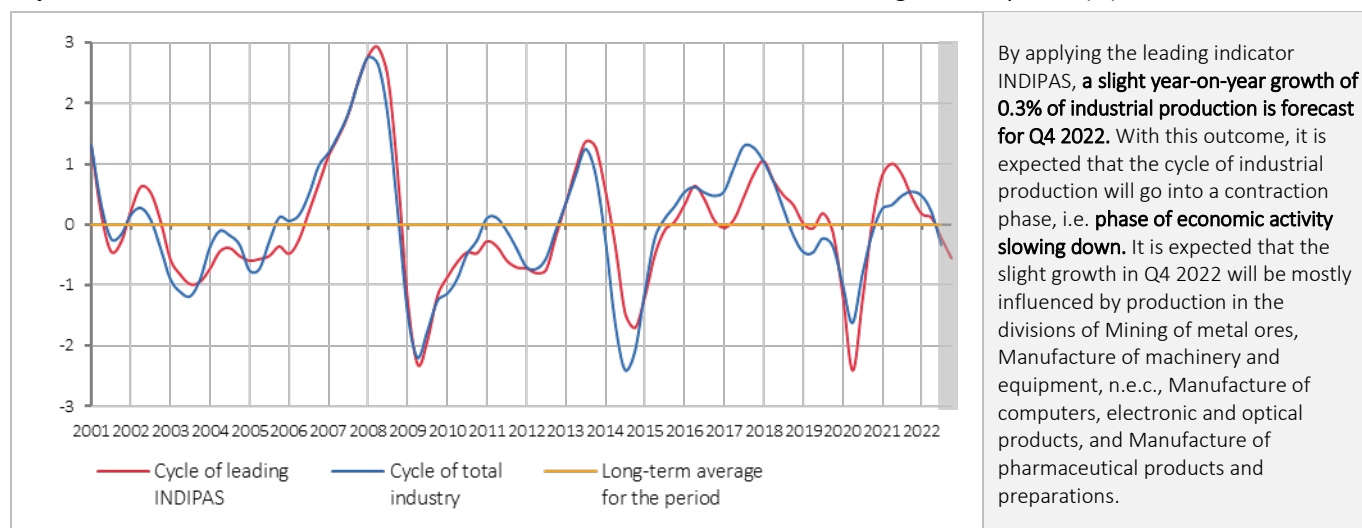


Chart 1.2. Comparison of real and forecast annual industry GVA growth rates, %

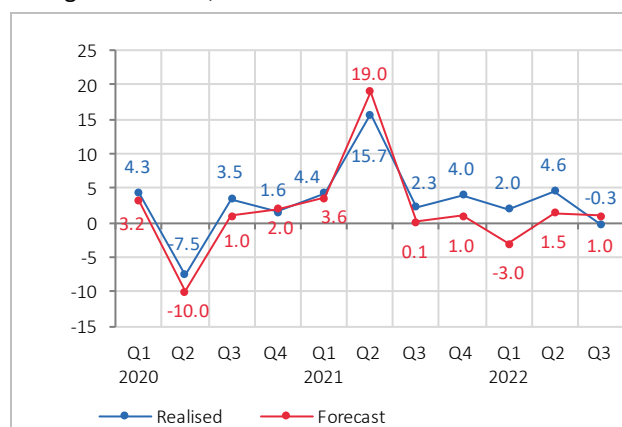
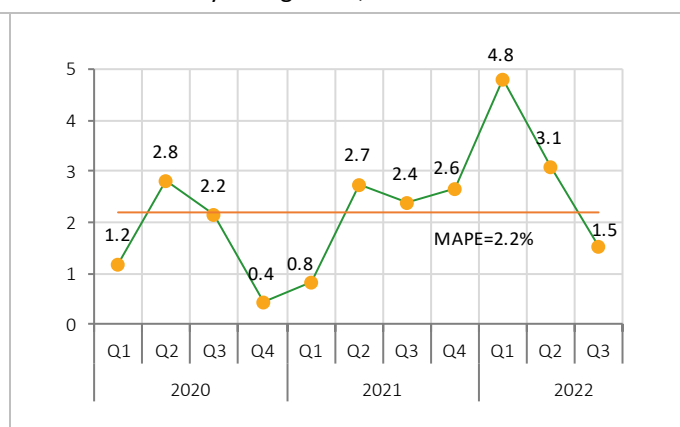


Chart 1.3. Mean Absolute Percentage Error - MAPE¹², of the forecast of industry GVA growth, %



¹² Mean Absolute Percentage Error – MAPE is a measure of the simplified interpretation an error of a forecasting model in statistics. It is defined as the ratio $MAPE = \frac{100\%}{n} \sum_{t=1}^n \left| \frac{A_t - F_t}{A_t} \right|$ where A_t is the real value, and F_t the forecast value. Their difference is divided by the real value A_t . The absolute value of this ratio is added up for each forecast point in time and divided by the total number of time points n . The relative deviation of the real values from the forecast ones by (+/-) 5% has been determined by the interval limit of validity of the given forecast (95-percentage indicator reliability interval), which we have defined after having derived MAPE as the likelihood of the model by the formula ($v=100-(MAPE)$) expressed in percentage. Absolute values are non-negative values. The forecast values in the chart were published in the previous issues of *Trends*.

1.3. SERVICE LEADING INDICATOR

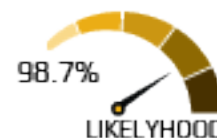


Chart 1.4. Comparison of the cycle of the service leading indicator and service GVA, seasonally adjusted, detrended, leveled out and standardised data, deviation from the average for the period (%)

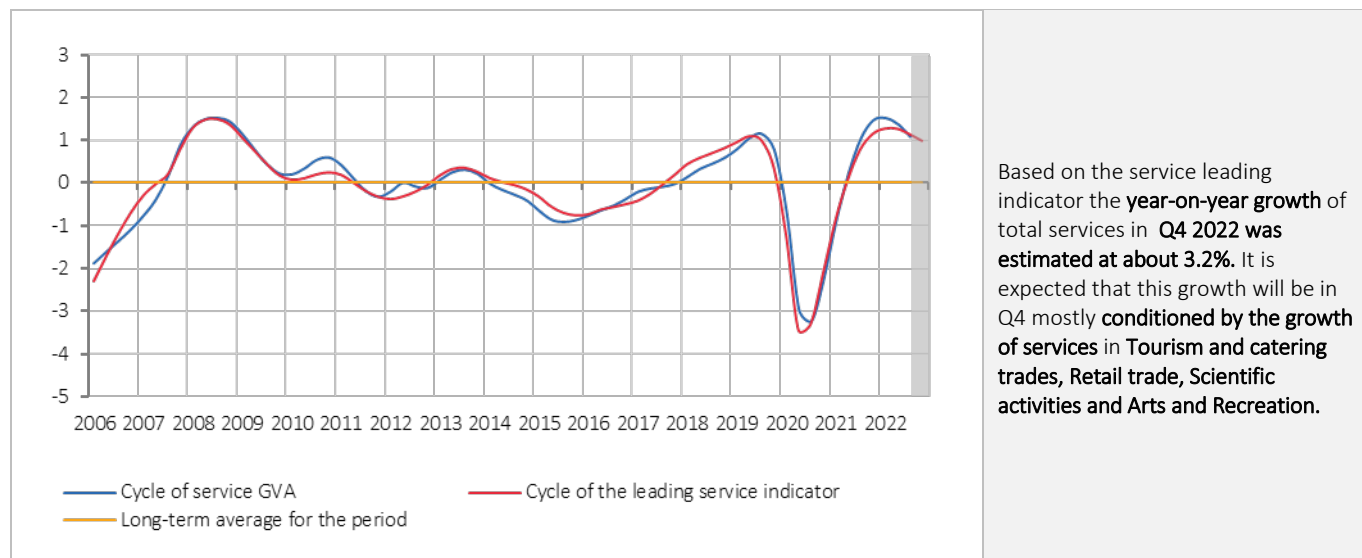


Chart 1.5. Comparison of realised annual service GVA growth rates, %

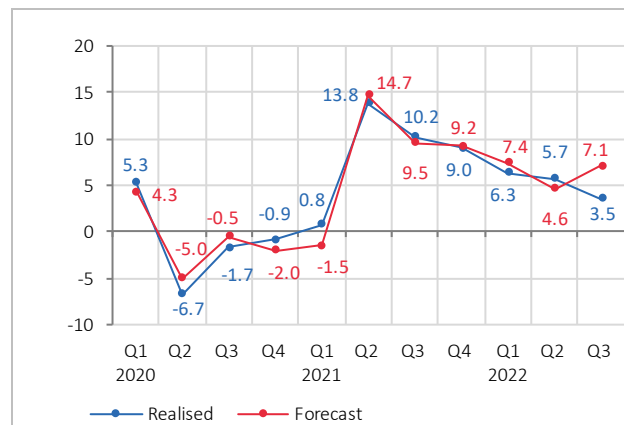
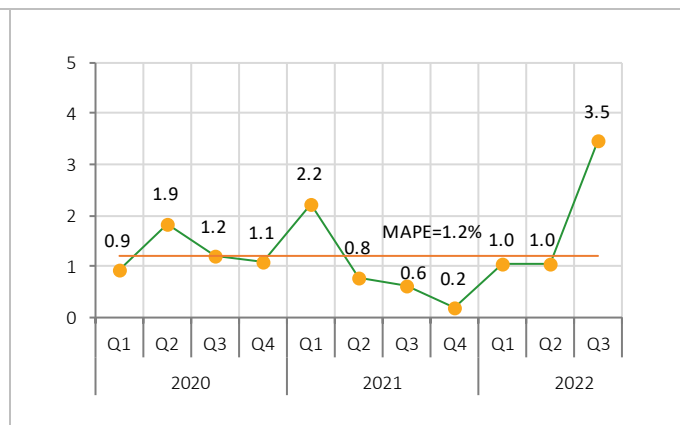


Chart 1.6. Mean Absolute Percentage Error, forecasts of service GVA growth rates, Q1 2020 – Q3 2022, %

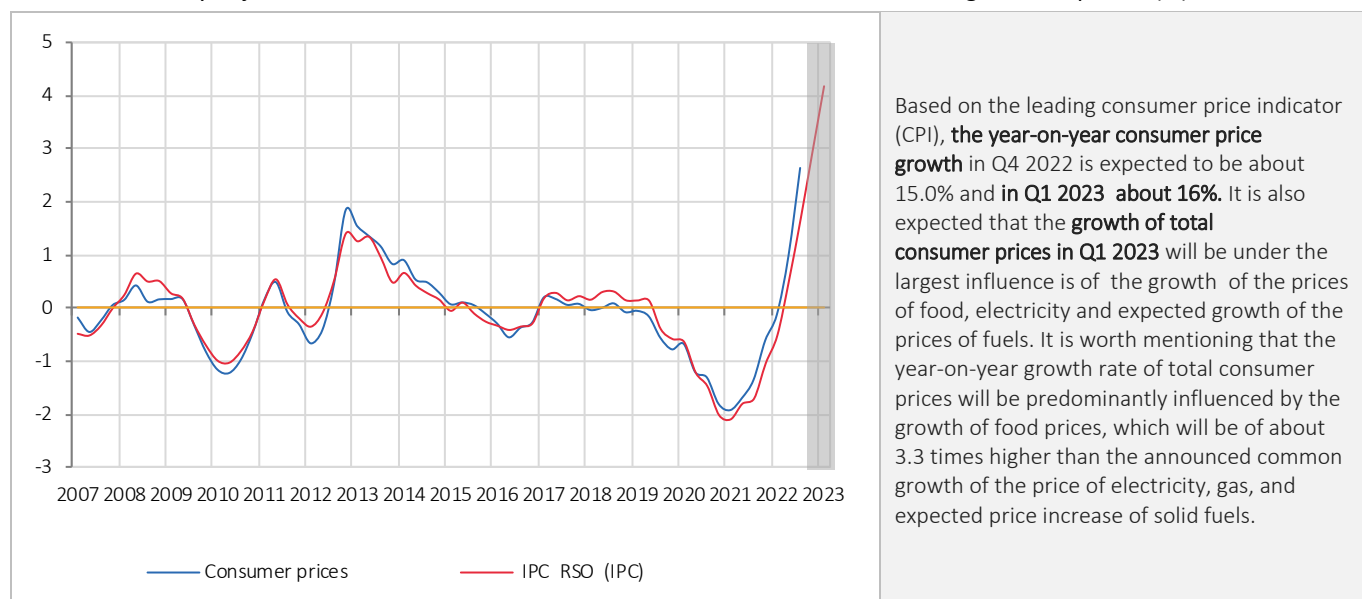


1.4. SORS LEADING CONSUMER PRICE INDICATOR (CPI) FOR Q1 2023



Taking into account the considerable change in the structure of consumer prices when generating the year-on-year growth rate (primarily, the significant growth of the influence of its energy component starting from the second half of 2022), **the SORS leading consumer price indicator (CPI)**, with the existing long standing biggest strategic elements of consumer price growth (food, tobacco and fuel for passenger cars), **has been modified** by directly including additional factors of price growth of electricity and solid fuel.

Chart 1.7. Comparison of the cycle of the composite leading consumer price indicator (CPI)¹³ and total consumer prices in Serbia, seasonally adjusted, detrended and standardised data, deviation from the average for the period (%)



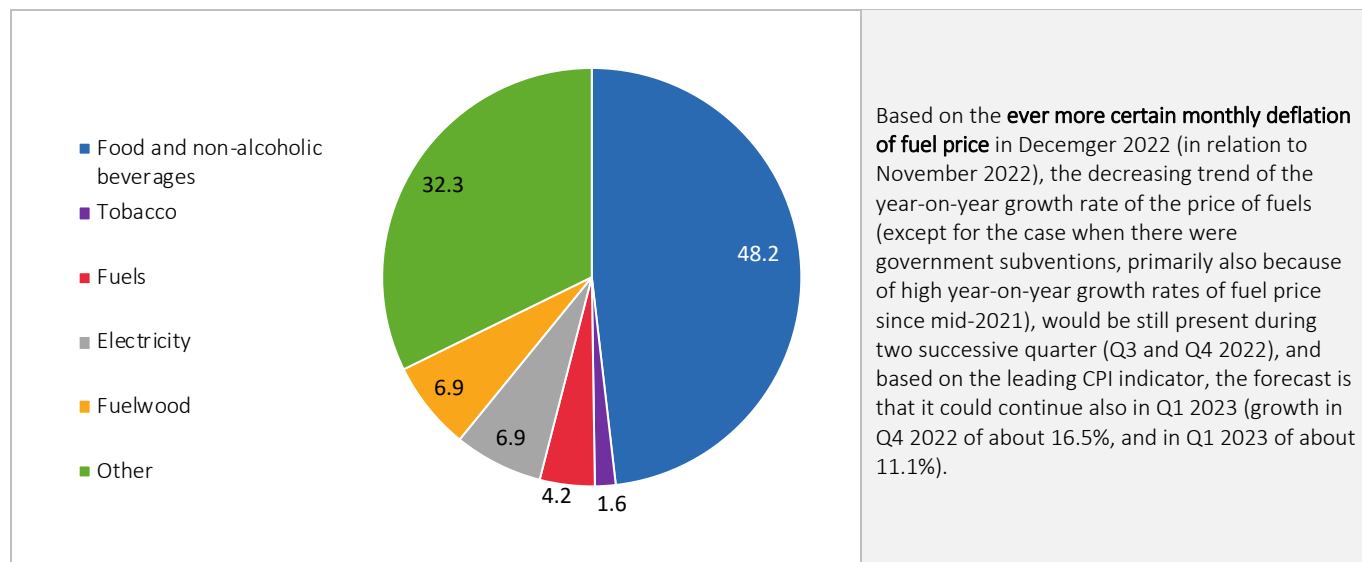
¹³ CPI-G is a weighted composite leading indicator that contains information on the movement of the most relevant indicators influencing oil price in Serbia, and that in its movement is ahead of the price of fuels and lubricants in Serbia by about two months. The indicator covers: the world price of *BRENT* crude oil, value of *WTI* crude oil futures (type *Cushing Oklahoma*), average price of American *WTI* crude oil (in first purchase from oil fields) dollar to euro ratio, stocks in the production of crude oil in the territory of Serbia and import of oil, oil refined products in Serbia.

An analysis of food price trends in Serbia has allowed to obtain the composite leading indicator of food price (CPI-H), which main goal is the forecast of food price for the next three months. After having analyzed a large number of variables, several ones with the best leading forecast characteristics for food price in Serbia have been singled out: harmonized food price index in Hungary, average purchase price of products of crop producers, import of the section Manufacture of food products, import of milk, dairy products and eggs, stocks of beef and veal, retail price index of the total basket of vegetables. The indicator of tobacco price is formed based on the trend of excise on tobacco and producers' tobacco prices for domestic market, which proved to be the best for forecasting the variability of the price of tobacco and tobacco products in Serbia.

The forecast of retail prices trends in the final phase represents the integration of previously obtained results of the leading indicators of retail prices of the analyzed groups of products: fuel (CPI-G), food and non-alcoholic beverages (CPI-H) and tobacco (IPC-D). The second-stage, composite and weighted aggregation of the above described indicators has allowed to derive a new composite leading indicator (abbreviated CPI), which aim is to forecast retail consumer prices for one to two quarters ahead.

The announced monthly growth (January 2023/December 2022) of the price of electricity (10.0%) and gas (11.0%) from January 2023 means that in Q1 2023 the year-on-year growth of the prices of electricity was 21.7% and gas 20.6%, thus participating in the structure of the forecast year-on-year growth of consumer price with about 14.3%.

Chart 1.8. Structure of the forecast year-on-year consumer price growth rate for Q1 2023 (total 100), %



1.5. SUMMARY OF THE OBTAINED RESULTS OF THE FORECAST OF LEADING INDICATORS BY GVA SECTIONS FOR Q4 2022

Table 1.2. Forecast of GVA of selected section and their estimated contributions to GDP for Q4 2022.

| Q4 2022 | Agriculture | Taxes and contributions | Industry | Construction | Services |
|--|-------------|-------------------------|----------|--------------|----------|
| Quarterly growth rates, % | -7.6 | 1.9 | 0.3 | -16.0 | 3.2 |
| Contribution to the growth rate of GDP (pp.) | -0.5 | 0.3 | 0.1 | -1.2 | 1.6 |

2.

GROSS DOMESTIC PRODUCT

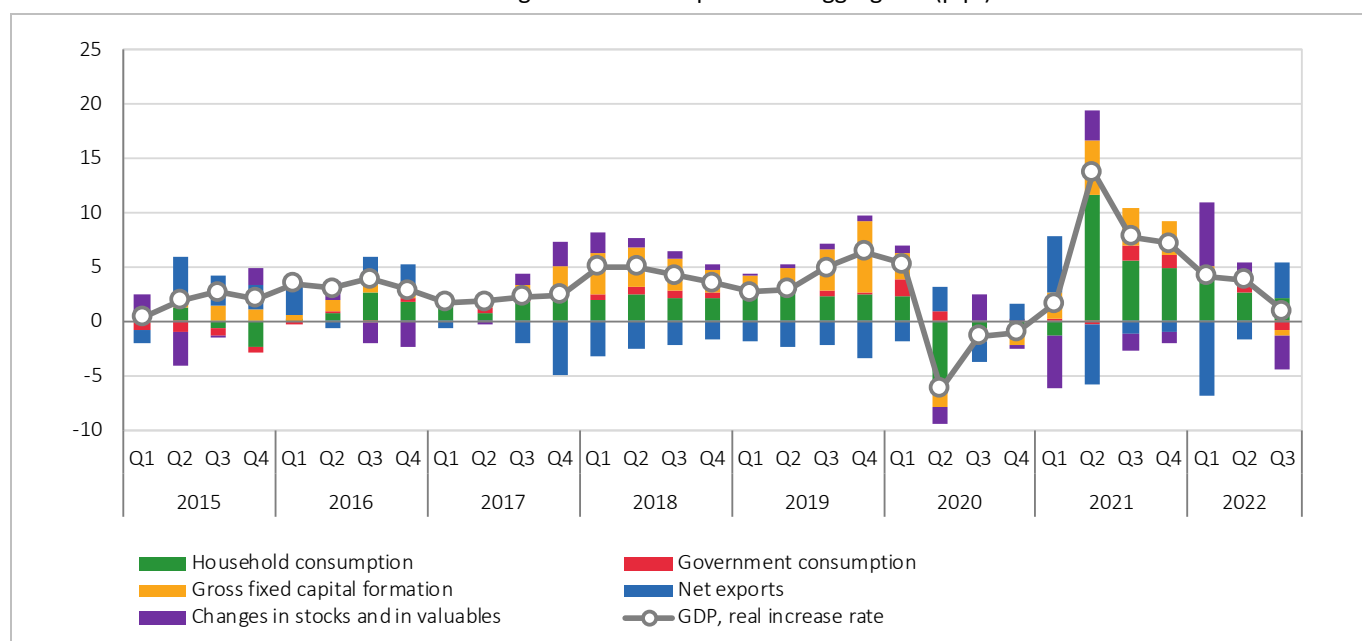
In the third quarter of 2022, GDP real increase of 1.0% was recorded relative to the same period last year. The dominant growth carrier in this quarter related to the section of services, excluding trade (1.5 p.p). Significant negative contribution to GDP trend was made by section of construction and of agriculture (with 0.8 p.p. and 0.4 p.p., respectively).

Observed by expenditure aggregates, in the third quarter of 2022, relative to the same period last year, household consumption recorded real growth of 3.1% and positively contributed to GDP trend with 2.1 p.p. Dynamics of export and import, with growth rates of 14.9% and 7.8% resulted in positive contribution to GDP trend (8.2 p.p. and 4.9 p.p., respectively). Investment activity decreased by 2.2% compared to Q3 2021 (contribution of 0.5p.p.) (Table 2.1).

Table 2.1 GDP – expenditure aggregates, real inter-annual growth rates, Q1 2020 – Q3 2022 (%)
(comparison with the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | |
|-------------------------------|------------|-------------|-------------|-------------|------------|-------------|------------|------------|------------|------------|------------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| GDP | 5.3 | -6.2 | -1.3 | -1.0 | 1.7 | 13.8 | 7.8 | 7.2 | 4.2 | 3.8 | 1.0 |
| Household consumption | 3.6 | -7.8 | -0.8 | -1.9 | -1.9 | 17.2 | 8.3 | 7.5 | 6.9 | 3.8 | 3.1 |
| Government consumption | 8.8 | 5.4 | -3.1 | 0.9 | 1.7 | -1.5 | 9.3 | 7.2 | 2.7 | 4.6 | -4.5 |
| Gross fixed capital formation | 13.0 | -11.1 | -3.4 | -3.2 | 11.5 | 25.1 | 15.6 | 13.0 | 1.2 | 1.8 | -2.2 |
| Exports | 5.2 | -18.9 | -6.7 | 3.9 | 8.6 | 36.3 | 22.5 | 14.0 | 19.9 | 20.7 | 14.9 |
| Imports | 7.3 | -19.7 | -2.7 | 0.9 | -1.5 | 42.4 | 21.2 | 13.8 | 30.7 | 20.2 | 7.8 |

Chart 2.1. Contributions to inter – annual GDP growth rate – expenditure aggregates (p.p.)



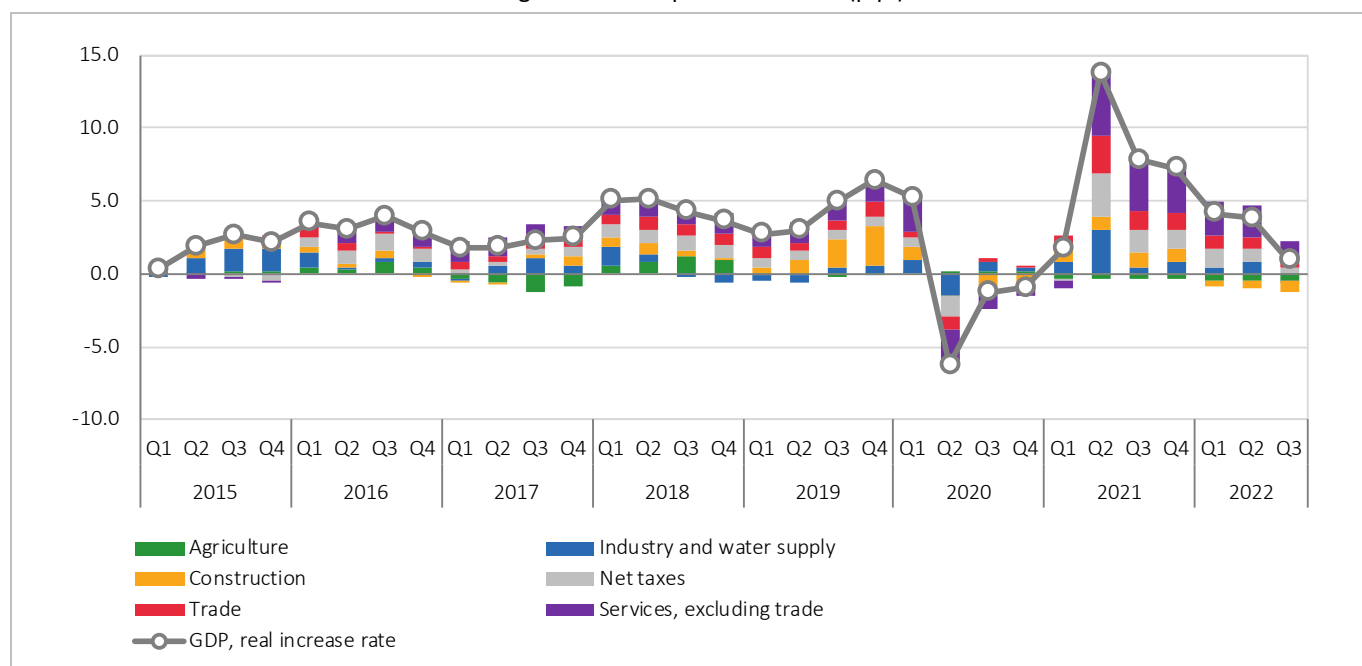
Observed from the **production side**, the greatest positive contribution to GDP increase in Q3 2022 resulted from increased activity in service section (excluding trade), 1.5 p.p.

Significant negative contribution to GDP trend was made by the construction sector and the agriculture sector (with 0.8 p.p. and 0.4 p.p., respectively).

Table 2.2. GDP– production side, real inter-annual growth rates, Q1 2020 – Q3 2022 (%)
(changes to the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | |
|---------------------------|------------|-------------|-------------|-------------|------------|-------------|------------|------------|------------|------------|------------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| GDP | 5.3 | -6.2 | -1.3 | -1.0 | 1.7 | 13.8 | 7.8 | 7.2 | 4.2 | 3.8 | 1.0 |
| Agriculture | 2.3 | 2.5 | 2.4 | 2.2 | -5.9 | -5.4 | -5.6 | -5.8 | -7.5 | -7.8 | -7.7 |
| Industry and water supply | 4.3 | -7.5 | 3.5 | 1.6 | 4.4 | 15.7 | 2.3 | 4.0 | 2.0 | 4.6 | -0.3 |
| Construction | 24.0 | -0.2 | -14.7 | -7.5 | 19.8 | 18.3 | 19.4 | 14.4 | -5.6 | -7.1 | -12.4 |
| Trade | 4.1 | -8.3 | 1.8 | 0.3 | 8.2 | 23.4 | 10.6 | 10.1 | 8.2 | 5.6 | 2.5 |
| Services, excl. trade | 5.5 | -6.3 | -2.7 | -1.2 | -1.2 | 11.2 | 10.1 | 8.7 | 5.8 | 5.7 | 3.8 |
| Net taxes | 3.3 | -7.7 | -2.0 | -2.5 | -0.7 | 16.7 | 9.1 | 8.1 | 7.9 | 4.9 | 2.2 |

Chart 2.2. Contributions to inter – annual GDP growth rate – production side (p.p.)



3. INDUSTRIAL PRODUCTION

3.1. TOTAL INDUSTRIAL PRODUCTION

Total industrial production in Serbia, in the period January - September of 2022 increased by 1.9% relative to the same period of 2021. Growth was noted in two sections: Manufacturing (2.7%) and Mining and quarrying (25%), while the section of Electricity, gas, steam and air conditioning supply recorded a fall of production of -11.5%.

Chart 3.1. Cumulative trend of total industrial production and its sections, growth rates (%) (January - September 2022 relative to Q3 2021)

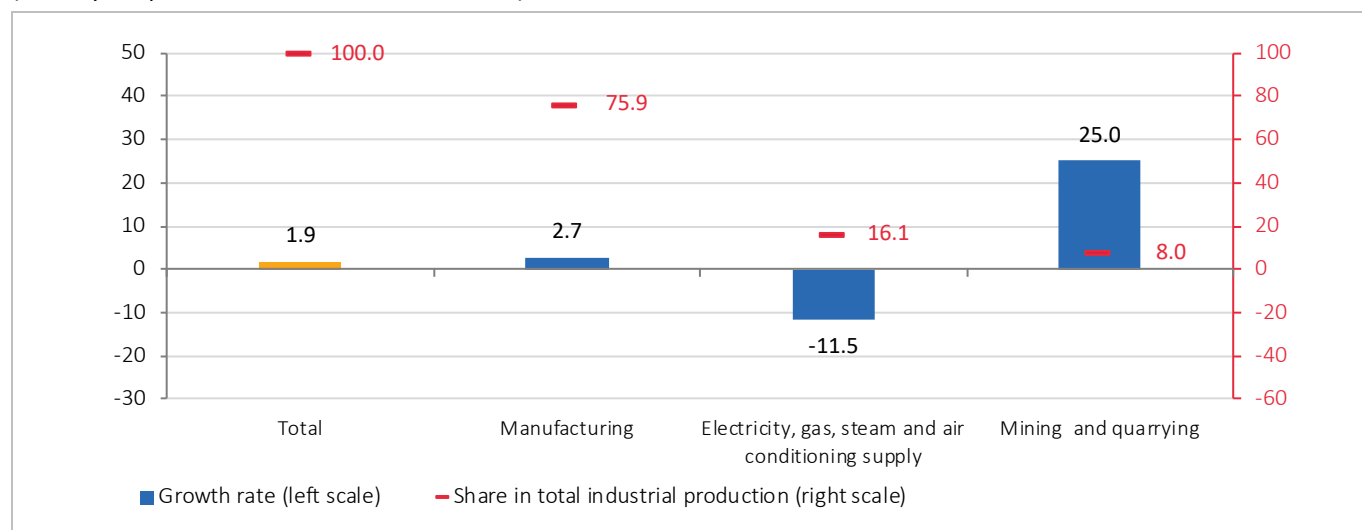
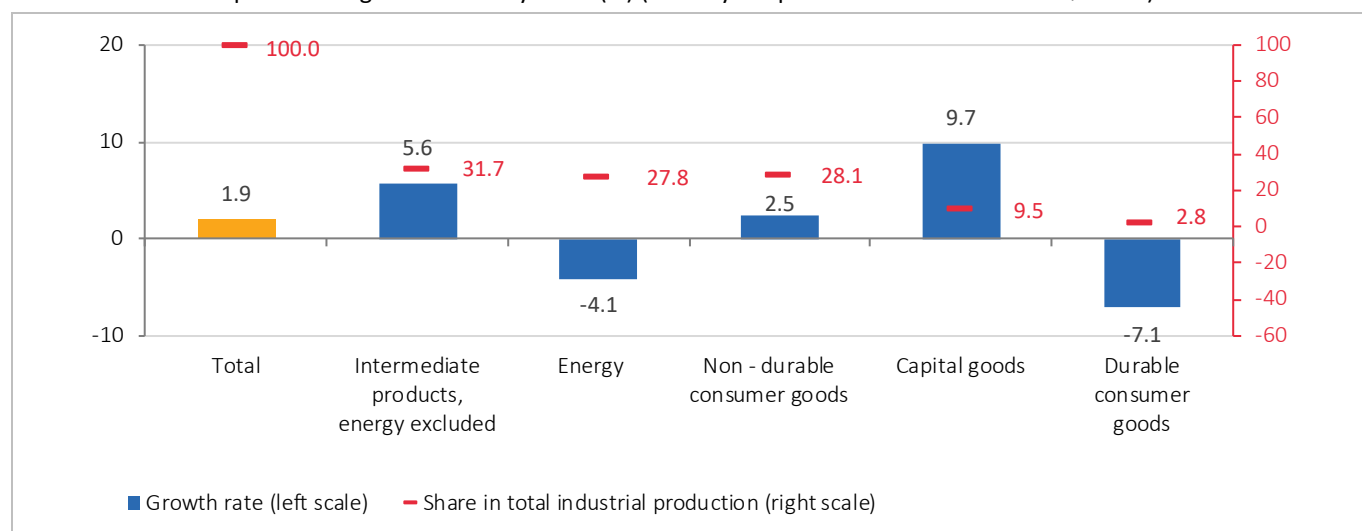


Chart 3.2. Industrial production growth rates by MIGs (%) (January - September 2022 relative to Q3 2021)



In the third quarter of 2022, the section of Manufacturing and Mining and quarrying contributed to the growth of Industry with 2.0 p.p. and 1.8 p.p. each, while the section of Electricity, gas, steam and air conditioning supply had a negative contribution (-1.9 p.p.).

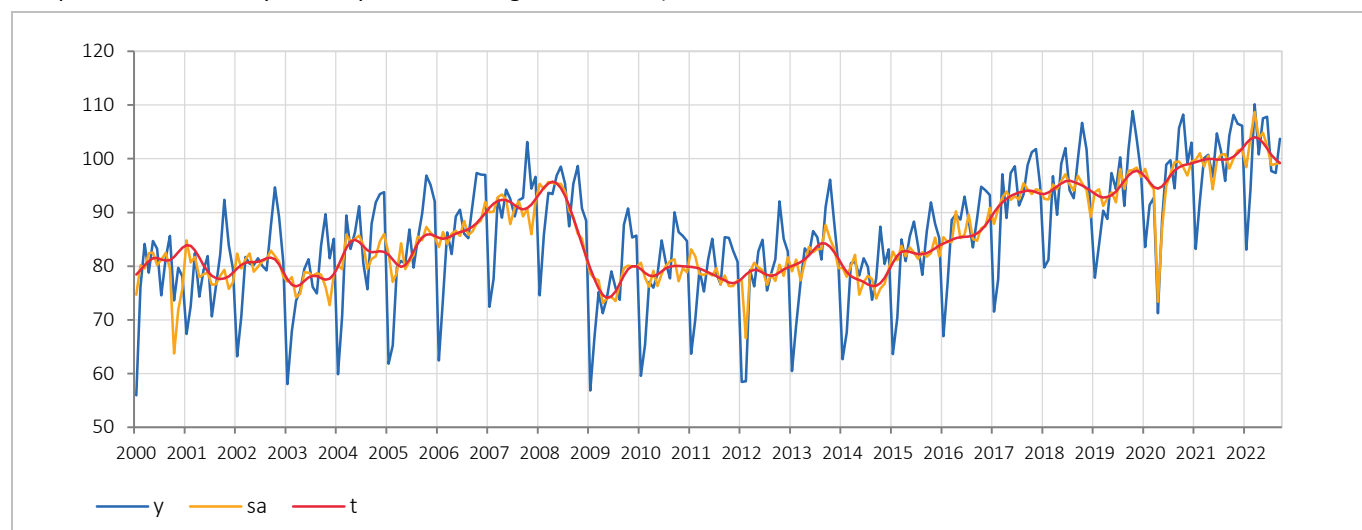
Table 3.1. Industrial production, indices (comparison with the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | | |
|---|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q1-Q4 ¹ |
| Industrial production – total | 104.5 | 92.4 | 103.3 | 101.5 | 104.2 | 116.0 | 102.6 | 103.7 | 101.9 | 104.8 | 99.4 | 102.0 |
| Manufacturing | 106.3 | 92.1 | 102.4 | 100.2 | 103.2 | 117.0 | 100.4 | 102.9 | 104.1 | 104.7 | 99.1 | 102.0 |
| Electricity, gas, steam and air conditioning supply | 96.9 | 91.3 | 109.1 | 107.9 | 109.1 | 107.5 | 96.0 | 90.6 | 80.9 | 91.8 | 95.8 | |
| Mining and quarrying | 108.9 | 98.5 | 101.3 | 102.0 | 109.0 | 124.6 | 140.8 | 142.9 | 139.0 | 132.4 | 108.5 | |

¹ Prognoses (obtained on the basis of time series analysis models).

3.2. MANUFACTURING (C) (share of 75.9% total industrial production index)

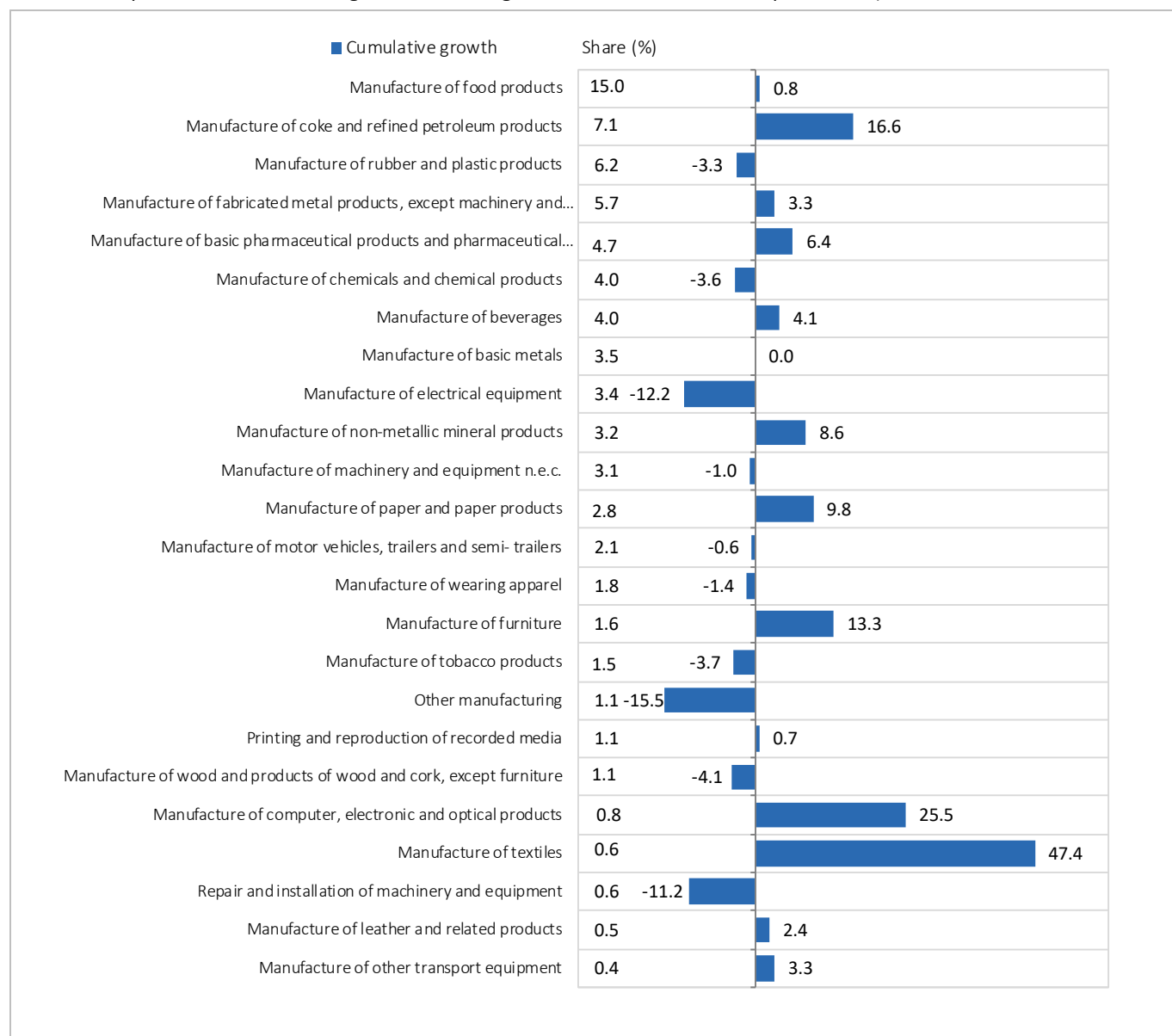
Trend-cycle component of Manufacturing in the third quarter of 2022, after increasing trend in the first quarter, since April 2022, started the decreasing trend (chart 3.3).

Chart 3.3. Components of Manufacturing time series, indices (y – original series, sa – series with excluded seasonal component, t – trend-cycle component, average 2021 = 100)

Observed by divisions, Manufacturing in the period January - September 2022 increased in 13 out of 24 divisions (mutually participating with 47.5% in total industry), if compared with the same period of 2021. The most significant divisions – measured by the share in total industrial production - in which positive results were noted in nine-month period were: Manufacture of food products (growth of 0.8%), Manufacture of coke and refined petroleum products (growth of 16.6%), Manufacture of metal products, except machinery (growth of 3.3%) and Manufacture of basic pharmaceutical products and pharmaceutical preparations (growth of 6.4%).

Decrease was recorded in ten divisions (mutually participating with 24.8% in total industry): Manufacture of rubber and plastic products (fall of -3.3%), Manufacture of chemicals and chemical products (fall of -3.6%), Manufacture of basic metals (fall of -12.2%), Manufacture of non-metallic mineral products (fall of -1%), and Manufacture of motor vehicles, trailers and semi-trailers (fall of -0.6%).

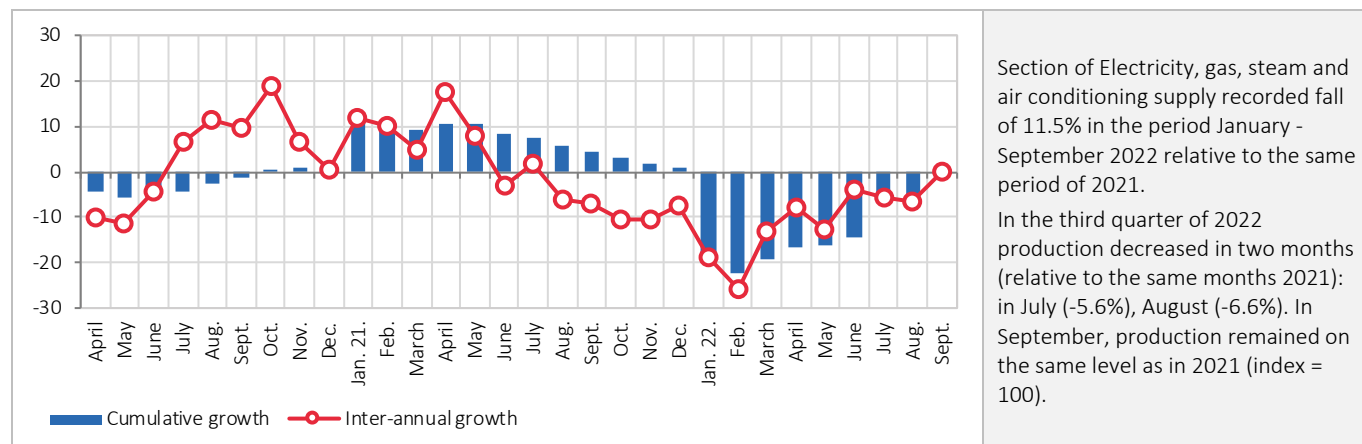
Chart 3.4. Manufacturing by divisions, cumulative growth rates (%) (January - September 2022 relative to Q3 2021); divisions are presented in descending order according to shares in total industrial production)



3.3. ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY (D)

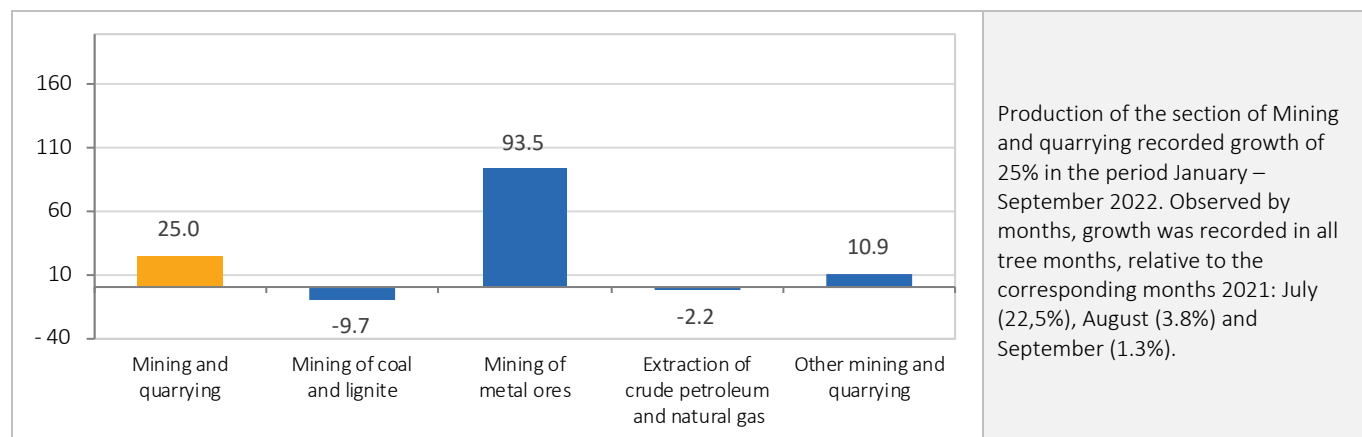
(share of 16.1% in total industrial production index)

Chart 3.5. Cumulative and year-on-year growth rates in energy section (%) (cumulative – period relative to the same period of the previous year; year-on-year – month relative to the same month of the previous year)



3.4. MINING AND QUARRYING (B) (share of 8% in total industrial production index)

Chart 3.6. Cumulative growth rates in Mining and quarrying section (%) (January - September 2022 relative to Q3 2021)



HOW TO INTERPRETE THE SERIES?

Seasonal effects can provoke distortions in time series trend, and in such way camouflaging its “real” nature and significant characteristics necessary for precise and detail analysis of the phenomena. When selecting the indicators that will be used for analysis (original, seasonally adjusted or trend), the nature of the observed series and point of the performed analysis should be taken into account. Three separate components (obtained by series’ disaggregation), together with the original series, describe various aspects of a single phenomenon and are used for versatile analytic purposes – depending on the researcher’s interest. Seasonally adjusted values are used for comparison of the consecutive periods and for estimation of potential value of a series when calendar effects and season effects would not exist, as is the case with industrial production.

4. CONSTRUCTION

4.1. CONSTRUCTION ACTIVITY

Since the second half of 2017, the indices of the value of construction works in Serbia have been rising. After a brief stoppage of construction activity in the second quarter and the second half of 2020 caused by the coronavirus epidemic, the indices of the value of the works performed on the territory of the Republic of Serbia in 2021 again recorded growth. In addition to large infrastructure projects, the year 2021 also saw very intensive construction of residential and non-residential buildings throughout the country. The annual growth rate for buildings was 17.0%, and for civil engineering 19.6%.

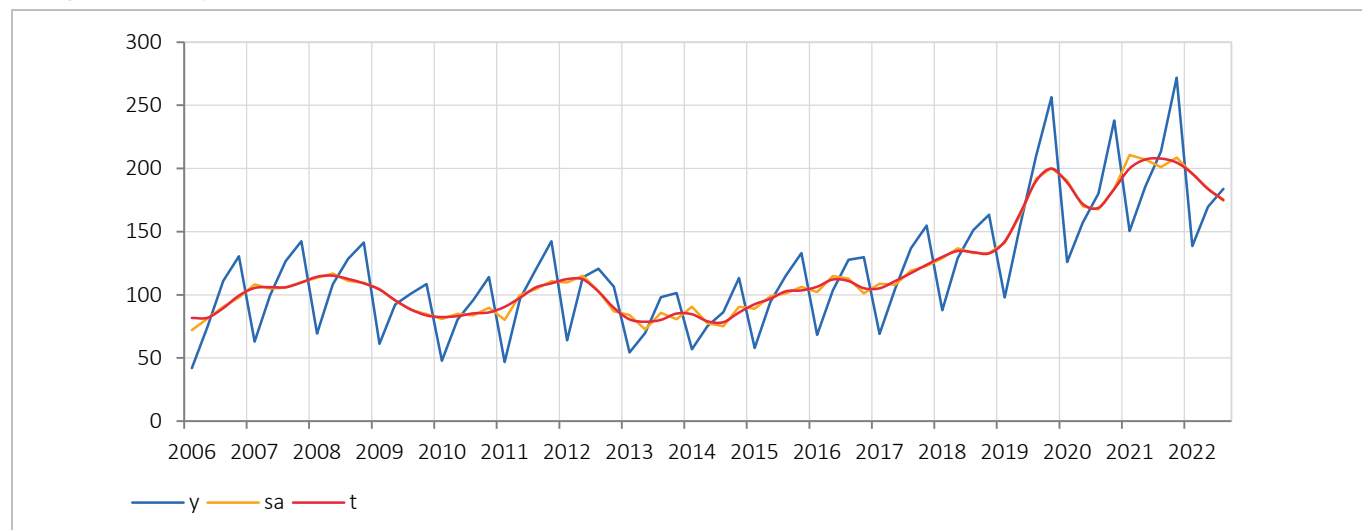
In the first nine months of 2022, cumulative value of performed construction works on the territory of the Republic of Serbia decreased both regarding buildings (-11.2%) and regarding civil engineering (-9.0%), while total value of performed construction works in the Republic of Serbia, at constant prices, in the first nine months, recorded decrease of 9.8% relative to the same period 2021.

4.2. TREND IN THE FIRST NINE MONTHS 2022

Construction activity on the territory of the Republic of Serbia in the period January – September 2022 decreased by 9.8% at constant prices compared to the same period last year.

Observed by type of constructions, the value of performed works on buildings decreased by 11.2%, and on civil engineering (transport infrastructure, pipelines, complex industrial structures, etc.), by 9.0% at constant prices.

Chart 4.1. Components of time series of Indices of performed construction works on the territory of the Republic of Serbia, at constant process, indices (u – original series, sa – series with excluded seasonal component, t – trend cycle component average 2015 = 100)



4.3. TREND IN THE THIRD QUARTER 2022

In the third quarter of 2022, construction activity on the territory of the Republic of Serbia increased by 2.7% at current prices, relative to the same period 2021, while at constant prices, it decreased by 13.5%. The price index of construction materials, which is used as a deflator of value in construction, amounted to 118.7 in the observed period.

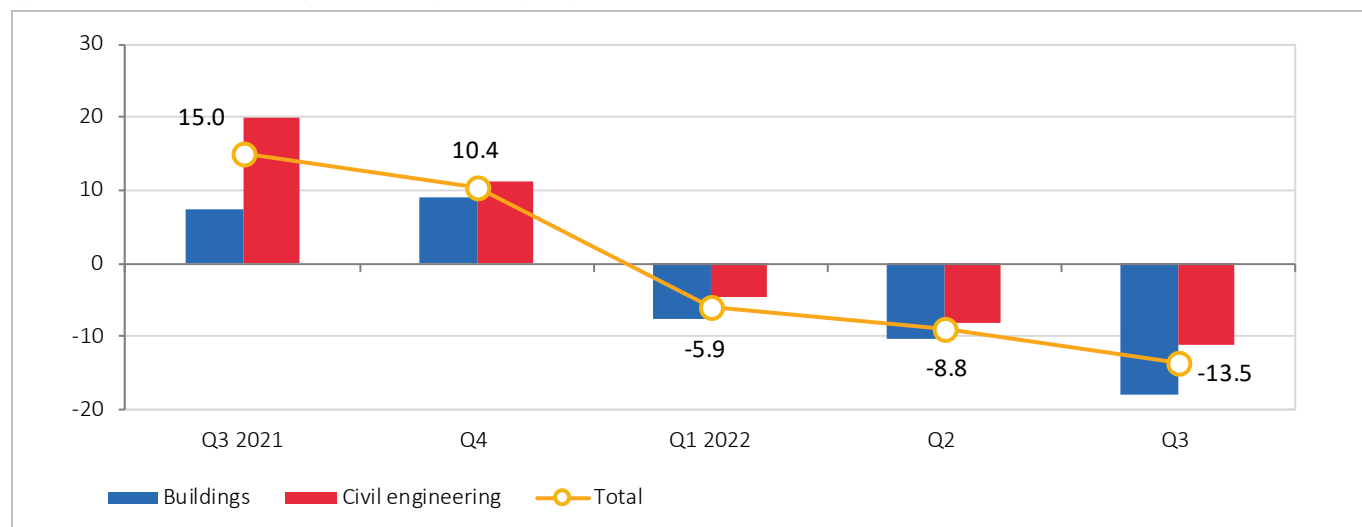
The value of construction works, expressed at constant prices, is lower by 11.0% on civil engineering (roads, pipelines, complex industrial structures, etc.), and on buildings by 17.8% compared to the third quarter of 2021.

Table 4.1. Value of performed construction works, quarterly indices (%) (comparison with the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | |
|-----------------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Current prices | 133.7 | 104.4 | 86.8 | 95.0 | 116.7 | 124.7 | 128.8 | 127.1 | 110.3 | 108.4 | 102.7 |
| Constant prices | 127.2 | 99.4 | 84.2 | 91.2 | 117.4 | 114.9 | 115.0 | 110.4 | 94.1 | 91.2 | 86.5 |

Chart 4.2. Value of performed construction works at constant prices, growth rates (%)

(quarter relative to the same quarter of the previous year)



In the third quarter of 2022, construction activity increased only in **Region of Sumadija and Western Serbia** compared to the same period last year, and that increase amounts to 6.4%, in constant prices. Observed according to the types of buildings, the activity has increased on the buildings of traffic infrastructure, which is, primarily, the result of very intensive works on the Moravian Corridor.

In all other regions, a decline of construction activity was recorded - the greatest in **Region of Southern and Eastern Serbia** (-34.1%), where construction activity decreased regarding all types of buildings except the construction of residential buildings. At the same time, residential construction was intensified on the territory of the municipalities of Niš. The biggest impact on the decline of overall value of works performed was the completion of the works on the construction of the Main Gas Pipeline (Turkey Stream).

In **Belgrade region**, construction activity decreased by 25%, in constant prices, compared to the same period last year. The biggest drop in value was recorded on the buildings of the traffic infrastructure, and the main reason is that the modernization works on Belgrade-Budapest railway were mostly completed on the territory of this region, while, on the other hand, the works on this project were intensified in the Region of Vojvodina.

The decrease in construction activity in the third quarter was also recorded in the **Region of Vojvodina** and amounted to 8.7%, at constant prices. In this region, the value of construction works has decreased on buildings (residential and non-residential), while there is a noticeable increase in construction activity on traffic infrastructure constructions. The modernization of the railway, Novi Sad - Subotica section, and the construction of Sremska Mitrovica - Sremska Rača highway stand out from the traffic infrastructure projects.

Chart 4.3. Value of performed construction works by regions, at constant prices, growth rates (%)
(quarter relative to the same quarter of the previous year)

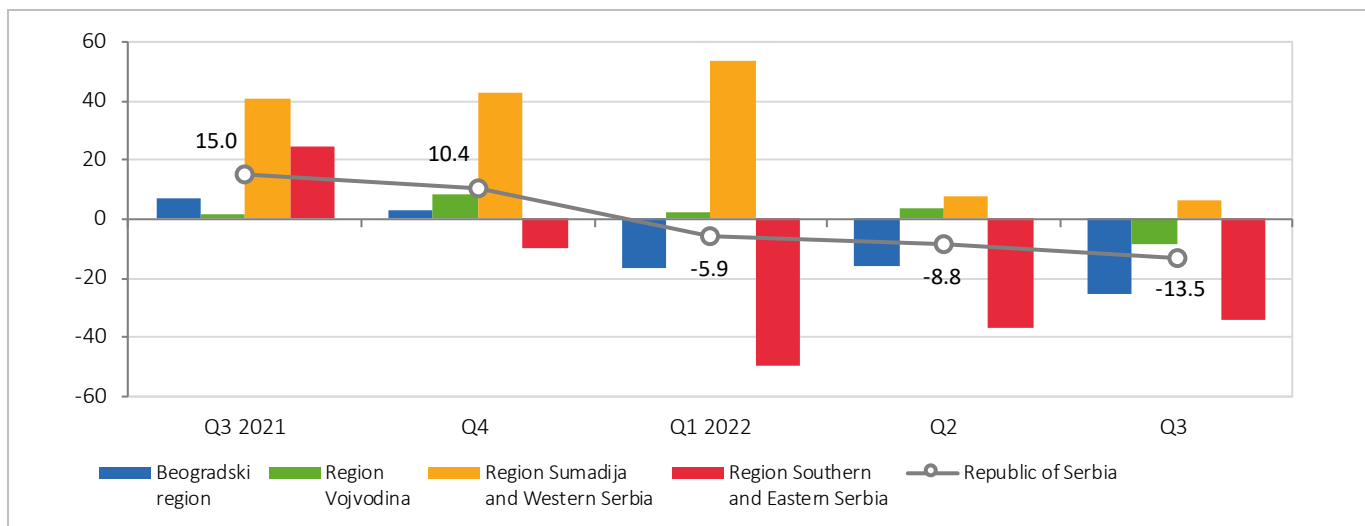


Chart 4.4. Value of performed construction works and hours of work on construction sites, comparative overview, indices
(quarter compared to the same quarter of the previous year)

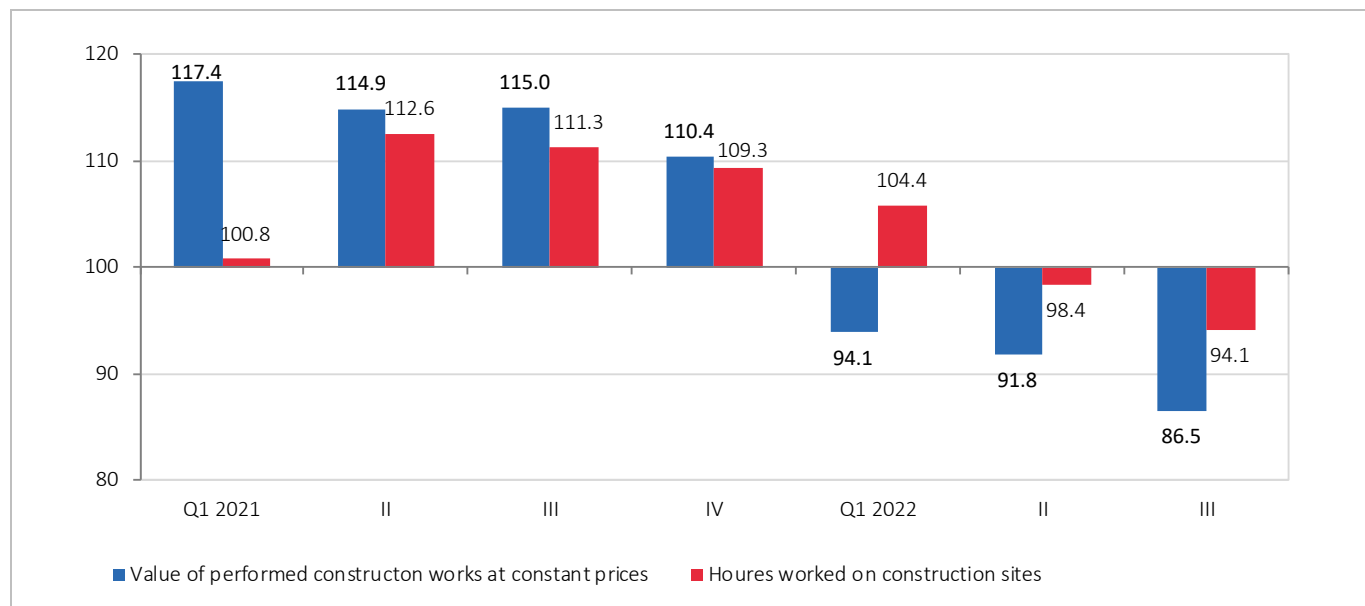


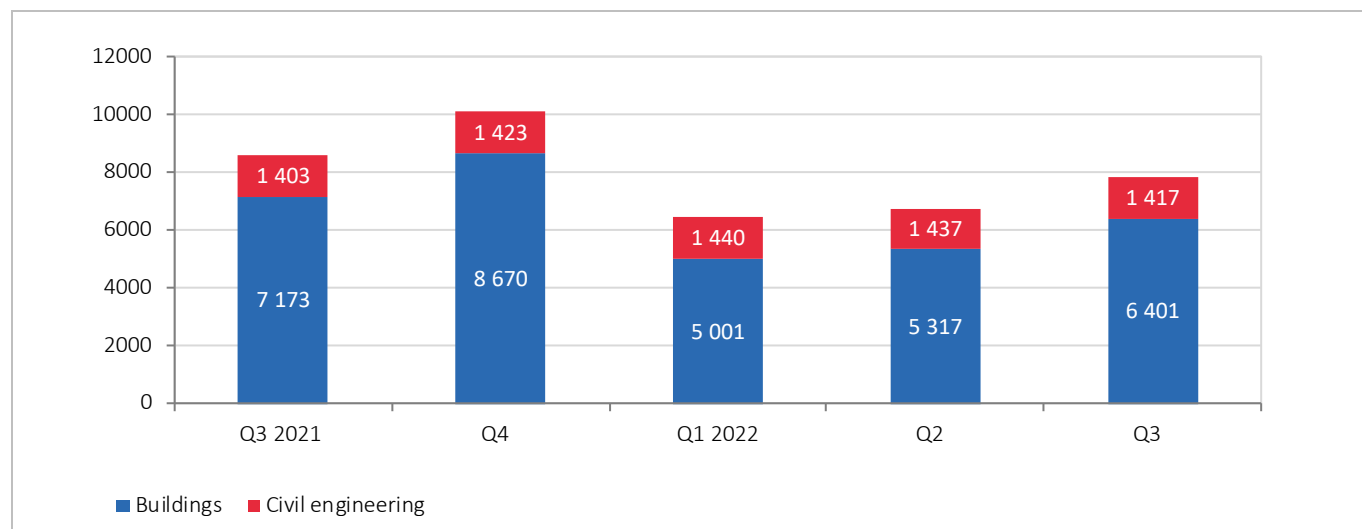
Chart 4.4 shows a comparative overview of the movement of working hours and the value of the works performed on construction sites. As can be seen, from the second quarter of 2021, the indices of working hours are high, which is a direct consequence of the engagement of a large number of workers on the construction of transport infrastructure constructions (highways and railways). In the first quarter of 2022, the value of works was lower, but the number of engaged workers was higher. In the second and in the third quarter of 2022, the hours of work and the value of completed works confirm the decline of the construction activity.

4.4. BUILDING PERMITS

In addition to the value of works performed and hours of work on construction sites, the statistics of construction keep a monthly record of the issued **building permits and decisions**, which approve the implementation of construction works in Serbia and which show the future trend of construction activity.

In the third quarter 2022, 7 818 building permits were issued. The greatest part of permits (6 401) related to construction works on buildings, while the rest (1417) related to transport infrastructure works, pipelines, complex industrial structures, etc. Total number of issued permits in the third quarter 2022 decreased by 8.8% related to the same period of the previous year.

Chart 4.5. Number of issued building permits for buildings and civil engineering

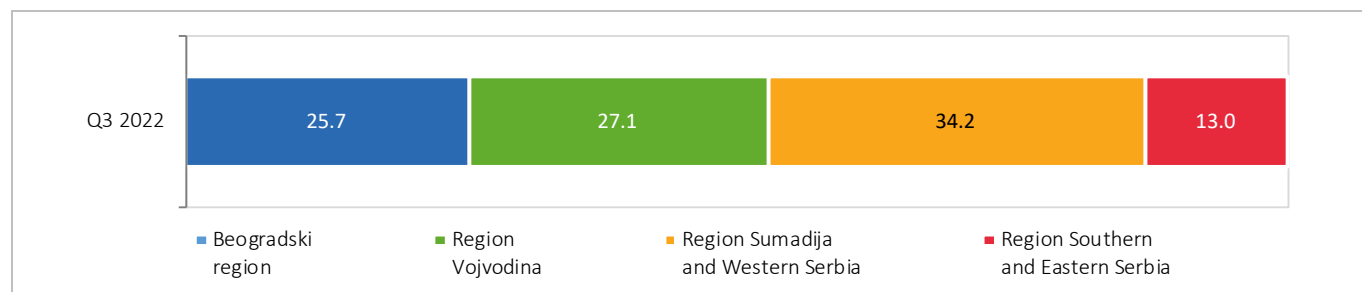


The anticipated value of works, according to the issued permits, in the third quarter, amounts to RSD 273 411 million, which represents an increase of 78.9% compared to the same quarter of the previous year.

In Region of Šumadija and Western Serbia, the estimated value of works is the highest and amounts to 34.2% of total estimated value of works in the Republic of Serbia.

Region of Vojvodina follows, with a share of 27.1%, then Region of Belgrade (share of 25.7%) and Region of Southern and Eastern Serbia (share of 13.0%).

Chart 4.6. Anticipated value of works according to issued permits, by region; share in %¹⁴



¹⁴ Note: Instead of the previously published data on the percentage share of the number of permits by regions, in the future we will show the share of the estimated value of the works according to the issued permits. Namely, the value of works is a better indicator of the volume of construction activity in the future, while the number of permits does not provide key information about the value of the planned investment, which is the most important for assessing the value of future construction works.



GLOSSARY

Value of performed construction works – the most significant indicator of construction activity trend in Serbia. It presents the value of performed works on construction that the reporting unit performed with workers directly engaged for execution of works.

Value of performed works includes: value of work, value of built in material and finished products for incorporating, consumed energy commodities and other expenditures related to performing works on construction. Value of performed works excludes: value of subcontractors' works, expenditures of land purchase, design, supervision and VAT.

According to *Classification of Types of Constructions*, applied since 2004, which is completely harmonized with the same Classification of Eurostat, all constructions can be classified into: buildings and civil engineering.

Value on buildings includes value of performed works, both on residential and non-residential buildings.

Civil engineering, besides transport infrastructure (roads, railways, bridges, etc.) involves also works carried out on pipelines, complex industrial structures and other civil engineering n.e.c. (e.g. sport constructions).

5. EXTERNAL TRADE

5.1. EXPORTS OF GOODS (EUR current exchange rate)

Total value of goods export in the Republic of Serbia in the first nine months of 2022 increased by 27.7%, relative to the same period 2021. Total export results were mostly influenced by manufacturing increase of 24.8%, as it presents 84.6% of total export, and increase of 195.1% in the section of mining and quarrying, presenting 6.7% of total export in the first three quarters of 2022.

Chart 5.1. Components of export's time series, indices (u – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2021 = 100)

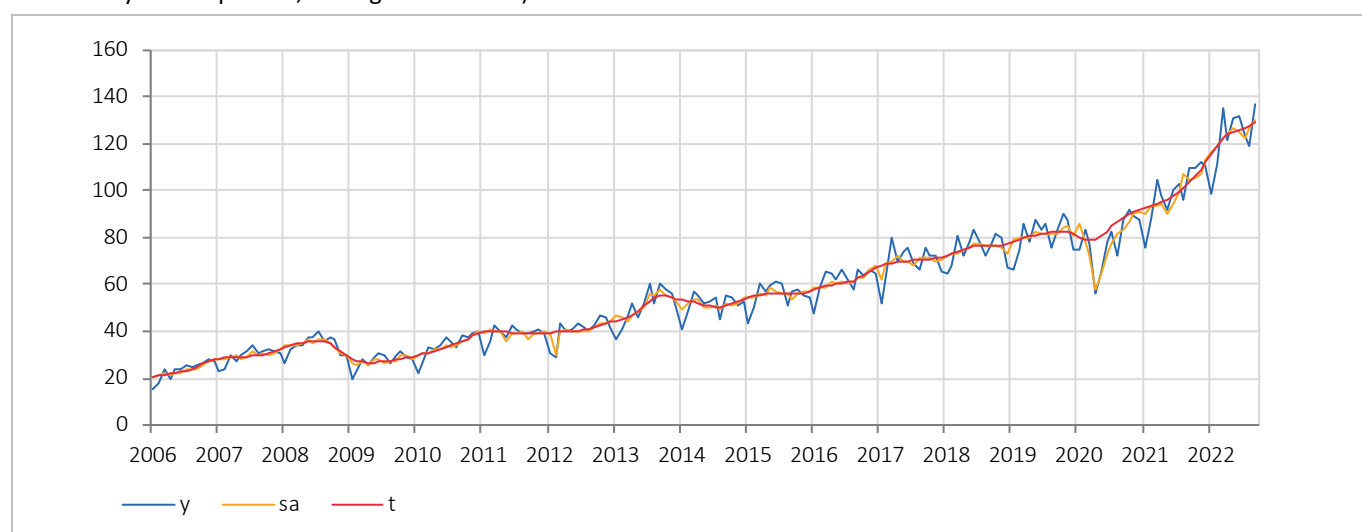
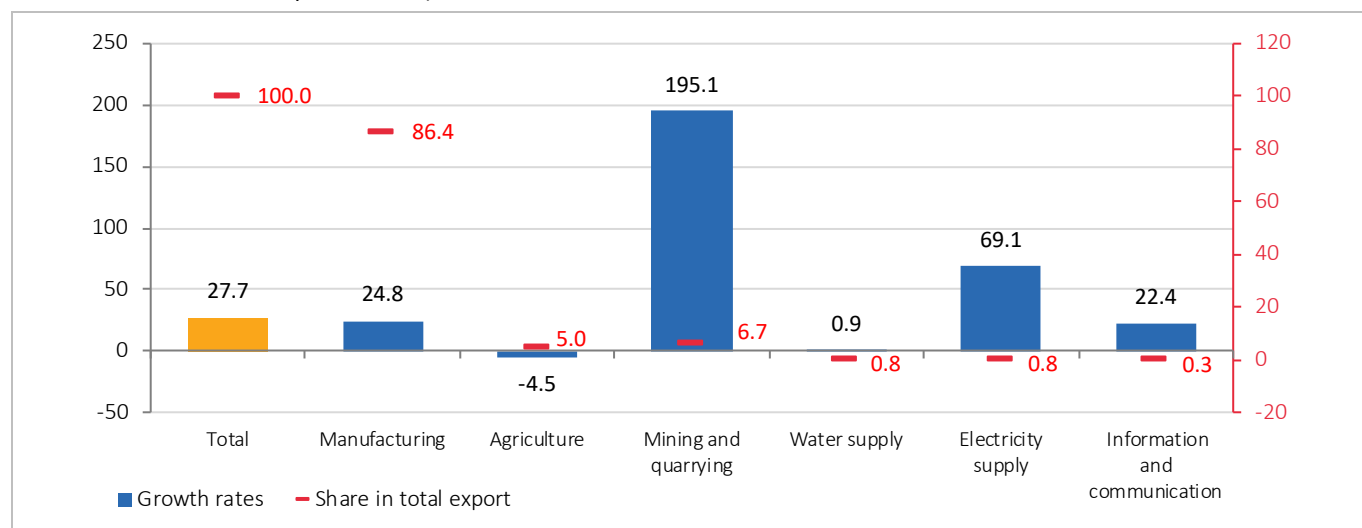


Table 5.1. Export of goods by CA (2010) sections, quarterly indices (comparison with the same period of the previous year)

| | 2020 | 2021 | | | | 2022 | | | |
|-----------------------------------|-------|-------|-------|--------|-------|--------|-------|-------|--------------------|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q1-Q4 ¹ |
| Export – total | 106.8 | 114.2 | 145.6 | 127.2 | 123.4 | 128.5 | 130.5 | 127.7 | 124.0 |
| Manufacturing | 102.0 | 111.5 | 145.4 | 122.4 | 122.4 | 125.9 | 126.1 | 124.8 | ... |
| Agriculture, forestry and fishing | 141.7 | 132.7 | 97.1 | 119.2 | 73.5 | 76.3 | 94.3 | 95.5 | ... |
| Mining and quarrying | 574.9 | 202.8 | 916.1 | 1369.6 | 366.8 | 1129.0 | 488.6 | 295.1 | ... |

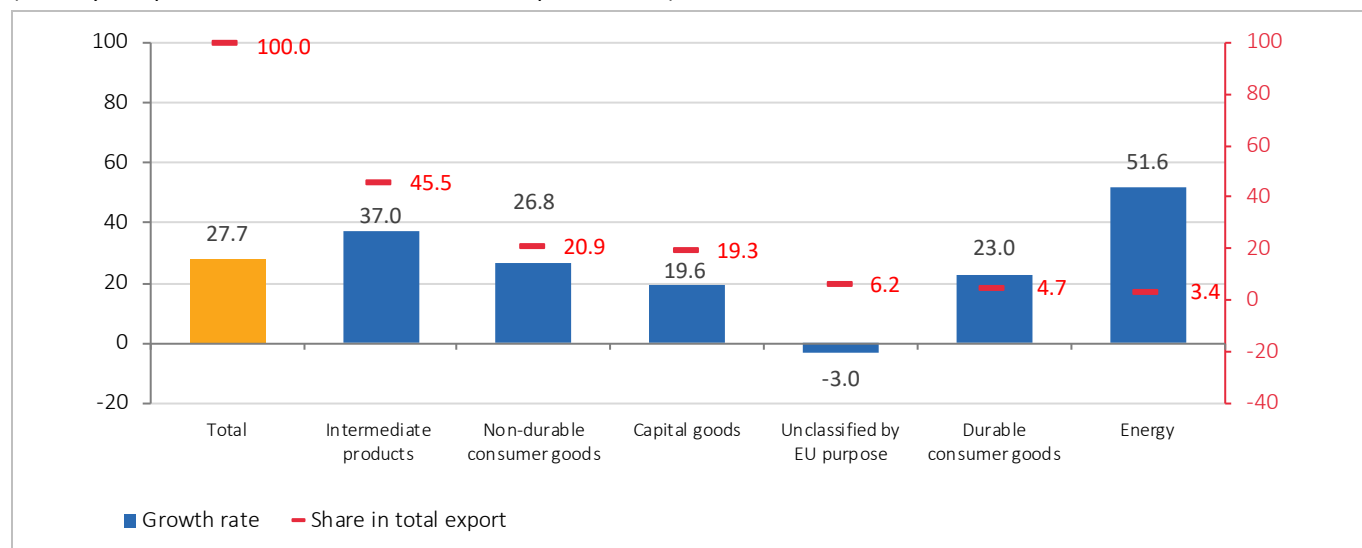
¹Prognosis (obtained on the basis of a time series analysis model).

Chart 5.2. Cumulative growth rates of export by CA (2010) sections and sections' share in export (%) (January – September 2022 relative to the same period 2021)



Observed by economic purpose, total export results in the period January - September 2022 were mostly influenced by increased exports of intermediate products (share of 45.5% and increase of 37.0%).

Chart 5.3. Cumulative growth rates of exports according to the economic purpose of the European Union (%) (January – September 2022 relative to the same period 2021)



5.2. IMPORTS OF GOODS (EUR current exchange rate)

Total value of goods import in Serbia in the first nine months 2022 increased by 36.8% relative to the same period 2021. Import results were mostly influenced by the section of manufacturing (increase of 27.5%), as it presents 72.9% of total imports, and 117.7% increase in the section of mining and quarrying (11.8% of total imports) in the first three quarters of 2022.

Chart 5.4. Components of import's time series, indices (u – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2021 = 100)

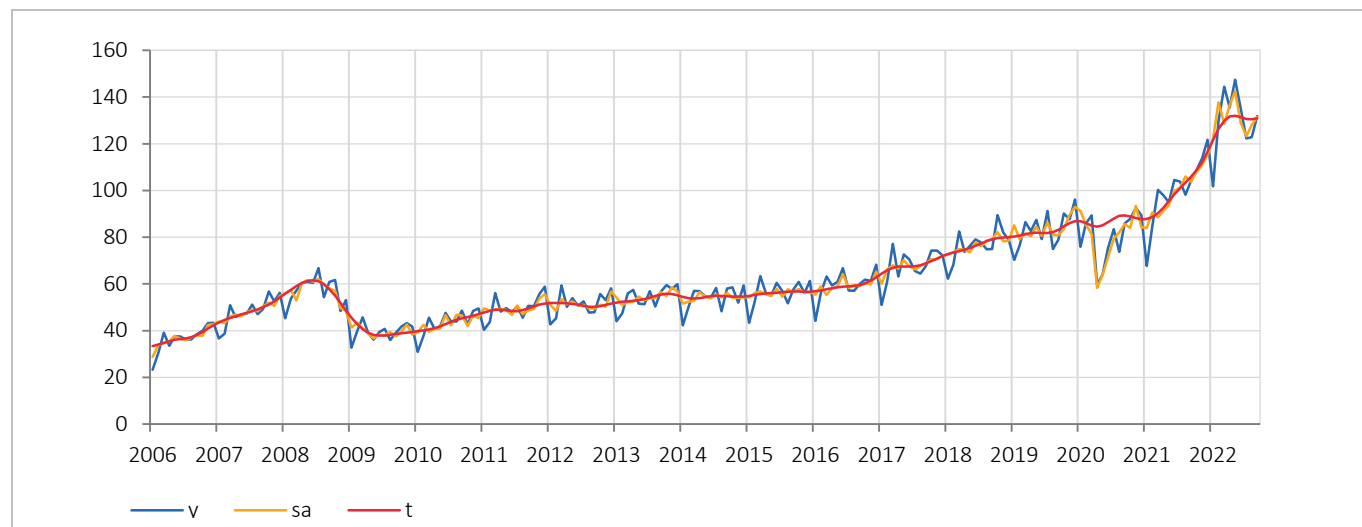
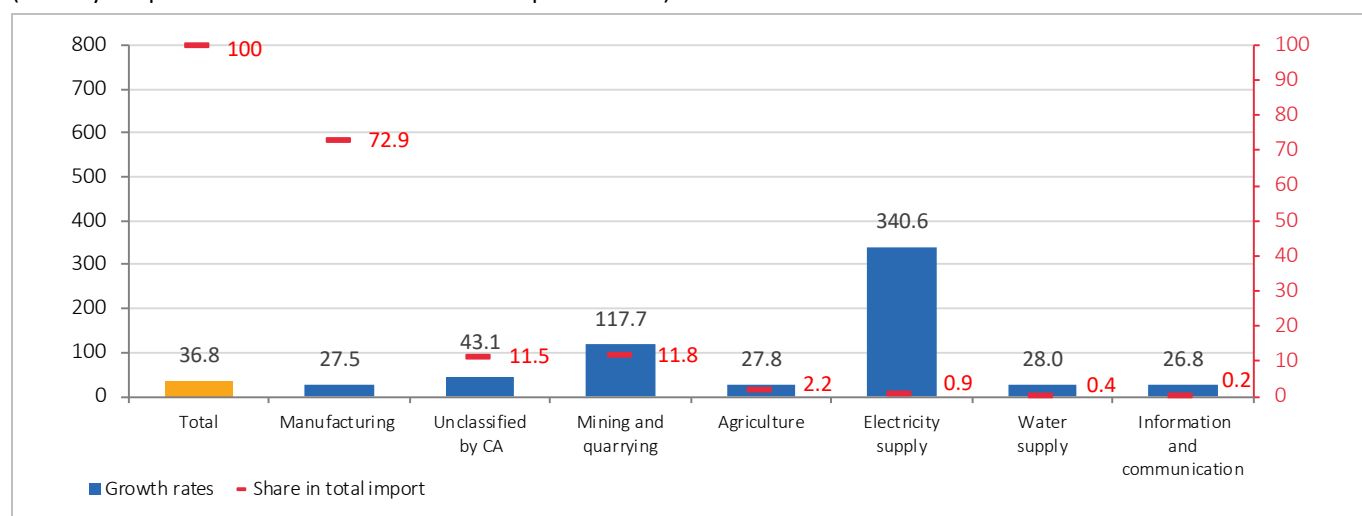


Table 5.2. Import of goods by CA (2010) sections, quarterly indices (comparison with the same period of the previous year)

| | 2020 | 2021 | | | | 2022 | | | |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q1-Q4 ¹ |
| Import – total | 98.5 | 100.5 | 149.4 | 125.9 | 127.5 | 148.5 | 142.2 | 136.8 | 132.0 |
| Manufacturing | 102.4 | 104.8 | 148.9 | 120.6 | 123.3 | 130.6 | 131.8 | 127.5 | ... |
| Agriculture, forestry and fishing | 105.1 | 102.3 | 101.0 | 113.6 | 143.8 | 127.6 | 125.5 | 127.8 | ... |
| Mining and quarrying | 52.9 | 58.2 | 206.4 | 181.1 | 158.2 | 373.7 | 272.7 | 217.7 | ... |

¹ Prognosis (obtained on the basis of a time series analysis model).

Chart 5.5. Cumulative growth rates of import by CA (2010) sections and sections' share in import (%) (January - September 2022 relative to the same period 2021)



Observed by MIGs, the greatest influence on total import in the first nine months 2022 related to intermediate products (share of 36.3%, increase of 29.7%), capital goods (share of 17.6%, increase of 16.8%) and energy (share of 15.4% and increase of 144.0%).

Chart 5.6. Cumulative growth rates of imports according to the economic purpose of the European Union (%) (January - September 2022 relative to the same period 2021)

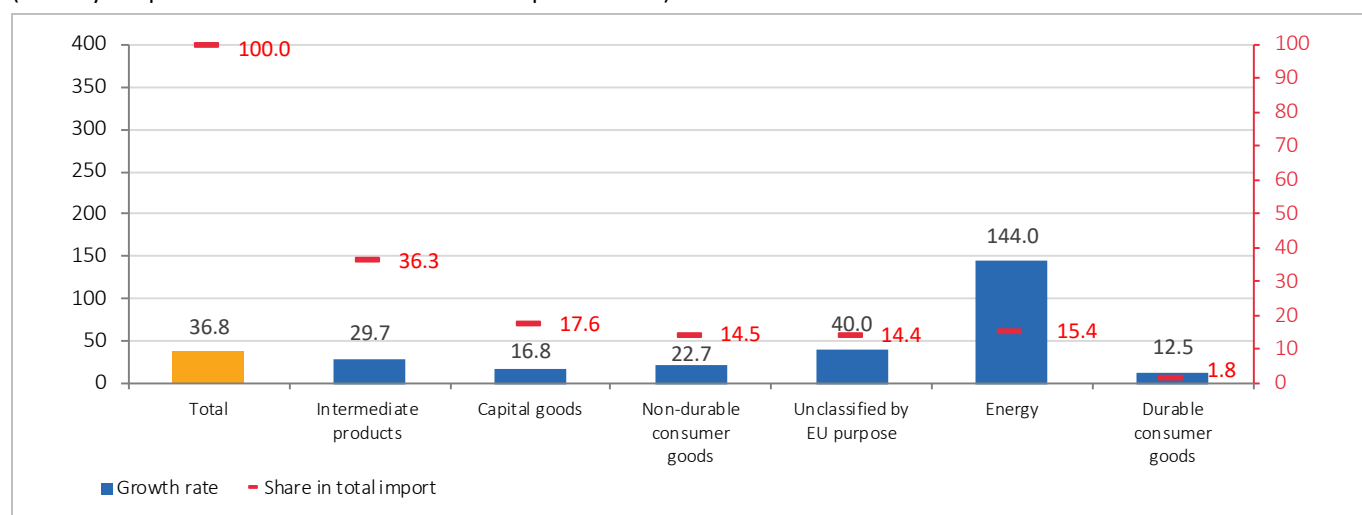
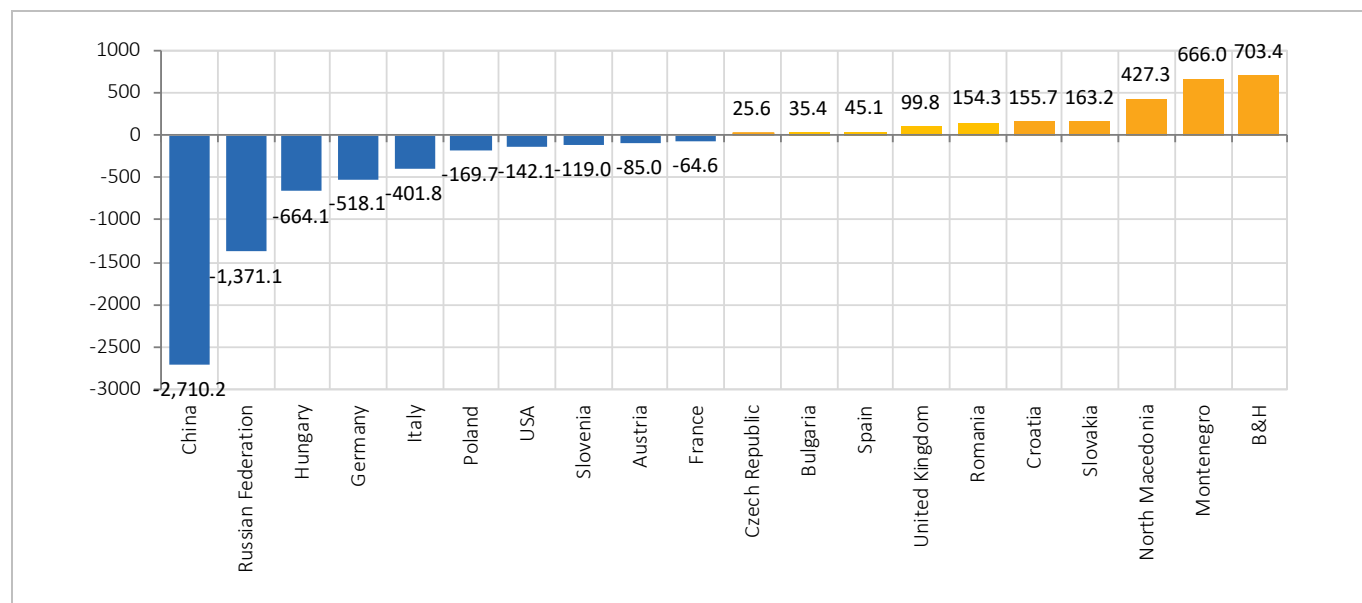


Chart 5.7 shows the 20 largest external trade partners of the Republic of Serbia, which account for 78.5% of the total external trade exchange. The Republic of Serbia achieved a positive external trade balance in the first nine months of 2022, i.e. a surplus, with ten European countries (a total of EUR 2.5 billion), of which Bosnia and Herzegovina is on the first place (a surplus of EUR 703.4 million). In this period, the Republic of Serbia exported the most coke and oil derivatives to BiH (15.6% of total export to BiH), food products (14.4% of total export to BiH) and basic metals (11.0% of the total export to BiH).

On the other hand, a negative external trade balance, i.e. deficit, was also recorded in 10 countries and amounts to a total of - EUR 6.2 billion. The largest external trade deficit in the first half of the year was recorded in trade with China (EUR -2.7 billion) and the Russian Federation (balance EUR -1.4 billion). Observed by CA product activities (2010), product imports from China mostly consisted of unclassified products (17.1% of total imports from China), imports of computers, electronic and optical products (15.8% of total imports from China), as well as n.e.c. machinery and equipment (14.9% of total imports from China). With the Russian Federation, the negative external trade balance is the result of the high value of crude oil and natural gas imports (62.5% of total imports from Russia). Hungary (deficit of EUR 664.1 million), Germany (EUR -518.1 million) and Italy (EUR -401.8 million) follow.

Chart 5.7. External trade balance of the Republic of Serbia by countries, January-September 2022 (EUR mill.)



5.3. THE MOST SIGNIFICANT EXTERNAL TRADE PARTNERS

Table 5.3. The major external trade partners, January – September 2022

| Export | EUR mill. | Import | EUR mill. |
|------------------------|-----------|--------------------|-----------|
| Germany | 2759.4 | China | 3571.6 |
| Italy | 1502.3 | Germany | 3277.5 |
| Bosnia and Herzegovina | 1489.8 | Russian Federation | 2141.2 |
| Hungary | 1020.3 | Italy | 1904.1 |
| Romania | 891.1 | Hungary | 1684.4 |

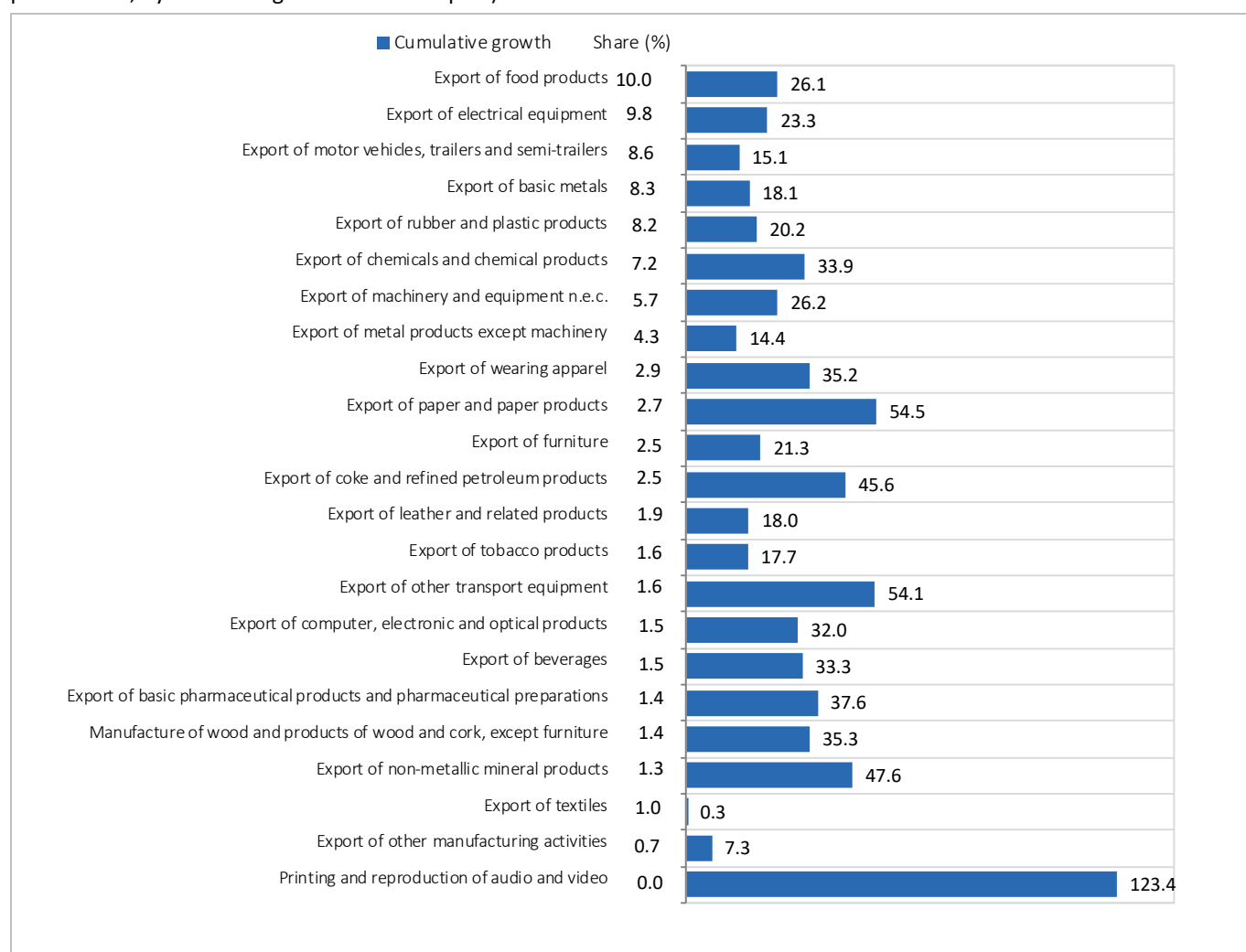
The most significant external trade partners in the first nine months of 2022 were the countries with which Serbia has signed agreements on free trade. The EU member countries account for 58.7% of total external trade, followed by Asia – Pacific Economic Cooperation, APEC, with share of 20.2%. The major external trade partners are separately presented in Table 5.3.

5.4. MANUFACTURING (C) (share of 86.4% in total export and 72.9% in total import)

Export of manufacturing recorded growth of 24.8% in the first nine months 2022, relative to the same period 2021, in all 23 divisions.

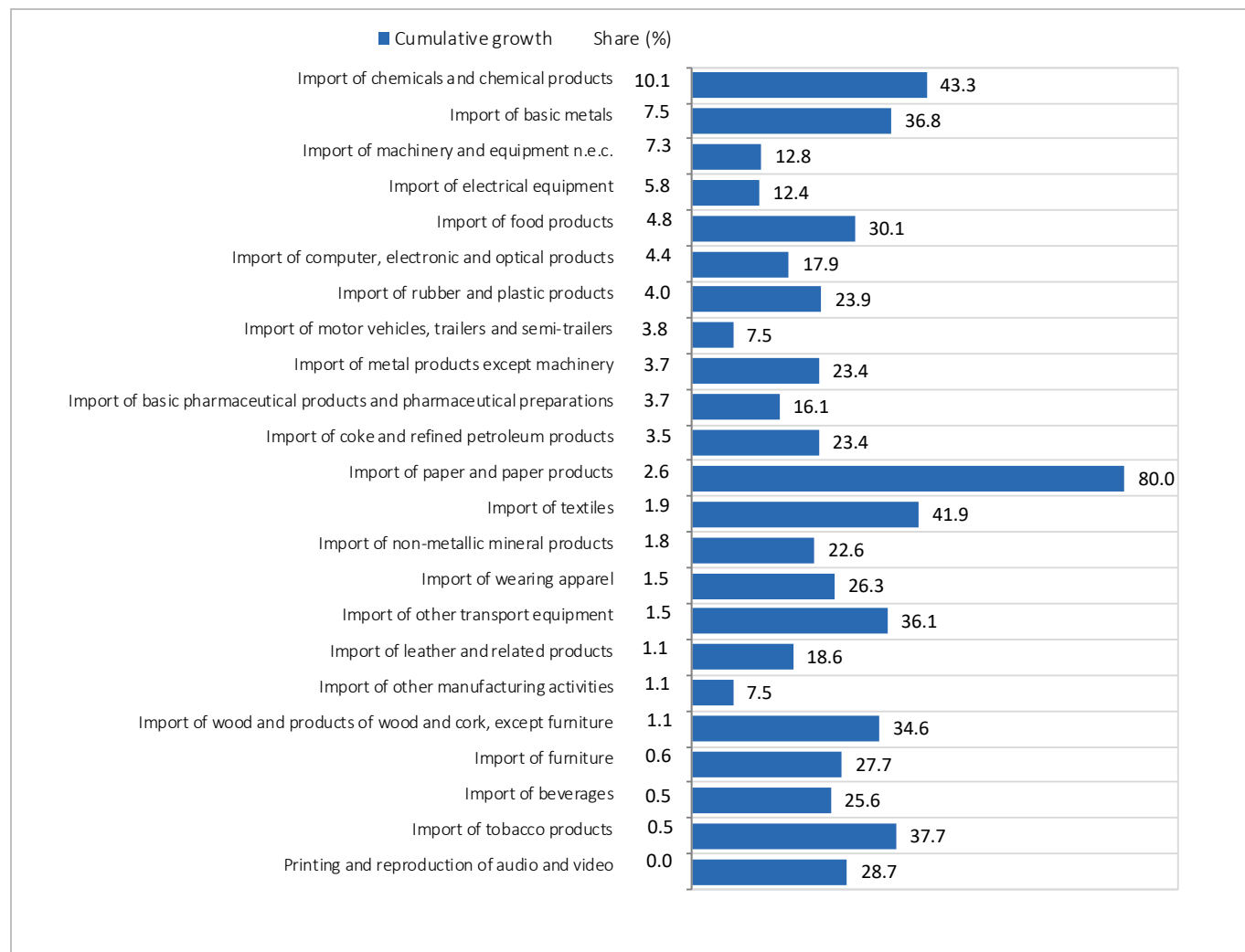
The export of **food products**, the division with the highest separate export value (EUR 1990.8 million), achieved a cumulative growth of 26.1%, with a share in total exports of 10.0% (10.1% in the same period of the previous year). The export of **electrical equipment** recorded a cumulative growth of 23.3% and an export value of EUR 1953.5 million, with a share of 9.8% in total exports (10.1% in the same period in 2021). Export of **motor vehicles and trailers**, division with an export value of EUR 1724.1 million and a share of 8.6%, recorded a cumulative growth of 15.1%. The export of **basic metals**, with a value of EUR 1667.1 million and a share in total imports of 8.3%, recorded a cumulative growth of 18.1%. The export of **rubber and plastic products** is positioned on the fifth place, with a participation in total imports of 8.2%, and records a cumulative growth of 20.2% and an export value of EUR 1637.5 million.

Chart 5.8. Export of manufacturing by divisions, cumulative growth (%) (January - September 2022 relative to the same period 2021, by descending share in total export)



In the first nine months of 2022, compared to the same period in 2021, the import of manufacturing achieved a growth of 27.5%, whereby growth was realized in all 23 divisions. This result was mostly influenced by the growth in import of **chemicals and chemical products** of 43.3% (with the largest share in total imports, which is 10.1%), import of **basic metals** (growth of 36.8% and a share of 7.5%), import of **machinery and equipment n.e.c.** (growth of 12.8% and share of 7.3%), and import of **electrical equipment**, which achieved a growth of 12.4% and share in total imports of 5.8%.

Chart 5.9. Import of manufacturing by divisions, cumulative growth (%) (January - September 2022 relative to the same period 2021, by descending share in total import)



5.5. AGRICULTURE, FORESTRY AND FISHING (A) (share of 5.0% in total export and 2.2% in total import)

Export in this section in the first nine months of 2022 realized decrease of 4.5%, as well as decreased share from 6.7% to 5.0% relative to the same period 2021. The cumulative drop of 9.7% in exports of cereals (except rice), leguminous crops and oil seeds, a group that makes up 64.8% of the entire section's exports in the observed period, contributed the most to this result. Export growth was achieved in a large number of sections, the largest of which was the export of pome and stone fruits (share 5.0%, growth 0.3%), export of vegetables, root and carotid plants (share 4.1%, growth 3.1%), export of planting material (2.3% share, 12.9% growth) and tobacco export (2.2% share, 46.3% growth).

Import recorded growth of 27.8% and a decreased share of total imports from 2.4%, in the same period of the previous year, to 2.2%. The group with the largest participation in the section (17.8%) - Import of vegetables, root and carotid plants - recorded a growth of 23.0% in the first nine months of 2022. The next group, according to realized share (15.1%), the group of cereals (except rice), leguminous and oil seeds - achieved an import growth of 78.4% in the observed period. On the other hand, there was a decrease of 6.8% in the import of apples and stone fruits, whose participation in the section is 1.8%.

5.6. MINING AND QUARRYING (B) (share of 6.7% in total export and 11.8% in total import)

The section of Mining and quarrying records the greatest increase in total export, from 2.9% in the first nine months 2021 to 6.7% in the same period 2022. The realized value of exports in the first three quarters is EUR 1.3 billion, which is by 195.1% more than exports in the same period last year. This result is a consequence of the growth in the export of metal ores, a group that accounts for 98.3% of the exports of the entire section, and which achieved a growth of 199.3% compared to the same period last year.

Import of this section in the first nine months of 2022 amounts to EUR 3,3 billion, presenting the share of 11.8% in total import (7.4% in the same period 2021). Import increase was 117.7% relative to the same period last year.

The growth in import was largely caused by a 161.6% increase in the import of crude oil and natural gas, a group that accounts for 88.1% of the entire sector's imports.



GLOSSARY

Unclassified goods by CA (2010), involves storage goods, goods in free zone, as well as goods for which customs tariff is not entered/ filled.

6. DOMESTIC TRADE

6.1. RETAIL TRADE TURNOVER (Division 47 of the Classification of Activities)

Retail trade turnover in the period January – September 2022, relative to the same period 2021, increased by 22.8% at current and by 7.2% at constant prices.

Table 6.1. Retail trade turnover, indices (comparison with the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | | |
|------------------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q1-Q4 ¹ |
| Current prices | 111.4 | 97.9 | 105.8 | 102.5 | 104.8 | 124.2 | 114.3 | 118.9 | 124.0 | 121.4 | 123.0 | 123.0 |
| Constant prices ² | 110.0 | 99.8 | 105.9 | 103.0 | 104.7 | 118.6 | 107.7 | 108.4 | 111.0 | 106.2 | 105.0 | 108.0 |

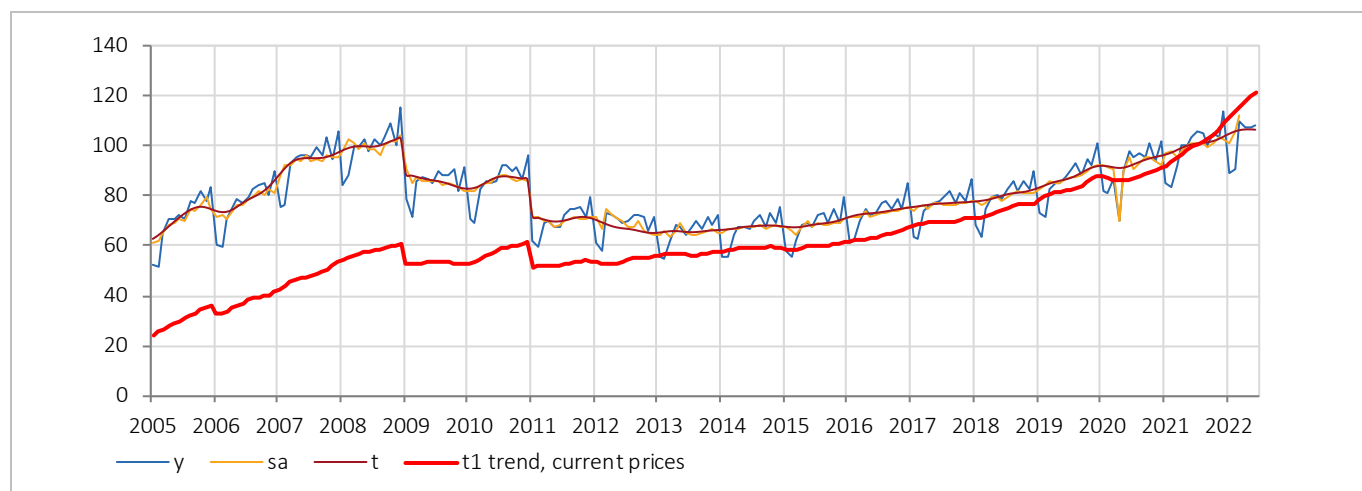
¹ Prognosis (obtained on the basis of time series model analysis).

² Indices are recalculated through monthly indices at constant prices.

The trend of growth in retail trade, which has been present for the last ten years, continues. Turnover growth rates at current prices are significantly higher than at constant prices, which is a consequence of accelerated inflation.

Chart 6.1. Components of time series of retail trade turnover at constant prices, indices

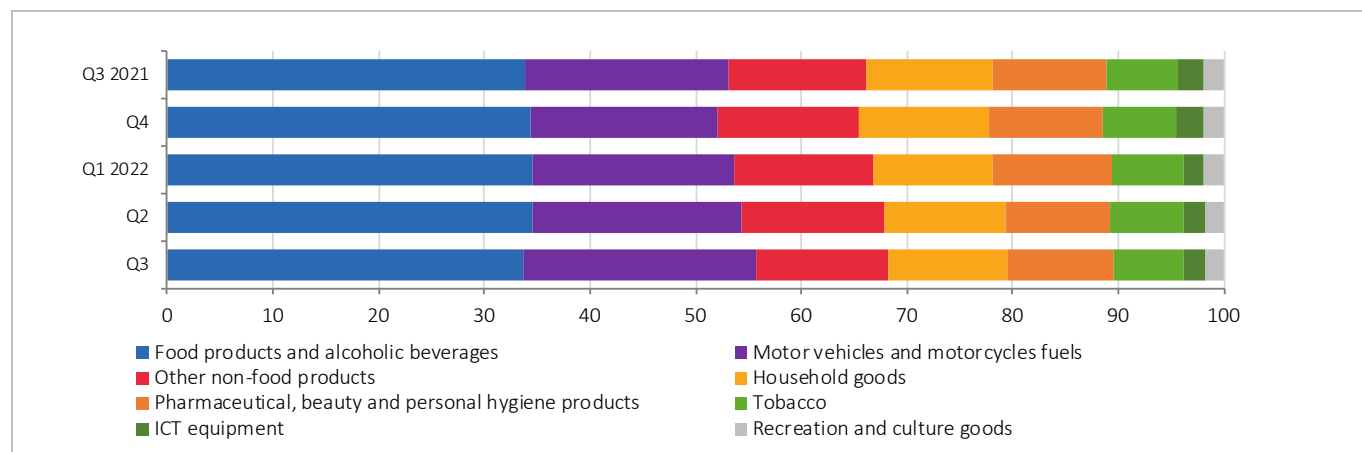
(u – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2021 = 100)



Observed according to the basic aggregates of CA (2010), **in the first nine months of 2022**, compared to the same period of the previous year, the highest turnover growth was achieved in trade of motor fuels (38.6% at current and 13.4% at constant prices), then in trade of non-food products (19.0% at current and 9.0% at constant prices). The lowest growth in trade was recorded in the category of Food, beverages and tobacco and amounted to 18.6% at current prices and 2.8% at constant prices.

Observed by the structure of trade divisions and commodity groups, **in the third quarter 2022**, the most notable were food products and alcoholic beverages (33.7%), followed by motor vehicles and motorcycles fuels (22.0%) and other non-food products (12.5%).

Chart 6.2. Structure of retail trade turnover by trade divisions and commodity groups (%)



6.2. WHOLESALE TRADE TURNOVER (Division 46 of the Classification of Activities)

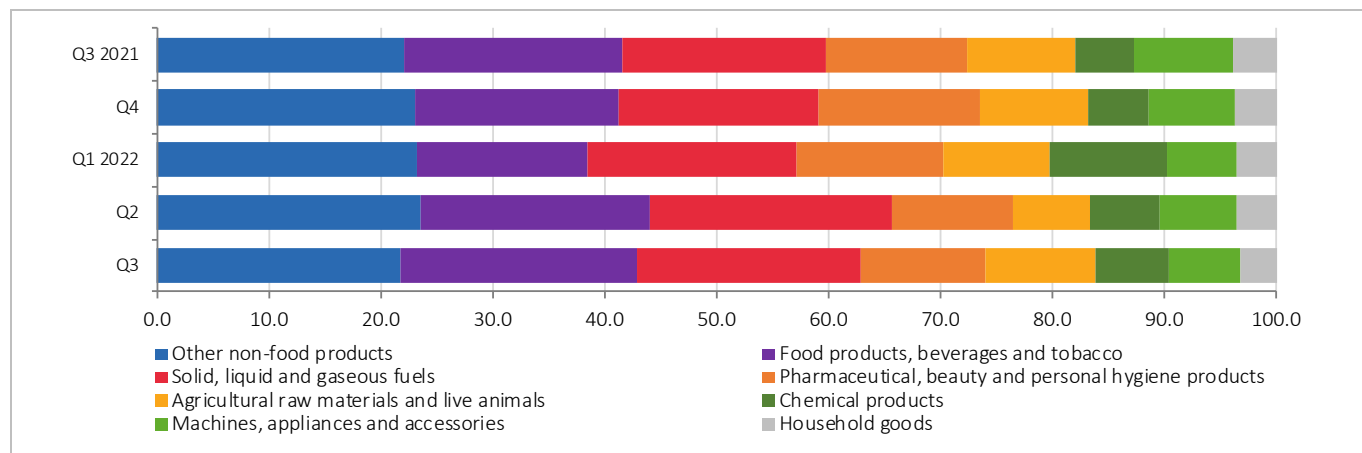
Wholesale trade turnover in the third quarter 2022, compared with the same period 2021 noted increase of 15.2% at current prices. In the first nine months, wholesale trade turnover increased by 19.2% relative to the same period last year.

Table 6.2. Wholesale trade turnover, indices (comparison with the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | |
|----------------|-------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Current prices | 101.9 | 86.7 | 96.1 | 96.2 | 110.9 | 133.5 | 123.6 | 126.5 | 120.1 | 122.6 | 115.2 |

Observed by trade divisions and commodity groups, in wholesale trade turnover, in the third quarter of 2022, the most notable were other non - food products (21.7%), followed by food products, beverages and tobacco (21.1%), solid, liquid and gaseous fuels, (20.1%).

Chart 6.3. Structure of wholesale trade turnover by trade divisions and commodity groups (%)



6.3. TURNOVER IN WHOLESALE AND RETAIL TRADE AND MOTOR VEHICLES REPAIR

(Division 45 of the Classification of Activities)

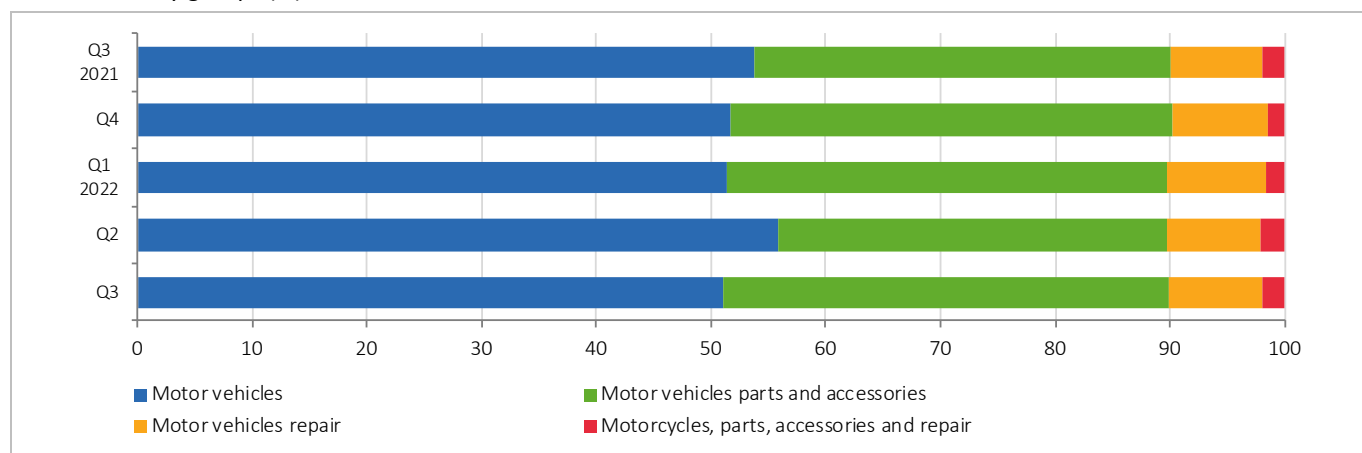
Turnover of goods in wholesale and retail trade and repair of motor vehicles **in the third quarter 2022**, relative to the same period 2021, recorded increase of 18.8% at current prices. **In the first nine months**, this division recorded increase of 22.6% relative to the same period 2021.

Table 6.3. Turnover in wholesale and retail trade and motor vehicles repair, indices
(comparison with the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | |
|----------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Current prices | 95.9 | 77.6 | 104.1 | 100.5 | 111.1 | 138.4 | 113.6 | 116.1 | 124.5 | 124.8 | 118.8 |

Observed by trade divisions and commodity groups, **in the third quarter 2022**, relative to the previous quarters, in the structure of wholesale and retail trade turnover and motor vehicles repair, the most notable were motor vehicles (51.0%), and motor vehicles parts and accessories (38.9%).

Chart 6.4. Structure of wholesale and retail trade turnover and motor vehicles repair by trade divisions and commodity groups (%)



NOTE:

Goods turnover indices of retail trade at constant prices are obtained by deflating the indices at current prices with appropriate consumer price indices, which exclude: water (from public utilities systems), electricity and motor vehicles, motorcycles and parts thereof.

7. PRICES

In the period Q1-Q3 2022 total consumer prices saw a cumulative **average year-on-year growth of 10.9%**. When looking at the level of products, the growth of consumer prices was predominantly **influenced by the growth of the price of meat, fuels for cars, vegetables, bread and cereals, dairy products and solid fuels**. In Q3 2022, the growth of the prices of fuelwood, dairy products and bread and cereals particularly impacted the year-on-year consumer price growth, when the dynamics of cumulative growth since the beginning of the year in the third quarter had a slightly modified structure of order by importance of influence on the year-on-year growth of consumer prices of the mentioned groups of products.

Table 7.1. Consumer prices, year-on-year inflation rate (%) (quarter to the same quarter of the previous year)

| | 2021 | | | | 2022 | | | |
|-----------------|------|-----|-----|-----|------|------|------|-----------------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 ¹ |
| Consumer prices | 1.4 | 3.2 | 4.4 | 7.3 | 8.7 | 10.5 | 13.1 | 15.0 |

¹ Forecast based on the SORS leading CPI indicator.

Chart 7.1. Inflation rate measured by consumer price indices (%) (monthly – month to the previous month; annual – month to the same month of the previous year)

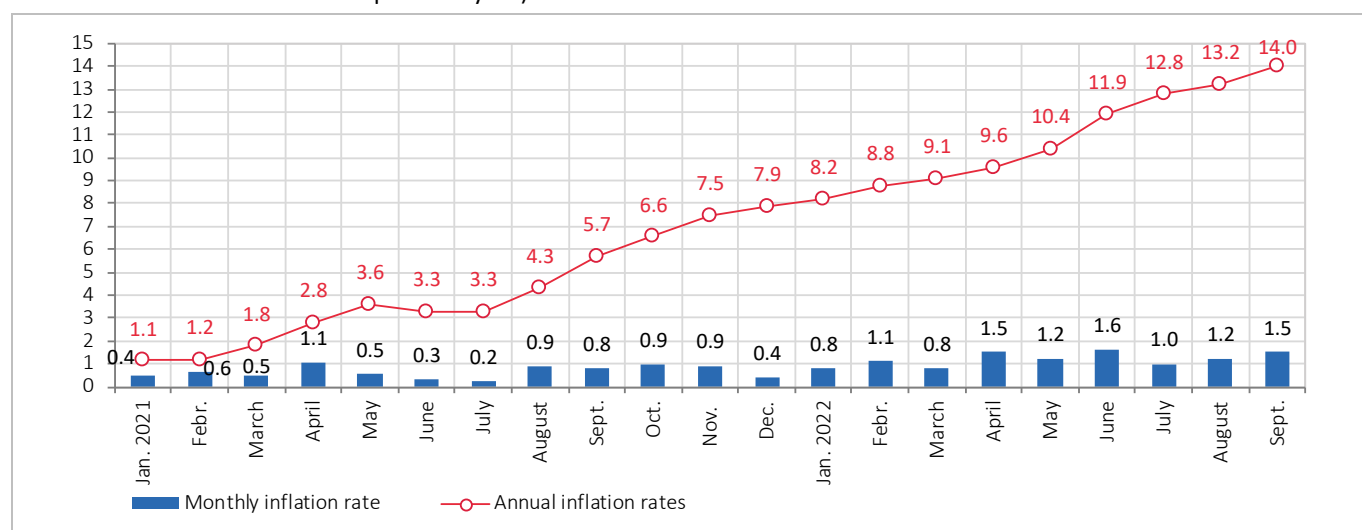
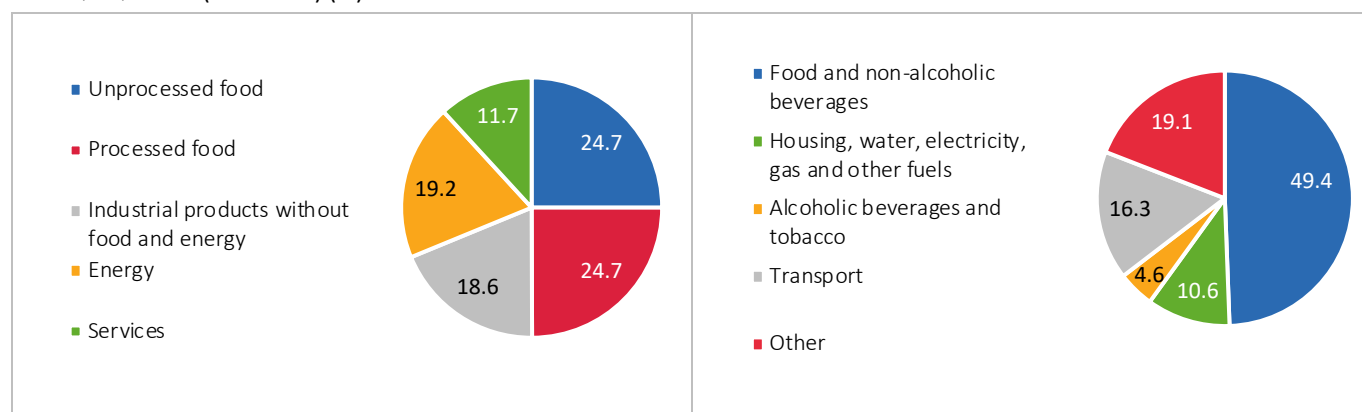
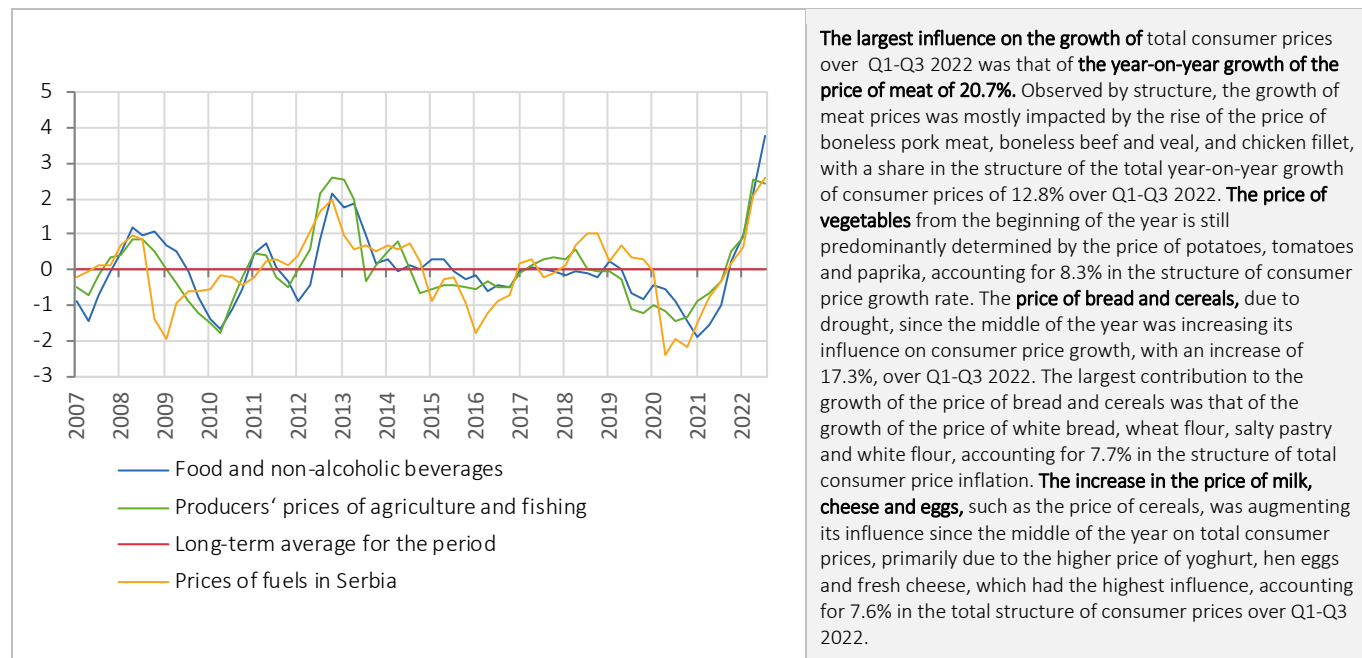


Chart 7.2. Share in the structure of the annual consumer price growth rate by purpose and main divisions of products, over Q1-Q3 2022 (total=100) (%)



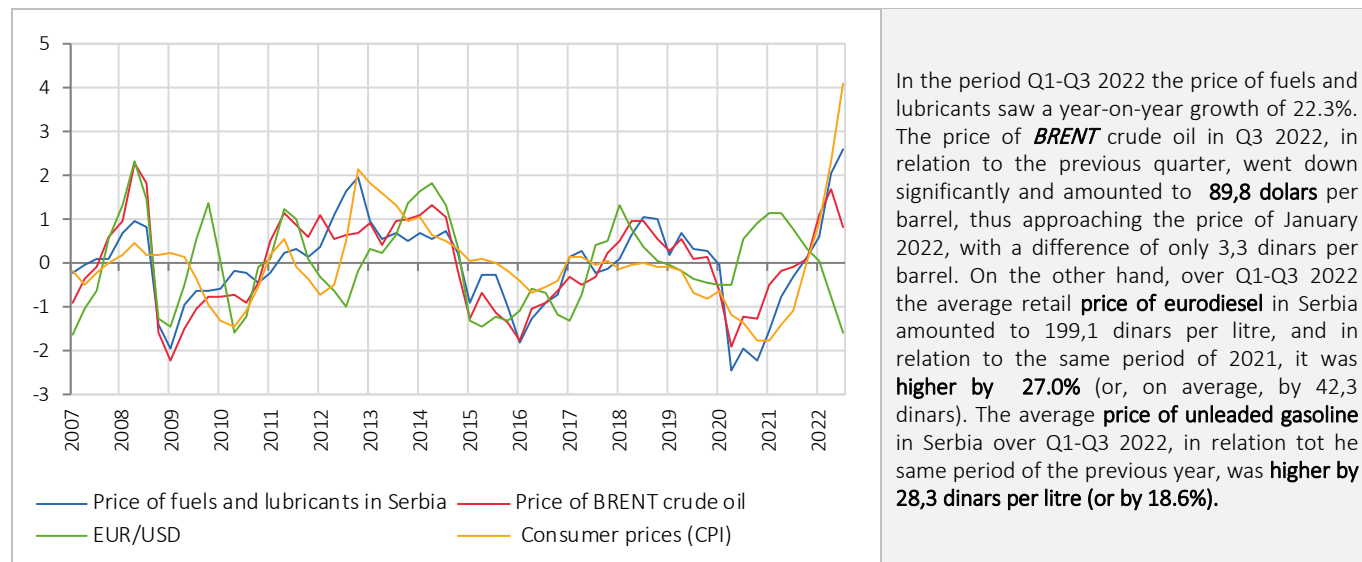
7.1. MEAT, VEGETABLES, BREAD AND CEREALS, AND DAIRY PRODUCTS (share in the structure of the annual consumer price growth over Q1-Q3 2022 – 36.1%)

Chart 7.3. Movement of the prices of food and non-alcoholic beverages; seasonally adjusted and standardised quarterly data, deviations for the average for the period (%)



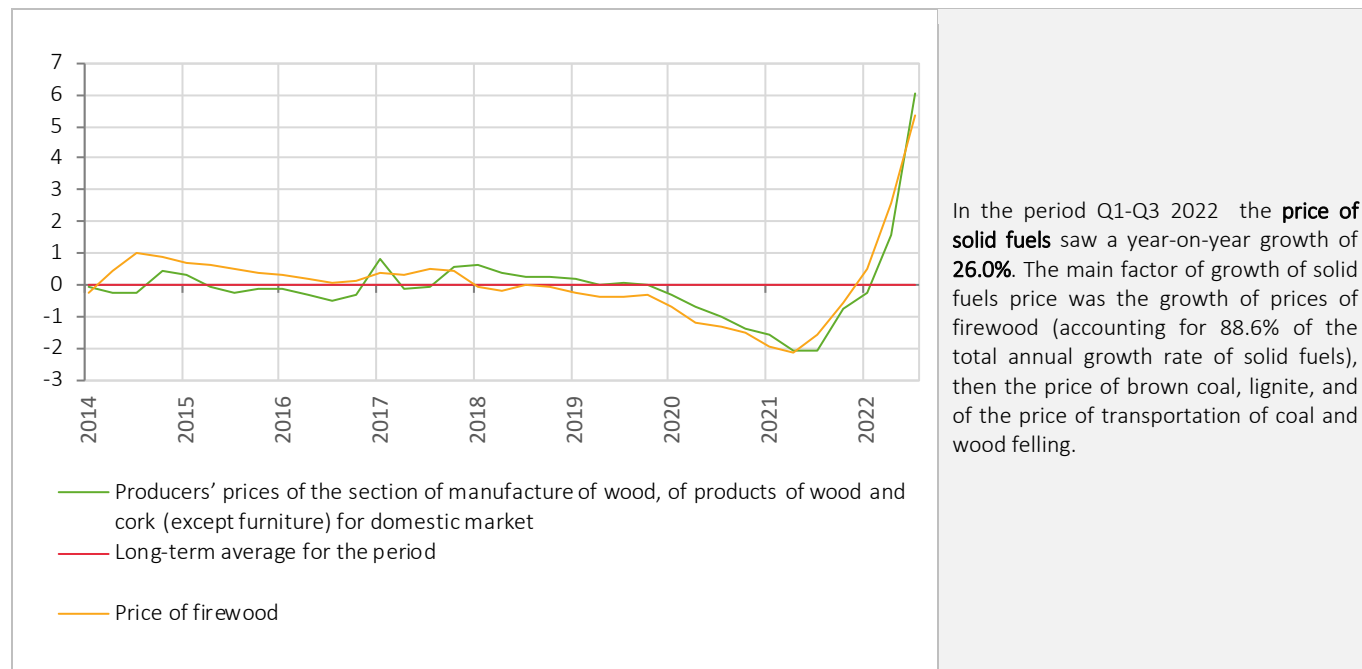
7.2. FUELS AND LUBRICANTS FOR PASSENGER CARS (share in the structure of the annual consumer price growth over Q1-Q3 2022 – 12.3%)

Chart 7.4. Movement of the price of fuels and lubricants according to the price of *BRENT* crude oil, parity EUR/USD and total consumer prices; detrended and standardised quarterly data, deviations from the average for the period (%)



7.3. SOLID FUELS – FIREWOOD (share in the structure of the annual consumer price growth over Q1-Q3 2022 – 5.8%)

Chart 7.5. Movement of the prices of solid fuels and producers' prices of the section of Manufacture of wood and products of wood (except furniture) for domestic market; detrended and standardised data, deviations from the average for the period (%)



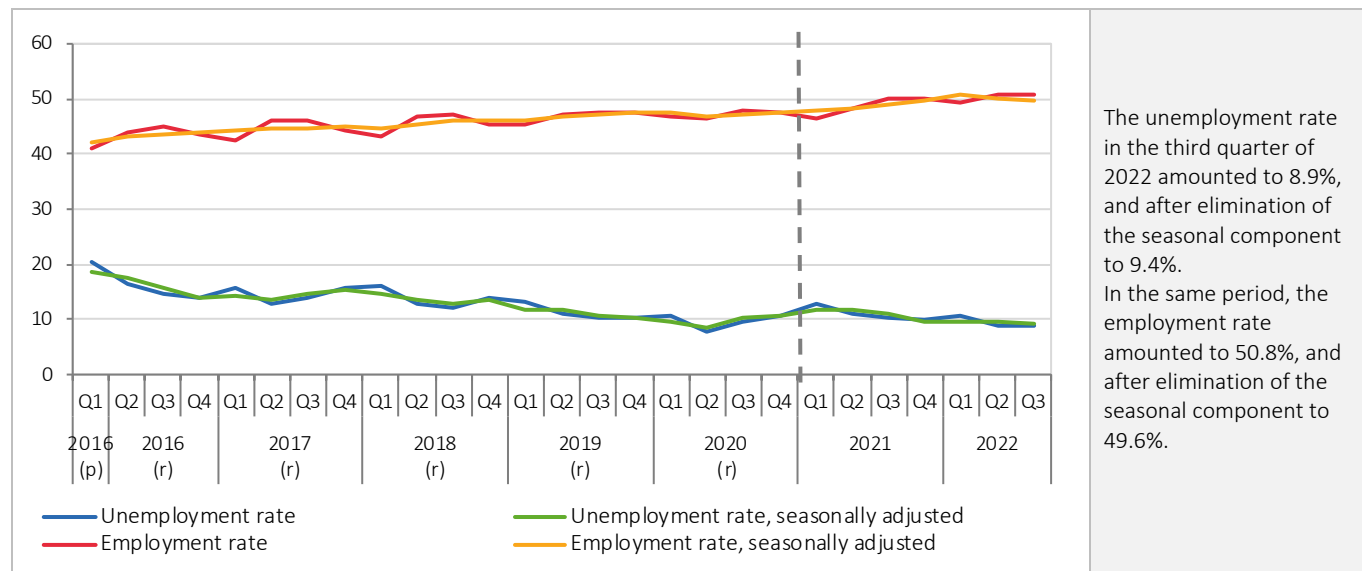
8. LABOUR MARKET

In the Republic of Serbia in the third quarter of 2022 there were 2,942 million employed persons, 288,9 thousand unemployed persons and 2,556 million persons outside labour force aged over 15.

The unemployment rate was 8.9% and remained unchanged when compared with the second quarter of 2022, the number of unemployed persons being up by 1,7 thousand, while the number of persons outside labour force was down by 7,4 thousand.

Compared with the second quarter of 2022 the unemployment rate decreased in the Region of Vojvodina (from 7.7% to 7.4%) and Region of Sumadija and Western Serbia (from 10.4% to 9.7%). In Region of Southern and Eastern Serbia it went up from 10% to 11.9%, while in Belgrade Region (with the value of 7.5%) it remained unchanged relative to the previous quarter.

Chart 8.1. Movement of the employment and unemployment rate for persons aged 15 and over (%)



(r) – revised data

Table 8.1. Activity, employment and unemployment rate – non-seasonally and seasonally adjusted values

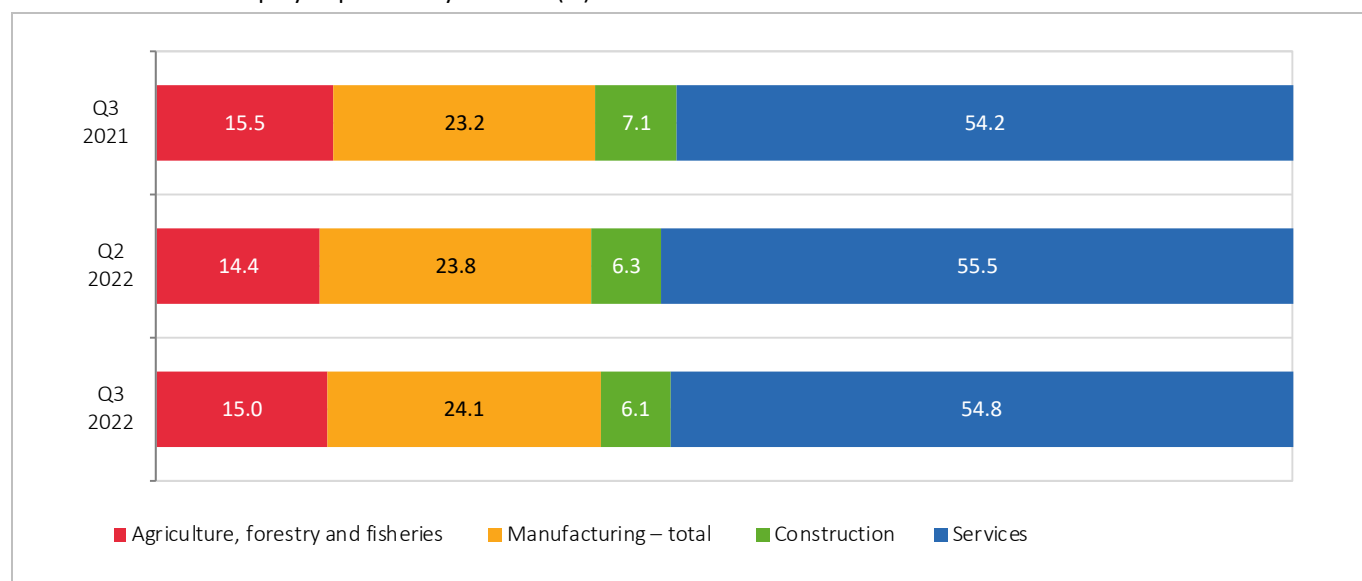
| | 2020(r) | | | | 2021 | | | | 2022 | | |
|------------------------------|---------|------|------|------|------|------|------|------|------|------|------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Activity rate (%) | 52.2 | 50.2 | 53.0 | 53.3 | 53.1 | 54.3 | 55.8 | 55.4 | 55.2 | 55.8 | 55.8 |
| Seasonally adjusted values | 53.1 | 49.9 | 52.3 | 53.5 | 54.0 | 54.0 | 55.1 | 55.5 | 56.0 | 55.7 | 55.2 |
| Employment rate (%) | 46.7 | 46.3 | 47.8 | 47.6 | 46.3 | 48.3 | 50.0 | 50.0 | 49.3 | 50.9 | 50.8 |
| Seasonally adjusted values | 47.3 | 47.0 | 47.0 | 47.4 | 47.9 | 48.4 | 48.8 | 49.4 | 51.0 | 50.4 | 49.6 |
| Unemployment rate (%) | 10.5 | 7.9 | 9.8 | 10.7 | 12.8 | 11.1 | 10.5 | 9.8 | 10.6 | 8.9 | 8.9 |
| Seasonally adjusted values | 9.5 | 8.4 | 10.3 | 10.4 | 11.6 | 11.9 | 11.2 | 9.7 | 9.6 | 9.4 | 9.4 |

Table 8.2. Labour market – persons aged 15 and over

| | Current quarter | Previous quarter | | The same quarter of the previous year | |
|-------------------|------------------------|------------------------|------------|---------------------------------------|------------|
| | Q3 2022 (in thous.) | Q2 2022 (in thous.) | Change, % | Q3 2021 (in thous.) | Change, % |
| Unemployment | 288,9 | 287,2 | 0.6 | 341,5 | -15.4 |
| Employment | 2 942,0 | 2 953,5 | -0.4 | 2 924,5 | 0.6 |
| | | % | Change pp. | % | Change pp. |
| Unemployment rate | 8,9 | 8,9 | 0.0 | 10,5 | -1.6 |
| Employment rate | 50,8 | 50,9 | - 0.1 | 50,0 | 0.8 |

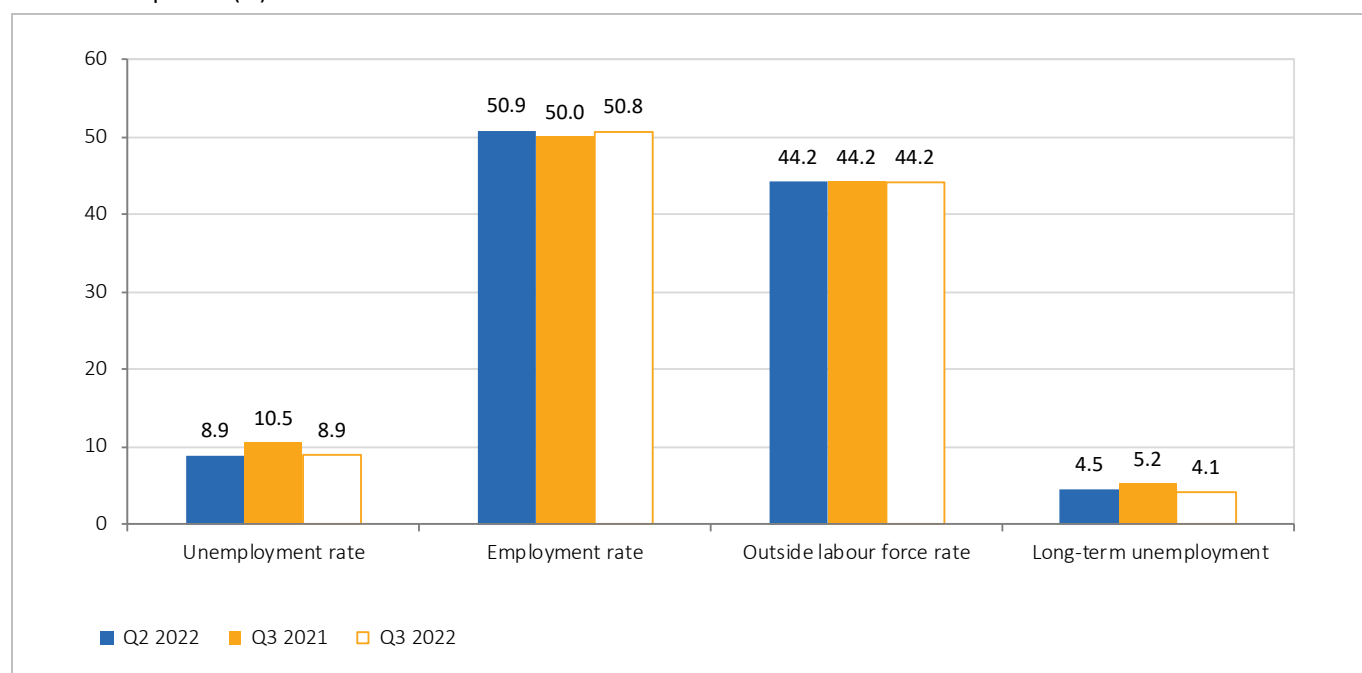
Observed by sections, the largest share of the number of employed persons in the third quarter of 2022 was recorded in Services (554.8%), then in Manufacturing (24.1%) and Agriculture (15%), and the lowest in Construction (6.1%). When compared with the previous quarter, a fall of the share of employed persons was recorded in Services (from 55.5% to 54.8%), and Construction (from 6.3% to 6.1%). On the other hand, when compared with the previous quarter, a fall of the share of persons employed was recorded in Manufacturing (from 23.8% to 24.1%) and Agriculture, forestry and fishing (from 14.4% to 15%).

In year-on-year periodicity (quarter III of 2022 – quarter III of 2021), the largest fall of the share of employed persons was recorded in Construction (from 7.1% to 6.1%), in contrast with Manufacturing, where the largest growth was noted (from 23.2% to 24.1%).

Share 8.2. Share of employed persons by sections (%)

Labour market indicators that showed a descending tendency of unemployment and inactivity (persons outside labour force) in the current quarter, relative tot the same period of the previous year, with at the same time growth of employment, are expressive of a certain stabilization of the situation of laboour market.

Chart 8.3. Labour market – major indicators for the previous quarter, the same quarter of the previous year and current quarter (%)



8.1. COMPARISON WITH THE PREVIOUS QUARTER

When compared with the previous, second quarter of 2022, the number of unemployed persons grew by 1.7 thousand, and the number of employed persons and persons outside labour force fell by 11.4 and 7.4 thousand, respectively. Slight movements of the main contingents of labour force are the reason for almost unchanged employment, unemployment and outside labour force rate, relative to the previous quarter.

The youth unemployment rate (aged from 15 to 24) in the third quarter of 2022 amounted to 25.4%, by 6.7 pp. more than in the second quarter of 2022 when it was 18.7%.

The long-term unemployment rate was 4.1%, by 0.4 pp. less than in the second quarter of 2022.

Observed by sex, the unemployment rate in the third quarter of 2022, compared with the previous quarter, saw a fall of 0.6 p.p. among women and a simultaneous growth of 0.6 pp. among men.

The unemployment rate among men increased in almost all the regions: in Belgrade Region from 7.5% to 7.8%, in Region of Sumadija and Western Serbia, from 8.4% to 8.9% and in Region of Southern and Eastern Serbia, from 7.3% to 10.9%. In Region of Vojvodina the unemployment rate among men decreased from 7.8% to 6.7%.

In contrast, the unemployment rate among women decreased in almost all the regions: in Belgrade Region from 7.6% to 7.3%, Region of Southern and Eastern Serbia from 13.6% to 13.2%, Region of Sumadija and Western Serbia from 12.9% to 10.7%, with the exception of Region of Vojvodina, where an increase from 7.5% to 8.3% was recorded.

Observed by professional status, and compared to the previous quarter, the number of employed persons increased only in the category of contributing family members (by 0.2%), while a growth of 1.4% and 0.2% was recorded in self-employed and employed persons.

Table 8.3. Employment by professional status, comparison Q2 2022 – Q3 2022

| | Q2 2022 (in thous.) | Q3 2022 (in thous.) | Change, % |
|---------------------------------|------------------------|------------------------|--------------|
| Employed persons – total | 2 953,5 | 2 942,0 | -0.4 |
| Self-employed | 484,9 | 478,0 | -1.4 |
| Employed | 2 276,3 | 2 271,4 | -0.2 |
| Contributing family members | 192,3 | 192,6 | 0.2 |

8.2. COMPARISON WITH THE SAME QUARTER OF THE PREVIOUS YEAR

Compared with the same quarter of the previous year, the number of unemployed persons decreased by 15.4% (from 341.5 thousand to 288.9 thousand). At the same time, the number employed persons grew by 0.6% (from 2 924.5 in the third quarter of 2021 to 2 942 in the third quarter of 2022).

The youth unemployment rate (aged from 15 to 24) in the third quarter of 2022 amounted to 24.5%, by 2.3 p.p. more than in the third quarter of 2021, when it amounted to 23.1%.

The long-term unemployment rate recorded fall on year-on-year level. In the third quarter of 2022 it amounted to 4.1%, by 1.1% down relative to the third quarter of 2021.

Observed by sex, the unemployment rate in the third quarter of 2022, compared with the same quarter of the previous year, saw a fall among both sexes, by 1.6 p.p. among men and 2.4 p.p. among women.

Observed by regions, the unemployment rate among men saw a fall in almost all the regions: in Region Vojvodina, from 7.8% to 6.7%, in Region of Sumadija and Western Serbia, from 10% to 8.9%, and in Region of Southern and Eastern Serbia 12.1 to 10.9%, with the exception of Belgrade region, where a slight growth from 7.5% to 7.8% was recorded.

Similar movements were also recorded among women – the unemployment rate went down in all four regions: in Belgrade Region, from 10.3 to 7.3%, in Region Vojvodina, from 10.1% to 8.3%, in Region of Southern and Eastern Serbia, from 15% to 13.2%, and in Region of Sumadija and Western Serbia, from 13.5% to 10.7%.

Observed by professional status, relative to the same quarter of 2021, the number of employed persons decreased only in the category of the self-employed (by 2.3%), while in employees and contributing family members the number of employees increased by 1.1% and 2.3%, respectively.

Table 8.4. Employment by professional status, comparison Q3 2021 – Q3 2022

| | Q3 2021 (in thous.) | Q3 2022 (in thous.) | Change, % |
|---------------------------------|------------------------|------------------------|--------------|
| Employed persons – total | 2 924,5 | 2 942,0 | 0.6 |
| Self-employed | 489,0 | 478,0 | -2.3 |
| Employed | 2 247,3 | 2 271,4 | 1.1 |
| Contributing family members | 188,2 | 192,6 | 2.3 |



GLOSSARY

Active population (labour force) comprises all employed and unemployed persons aged 15 and 24.

Employed persons are persons aged 15-89 and over who performed a paid job for at least one hour in the reference week (in cash or in kind), as well as persons who had an employment but who were absent from work in that week. According to the Classification of Employment Status, they are divided into *self-employed*, *employed* and *contributing family member*.

Self-employed are persons working solely in their own enterprise, institution, privately- owned store or on an agricultural holding, as well as persons performing solely a professional activity or any other job for own account. Self-employed are persons who solely define the conditions of their work (as well as of their employees) and bear the risk for their work.

Employed workers are persons who work for an employer in any ownership sector, whether having a formal employment contract or working on an oral contract. Family members who help in performing family business and are paid for their work are considered employed workers.

Contributing family members are persons who help another family member in running family business or agricultural holding, and are not paid for that work. Those persons are considered employed even if they are not paid for their work because they have benefits, such as accommodation, food, etc.

Unemployed persons are persons aged 15-74 who did not perform any paid job in the reference week, sought actively a job during four weeks preceding the reference week, and who were ready to start working within two weeks after the reference week

Outside labour force population comprises all persons aged 15 and more who are classified in the employed or unemployed population. Inactive persons include students, retired persons, houseworkers, as well as all persons who did not perform in the reference week any paid job, did not actively seek employment or were not able to start working within two weeks after the end of the reference week.

Activity rate is the share of active population in the total population aged 15 and over.

Employment rate is the share of employed persons in the total population aged 15 and over.

Unemployment rate is the share of unemployed persons in the total number of active population aged 15 and over.

Long-term unemployment is the share of persons being unemployed more than a year in the labour force (the employed and unemployed) aged 15 and over.

Outside labour force rate is the percentage of inactive population in the total population aged 15 and over.

9. SALARIES AND WAGES

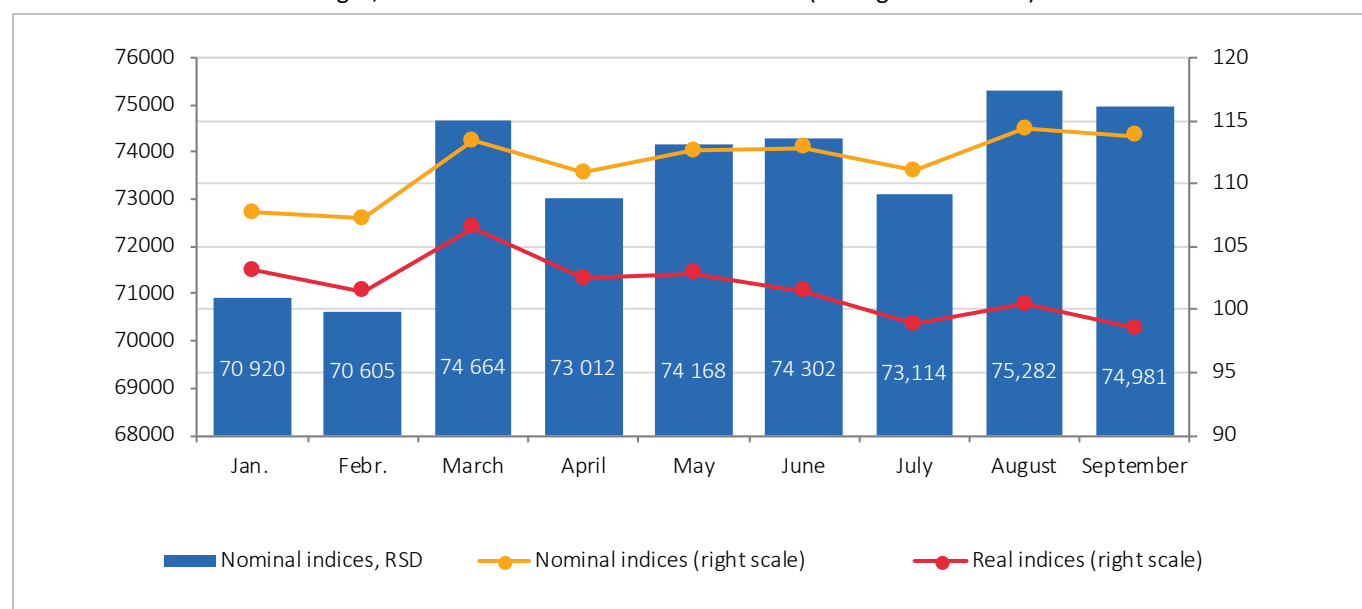
Average net salaries and wages in the Republic of Serbia for the third quarter of 2022 amounted to 74 459 dinars. Compared with the same period of the previous year, they increased nominally by 14.8% and by 1.3% in real terms. Compared with the previous quarter, i.e. second quarter of 2022, they increased nominally by 0.9%, and decreased by 2.9% in real terms.

In the first nine months of 2022 the calculated average net salaries and wages amounted to 73 456 dinars and compared with the same period of the previous year they increased nominally by 13.9%, and by 2.7% in real terms.

Table 9.1. Net salaries and wages – real and nominal indices (comparison with the same period of the previous year)

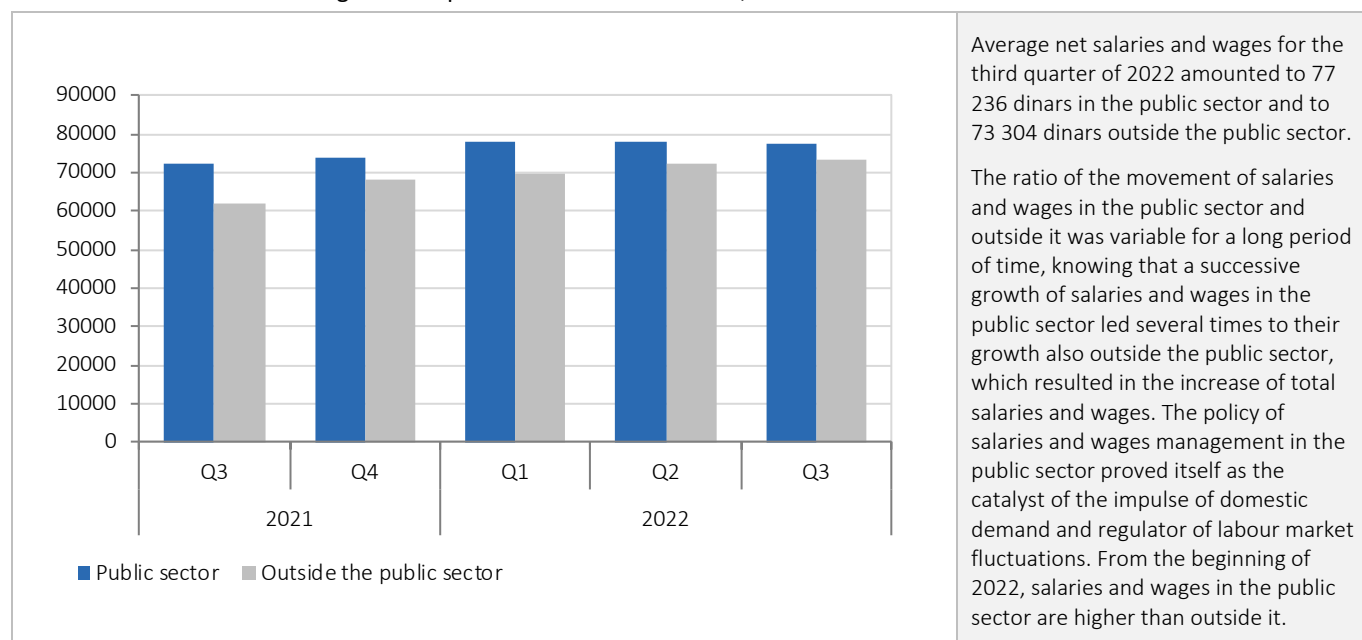
| | 2019 | | | | 2020 | | | | 2021 | | | | 2022 | | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Real indices | 106.9 | 107.6 | 109.5 | 100.4 | 108.3 | 107.4 | 107.4 | 107.6 | 105.8 | 106.4 | 104.5 | 104.5 | 104.3 | 102.7 | 101.3 |
| Nominal indices | 109.5 | 110.0 | 110.9 | 112.0 | 110.3 | 108.5 | 109.4 | 109.3 | 107.3 | 109.8 | 109.2 | 112.1 | 113.4 | 113.6 | 114.8 |

Chart 9.1. Net salaries and wages, movement of nominal and real indices (average 2021 = 100)



Since the beginning of the year, nominal salaries and wages have followed the real economy and budget, adapting themselves at the same time to trade indicators, i.e. offer and demand for labour force. Average net salaries and wages recorded also an ascending trend in September 2022, amounting to RSD 74 981, reaching a year-on-year growth of 15% nominally, i.e. of 0.9% in real terms. As having exceeded in June the year-on-year growth of inflation (14%), it can be said that available income and population purchasing power were maintained. The decision on increasing the minimal pay from 183.9 dinars per hour of work in 2021 to 201.2 dinars in 2022 influenced the growth of salaries and wages. Average net salaries and wages, expressed in euros, as an indicator of living standard and international economic competitiveness of Serbia, recorded growth also in September 2022, reaching a value of EUR 639 or year-on-year growth of 15.1%.

Chart 9.2. Net salaries and wages in the public sector and outside it, RSD



**Average net salaries and wages in the public sector
(January – September 2022)**

| | |
|--------------------------------|------------|
| Public sector – total | RSD 77 780 |
| Public State-owned enterprises | RSD 87 964 |
| Public local enterprises | RSD 68 043 |
| Administration – all levels | RSD 82 115 |
| Government level | RSD 85 614 |
| Autonomous Province level | RSD 86 806 |
| Local authorities level | RSD 64 835 |
| Health and social work | RSD 78 381 |
| Education and culture | RSD 70 737 |

When comparing net salaries and wages by CA (2010), one notices that the largest real growth in nine months of 2022, compared with the same period of 2021, was realised in the sections Information and communications (21.2%), Professional, scientific and technical activities (7.8%), and Accommodation and food service activities (4.2%).

The highest net salaries and wages over January-September 2022 was recorded in the following divisions: Computer programming and consultancy activities (240 126 dinars), Air transport (174 209 dinars), Scientific research and development activities (153 346), Extraction of crude petroleum and natural gas (131 332), and Administrative activities; counseling related to administration (128 809).

In all other divisions salaries and wages ranged from 41 837 dinars (Food and beverages service activities) to 128 261 dinars (Manufacture of tobacco products).

Observed by regions, the highest average net salaries and wages January-September 2022 were paid in Belgrade Region, 92 540 dinars. In Region Vojvodina average salaries and wages totaled 69 742 dinars, in Region of Southern and Eastern Serbia, 63 579 dinars, and in Region of Sumadija and Western Serbia, 61 629 dinars.

Chart 9.3. Real growth of net salaries and wages by sections of CA (2010)
(January-September 2022 to the same period of 2021)

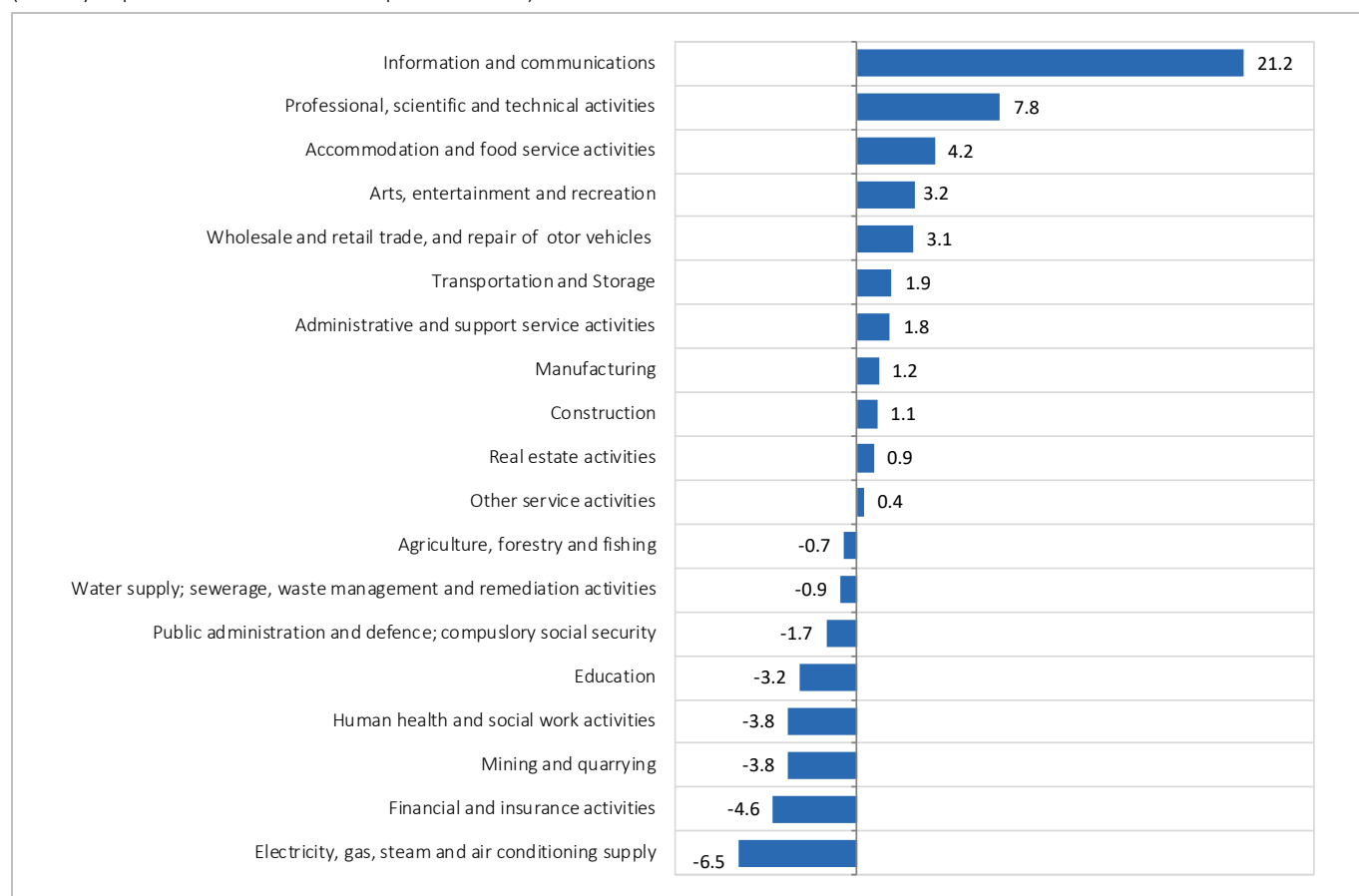
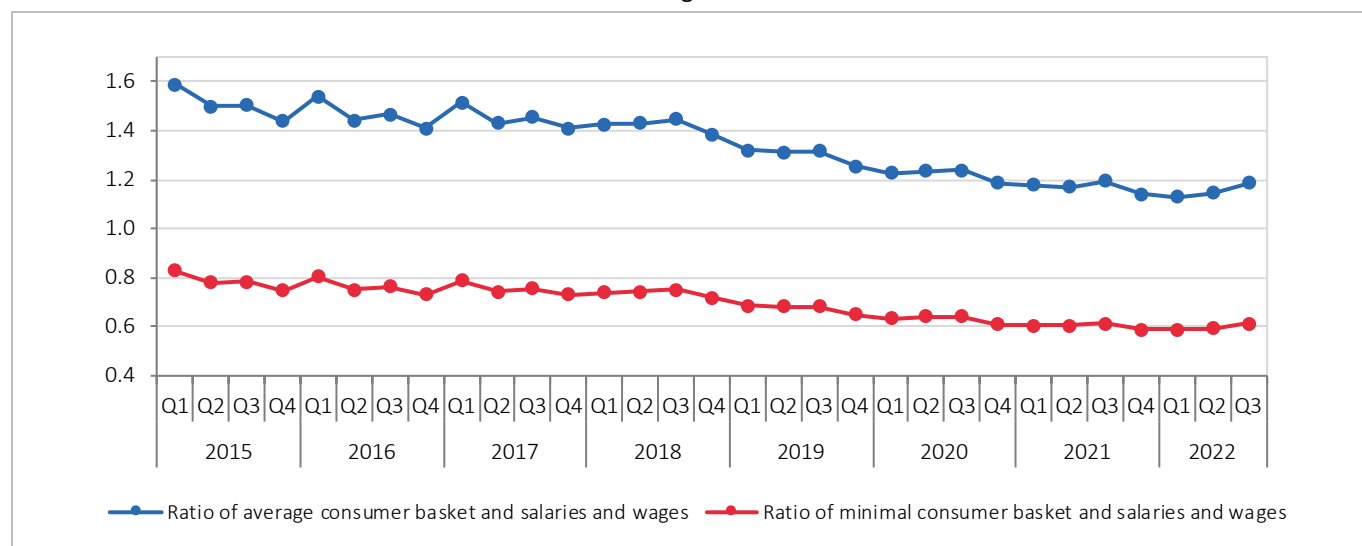


Chart 9.4. Ratio of consumer basket¹⁵ and net salaries and wages



Increased population living standard over 2015–2021 is primarily the result of a dynamic growth of salaries and wages. In 2015, the ratio of the average consumer basket and average net salaries and wages was 1.51, while in 2021 it was 1.17, indicating that, while in 2015 1.51 of the average salaries and wages was needed for the average consumer basket, in 2021 this ratio grew so that 1.17 of the average salaries and wages was necessary for the average consumer basket.

The ratio of net salaries and wages and average consumer basket in the third quarter of 2022 indicates that the purchasing power fell slightly, when compared with the previous quarter. To cover the average consumer basket in the third quarter of 2022 1.19 average salaries and wages (in the second quarter of 2022, 1.15), and to cover the minimum consumer basket only 0.61 of average (in the second quarter 0.59).

When compared with the same quarter of the previous year, the ratio of net salaries and wages and average consumer basket remained unchanged (1.19). as well as the minimum average consumer basket of 0.61 of average salaries and wages, which is at the same level as in the third quarter of 2021.

Observed by towns, in the third quarter of 2022, purchasing power (ratio of the average consumer basket and average salaries and wages) above the average of the Republic (1.19) was recorded in Belgrade (0.98), Novi Sad (1.12), Kragujevac (1.15) and Nis (1.16), while in other statistically monitored towns, average salaries and wages covered the minimum, but not average household consumer basket.

¹⁵ *Minimum consumer basket* – refers household consumption, which provides for basic living and working capacity of household members, bearing in mind the optimal biochemical composition of food (carbohydrates, proteins, fats and calories). The total value of the minimum consumer basket is the sum of expenses for food and other products and services making up individual household consumption.

Average consumer basket – refers to the consumption of products and services of the individual consumption of an average household.

Since January 2011 New Average and New Minimum Consumer Basket have been published, which are calculated starting with January 2018 according to the new methodology of the Statistical Office of the Republic of Serbia.

10. TOURISM

Tourism, having a multidimensional and complex nature, is an activity intertwined with many other economic activities, as, besides providing accommodation and restaurant services, indispensable activities related to tourism are the following ones: transport, cultural and recreational activities, payment operations, etc. It not only promotes and forms the national identity of a country but it also plays a big role in its economy – in some regions it is even the only factor for creating employment for the local population, and generally, the only factor of sustainable development — all the reasons to deserve special analytical attention.

10.1. TOURISM OVERNIGHT STAYS

Tourism in the Republic of Serbia started its expansion in 2015, primarily by means of incentive measures of domestic tourism, but also by increased interest of foreign tourists in this period. Expressed in number of overnight stays, tourist turnover was going up until 2019, when a record number of 10.1 million overnight stays was achieved. The year 2020 brought contraction of tourism activity and a fall of the number of overnight stays of 6.2 million, where domestic tourists spent almost 5 million, and foreign ones about 1.3 nights. The year 2021 brought recovery and the number of overnight stays grew by 8.2 million. Even though domestic tourists were predominant in the number of overnight stays, there were twice more foreign tourists in our country (2.4 million) than in 2020.

In the third quarter of 2022, the number of spent tourist nights amounted to 4.3 million, by 29.2% more than in the third quarter of 2021. Domestic tourists accounted for 63.7% and foreign ones for 36.3% of the total number of overnight stays.

Chart 10.1. Tourist overnight stays – domestic, foreign and total; quarterly and annual data

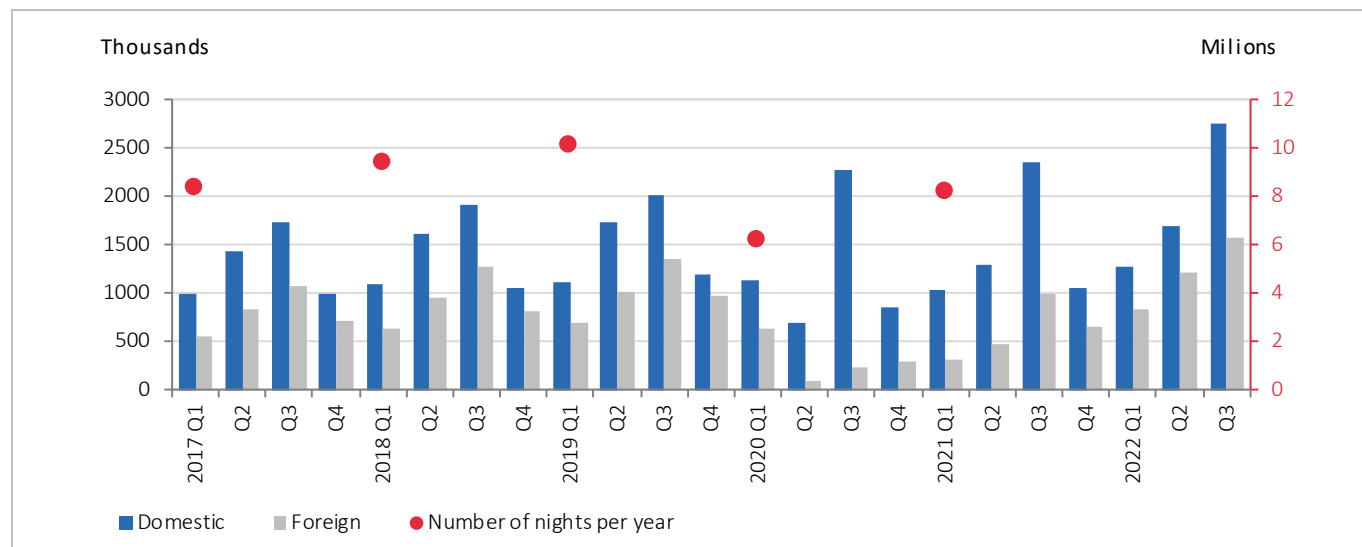


Table 10.1. Tourist overnight stays (comparison with the same period of the previous year)

| | 2020 | | | | 2021 | | | | 2022 | | |
|-------------------|-------|------|-------|------|------|-------|-------|-------|-------|-------|-------|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Total | 98.3 | 28.1 | 74.9 | 52.8 | 76.1 | 228.4 | 133.3 | 148.2 | 156.3 | 164.1 | 129.2 |
| Domestic tourists | 101.5 | 39.3 | 113.0 | 71.1 | 91.9 | 188.5 | 103.6 | 123.5 | 122.2 | 130.8 | 117.2 |
| Foreign tourists | 93.2 | 8.9 | 17.9 | 30.2 | 48.3 | 535.8 | 412.6 | 220.0 | 270.1 | 253.8 | 157.5 |

10.2. MAJOR TOURIST RESORT

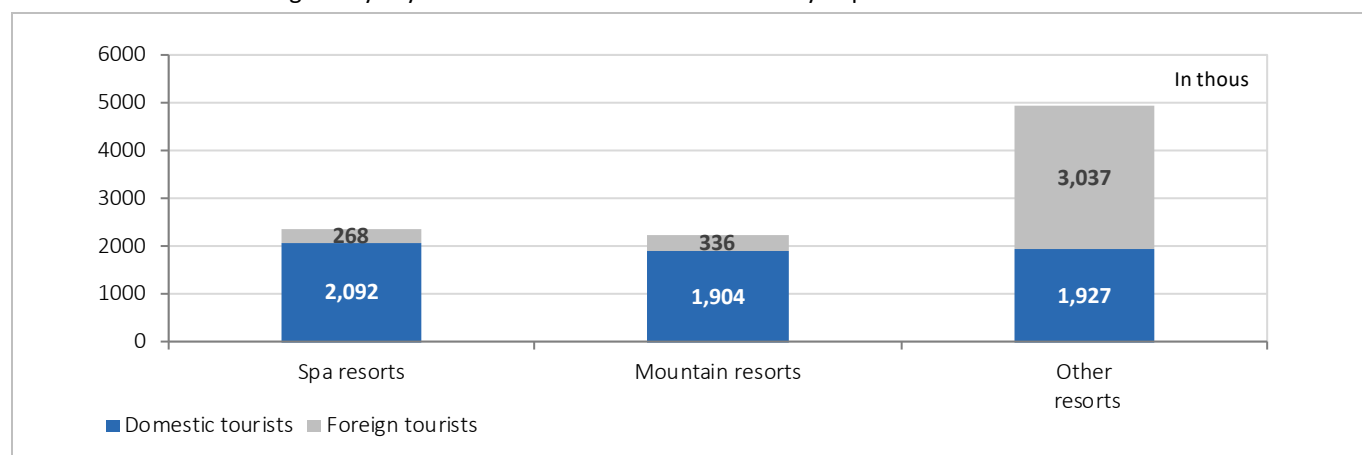
Expressed in number of tourist overnight stays¹⁶, the most frequently visited tourist resorts in the first nine months of 2022 were **Other tourist resorts**, with 5.0 million overnight stays (or about 52% of total overnight stays), by 34.5% more than in the first nine months of 2021. This category comprises Belgrade (2.3 million overnight stays) and larger towns of Serbia (Novi Sad, Subotica, Nis). Most of the visitors to Belgrade were foreign tourists (84%), and a similar situation was recorded in Novi Sad and Subotica, where about 60% of visitors were from abroad.

Spa resorts, second by category in a row of resorts according to the number of tourist overnight stays in the first nine months of 2022 recorded 2.4 million overnight stays, by 30.5% more than in the first nine quarters of 2021. Tourists were mainly from Serbia (88.6%), and the most visited was Sokobanja with 607.5 thousand visitors, followed by Vrnjacka banja (583.7 thousand), Banja Vrdnik (157 thousand), Lukovska Banja (143 thousand), and other spas.

In Mountain resorts in the first nine months of 2022 there were 2.2 million overnight stays (or 23.4% of the total number of overnight stays), by 29.7% more than in the same period of the previous year. Zlatibor attracted the largest number of tourists (505.3 thousand), who were mostly from Serbia (389.5 thousand). Kopaonik recorded 481 thousand tourist overnight stays, of which most were from Serbia (385.6 thousand). These two mountains accommodated about 44% of the total number of tourists who spent nights in mountain resorts.

Almost all tourist resorts saw a growth of the number of tourist overnight stays, compared to the same period of 2021, and mostly in Gamzigrad banja (index 228.8), Golija (index of 131.7%), Novopazarska banja (index of 91.3%), and Vrsac (index of 84.5%).

Chart 10.2. Tourist overnight stays by selected tourist resorts over January-September 2022



10.3. COUNTRY OF ORIGIN OF FOREIGN TOURISTS

In the period January-September 2022, the number of foreign tourist overnight stays increased by 50.4%, compared with the same period of the previous year. In the first nine months of 2022 tourists from about fifty different countries visited Serbia. Tourists from Europe were the most numerous to have spent nights (78.3%).

Three countries which tourists spent the largest number of nights were the Russian Federation (360.2 thousand), Turkey (315.4 thousand), and other non-European countries (275.7 thousand). Visitors from Bosnia and Herzegovina were at the fourth place (254 thousand), then from Germany (191.8 thousand), Montenegro (151.7 thousand) and North Macedonia (147.2 thousand). Overnight stays of tourists from these seven countries account for almost a half of the total number of nights spent in the first nine months of 2022.

¹⁶ The sum of data by type of resorts (spas, mountains, other resorts) does not give the correct number of tourist overnight stays in the Republic of Serbia knowing that the areas of some tourist resorts belong at the same time to different resorts (e.g. they are at the same time spa and mountain resorts).

For the purpose of comparison, chart 10.4 presents the number of tourist overnight stays over January – September 2021, when tourism was still under the negative influence of the coronavirus epidemic.

Chart 10.3. Foreign overnight stays by countries they came from, January – September 2022

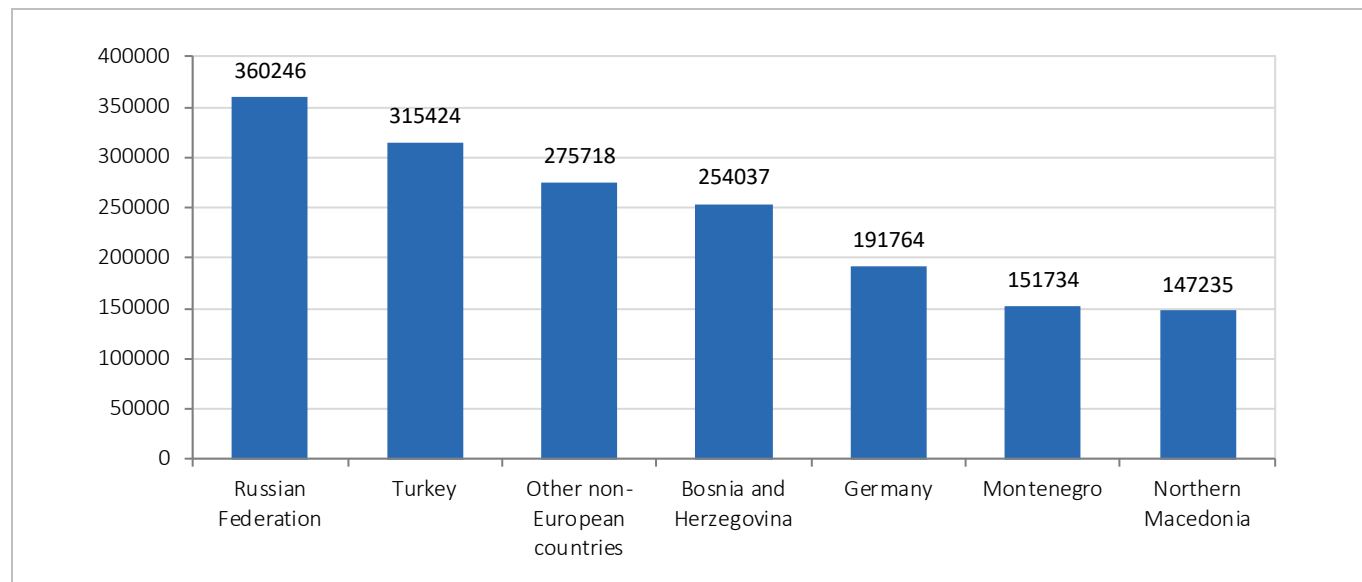
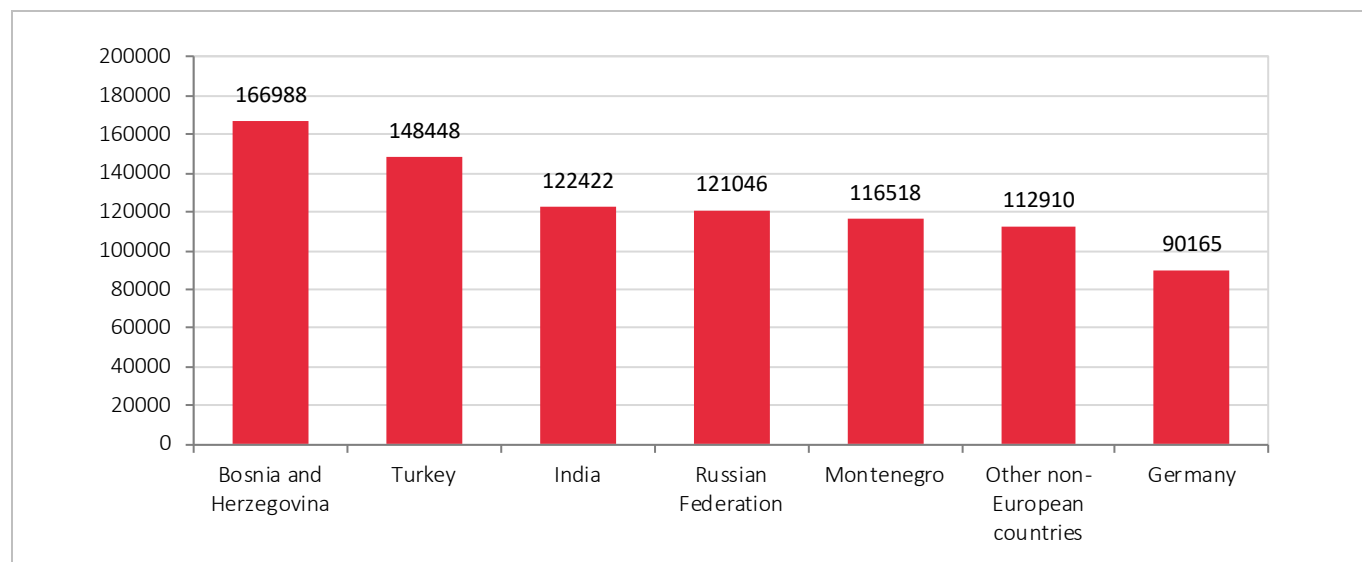


Chart 10.4. Foreign tourist overnight stays by countries they came from, January – September 2021



Note: in all the publication of the Statistical Office of the Republic of Serbia. Since 2022 data on tourism turnover have been published on the basis of the processing of data retrieved from the administrative source, Central Information System in Catering and Tourism (eTourist). Until December 2021 included, data were collected, processed and published on the basis of a statistical survey on tourist arrivals and overnight stays in accommodation facilities (TU-11).

All indices of tourism turnover (tourist arrivals and overnight stays) in 2022 are calculated based on the data of the Central Information System in Catering and Tourism (eTourist) for 2022 and 2021. With the change of data source, and therefore of the coverage, the survey-based results (TU'-11, for the previous year) and those from the administrative source (eTourist) are not comparable.

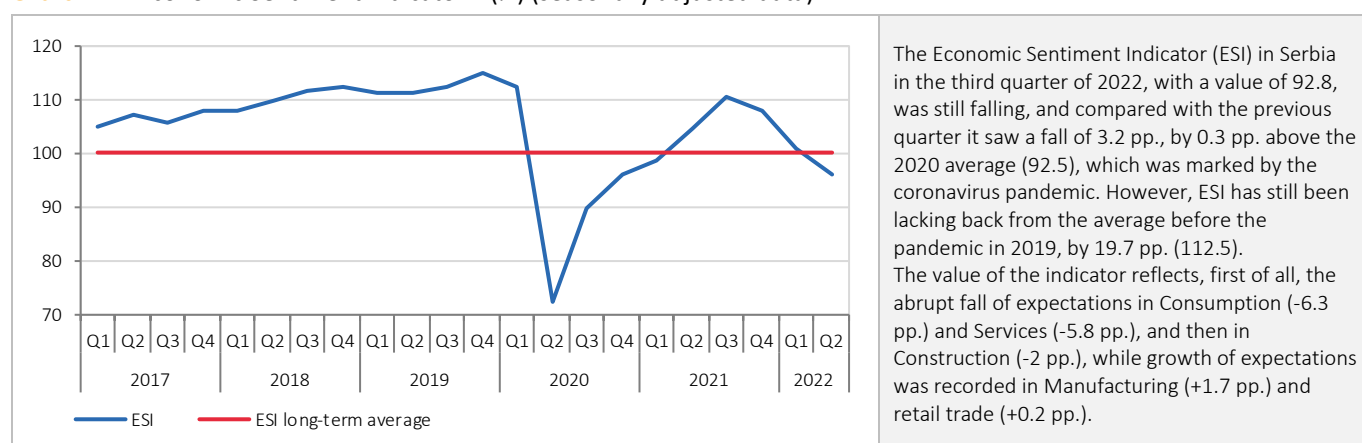
11. ECONOMIC SENTIMENT INDICATOR

11.1. ECONOMIC SENTIMENT INDICATOR - ESI

Economic Sentiment Indicator - ESI is a composite indicator which purpose is to present producers' and consumers' perceptions about economic movements and economic stability. As expectations of business subjects can be an important signal of changes in economic trends, this indicator is used to assess economic situation, make flash estimates, for scientific and analytical use, as well as for international comparisons and creating economic policies.

ESI has been developed by the General Directorate for Economic and Financial Affairs of the European Commission (DG ECFIN). It is obtained through five different surveys of producers and consumers, which attitudes provide a reliable indication of economic movements, based on which confidence indicators are created. Confidence indicators of the analysed sections are weighted in order to reflect as good as possible their influence on economic activity – manufacturing 40%, service activities 30%, household consumption 20%, construction 5% and retail trade 5%. A value of ESI index exceeding 100 indicates improvement or economic activity, while that below 100 suggests decline.¹⁷

Chart 11.1. Economic Sentiment Indicator¹⁸ (%) (seasonally adjusted data)



Source: European Commission, processing: Statistical Office of the Republic of Serbia. Quarterly data represent quarterly average.

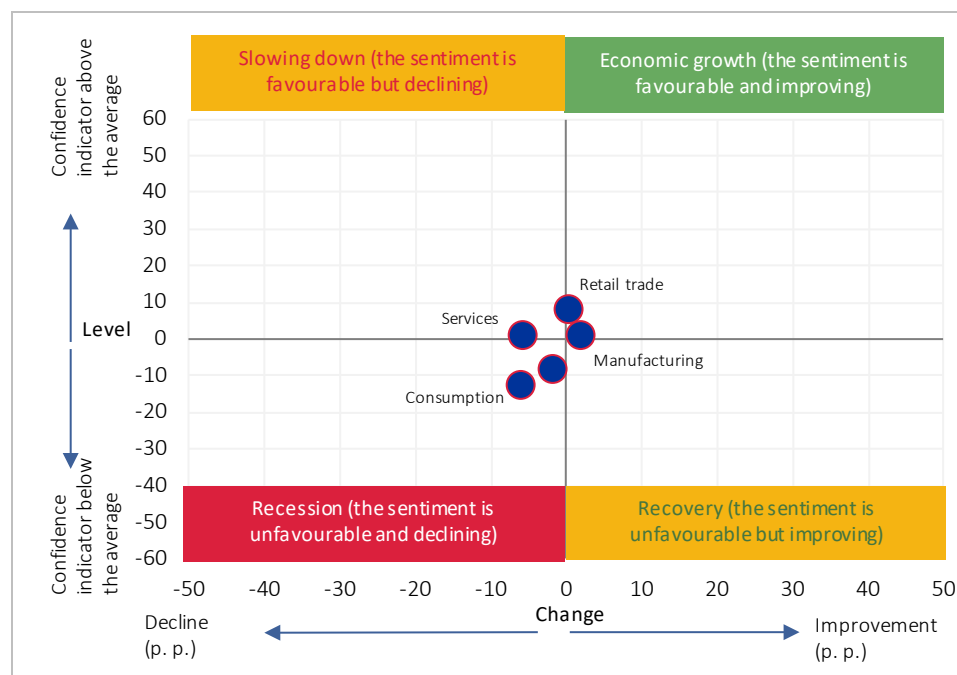
Table 11.1. Confidence indicators by sections and Economic Sentiment Indicator – growth in relation to long-term average (%)

| Confidence indicators | Minimum | | Average | Maximum | | 2021 | | | | 2022 | | |
|-------------------------------------|----------------|-------------|--------------|----------------|--------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|
| | Quarter | Value | | Quarter | Value | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Manufacturing | Q2 2020 | -9.3 | 3.9 | Q3 2018 | 8.0 | 0.0 | 1.6 | 4.5 | 6.6 | 0.2 | -0.7 | 1.0 |
| Services | Q2 2020 | -40.5 | 6.7 | Q2 2016 | 16.2 | -0.1 | 8.1 | 14.3 | 8.0 | 6.7 | 7.1 | 1.3 |
| Retail trade | Q2 2020 | -11.7 | 8.2 | Q4 2019 | 16.9 | 4.9 | 7.5 | 9.6 | 7.3 | 8.4 | 7.9 | 8.1 |
| Construction | Q3 2013 | -40.9 | -10.8 | Q3 2019 | 6.9 | -4.8 | -2.1 | -2.0 | -1.5 | -0.9 | -6.0 | -8.0 |
| Consumption | Q4 2014 | -20.6 | -4.5 | Q1 2020 | 10.7 | 4.1 | 5.7 | 6.8 | 2.2 | 2.3 | -6.0 | -12.3 |
| <i>Economic Sentiment Indicator</i> | <i>Q2 2020</i> | <i>72.3</i> | <i>102.5</i> | <i>Q4 2019</i> | <i>115.0</i> | <i>98.4</i> | <i>104.5</i> | <i>110.4</i> | <i>107.7</i> | <i>100.8</i> | <i>96.0</i> | <i>92.8</i> |

¹⁷ ESI is calculated as an index with a mean value of 100 and standardised deviation of 10. More on the methodology on: https://ec.europa.eu/info/sites/default/files/bcs_user_guide.pdf

¹⁸ Data for the Economic Sentiment Indicator (ESI) have been revised in line with the improved methodology of data seasonal adjustment, which has been in use since April 2022.

Chart 11.2. Economic Sentiment Tracer

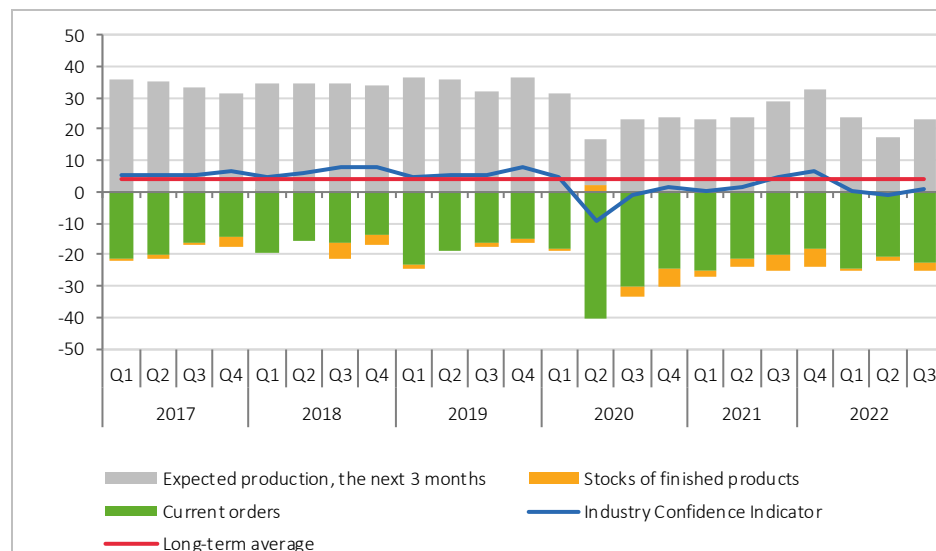


The Economic Sentiment Tracer, created on the basis of seasonally adjusted confidence indicators, shows that the sections of Consumption and Construction are in the recession phase, characterised by unfavourable climate with declining tendency, while Retail trade is in the phase of economic growth.

11.2. INDUSTRY CONFIDENCE INDICATOR

The industry confidence indicator includes the responses of economic subjects on contracted orders, expected production and stocks of finished products.

Chart 11.3. Industry Confidence Indicator (%) (seasonally adjusted data)

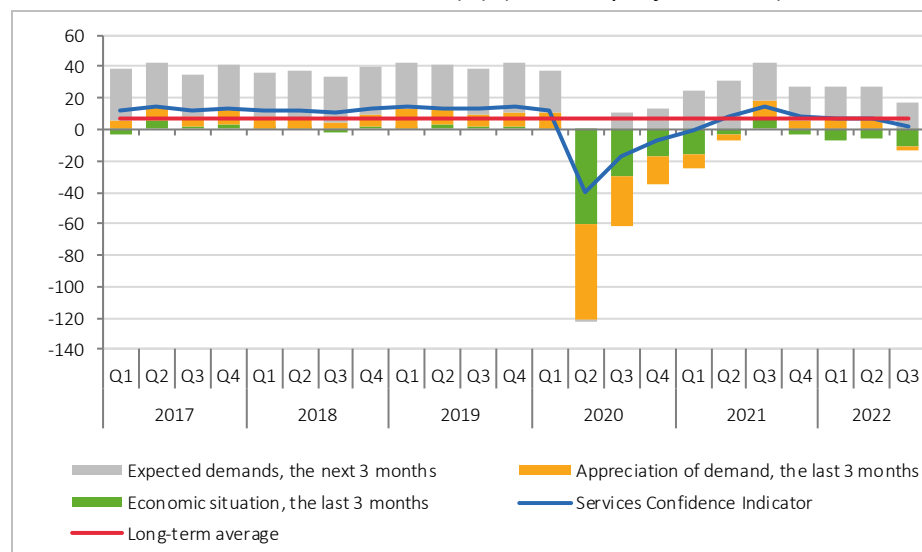


The Industry Confidence Indicator – ICI in the third quarter of 2022 amounted to 1% or 1.7 pp. more than in the previous quarter, and by 2.9 pp. under the long-term average. The value of this indicator reflects further negative businessmen's appraisals concerning current orders (-2 pp.), as well as stocks of finished products (-1.3 pp.), while the expectations are slightly more optimistic regarding production in the next quarter (+ 5.8 pp.).

11.3. SERVICE CONFIDENCE INDICATOR

The survey in services is made of questions about the economic situation, current and expected demand for services.

Chart 11.4. Service Confidence Indicator (%) (seasonally adjusted data)



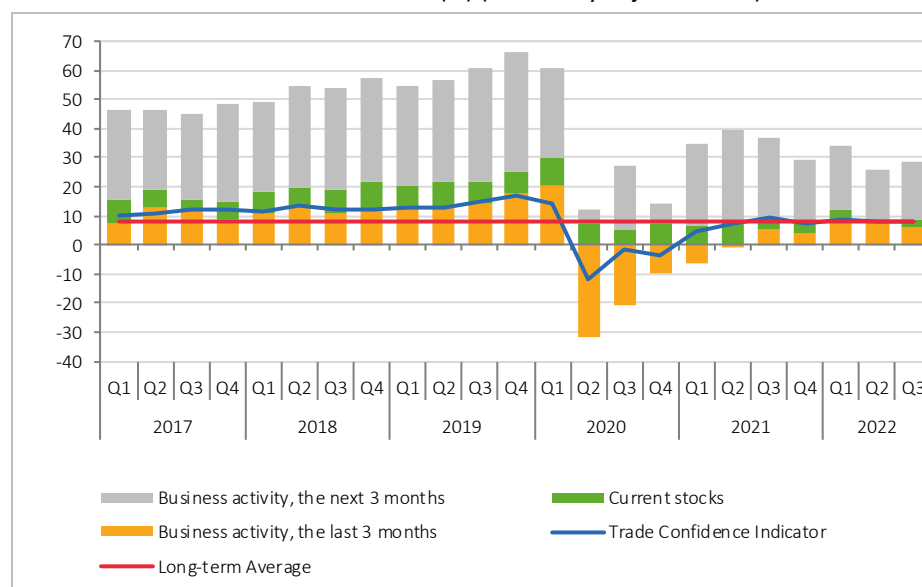
The Service Confidence Indicator – *SCI* saw a fall from the beginning of the year and in the third quarter of 2022, with a value of 1.3%, by 5.8 pp. lower than in the previous quarter and by 5.4 pp. under the long-term average.

All three components of this indicator saw fall, mostly the appraisal concerning demand in the previous quarter (-10.3 pp.), and then the appraisal of the economic situation in the last three months (-4 pp.) as well as the appraisal of demand in the next three months (-3.1 pp.).

11.4. TRADE CONFIDENCE INDICATOR

The survey in retail trade is made of questions about the current and future business activity of enterprises and stock balance.

Chart 11.5. Trade Confidence Indicator (%) (seasonally adjusted data)



The Trade Confidence Indicator – *TCI* in the third quarter of 2022, with a value of 8.1% saw a minimum growth of 0.2 pp. in relation to the previous quarter, being approximately at the same level of the long-term average.

While the opinions are optimistic as to business activity in the next three months and current stocks (growth in relation to the previous quarter amounts to 2.7 and 1 pp. respectively), slight fall is noted in the appraisal for business activity in the the last quarter (-1.1 pp.).

11.5. CONSTRUCTION CONFIDENCE INDICATOR

The survey in construction is made of questions about contracted orders and expected employment.

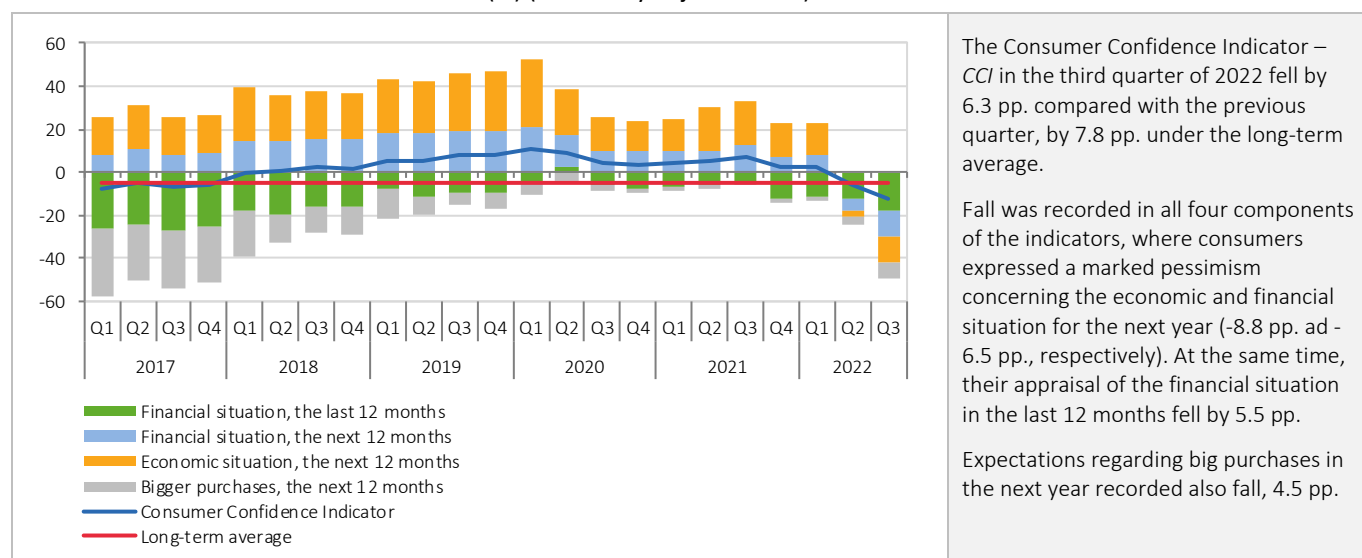
Chart 11.6. Construction Confidence Indicator (%) (seasonally adjusted data)



11.6. CONSUMER CONFIDENCE INDICATOR¹⁹

The survey of household consumption is made of questions about household financial situation, general economic situation and expectations relative to bigger purchases.

Chart 11.7. Consumer Confidence Indicator (%) (seasonally adjusted data)

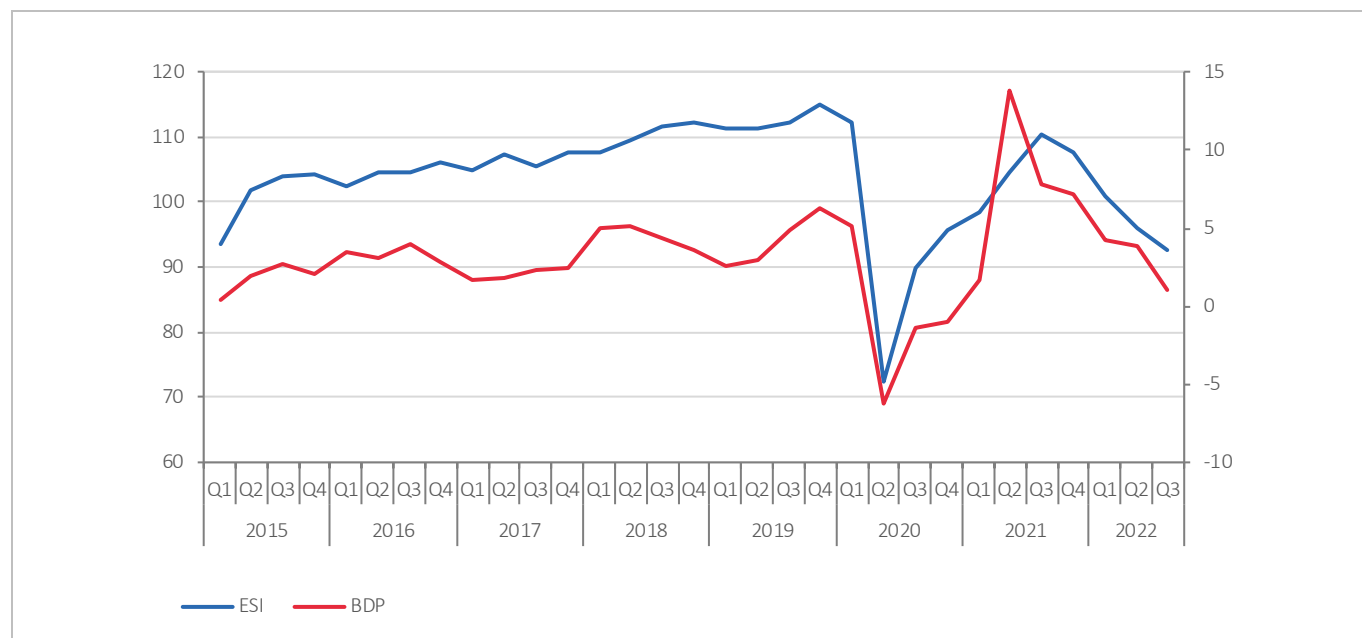


¹⁹ The European Commission made changes in 2018 to the methodology for the calculation of the Consumer Confidence Indicator, therefore the data have been revised accordingly.

11.7. CORRELATION OF ESI AND GDP OF SERBIA

Researchers and decision-makers in economic matters often include ESI as an explanatory variable with relevant pieces of information to model the economic growth, particularly if one takes into account that the data on the economic climate are available before most of the economic indicators. Gross Domestic Product (GDP) is the reference (explanatory) series that is most frequently used, because it reflects the movements in the economy as a whole. When considering that ESI represents a coincident indicator (showing changes at the same time when the changes are shown by the reference series), it can be concluded that it follows relatively well the GDP trend, which is confirmed also by the correlation coefficient of 0.69.

Chart 11.8. Correlation of ESI and GDP of Serbia



11.8. ECONOMIC SENTIMENT INDICATOR OF THE EUROPEAN UNION

Economic expectations in most of EU member states declined in the third quarter of 2022 (relative to the previous quarter), which made ESI go down by 7.7 p.p. (from the value of 95.3). The largest fall in expectations in the EU was recorded in Consumption (-8 pp.), then in Manufacturing (-5 pp.).

Chart 11.9. Economic sentiment indicators



HOW TO INTERPRETE THE TRACER?

The tracer scale of the chart ranges from 60 to 120 (average = 100). The most recent quarterly outcomes (Q3 2022) are compared with the previous quarterly outcomes (Q2 2022) and long-term average (= 100) of the corresponding series of confidence indicators. Developments far from the center reflect confidence indicator improvement, and close to the centre its decline.

12. REGIONAL ECONOMIC ASYMMETRIES

The starting point in realizing various aspects of regional asymmetries is the status of cities and municipalities of Serbia according to Regulation on establishing *List of Regional Development and Local Government Units for 2014* (Official Gazette of RS, no 104/2014). In compliance with the Regulation, excluding Beogradski region that comprises no municipality with the status of undeveloped area, in other three regions, number and size of undeveloped municipalities varies – Region Vojvodine has only one municipality in the group of extremely underdeveloped (out of 46 municipalities), Region Southern and Eastern Serbia has even 30 (out of total of 53), and in Region Sumadija and Western Serbia, such status is recorded in 13 out of 53 municipalities.. On the other hand, there is no municipality in Region Vojvodina with the status of devastated municipality (devastated means that development level is below 50% of the Republic average – see Glossary), while in Region Sumadija and Western Serbia, the mentioned status is recorded in three municipalities, and in Region Southern and Eastern Serbia, even 16 municipalities.

Unequal economic development in Serbia in the last several decades has contributed to deeper, already existing territorial inequalities. Regional polarization is apparent at several levels – undeveloped area, developed centre and insufficiently developed periphery. Regional disproportions – expressed in economic, social, demographic and infrastructure indicators – reflect characteristics of economic and social system of the country.

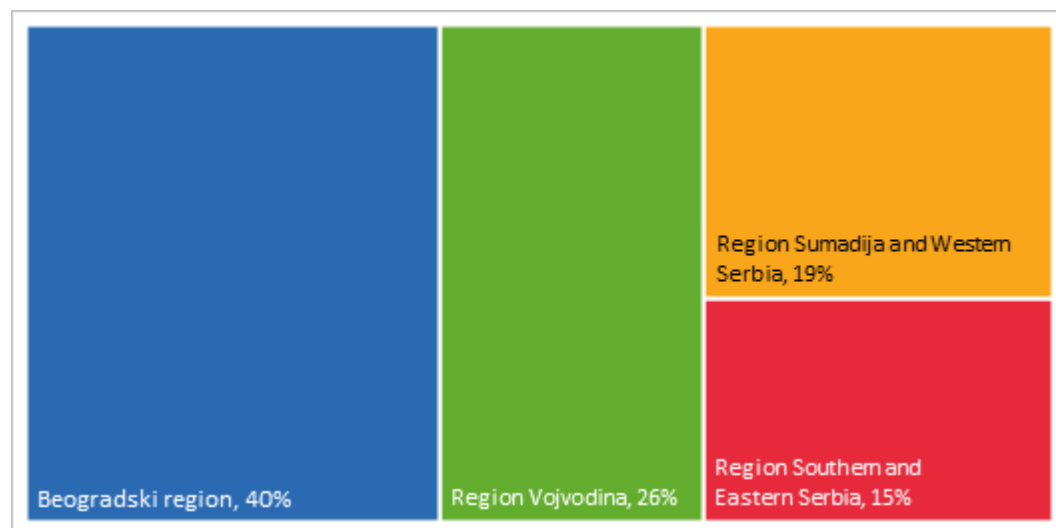
■ Gross domestic product

Regional gross domestic product presents primary statistical indicator for estimating economic performances of the region and effectiveness of regional policies and programs directed to decreasing the gap among the regions.

Out of total GDP in 2021, observed by level of NSTU 2 regions, the greatest realized GDP was in Beogradski region (40.2%), followed by Region Vojvodina (25.6%), Region Sumadija and Western Serbia (18.3%) and Region Southern and Eastern Serbia (14%).

Knowing that Beogradski region covers 3.7% of the area inhabited by 24% of the population of Serbia, it is clear that it is also the region with the highest GDP per capita (1 492 000 RSD / per capita, i.e. 62.6 % above the republic average or almost double than in Region Southern and Eastern Serbia). Other regions record GDP per capita under the average, i.e. Region Vojvodina -3.5%, Region Sumadija and Western Serbia -31.6% and Region Southern and Eastern Serbia -27.9%.

Chart 12.1. Share of the region in the national GDP, 2021



■ Average salaries and wages

Level of regions' development, measured by average net salaries and wages varies in ratio 1.5:1, i.e. the highest salaries and wages are recorded in Beogradski region, and lowest ones in Region Sumadija and Western Serbia. Average net salaries and wages in the period January - September 2022 in Beogradski region amounted to RSD 92 540, or 126% of RS average (RSD 73 456), in Region Vojvodina, they were insignificantly below RS average (RSD 69 742, or 95% of RS average), while in Region Southern and Eastern Serbia and Region Sumadija and Western Serbia, they were about 87% and 84% of the Republic average (RSD 63 579 and RSD 61 629, respectively). In all regions, average salaries and wages recorded growth relative to the same quarter of the previous year, and the greatest absolute and relative increase was noted in Beogradski region, by 15.6%.

In 78 municipalities, average net salaries and wages were below 80% of the Republic average, i.e. in particular Belgrade municipalities, average salaries and wages were more than double relative to municipality of Bojnik (with the lowest average salaries and wages of RSD 49 494). Moreover, at the bottom of the list are the municipalities of Presevo with an average salary of RSD 50 364, Vlasotince (51 279) and Svrlijig (51 692).

■ Labour market

The correlation of unemployment rate and development level of the region is very high, and in accordance with the mentioned, Region Southern and Eastern Serbia, with unemployment rate of 11.7% in the period January-September 2022, by 23.4% exceeds the average of Serbia (9.5%). On the other hand, in Beogradski Region, unemployment rate was the lowest, 7.9%, i.e. 16.8% below the national average. Additionally, referring to employment rate, it is the highest in Beogradski region (54.1% or 7.5% above the average of Serbia), while in Region Southern and Eastern Serbia, noted was the lowest employment rate of 45.7%, or 9.2% below the Republic average (50.3%).

In the period January-September 2022, Region Sumadija and Western Serbia recorded the largest share in total employment (27.5%), but this region recorded also almost a third of total employment (31.1%). Region Southern and Eastern Serbia with 19% has the lowest share in total employment in Serbia, participating with 24.1% in total unemployment in Serbia. (according to the Labour Force Survey).

■ Export activity

In contrast to other indicators, in the period January-September 2022, Beogradski region was not on the first place regarding total export of Serbia (share of 23.3%). Region Vojvodina is on the first place with the share of 34.4% in export, followed by Region Sumadija and Western Serbia (21.5%) and Region Southern and Eastern Serbia (20.7%). Export per capita reflects regional asymmetries – Region Vojvodina records the export of EUR 3 766 per capita and it is by 28.8% above the Republic average and it exceeds by 1.6 times the export value per capita in Region Sumadija and Western Serbia (EUR 2 295), which is by 21% below the average of the Republic. Region Vojvodina, as the leading exporter in the first nine months of 2022, recorded the greatest share in export²⁰ and the greatest share of agricultural and food products (22%), primarily cereals (33.1%), the most important export product being maize (16% of export of agricultural and food products).

■ Demographic structure

According to the last available data for 2021, population density in Beogradski region is by 6.8 times greater than average population density in Serbia, while in Region Southern and Eastern Serbia, population density was the lowest – 28% below the Republic average. Although all regions participate relatively equally in total population of Serbia, interregional differences are particularly apparent. For example, in eight towns in Region Vojvodina, lives even over a half of total population of Vojvodina (53.7%). However, the most obvious population inequality is in other two regions: Region Sumadija and Western Serbia comprises 10 towns in which 55% of total population of the Region lives, while in 13 undeveloped municipalities, only 13 % of population lives. This ratio is even more noticeable in Region Southern and Eastern Serbia, as 56% of population lives in 9 cities, while even in 30 underdeveloped municipalities live 31% of population. Additionally, due to economic migrations, number of population in Beogradski region is constantly increasing (by 1.8% between 2011 and 2021), while the number of population in other three regions is constantly decreasing. Simultaneously, it means that differences in population density will

²⁰ According to the Standardized International Trade Classification (SITC).

be even greater as population in Region Southern and Eastern Serbia is becoming more and more fragmented, while population density in Beogradski region becomes increasingly denser.

■ Transport infrastructure

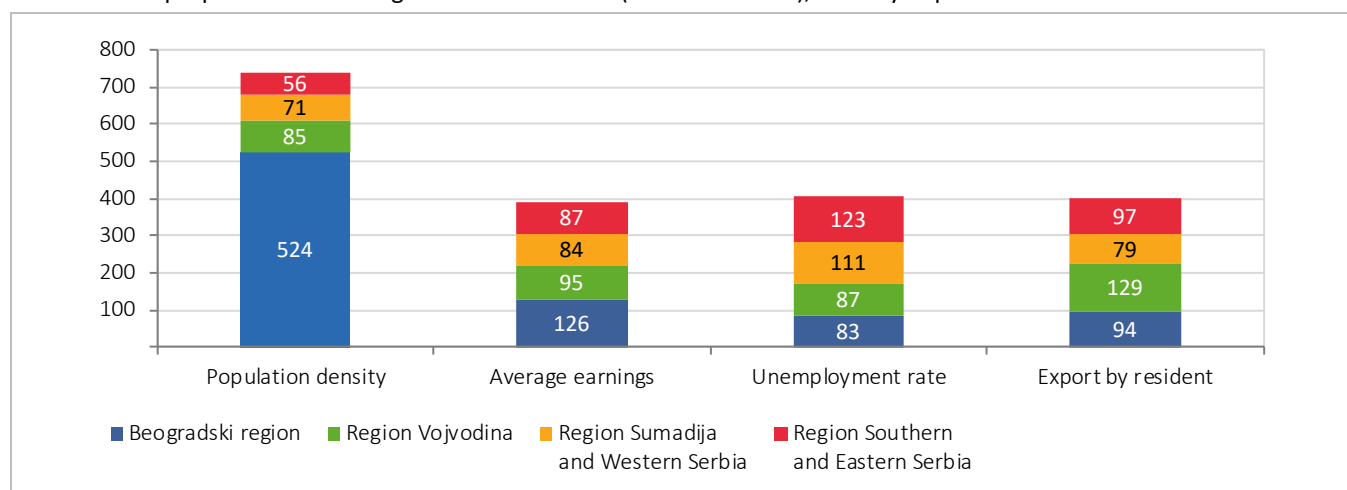
In the Republic of Serbia, there are huge regional and interregional differences regarding infrastructure equipment (transport, telecommunication and water management, i.e., accompanying supra structures). In roads' quality, telecommunication and modern living conditions, differences are, first of all, manifested in underdeveloped south area and more developed north area of Serbia. The unsatisfactory condition of the road network is particularly evident in the municipal (local) roads, necessary for the daily functioning, development and activation of municipalities and settlements. This is clearly indicated by the fact that 38 municipalities² have an out-of-band participation of local roads with a modern roadway, while four municipalities account for less than 20%, which are actually undeveloped and devastated areas facing the biggest developmental problems. Also, *the car renewal rate* (the number of cars registered for the first time in relation to the total number of registered cars) as an indicator of socio-economic inequalities at the regional level varies in 2021 from 7.2 in Region Southern and Eastern Serbia to 9 in Beogradski region, where a third part of the vehicles was registered. The number of first-time registered cars compared to the number of inhabitants over January-September 2022 reflects a similar ratio, with Beogradski region leading up to 32% above the average of the Republic of Serbia versus Region Southern and Eastern Serbia, with 23% below the national average.

Regional asymmetry is seen through the relation between the extreme (the highest and the lowest) values of the key indicators. For example, the highest density of population is recorded in Belgrade and exceeds 9 times the population density in Region Southern and Eastern Serbia, where it is the lowest (Table 12.1)

Табела 12.1. Extreme values and indicators of regional asymmetry, January-September 2022

| Indicators | Population density, km ² , 2021 | GDP/per capita, 2021 | Average net salaries and wages | Unemployment rate | Export per capita | Demographic emptying, 2011–2021 (%) |
|---|--|--|--|--|---|--|
| | 9 : 1 | 2.3 : 1 | 1.5 : 1 | 1.4 : 1 | 1.6 : 1 | (-9.9) : (+1.8) |
| Extreme Values (the highest : the lowest) | Beogradski region: Region Southern and Eastern Serbia | Beogradski region: Region Southern and Eastern Serbia | Beogradski region: Region Sumadija and Western Serbia | Region Southern and Eastern Serbia: Beogradski region | Region Vojvodina: Region Sumadija and Western Serbia | Region Southern and Eastern Serbia: Beogradski region |

Chart 12.2. Disproportions at the regional level in Serbia (RS level = 100%), January-September 2022



¹ Data relate to 2020

Table 12.2. Indicators of regional development of Serbia (NSTJ 2) (RS level = 100%)

| | 2020 | | | | 2021 ²¹ | | | | 2022 | | |
|--|-------|-------|-------|-------|--------------------|-------|-------|-------|-------|-------|-------|
| | Q1 | Q1 | Q1 | Q1 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| Beogradski region | | | | | | | | | | | |
| Average salaries and wages in dinars | 124.0 | 123.5 | 123.3 | 124.1 | 124.0 | 123.8 | 124.6 | 126.2 | 125.8 | 125.8 | 126.3 |
| Employment rate | 109.0 | 104.1 | 102.0 | 102.6 | 109.5 | 109.1 | 107.2 | 106.2 | 106.7 | 107.1 | 108.9 |
| Unemployment rate | 73.2 | 83.6 | 86.7 | 89.9 | 75.0 | 81.1 | 83.8 | 81.6 | 81.1 | 84.3 | 84.3 |
| Exports per capita in euros | 99.5 | 110.4 | 97.6 | 98.8 | 94.2 | 94.0 | 98.3 | 97.9 | 92.4 | 92.5 | 98.3 |
| Number of first- time registered passengers' cars per 1000 inhabitants | 130.7 | 137.3 | 130.0 | 125.7 | 125.0 | 136.8 | 124.3 | 125.4 | 126.3 | 135.8 | 132.6 |
| Region Vojvodina | | | | | | | | | | | |
| Average salaries and wages in dinars | 95.2 | 94.9 | 95.2 | 95.5 | 95.2 | 94.8 | 94.5 | 95.1 | 95.1 | 94.9 | 94.9 |
| Employment rate | 97.7 | 97.5 | 100.0 | 99.2 | 101.9 | 99.2 | 101.6 | 102.8 | 99.8 | 99.4 | 101.6 |
| Unemployment rate | 86.6 | 82.2 | 80.0 | 87.9 | 85.2 | 86.5 | 83.8 | 89.8 | 91.5 | 86.5 | 83.1 |
| Exports per capita in euros | 134.3 | 134.9 | 130.8 | 135.4 | 138.2 | 133.1 | 126.8 | 124.6 | 127.4 | 130.6 | 128.3 |
| Number of first- time registered passengers' cars per 1000 inhabitants | 95.1 | 91.7 | 91.1 | 94.7 | 94.4 | 89.7 | 90.2 | 94.1 | 95.2 | 90.5 | 88.6 |
| Region Sumadija and Western Serbia | | | | | | | | | | | |
| Average salaries and wages in dinars | 84.8 | 85.1 | 85.5 | 84.7 | 84.9 | 85.2 | 85.2 | 84.2 | 83.9 | 83.9 | 83.9 |
| Employment rate | 101.4 | 102.3 | 102.6 | 103.6 | 98.9 | 100.0 | 101.0 | 100.4 | 102.2 | 99.4 | 98.6 |
| Unemployment rate | 118.6 | 106.8 | 107.8 | 104.0 | 114.8 | 122.5 | 110.5 | 109.2 | 109.4 | 116.9 | 109.0 |
| Exports per capita in euros | 81.3 | 74.5 | 84.2 | 83.1 | 80.5 | 81.2 | 79.8 | 77.8 | 78.0 | 78.6 | 79.0 |
| Number of first- time registered passengers' cars per 1000 inhabitants | 95.2 | 94.2 | 97.0 | 97.5 | 98.9 | 94.5 | 101.0 | 99.7 | 96.9 | 94.3 | 100.2 |
| Region Southern and Eastern Serbia | | | | | | | | | | | |
| Average salaries and wages in dinars | 87.6 | 88.4 | 88.2 | 87.8 | 87.8 | 88.3 | 87.9 | 85.7 | 86.6 | 86.9 | 86.1 |
| Employment rate | 90.8 | 95.6 | 93.6 | 92.6 | 88.3 | 90.3 | 88.2 | 88.4 | 89.5 | 93.1 | 89.8 |
| Unemployment rate | 126.8 | 131.5 | 133.3 | 123.2 | 131.3 | 109.0 | 127.6 | 124.5 | 124.5 | 112.4 | 133.7 |
| Exports per capita in euros | 81.4 | 76.8 | 84.2 | 78.5 | 83.3 | 89.0 | 93.9 | 99.6 | 102.3 | 97.3 | 93.1 |
| Number of first- time registered passengers' cars per 1000 inhabitants | 75.8 | 74.1 | 79.5 | 79.1 | 78.2 | 76.0 | 81.7 | 77.6 | 78.6 | 76.7 | 75.6 |

²¹ Labour market indicators - employment rate and unemployment rate, were created according to the new redesigned Eurostat methodology, which the Statistical Office of the Republic of Serbia has been conducting as a part of 2021 Labour Force Survey. The change in methodology was made on the basis of and in accordance with the new Regulation of the European Parliament and the Council, which entered into force on January 1 st, 2021. More information on methodological changes and their effects on the main statistical indicators can be found in a special publication via the link: <https://www.stat.gov.rs/vesti/20210628-anketa-o-radnoj-snazi-nova-metodologija/>



GLOSSARY

Classification of regions and local government units (municipalities) – according to the Regulation. The Regulation establishes the unique list of *regions'* development (that are by development levels classified as developed and insufficiently developed regions) and *municipalities*, classified in four groups and devastated areas. In the first group are municipalities with the development level above the Republic average; in the second group are municipalities with the development level of 80% - 100% of the Republic average, the third group comprises insufficiently developed municipalities with the level of development of 60% - 80% of the average, while in the fourth group are extremely insufficiently developed municipalities, with the development level below 60% of the Republic average.

Devastated areas are municipalities from the fourth group with the development level below 50% of the Republic average (according to the data of the authority competent for statistics and finances tasks). Classification of the regions is performed on the basis of GDP value per capita in the observed region compared to Republic average, for the referent period. Developed regions are the regions that realize gross domestic product value above the Republic average, (Beogradski Region and Region Vojvodina). Insufficiently developed regions are the ones in which GDP value is below the Republic average, (Region Sumadija and Western Serbia and Region Southern and Eastern Serbia). Additionally, status of insufficiently developed region refers to Region Kosovo I Metohija.

Demographic emptying is the term that depicts natural and mechanical population outflow in the specific geographic and administrative area.

13. AGRICULTURE

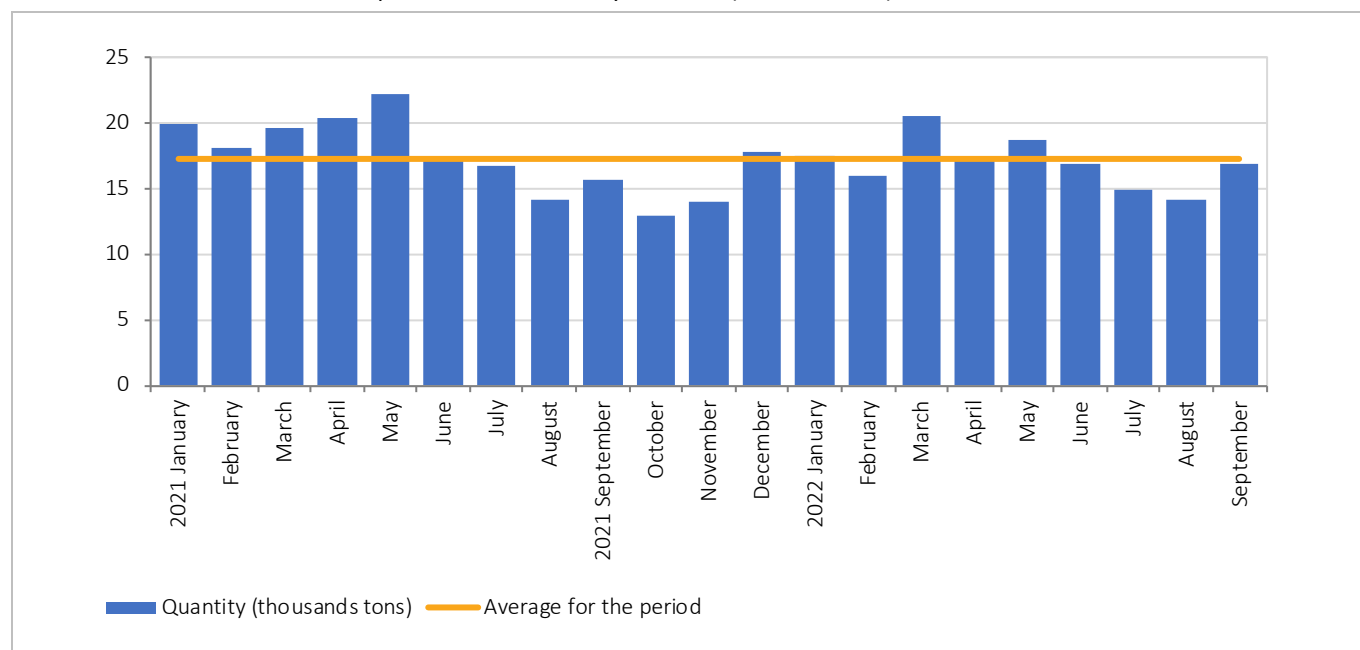
Agricultural production is made of two main branches: crop production and livestock production. Due to its specific nature, relevant data related to agricultural production are available mainly on annual basis. This issue of Trend presents the movement of occurrences in agriculture concerning livestock production (production of consumption cow milk in dairies and livestock slaughter in slaughtering houses), prices of agricultural products and intermediate goods, external trade in agricultural products, as well as expected the yield of certain crops.

13.1. PRICES OF MILK, CEREALS AND LIVESTOCK

Estimates show that agricultural holdings engaged in the production of cow milk distribute it to milk collection points (dairy factories) about 59% of total production²³. Of the quantity of cow milk that stays on the agricultural holding (about 41%) about 10% are used for feeding household members and livestock on the holding, about 22% are transformed in dairy products (mainly cheese and „kajmak“), and the rest (about 9%) is sold to direct consumers. According to the same source, losses on the holding are insignificant (up to 0.1%).

Cow milk accounts for about 97% of the total production of milk on holdings, and the remnant refers to sheep and goat milk. In the period January-September 2022 the production of consumption cow milk in dairy factories decreased by 6.8% relative to the same period of the previous year. When looking by quarters of 2022, in the third quarter of 2022 the production of consumption cow milk fell by 1.6%, compared to the same quarter of the previous year.

Chart 13.1. Production of consumption cow milk in dairy factories (in thous. tons)



²³ Survey on Agricultural Production – Livestock Production, 2021.

Purchase prices of cow milk increased by 32.7% in the period January-September of this year, compared with the same period of the previous year²⁴. In relation to the same quarter of the previous year, in the third quarter of 2022 prices of milk increased by 52.4%.

Consumer prices of milk have a growing trend in the first nine months of 2022 and were higher by 13.5% than in the same period of the previous year. Observed by quarters, the growth of consumer prices amounted to 24.0% in the third quarter of the current year, compared to the same quarter of the previous year. Based on the comparative presentation and previous analysis, it can be concluded that the purchasing prices of milk showed a tendency of faster growth over January-September 2022, compared with the same period of the previous year (increase of 32.7%), while consumer prices growth in the same period amounted to 13.5%

Purchasing prices of cow milk have a tendency to grow faster than consumer prices (table 13.1). Namely, in the first period January-June of the previous year consumer prices were 2.8 times higher than purchase done (or 184%), while they were 2.5 times higher (or 155%) in the same period of the current year.

As this issue of *Trends* analyses, besides livestock products, the production of certain crops, as well a selected categories of livestock, it is necessary to present along with their purchasing prices.

In the period January-September the **price index of cereals** amounted to 125.4%. In this period purchasing prices of wheat grew by 53.6%, while the price of maize went up by 26.3%. The price index of **industrial crops** in the same period grew by 13.0%.

Observed by **livestock categories**, in the period January-September the purchasing price of cattle grew by 27.5% and of pigs by 29.0%.

Table 13.1. Comparative presentation of purchasing and consumer prices of cow milk

| Month | Milk price, din./liter | |
|--------------|------------------------|----------------|
| | Purchasing price | Consumer price |
| January 2021 | 32.35 | 91.12 |
| February | 31.94 | 91.22 |
| March | 32.08 | 90.85 |
| April | 32.04 | 90.88 |
| May | 31.83 | 91.07 |
| June | 31.60 | 90.96 |
| July | 31.58 | 90.93 |
| August | 31.84 | 91.09 |
| September | 32.37 | 91.15 |
| October | 33.38 | 92.69 |
| November | 34.40 | 93.81 |
| December | 35.25 | 94.90 |
| January 2022 | 36.91 | 95.33 |
| February | 37.54 | 95.50 |
| March | 38.08 | 96.81 |
| April | 39.86 | 97.41 |
| May | 40.97 | 101.62 |
| June | 42.29 | 104.46 |
| July | 45.16 | 110.10 |
| August | 47.70 | 111.3 |
| September | 53.13 | 117.4 |

Table 13.2. Producers' prices indices of agriculture and fishing

| | <u>IX 2022</u> IX 2021 | <u>IX 2022</u> VIII 2022 | <u>I-IX 2022</u> I-IX 2021 |
|-------------------------|---------------------------|-----------------------------|-------------------------------|
| Agriculture and fishing | 121.8 | 101.3 | 125.4 |
| Cereals | 140.8 | 101.4 | 136.8 |
| Wheat | 146.7 | 103 | 153.6 |
| Maize | 137.9 | 100.8 | 126.3 |
| Industrial crops | 110.9 | 100.9 | 113 |
| Livestock and poultry | 132.6 | 97.3 | 126.7 |
| Cattle | 132.6 | 101.7 | 127.5 |
| Pigs | 137.5 | 94.1 | 129 |

²⁴ Those are producers' prices of agriculture and fishing – the prices at which purchase from family holding is made and prices at which legal persons engaged in agriculture sell their products.

13.2. INTERMEDIATE GOODS

A stable and successful production in agriculture depends on many factors. As far as crop production is concerned, besides adequate land tillage for high and stable yields, the used inputs are extremely important. The latter refer to seeds and seeding materials, fertilizers and protection preparations. As for the other agricultural branch, i.e. livestock production, good animal health and increase require adequate animal feed and housing facilities. To meet all these conditions one need not only human labour but also capital goods, i.e. agricultural machinery. Therefore, farmers have to have corresponding machinery or to engage others (fertilization, sprinkling, harvest, etc.). All these factors make the intermediate consumption (accounting for almost 60% of the total value of agricultural production), and their price indices are presented in table 13.3.

The total intermediate consumption, i.e. the prices of intermediate goods, capital goods and services in agriculture in the third quarter of 2022 increased by 28.7% compared to the same quarter of the previous year. Observed by groups of products, the largest price increase in the third quarter of the current year, relative to the same quarter of the previous year, was recorded in: Mineral fertilizers (126.6%), Seeds (85.8%), Plant protection preparations (24.3%) and Maintenance of facilities (16.5%).

When compared to the previous quarter of the same year, in the third quarter of the current year the total intermediate consumption decreased by 2.0%, and the largest influence was recorded in the groups: Mineral fertilizers (-10.4%) and Animal feed (6.2%).

Table 13.3. Price indices of intermediate goods, capital goods and services in agriculture

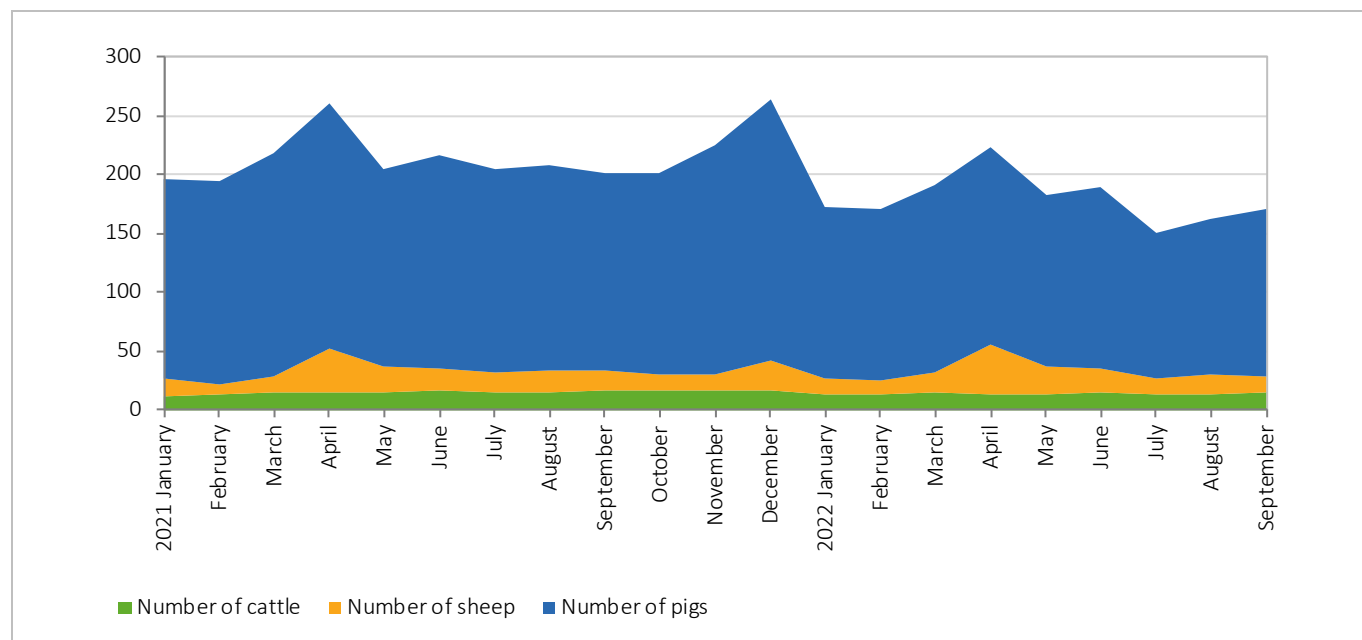
| | <u>Quarter III 2022</u> Quarter III 2021 | <u>Quarter III 2022</u> Quarter II 2022 | <u>Quarter III 2022</u> Ø 2021 |
|---|---|--|-----------------------------------|
| Total | 128.7 | 98 | 127.4 |
| Products and services for current use in agriculture | 130.3 | 97.7 | 128.5 |
| Seed | 185.8 | 130.2 | 144.5 |
| Energy commodities | 115.2 | 104.5 | 116.9 |
| Mineral fertilizers | 226.6 | 89.6 | 218.3 |
| Plant protection preparations | 124.3 | 99.6 | 127 |
| Animal feed | 111.7 | 93.8 | 114.2 |
| Equipment maintenance | 109 | 102.3 | 108.8 |
| Facilities maintenance | 116.5 | 102.2 | 118.4 |
| Other products and services | 104.5 | 100.6 | 105 |
| Products and services for investments in agriculture | 111.5 | 102 | 115.5 |
| Machinery in agriculture | 111.5 | 102 | 115.5 |

13.3. LIVESTOCK SLAUGHTER

In the Republic of Serbia, livestock are slaughtered in registered slaughtering houses and outside them, i.e. on holdings. As far as cattle are concerned, slaughter in slaughtering houses amounts to about 57% of total slaughter of this type of livestock, while pigs and sheep are slaughtered mainly outside slaughtering houses, 60% and 83%, respectively. Data on livestock slaughter in slaughtering houses include slaughter in all registered slaughtering houses in the territory of the Republic of Serbia, and amounted to 361 as of 30 September 2022. In this issue of Trends the topic of analysis will be livestock slaughtered in slaughtering houses.

In the first nine months of 2022, compared with the same period of the previous year, fall of slaughtered **cattle** in slaughtering houses was recorded, amounting to 7.0%. Observed by quarters, in the third quarter a fall of 13.8% was recorded in cattle slaughtered in slaughtering houses, compared with the same quarter of the previous year. In the category of slaughtered cattle, the largest fall in the third quarter of the current year was recorded in *cattle up to one year* (fall of 24.1% to the same quarter of the previous year). The largest share in the total slaughtering in the third quarter of this year was that of the category of cattle aged 1–2, being 75.2%.

Chart 13.2. Number of slaughtered pigs, sheep and cattle in slaughtering houses (in thous.)



The number **pigs** slaughtered in slaughtering houses in the first six months of the current year went down by 17.7% relative to the same period of the previous year. Looking by quarters, in all three quarters the number of pigs slaughtered in slaughtering houses was lower than in the same period of the previous year: by 14.9% in the first, by 15.6% in the second and by 22.9% in the third quarter. The category of slaughtered pigs, which recorded in the third quarter of the previous year the largest fall, is *pigs weighting from 25 kg to 50 kg* (fall of 27.6% to the same quarter of the previous year). Of the total slaughtered pigs in slaughtering houses, the category of pigs of over 50 kg accounted for even 91.7% of the total slaughter of this species of livestock.

Of the total number of slaughtered **sheep** in the territory of the Republic of Serbia only about 17% are done in slaughtering houses. In the period January–September 2022, the number of sheep slaughtered in slaughtering houses increased by 1.8% compared with the same period of the previous year. Observed by quarters, in the third quarter the number of sheep slaughtered in slaughtering houses is down by 13.8% relative to the same quarter of the previous year: by 11.9% in the first and by 7.5% in the second quarter. The category of sheep, which recorded the largest growth in the third quarter of the current year, is *spring sheep age up to six months to one year* (growth of 8.2% to the same quarter of the previous year). Of total slaughtered sheep in slaughtering houses, the category of spring lamb up to 6 months old accounted for 95.2% of the total slaughter of this species.

13.4. EXTERNAL TRADE IN AGRICULTURAL PRODUCTS

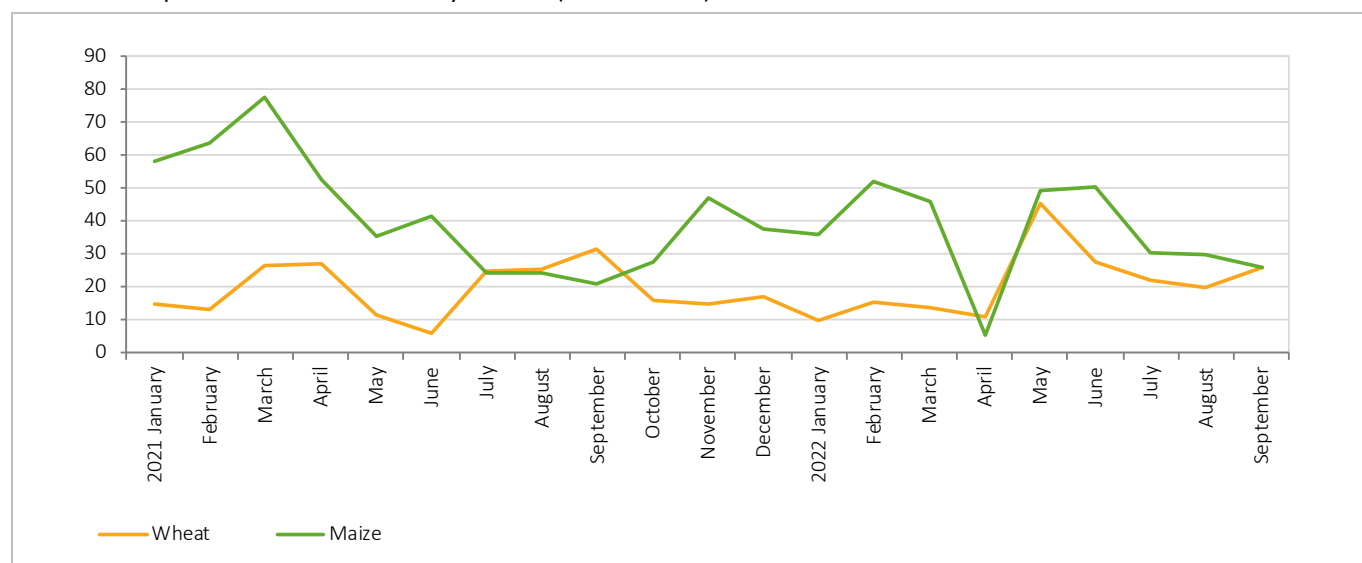
In the first nine months of 2022, the section Agriculture, forestry and fishing²⁵ realised a positive external trade balance of EUR 376.5 million. Exports of this section amounted to EUR 1 billion, by 4.5 % less than in the same period of 2021, and the share in total exports in the observed period fell from 6.7% to 5.0%. Imports of this section amounted to EUR 628.0 million, by 27.8% more than in the same period of the previous year, and the share in total imports fell from 2.4% to 2.2%.

Exports fall in the first nine months of the current year is mostly a result of a cumulative fall of 9.7% in exports of wheat (except for rice), leguminous and oil seed, the most representative groups in this section (share of 64.8%). On import side, the representative group of products is growing of vegetables, root vegetables (share of 17.8% in import in the section of agriculture), which records a cumulative growth of 23.0% over January-September of the current year.

Export of maize in the first nine months of the previous year amounted to EUR 324.0 million, a fall of 18.6% relative to the same period of the previous year. Most of maize (in quantities and value) was exported to Romania (almost 40% of total exports). Observing the value, 19.2% was exported to Italy, followed by Bosnia and Herzegovina, Austria and Hungary with 12.0%, 8.0% and 8.0% of total exports. Exports of maize in the third quarter of 2022 were higher by 24% than in the third quarter of the previous year.

Export of wheat in the first nine months of the previous year amounted to EUR 190.1 million, a growth of 5.4% relative to the same period of the previous year. Looking at quantities, most of the wheat was exported to Italy (35.8% of total exports of wheat), then to Romania (23.7%) followed by Bosnia and Herzegovina, North Macedonia and Albania with 13.4%, 10.6% and 8.9% of total exports. Wheat exports in the third quarter of 2022 were lower by 17.5% than in the third quarter of the previous year.

Chart 13.3. Export of wheat and maize by months (in mill. euros)



²⁵ According to CA (2010).

13.5. EKIEXPECTED PRODUCTION OF SELECTED CROPS WITHIN CROP PRODUCTION IN AGRICULTURE, 2021/2022

High temperatures with minimum rainfall led to lower average yields per hectare. The very beginning promised optimistic results, but as time went by, weather conditions impacted very badly the whole agricultural productions.

Besides the current 2022, as a drought year for agriculture, we can add also 2000, 2003, 2007, 2012 and 2017, when average yields and total production were far beyond the average.

In the current 2022, 3 113 thousand tons of wheat were produced, by 9.6% less than realised in the previous year. In contrast to vegetable crops, the situation was more favourable for fruit production. The realised production of raspberries amounted to about 115 thousand tons (4% more than in the previous year), and of sour cherries to about 116 thousand tons (6% more than in the previous year).

On the other side, the expected production of maize was 4 523 thousand tons, by 25.0% less than realised in the previous year. When compared with the previous year, the production of sunflower is expected to be higher by 5.9%, and that of sugar beet is expected to be lower by 21.4% and of soya beans by 26.2%.

Table 13.4. Realised and expected production of certain crops in plant production²⁶

| | Realised production | | | Expected production | | | |
|---------------------|---------------------|-------------|---------------|---------------------|------------|-----------|------------|
| | Wheat | Raspberries | Sour cherries | Maize | Sugar beet | Sunflower | Soya beans |
| Harvesting area, ha | 631 086 | 19 703 | 19 875 | 952 216 | 34 728 | 251 155 | 235 275 |
| Yield per ha, t | 4.9 | 5.8 | 8.3 | 4.8 | 46.3 | 2.6 | 1.7 |
| Production, t | 3 113 085 | 114 987 | 164 446 | 4 523 043 | 1 609 535 | 643 459 | 398 556 |
| Index, 2021=100 | 90.4 | 104 | 106 | 75 | 78.6 | 105.9 | 73.8 |

²⁶ Source – Realised production of wheat and early vegetables and expected yields of late crops, fruit and grapes, as of 05/09/ 2022 - <https://publikacije.stat.gov.rs/G2022/Htm/G20221265.html>

14. INDICATORS FOR MONITORING MACROECONOMIC IMBALANCES IN THE EUROPEAN UNION - RESULTS FOR SERBIA

DEVELOPMENT OF THE PROCEDURE FOR IDENTIFYING AND CORRECTING MACROECONOMIC IMBALANCES OF THE EU MEMBER COUNTRIES (Macroeconomic Imbalance Procedure - MIP)

The global financial crisis in 2007 was followed by the Eurozone crisis in 2010, which strongly influenced the European economic system and greatly questioned the original concept of the single European market and the European Monetary Union as a part of the European Union. There was a need for stronger economic management and better coordination of policies among the member states of the European Union. In this regard, the European Council decided to establish the *European Semester* in 2010 as a special instrument for monitoring and joint coordination of budget, economic and structural policies of member states with goals and rules agreed at the level of the European Union. The structure of the European Semester stands on three pillars, one of which is the *Macroeconomic Imbalance Procedure* (MIP). The other two pillars are Europe 2020 strategy and Stability and Growth Pact (SGP).

Macroeconomic Imbalance Procedure (MIP) is the main mechanism for monitoring and correcting harmful macroeconomic imbalances in member states and its ultimate goal is to strengthen their resilience and the resilience of the entire European Union economy to similar shocks in the future. MIP is one of six legal proposals on economic governance adopted by the European Parliament and the Council in November 2011, and, as such, forms part of the EU acquis, which candidate countries will adopt by the date of accession.

The starting point of the Procedure in case of macroeconomic imbalances is the *Alert Mechanism Report* (AMR) of the European Commission. The report is based on the economic interpretation of defined indicators for monitoring macroeconomic imbalances - MIP indicators, presented in the form of an achievement table (MIP Scoreboard). It is about 14 basic indicators of conditions and flows that should indicate the appearance of macroeconomic imbalances that arise in the short term and imbalances that arise due to structural and long-term trends. For each indicator, a reference value is defined, in relation to which the achievements of the member states are evaluated. Based on the results of a detailed review of the mentioned indicators, the European Commission decides on the eventual initiation of the procedure in case of excessive macroeconomic imbalances.

Bearing in mind that some imbalances may be part of the dynamic adjustment of the economy and that all imbalances do not require policy intervention, the basic indicators (MIP Scoreboard) should not be interpreted mechanically. Their economic interpretation is complemented by the analysis of a wider set of auxiliary indicators (MIP Auxiliary), which, however, do not have associated reference values (thresholds). There are 28 auxiliary indicators that provide additional information on aspects related to the general macroeconomic situation.

Each AMR report is accompanied by a statistical annex, which contains basic and auxiliary MIP indicators for each member state and covers a period of 10 years. The list and structure of basic and auxiliary indicators are subject to changes over time in order to best reflect changes or threats to macroeconomic stability.

14.1. BASIC INDICATORS (MIP Scoreboard) FOR MONITORING MACROECONOMIC IMBALANCES IN THE EUROPEAN UNION

The main analytical tool for monitoring macroeconomic imbalances in the European Union are MIP indicators (Macroeconomic Imbalances Procedure indicators), which represent a warning instrument by identifying potential macroeconomic risks in their early stages, in order to both prevent emergence of severe macroeconomic imbalances, and also to correct the already created imbalances.

There are 14 basic (MIP Scoreboard) indicators, and they include internal and external imbalance indicators, as well as employment indicators. They are presented in the form of a table of achievements, where a reference value is defined for each indicator, in relation to which the achievements of the member states are evaluated. Indicators for monitoring macroeconomic imbalances include: *indicators of internal imbalance* (indebtedness, indicators of movements in the financial and real estate markets [real estate prices], unemployment), *indicators of external imbalance and competitiveness* (current account of the balance of payments, Real Effective Exchange Rate - REER, share in export markets and nominal unit labour costs) and *employment indicators*. There are 28 MIP Auxiliary indicators and they provide additional support for the economic interpretation of data.

MIP basic (MIP Scoreboard) indicators

| Indicators of external imbalance | Indicators of internal imbalance | Employment indicators |
|--|--|---|
| <ul style="list-style-type: none">❑ Current account balance (% GDP) – 3 -year average❑ International investment position (% GDP) – current year❑ Real effective exchange rate, % change (3- year)❑ Export market shares – % change (5- year)❑ Nominal unit labour costs – % change (3- year) | <ul style="list-style-type: none">❑ House price index- deflated, % change (1 year)❑ Private sector credit flow, consolidated, (% GDP)❑ Private sector debt, consolidated, (% GDP)❑ General government sector debt, (% GDP)❑ Unemployment rate – three- year average (%)❑ Total financial sector liabilities, non-consolidated – % change (1 year) | <ul style="list-style-type: none">❑ Activity rate % of total population aged 15-64 (3- year change in p.p.)❑ Long-term unemployment rate – % of active population aged 15 – 74 (3 – year change in p.p.)❑ Youth unemployment rate – % of active population aged 15 – 24 (3 – year change in p.p.) |

14.2. BASIC INDICATORS OF MACROECONOMIC IMBALANCES IN SERBIA

Out of a total of fourteen basic MIP Scoreboard indicators, the analysis included eight, for which data are directly available. These are the following indicators: current account balance, international investment position, export market shares, gross general government debt, unemployment rate, activity rate, long-term unemployment rate and youth unemployment rate.

The analysis refers to the results that Serbia would achieve by hypothetically participating in the regular annual cycle of the implementation of the MIP procedure. With the aim of ensuring comparability among EU member states, the European Commission prescribes that when calculating individual indicators, specific databases of relevant international institutions are used. It is, in fact, MIP indicators that are calculated as the quotient of the two quantities, whereby the data for the quantity in the denominator is taken from the mentioned databases. This is the case, for example, with the indicator of the share in the world export of goods and services, for the calculation of which data from the database of the International Monetary Fund is used¹². Since it is an annual data, the last available data refers to 2021.

Table 14.1. Serbia's achievements according to the basic indicators of macroeconomic imbalances, 2015–2021

| | Definition | Referent value | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|--------------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|
| Current account balance | 3-year average, % of GDP | -4% of GDP / 6% of GDP | -4.94 | -3.99 | -3.87 | -4.33 | -5.65 | -5.28 | -5.5 |
| Net international investment position | Current year, % of GDP | -35% of GDP | -94.79 | -94.27 | -90.68 | -87.56 | -87.99 | -90.30 | -83.06 |
| Share in world export of goods and services | 5-year change, % | -6% | 22.49 | 36.98 | 46.42 | 25.89 | 31.44 | 38.35 | 31.79 |
| Gross general government debt | Current year, % of GDP | 60% of GDP | 71.20 | 68.70 | 58.62 | 54.35 | 52.82 | 57.82 | 57.14 |
| Unemployment rate | 3-year average, % | 10% | 21.16 | 18.62 | 16.60 | 14.85 | 13.12 | 11.53 | 10.64 |
| Activity rate of population aged 15-64 | 3-year change in p.p. | -0,2 p. p. | -0.01 | -0.01 | 0.05 | 0.06 | 0.03 | 0.01 | 0.05 |
| Long-term unemployment rate of active population aged 15-74 | 3-year change in p.p. | 0,5 p. p. | -0.39 | -0.41 | -0.36 | -0.33 | -0.39 | -0.40 | - |
| Unemployment rate of youth aged 15-24 | 3-year change in p.p. | 2 p. p. | -0.16 | -0.30 | -0.33 | -0.31 | -0.21 | -0.16 | -0.14 |

Out of the observed number of indicators (eight), Serbia currently exceeds the reference values in an unfavourable direction for three indicators (current account balance, net international investment position and unemployment rate).

The level of the current deficit in Serbia, which meets the criteria only in 2016 and 2017, mostly exceeds the reference range (the lower limit of the reference range is -4.0%), as a consequence of the increase in the foreign trade deficit due to a significant increase in the goods deficit (despite the simultaneous surplus growth on the services account).

The high negative balance of the international investment position as a % of GDP, which exceeds the reference value (-35% of GDP), during the entire observed period, indicates Serbia's high dependence on foreign funds.

When it comes to the indicator of the share of exports in world exports (dynamics of five-year change), Serbia, in the observed period, achieves values above the set lower limit for this indicator (reference value -6%), and continuously fulfils the criteria for this indicator.

¹² <https://data.imf.org/?sk=7A51304B-6426-40C0-83DD-CA473CA1FD52&sid=1542633711584>

According to the unemployment rate, in the entire observed period, Serbia records values that are above the reference value for this indicator (10%), whereby the indisputable contribution of the package of economic measures to the preservation of jobs and the absence of major negative effects of the coronavirus pandemic on labour market indicators should be emphasized. Serbia has an unemployment rate of 10.6% in 2021, slightly above the defined limit value of MIP (10%).

For other indicators of the labour market, instead of annual values, three-year changes are taken, expressed in percentage points, in order to emphasize the medium-term ability to adjust the labour market.

The dynamics of other indicators of the labour market (activity rate of the working-age population, long-term unemployment rate and youth unemployment rate) is moving in a positive direction and in the observed period exceeds the reference values of three-year changes.

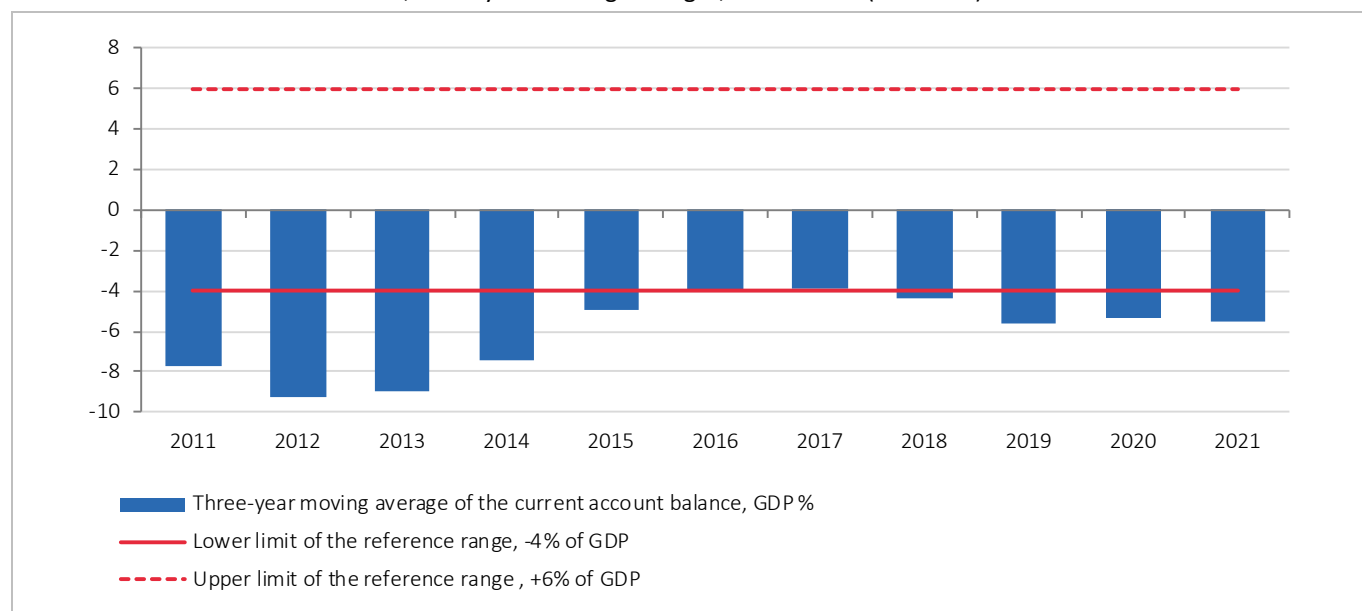
14.2. BALANCE OF THE CURRENT ACCOUNT OF BALANCE OF PAYMENT (REFERENCE RANGE FROM -4% TO +6% OF NOMINAL GROSS DOMESTIC PRODUCT IN A THREE-YEAR AVERAGE)

The current account balance of the balance of payments represents one of the most important and most frequently used indicators of the country's external macroeconomic position. The existence of imbalances on the current account may indicate increased exposure of the economy to external shocks, but also the presence of other macroeconomic imbalances. At the same time, the European Commission does not evaluate current account imbalances symmetrically. Greater importance is attached to deficits, which are often linked to a number of other macroeconomic imbalances and risks. The risks arising from current account surpluses are not negligible, but they are still significantly milder than the risks associated with deficits.

When choosing indicators for the current account balance, instead of the annual ratio of the current account balance to GDP, a three-year moving average of that ratio is used, with the aim of mitigating the effects of possible sudden annual fluctuations in the current account balance. The limits of the reference range are set at -4% of GDP and +6% of GDP.

According to this indicator, Serbia meets the criteria only in 2016 and 2017, when the three-year average of the ratio of the current account balance to GDP was -4.0% and -3.9%, respectively (the lower limit of the reference range is -4.0%). In all other years, Serbia does not meet the criteria for this indicator.

It should be expected that Serbia will not meet the criteria for this indicator in the coming years, given the way it is calculated and the fact that starting from 2017, the growth of the share of the current account deficit in GDP varies at the level of around 5%.

Chart 14.1. Current account balance, three-year moving averages, 2011–2021. (% of GDP)

This level of the current deficit is a consequence of the increase in the foreign trade deficit due to a significant increase in the goods deficit (despite the simultaneous increase in the surplus on the services account). The negative balance of foreign trade in goods amounted to EUR 5 924 mill. in 2021, which is 11.1% of GDP. At the same time, the realized surplus in trade in services amounted to EUR 1 398 mill., which represents 2.6% of GDP. Despite the multi-year trend of growth of the share of the surplus in services trade in GDP, the foreign trade deficit is solely the result of the increase in the goods deficit. The growth of the trade deficit is related to the growth of domestic demand, but also to the increase in the import of means of reproduction, due to the energy crisis and the rise in prices of energy commodities on the world market.

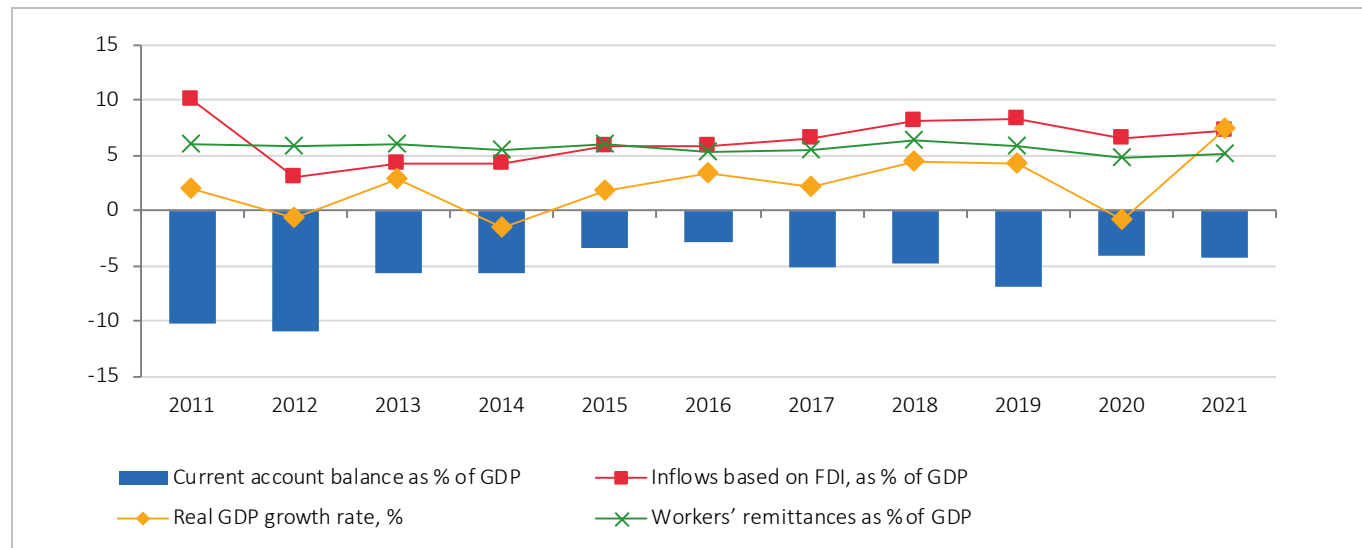
Table 14.2. Balance of payments of Serbia, 2015–2021

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|----------|----------|----------|----------|----------|----------|----------|
| Current account balance, EUR mill. | -1.233,8 | -1.074,9 | -2.050,8 | -2.076,1 | -3.160,9 | -1.928,8 | -2.296,4 |
| Current account balance, % of GDP | -3,5 | -2,9 | -5,2 | -4,8 | -6,9 | -4,1 | -4,3 |
| External trade balance (goods and services), EUR mill. | -2.915,4 | -2.211,9 | -3.031,4 | -4.090,6 | -4.611,6 | -4.099,1 | -4.525,5 |
| External trade balance, % of GDP | -8,2 | -6,0 | -7,7 | -9,5 | -10,0 | -8,8 | -8,5 |
| Export of goods and services, EUR mill. | 15.727,6 | 17.384,9 | 19.312,0 | 21.166,3 | 23.348,6 | 22.270,8 | 28.583,3 |
| Export of goods and services, indices, previous year=100 | 108,8 | 110,5 | 111,1 | 109,6 | 110,3 | 95,4 | 128,3 |
| Import of goods and services, EUR mill. | 18.643,0 | 19.596,8 | 22.343,4 | 25.256,9 | 27.960,2 | 26.369,9 | 33.108,8 |
| Import of goods and services, indices, previous year=100 | 103,0 | 105,1 | 114,0 | 113,0 | 110,7 | 94,3 | 125,6 |
| Export import ratio, % | 84,4 | 88,7 | 86,4 | 83,8 | 83,5 | 84,5 | 86,3 |

In 2021, the current account deficit amounted to EUR 2.3 billion or 4.3% of GDP. This deficit was somewhat compensated by the inflow of secondary income (€5.1 billion or 10% of GDP), primarily due to the inflow of remittances from abroad (€2.7 billion or 5% of GDP), with the surplus growing on the account of services, while the primary income deficit deepened and in 2021 amounts to EUR 2.1 billion or 3.9% of GDP, mainly due to higher expenditures based on income from foreign direct investments. Capital inflow to Serbia based on foreign direct investments exceeded the record level achieved in 2019 (EUR 3.8 billion or 8.3% of GDP)

and in 2021 it amounted to EUR 3.9 billion or 7.3 % of GDP. Since 2015, Serbia's current deficit has been fully covered by the net inflow of foreign direct investments, which is expected in the coming years as well (projected net FDI inflow of around 5% of GDP). The net inflow of portfolio investments in 2021 amounted to EUR 1.6 billion, thanks primarily to the successful issuance of Eurobonds on the international market, while an outflow of EUR 416 million was recorded based on other investments or 80% less compared to the previous year.

Chart 14.2. Current account balance by selected components, 2011–2021 (% of GDP)



14.2. INTERNATIONAL INVESTMENT POSITION (REFERENCE VALUE OF -35% OF NOMINAL GDP IN THE CURRENT PERIOD)

The international investment position represents the difference between a country's foreign financial assets and liabilities. In other words, the difference between the financial assets that an economy has and the assets it owes reflects the state of its international investments. So, depending on the sign of the international investment position, the country can be a net creditor or a net debtor in relation to the rest of the world.

Together with the indicator of the current balance of payments account, it is used in the analysis of the state and dynamics of the country's external position, stock-flow analysis and serves to assess the country's risk exposure in economic relations with foreign countries.

The ratio of international investments and GDP in the current period is used as an indicator. The reference value is -35% of GDP, which means that countries whose net foreign liabilities exceed 35% of GDP do not meet this indicator.

The international net investment position (MIP)¹³ of the country is an important indicator of macroeconomic risks in the future, because in addition to net liabilities based on foreign loans, it also includes liabilities based on foreign capital. With the average share of net foreign liabilities, in the period 2013–2021, of about 90% in nominal GDP, Serbia significantly exceeds the established reference value for the indicator of the state of international investments (-35% of GDP).

A high negative value of net foreign liabilities indicates high dependence on foreign funds, as well as the potential danger of a debt crisis.

¹³ The international net investment position represents the difference between foreign exchange reserves, loans granted abroad and capital invested abroad, on one hand, and loans taken from abroad and foreign capital invested in the country, on the other hand.

Direct investments appear as the main driver of negative MIP in all years. The share of the negative position of direct investments in GDP ranged between 57.0% and 83.0%. A negative position in all observed years was also recorded in other countries (between 19.7% and 41.0% of GDP) and portfolio investments (between 10.5% and 20.0% of GDP). A positive net position was recorded in all years for foreign exchange reserves, whose participation in GDP in the observed period ranged between 25.4% and 30.9%. Although a positive net position was recorded in all years and with financial derivatives, it should be said that in the case of the Republic of Serbia, the relative importance of this category is negligible.

Chart 14.3. Structure of the international investment position by functional categories, 2013–2021 (% of GDP)

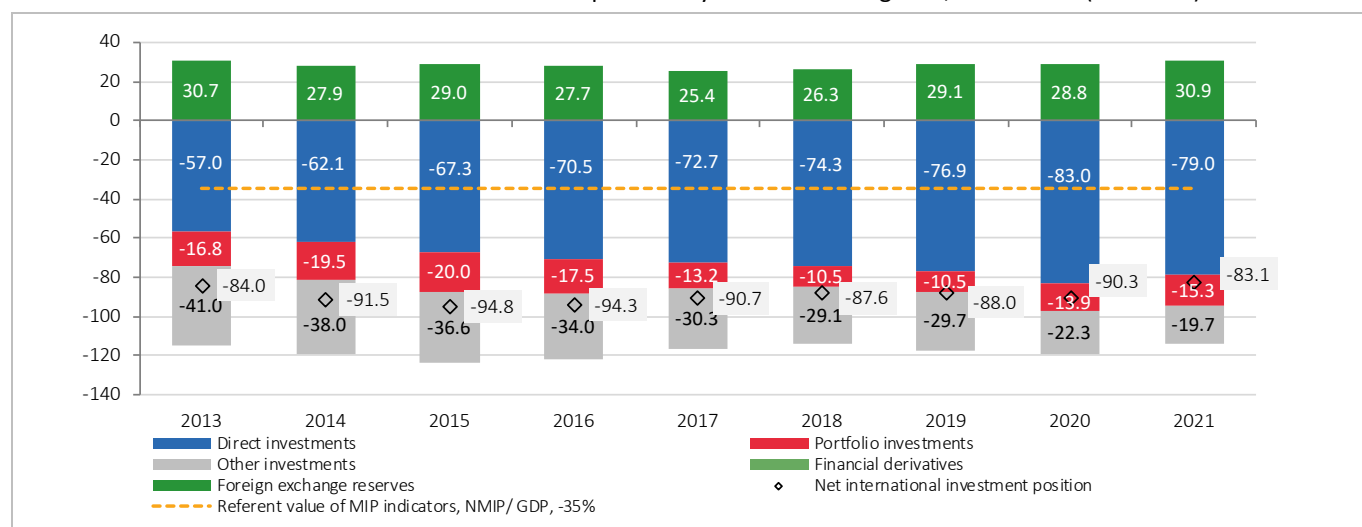
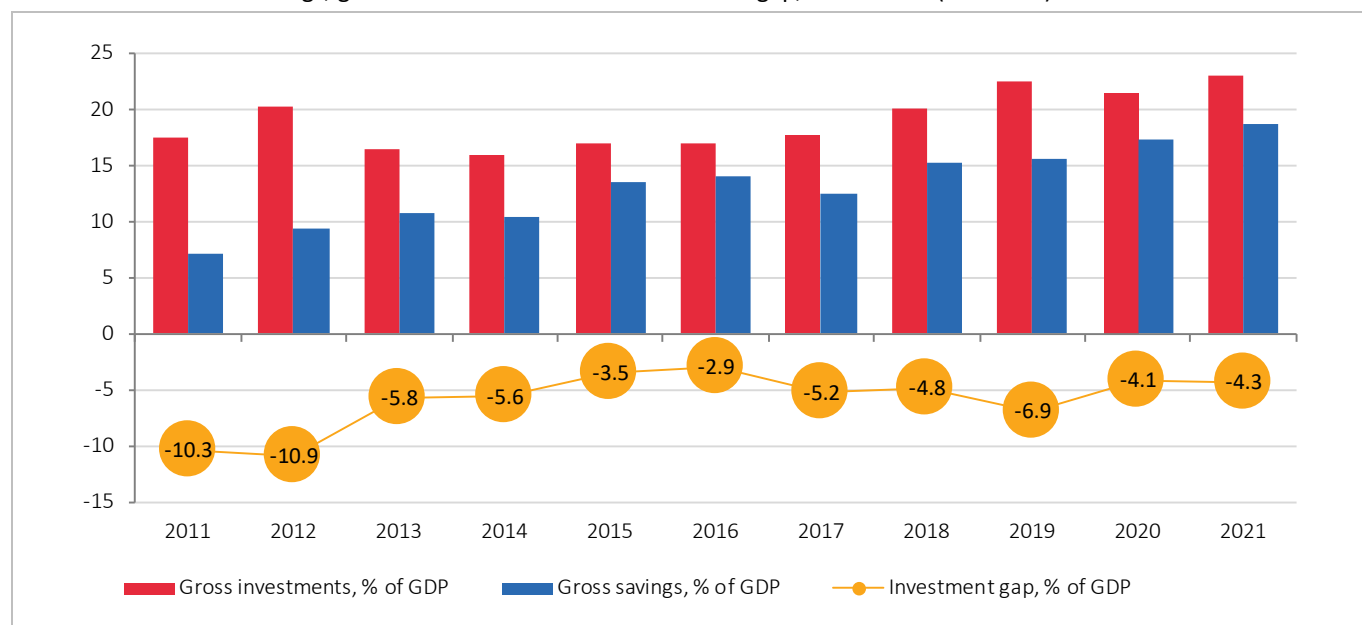


Table 14.3. Net investment position of Serbia, as of the end of the year, 2015–2021

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|--|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Direct investments | -24.060 | -25.941 | -28.510 | -31.868 | -35.388 | -38.849 | -42.112 |
| Portfolio investments | -7.147 | -6.453 | -5.184 | -4.500 | -4.836 | -6.517 | -8.178 |
| Financial derivatives | 32 | 38 | 28 | 49 | 50 | 53 | 29 |
| Other investments | -13.081 | -12.520 | -11.875 | -12.497 | -13.682 | -10.452 | -10.489 |
| Foreign exchange reserves | 10.378 | 10.205 | 9.962 | 11.262 | 13.378 | 13.492 | 16.455 |
| Net international investment position (MIP), in EUR mill. | -33.877 | -34.672 | -35.579 | -37.555 | -40.478 | -42.274 | -44.294 |
| % of GDP | | | | | | | |
| Direct investments | -67,3 | -70,5 | -72,7 | -74,3 | -76,9 | -83,0 | -79,0 |
| Portfolio investments | -20,0 | -17,5 | -13,2 | -10,5 | -10,5 | -13,9 | -15,3 |
| Financial derivatives | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 | 0,1 |
| Other investments | -36,6 | -34,0 | -30,3 | -29,1 | -29,7 | -22,3 | -19,7 |
| Foreign exchange reserves | 29,0 | 27,7 | 25,4 | 26,3 | 29,1 | 28,8 | 30,9 |
| MIP/GDP, % (referent value is -35% of GDP) | -94,79 | -94,27 | -90,68 | -87,56 | -87,99 | -90,30 | -83,06 |

The immediate cause of Serbia's unfavourable international net asset position is the high deficit in the current balance of payments, as a consequence of the low level of domestic savings. Therefore, a significant part of investments is financed by foreign funds - loans or foreign investments.

Chart 14.4. Domestic savings, gross investments and the investment gap, 2011–2021 (% of GDP)



14.3. SHARE IN WORLD EXPORTS OF GOODS AND SERVICES (REFERENCE VALUE OF -6% FOR A FIVE-YEAR PERCENTAGE CHANGE)

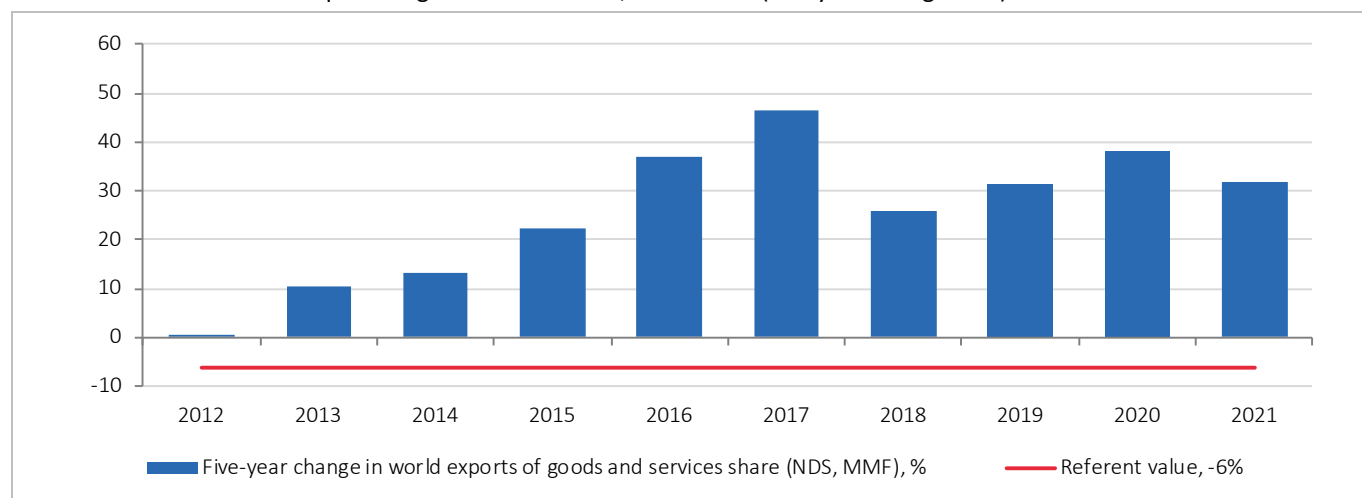
As an indicator for monitoring the dynamics of the share in world exports, the five-year change in the share of an individual country in total world exports is taken. By using a longer reference period, it is tried to capture longer-term changes in the relative competitiveness of the economy. The reference value is -6%, which means that a country whose loss of share in world exports in the past five years was greater than 6% will not meet this indicator.

The indicator of the share in the world export of goods and services aims to reveal structural losses in competitiveness. Namely, the change in the share of world exports does not have to be the result of a change in price or cost competitiveness, but rather a reflection of structural and qualitative changes in the structure of exports, geographic specialization of exports or movements in relative productivity, which, in the long term, presents a key factor in exports.

In the entire observed period 2012–2021, the dynamics of the five-year change in the share of Serbian exports in the world export of goods and services moved above the set lower limit for this indicator (reference value -6%). In this regard, Serbia continuously met the criteria for this indicator for the entire observation period.

After the drop in the share of Serbian exports in world exports to only 0.4% in 2012, due to low foreign demand and unfavourable economic trends in the EU countries, in the following five-year period (2013–2017) a double-digit growth of Serbia's export market share was recorded, increasing from year to year. In 2018, it slowed down, from 46.4% in 2017, when it was the highest, to 31.8% in 2021. This kind of growth in the years after 2013 is associated with low production costs and therefore with the strengthening of the country's price competitiveness. In 2021, there was an intensive growth of exports of goods of 29.1%, which was driven, above all, by the recovery of exports of manufacturing, and it would have been faster if there were no disruptions in global supply chains. Better export performance was significantly influenced by higher production and exports in mining and quarrying, which recorded a maximal amount of EUR 819.5 million, being almost entirely the result of the exploitation of metal ores with exports of EUR 800 million. In addition, agriculture also recorded an increase in exports despite a slightly weaker agricultural season. The growth of export of services in 2021 amounted to 26% and was driven by the export of ICT services, as well as tourist services, which fully recovered during 2021.

Chart 14.5. Share in world exports of goods and services, 2011–2021 (five-year change in %)



Also, the participation of the number of foreign-owned export companies in the total number of exporters in Serbia is significant, which represents an indirect channel of foreign direct investment inflows, affecting the GDP and improving the country's export performance. External trade in goods was the largest with the countries with which Serbia has signed free trade agreements. European Union member countries account for about 60.3% of total external trade in 2021. With the CEFTA countries, Serbia records an exchange surplus of EUR 1.8 billion.

14.4. GENERAL DEBT OF THE STATE (REFERENCE VALUE OF 60% OF NOMINAL GDP IN THE CURRENT PERIOD)

The debt of the general level of the state is defined within the *Excessive Deficit Procedure (EDP)* as the nominally expressed total gross debt at the end of the year. It is about the consolidated amount of debt between and within the general government sector. General government debt is included in the MIP indicators in order to gain insight into the total indebtedness of all sectors of the economy, together with the private sector debt indicator¹⁴.

The reference value for this indicator is 60% of GDP.

In the observed period, Serbia did not meet the criteria for the debt indicator of the general state level only in the period 2014–2016, when the share of general government debt in nominal GDP was above the reference value of 60%. The highest share of debt was recorded in 2015 and amounted to 71.2%.

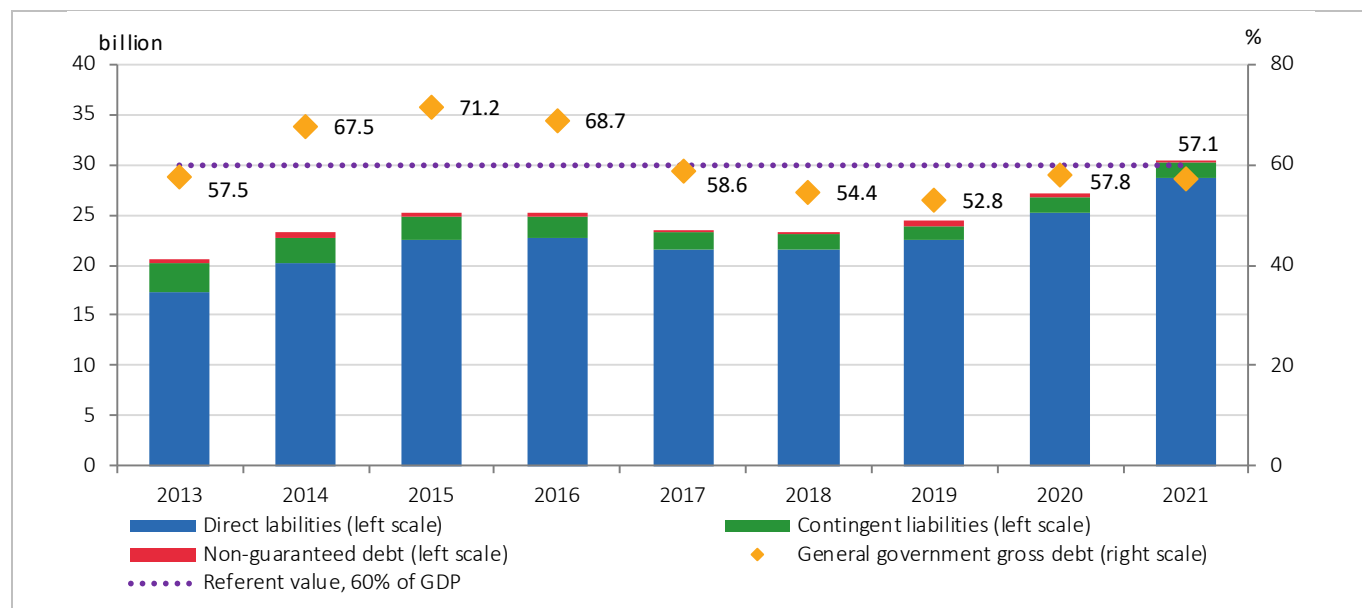
The financing of the fiscal deficit contributed the most to the increase in debt, followed by the approval of guarantees to public and state-owned enterprises, but also the negative exchange rate difference, as well as covering the losses of state-owned banks. In the period after 2016, a decrease in the share of general government debt was recorded. The trend of reducing the share of debt was interrupted in 2020, whereby the upward trend is closely related to the coronavirus pandemic and the Government's anti-crisis measures. At the end of 2021, the general government debt was recorded at EUR 30.5 billion, which is 57.1% of nominal GDP (a decrease of 0.7 p.p. compared to 2020). Structural improvements of the economy supported by economic policy measures have already produced results in the first half of 2021. At the end of 2021, the early redemption of a seven-year dinar government bond maturing in July 2023 in the total amount of RSD 3.45 billion, as well as a twelve-and-a-half-year dinar

¹⁴ The debt of the private sector is not included in this analysis, since the data necessary for the calculation of this indicator are not available in accordance with the targeted EU methodology, so it is not possible to make a comparison with the reference values, as well as with EU countries.

The debt of the private sector is defined as the ratio of the liabilities of the household sector and the non-financial sector by taken loans and issued securities and GDP. It is calculated using non-consolidated data within the annual financial accounts statistics. The reference value for this indicator is 160% of GDP. The collection and publication of this data is the responsibility of the NBS.

government bond maturing in August 2032 in the total amount of RSD 3.1 billion, was carried out. At the end of 2021, the largest part of the public debt of the general state of the Republic of Serbia is with a fixed interest rate (86.6%), while public debt with a variable interest rate refers to 13.4% of the total public debt. Also, taking into account the trend of inflation, borrowing costs slightly increased.

Chart 14.6. Trends in general government debt, 2013–2021



Source: Public debt administration.

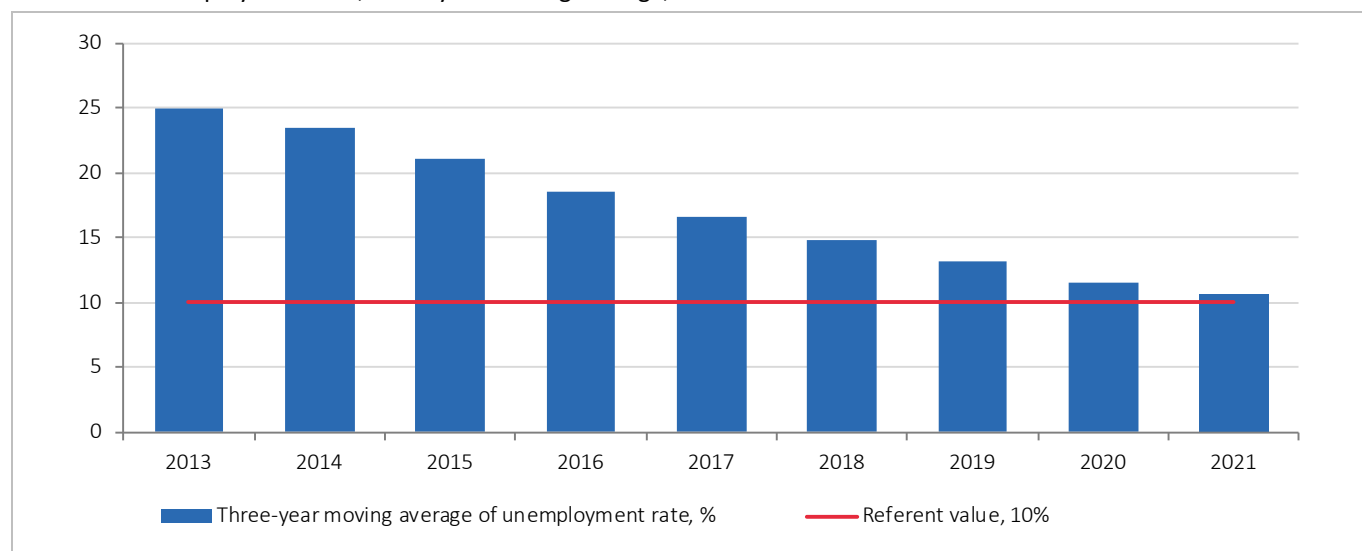
Failure to meet the criteria for the ratio of general government debt and GDP would represent a significant risk for Serbia, because the same reference value for government debt is also prescribed within the criteria of nominal convergence that countries must meet before the introduction of the euro. In this regard, by exceeding the reference value for this indicator, Serbia would jeopardize the prospect of meeting, first of all, the criteria for EU membership in the economic union, and then in the monetary union, in the near future.

14.5. UNEMPLOYMENT RATE (REFERENCE VALUE OF 10% IN A THREE-YEAR MOVING AVERAGE, %)

The unemployment rate represents the percentage of unemployed persons in the total number of active population aged 15 and over. It is included among the indicators because high unemployment can indicate an unfavourable allocation of resources in the economy and an insufficient ability to adjust the economy. Instead of annual values, this indicator uses three-year moving averages of the unemployment rate in order to emphasize the medium-term ability of the labour market to adapt. The reference value for this indicator is 10%.

According to the unemployment rate, in the entire observed period 2013-2021, Serbia records values that are above the reference value for this indicator (10%). In 2013, this deviation was the highest and amounted to 13 p. p. After that, its continuous reduction occurs, so that in 2021, according to this indicator, Serbia would be by 0.6 p. p. above the threshold value within the MIP.

Chart 14.7. Unemployment rate, three-year moving average, 2013–2021



According to the Labour Force Survey, the unemployment rate in 2021 was 11%, and the number of unemployed persons was about 352 400. Compared to 2020, the number of unemployed increased by about 53 000. Due to the increase in the number of unemployed, with simultaneous increase of the employed, unemployment rate increased by 1.3 p. p. in relation to 2020.

The success of the economic package of measures was verified by the absence of major negative effects of the pandemic on the labour market, and jobs and wages were preserved to a significant extent, both in the private and public sectors, and the scenario of a significant increase in unemployment was avoided.

However, despite the improvement of indicators on the labour market, they are still less favourable than in the EU. The unemployment rate in Serbia is higher, while the employment rate is lower than in the EU. There is also a difference in the structure of employed persons by sectors: in Serbia, compared to the EU, there is a far greater share of employees in agriculture, and a smaller share in service activities. It should be expected that Serbia will not meet the criterion for this indicator in the coming years, considering the way it is calculated and the dynamics of the convergence of the unemployment rate towards the threshold value within the MIA.

14.6. ACTIVITY RATE OF THE POPULATION AGED 15-64 (REFERENCE VALUE OF -0.2 P.P. FOR THE THREE-YEAR CHANGE IN P.P.)

The dynamics of the activity rate allows tracking the transition of the labour force from active to inactive status (out-of-labour population)¹⁵ - which includes people who retire, the "discouraged" labour force, which gives up on finding work, and the "new labour force", which enters to the labour market. The activity rate is also relevant when analysing the impact on potential output, i.e. GDP, since low activity implies a reduced labour supply, and thus unused production capacity in the country's economy. The reference value for this indicator is -0.2 p. p. for the three-year change.

In the period 2013-2021, Serbia exceeded the reference value for the indicator of the activity rate of the population aged 15-64 within the MIP. In 2018, the three-year change in the activity rate of the population aged 15–64 reached the highest value in the entire observed period and amounted to 0.06%. The activity rate has proved quite resilient to the slowdown that began before the pandemic.

¹⁵ According to the Labour Force Survey, the population outside the labour force consists of all persons aged 15 and over who are not classified as employed or unemployed.

The activity rate or labour force participation rate shows the degree of labour force activity in the labour market. This means that in 2021, 70.3% of working age population could engage in the production of goods and services.

Chart 14.8. Activity rate of the population aged 15-64, three-year moving average, 2013-2021.

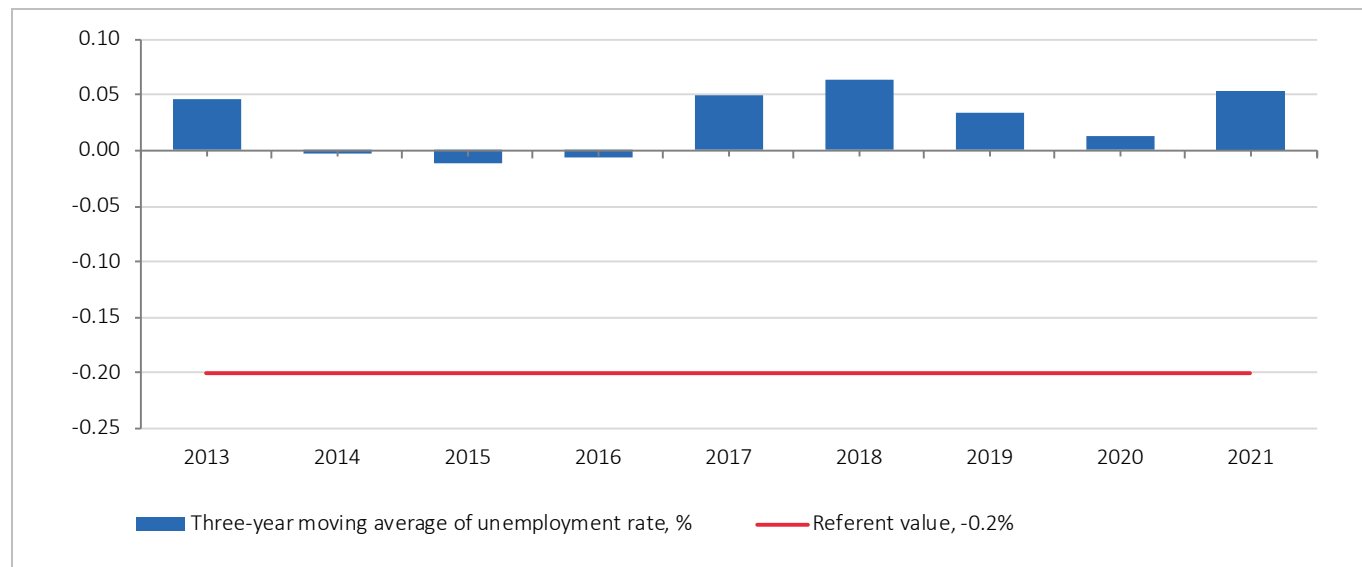
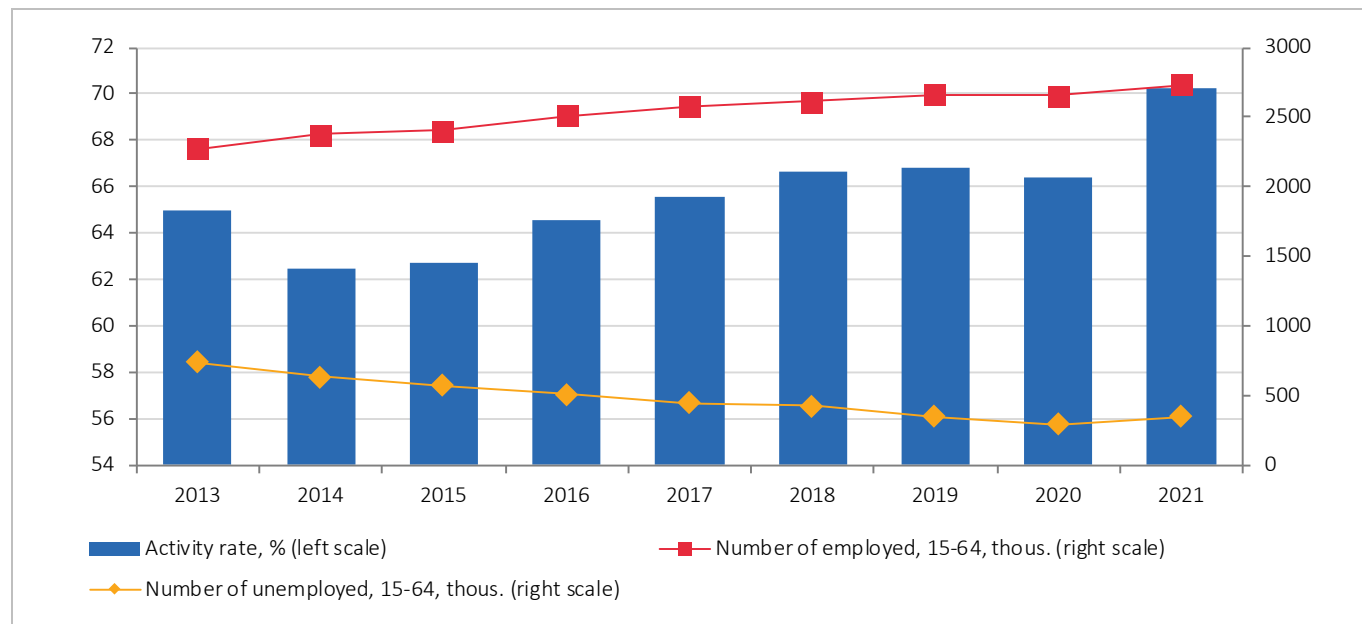


Chart 14.9. Activity rate of the population aged 15–64, 2013–2021

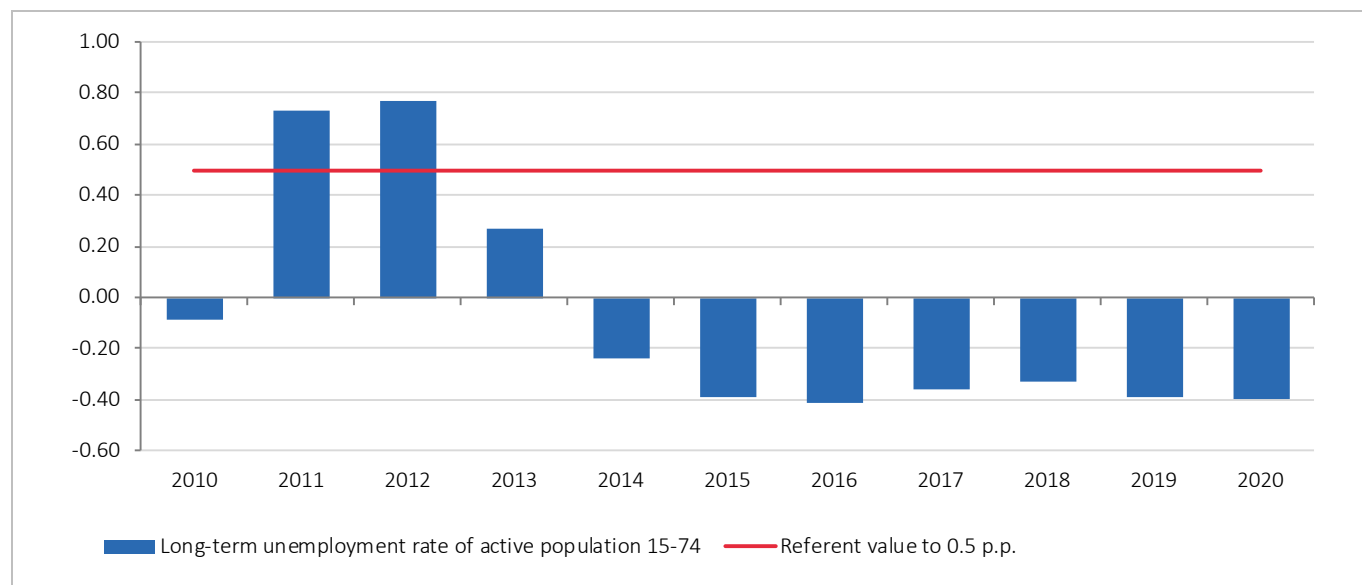


14.7. LONG-TERM UNEMPLOYMENT RATE OF THE ACTIVE POPULATION AGED 15-74 (REFERENCE VALUE OF 0.5 P.P. FOR THE THREE-YEAR CHANGE IN P.P.)

The long-term unemployment rate (state of unemployment for more than a year) represents the percentage share of the long-term unemployed in active population. Monitoring long-term unemployment helps to assess employment trends, since a longer state of unemployment significantly reduces the prospects for re-employment. The decrease in the prospects for re-employment is also associated with psychological moments of discouragement and a kind of stigmatization and, finally, the loss of acquired skills. Also, the social cost of long-term unemployment is high, and it is paid in poverty, growing social exclusion, rising health insurance costs and creating conditions for the appearance of negative forms of social behaviour (violence, crime, etc.). The reference value for this indicator is 0.5 p. p. for the three-year change.

According to this indicator, Serbia was in imbalance in 2011 and 2012, and after that recorded rate values within the reference limits. Although there has been a downward trend in the long-term unemployment rate since 2014, the share of the long-term unemployed in total unemployment (15-74) in Serbia is still high, and in 2020 this share in Serbia amounts to 54.8%. High rates of long-term unemployment indicate insufficiently good functioning of the labour market, which is reflected in the existence of certain obstacles that prevent those who are looking for a job for the first time to start an employment relationship or those who have been employed, to be employed again. In addition, long-term unemployment should be seen as one of the key sources of structural unemployment growth (in addition to high youth unemployment and high participation of early school leavers).

Chart 15.0. Long-term unemployment rate of the active population aged 15-74, three-year moving average, 2010-2020¹⁶



¹⁶ Labour market indicators - employment rate and unemployment rate, were created according to the new, redesigned methodology of Eurostat, which the Statistical Office of the Republic of Serbia has been conducting as a part of the Labour Force Survey from 2021. Considering that the data revision is done only for the basic indicators and that the set of collected data from the pilot survey is of limited scope, the possibility of a deeper and more precise structural analysis of changes is missing, and, accordingly, long-term unemployment rates can be compared up to 2020.

14.8. UNEMPLOYMENT RATE OF THE ACTIVE POPULATION AGED 15-24 (REFERENCE VALUE OF 2 P.P. FOR THE THREE-YEAR CHANGE IN P.P.)

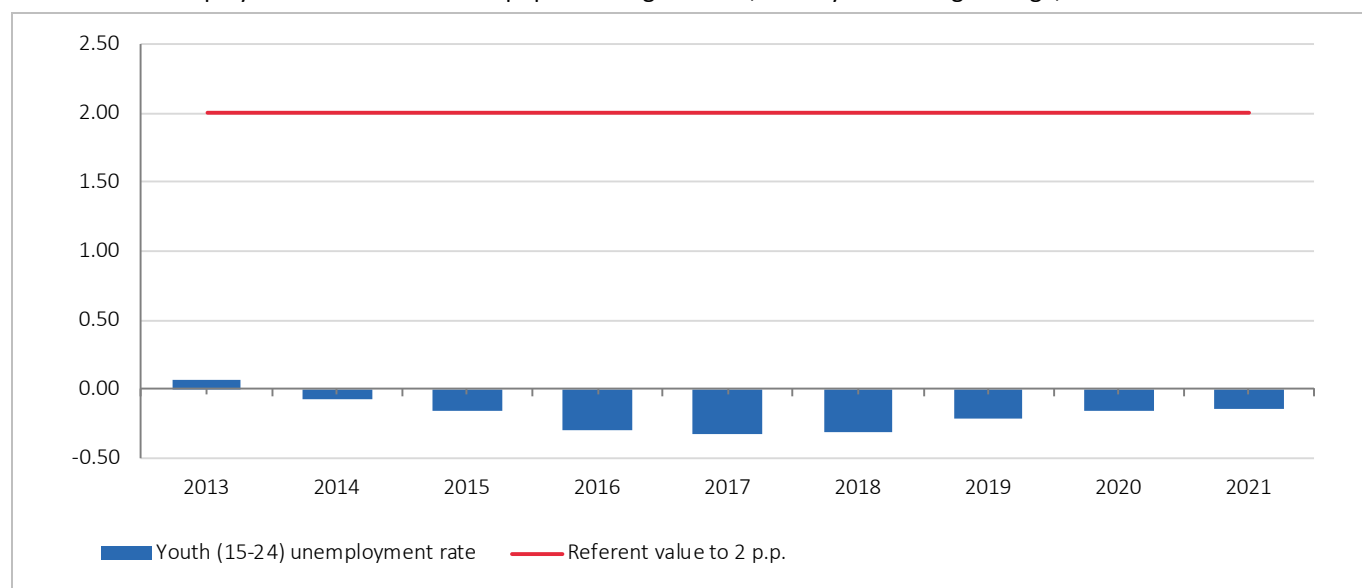
The youth unemployment rate, i.e. the economically active population aged 15 to 24, is an indicator for early warning of worsening conditions on the labour market. It actually signals reduced potential output due to the deterioration of acquired skills and lost earnings in future, with multiple social consequences and increased social exclusion. The reference value set in the Alert Mechanism Report (AMR) for this indicator is the growth of the youth unemployment rate in the last three years by a maximum of 2 p. p.

According to this indicator, Serbia was in balance in the entire observed period. After the highest recorded youth unemployment rate of 52% in 2013, followed the period of continuous reduction of this rate, so that in 2021 it fell to 26.4%. However, although the position of young people on the labour market has improved, it is still worse relative to other age groups. The youth unemployment rate is still significantly higher than the overall unemployment rate.

The number of employed young people, aged 15-24, in 2021 is higher by 27 600 (or 19.3%), and the number of unemployed by 6 600 (or 12.0%) compared to 2020. The employment rate of the young population in 2021 was 24.5%, which is by 4.3 p. p. more than in 2020. The youth unemployment rate recorded a value of 26.4% and is lower than in the previous year by 1.2 p. p.

Activity rates have proven to be quite resilient to the slowdown that began before the coronavirus pandemic, and long-term unemployment and youth unemployment are even showing better trends compared to other labour market indicators.

Chart 15.1. Unemployment rate of the active population aged 15-24, three-year moving average, 2013-2021



The youth (15-24) unemployment rate, which amounts to 26.4% in 2021, is an indicator according to which young people in the Republic of Serbia are in the most unfavourable position compared to young people in the EU, i.e. this rate is higher by 7.1 p. p. of the youth unemployment rate in the EU (19.3%).

The macroeconomic trends of the EU member states in the last decade have been mostly marked by the crisis due to the coronavirus pandemic (COVID-19). The crisis did not fundamentally change the nature of macroeconomic imbalances in the EU member states, but it led to a reversal of the evident trend of decreasing macroeconomic imbalances in the years before the pandemic. The share of the debt of the general level of state in GDP recorded growth as a result of the necessary support measures to mitigate the effects of the shock, which contributed to an additional increase in the share of the debt of individual member states, which had high shares even before the crisis caused by the coronavirus pandemic. Current account deficits remained mostly stable, except in the member states that were most affected by the decline in the number of foreign tourists, with some member states still achieving high current account surpluses.

During the pandemic, the labour market remained resilient, primarily thanks to support measures at both national and EU levels. Programs to preserve jobs, along with European support instruments for reducing the risk of unemployment in extraordinary circumstances, have significantly mitigated the consequences of the crisis caused by the pandemic on the preservation of jobs and income and thus prevented the health crisis from turning into a labour market crisis. Labour market conditions continued to improve during 2021, driven by the full opening of the economy, the improvement of the epidemiological situation, the effects of accumulated demand, as well as a better tourist season following the ease of mobility.

Based on the analysed data, it can be said that macroeconomic trends in Serbia followed European trends, but also that the crisis caused by the coronavirus pandemic (COVID-19) affected Serbia to a lesser extent compared to most European countries, primarily as a result of the achieved macroeconomic and financial stability, previous growth dynamics, but also a timely and comprehensive package of measures, as well as the structure of the economy. Adopted economic policy measures (EUR 5.8 bill., about 13% of GDP in 2020) minimized the GDP fall in 2020, while an additional package of EUR 2.2 bill. (4.2% of GDP) in 2021 contributed to further GDP growth and returning to the path of sustainable growth in the medium term, also avoiding turbulence in the labour market. Moreover, despite the pandemic, the inflow of foreign direct investments is significant, which once again made Serbia stand out in a positive way in the region, which recorded a greater decline than Serbia.

Dissemination and public relations group

Tel.: ++ 381 11 24-01-284

e-mail: stat@stat.gov.rs

Library

Tel.: ++ 381 11 24-12-922, extension 251

e-mail: biblioteka@stat.gov.rs

Pages: 97



TRENDS 2022 - 3rd quarter

MACROECONOMIC FORECASTS

GROSS DOMESTIC PRODUCT

INDUSTRIAL PRODUCTION

CONSTRUCTION

EXTERNAL TRADE

DOMESTIC TRADE

PRICES

LABOUR MARKET

SALARIES AND WAGES

TOURISM

ECONOMIC SENTIMENT INDICATOR

REGIONAL ECONOMIC ASYMMETRIES

AGRICULTURE

INDICATORS FOR MONITORING MACROECONOMIC

IMBALANCES IN THE EU - RESULTS FOR SERBIA