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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 2023 presents a review of major economic trends in this period and in the whole year: 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.

As always, this issue presents also the forecasts of trends in certain areas in the next period, obtained under ARIMA forecasting models (in the following sections: Industry, Domestic trade and External trade). A set of composite leading indicators, which can anticipate with high reliability the cyclical movements, and serve short-term forecasts, is presented in the section Macroeconomic forecasts. This chapter provides a review and analysis of the effects of the action "better price" on reducing total inflation in the period October-November 2023.

Trends for the third quarter of the reference year contains another regular part - Macroeconomic Imbalance Procedure - results for Serbia. In this issue the analysis includes eight main indicators for monitoring macroeconomic imbalances in Serbia (MIP Scoreboard) for which data are directly available.

This issue of *Trends* contains also a paper: „Global and regional energy security, food security, water security and human resources security - in the context of global and regional perspectives on growth and development". These are topics that are currently of the most importance in economic considerations of the environment, demography, prices, energy and numerous indirect factors that should maintain global economy on the path of healthy and stable growth.

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).

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PROFESSIONAL PAPER

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GLOBAL AND REGIONAL ENERGY SECURITY, FOOD SECURITY, WATER SECURITY AND HUMAN RESOURCES SECURITY IN THE CONTEXT OF GLOBAL AND REGIONAL PERSPECTIVES ON GROWTH AND DEVELOPMENT

1. GLOBAL AND REGIONAL PERSPECTIVES

Until just a few years ago, it was widely believed in the economic community that, despite all crises and setbacks, the global economy was on a long-term growth trajectory. The upward trend in GDP growth, poverty reduction, increased productivity, disposable income, and manageable inflation were the main features of the global economic cycle that began in the 1990s. Today, the economic landscape looks different, and nearly all the economic engines on which the growth cycle was based are now in stagnation, if not in retreat. Economic pessimism, and in many cases, frustration due to the inability to act, have been the dominant sentiments in recent years. Are we facing a lost decade? Can economic measures and policies provide the long-awaited stimulus, and if so, will the growth be sustainable, or is the world inevitably entering a phase of stagnation and contraction in the global economy? These are the questions and topics analysed by the World Bank in the study titled "Falling Long-Term Growth Prospects" [1] published in March of this year, along with a detailed overview of the most important trends and shocks that have brought the global economy to a historical crossroads.

Potential Growth and its Determinants. The most important driver of an economy, indicating its growth rate under full utilization of available capacities, is called potential growth and is an essential item in both short-term and long-term analysis of macroeconomic development. It is most commonly measured through the Cobb-Douglas function, which shows the combination of employed labour and capital along with the necessary technological progress to achieve growth. The potential growth of an economy is, metaphorically speaking, its limiting speed and reflects on numerous economic aspects – the reference interest rate, the level of government and population consumption, expected return on investment, etc. The World Bank's study, based on data analysis for 173 countries in the period 1981-2021, shows a decline in potential growth to 2.6% in the period 2011-2021 (from 3.5% in the period 2000-2010). The decline is more pronounced in developed economies (1.4% in the period 2011-2021 after 2.2% in the preceding decade) than in less developed ones (5% after 6% in the decade 2000-2010). The fundamental drivers of this trend are the slowdown in TFP[1] growth, slowing investment activity, and constant reduction of available labour force. Recessions (there have been two in the last twenty years – the first, the great financial crisis of 2009, and the second, the COVID-19 recession) have also had a strong impact – contributing about 1.4 percentage points to the decline in potential growth, even five years after the outbreak. Recessions are inevitably linked to banking sector crises and the collapse of investment activity, which – according to the World Bank's calculation – reduce potential growth by 1.8 percentage points in the two-year period following the outbreak.

The consequences of slowing potential growth are numerous. Firstly, it is directly correlated with the pace of poverty reduction, and it is already clear that achieving the targeted goal – reducing extreme poverty to 3% of the population by 2030 – is impossible to attain. Secondly, weaker economic growth triggers a decline in investments, which are essential for a more robust global recovery. Low economic growth is always associated with a decrease in employment, wages, and aggregate demand. All these factors together lead to a rapid decline in the available resources necessary to finance the debts of future generations. In

[1] TFP (Total Factor Productivity) indicates productivity growth that is not explained by either labor or capital input but by a third factor – technological progress and the efficiency of combining different inputs.

economics, there are effective tools for increasing potential growth: promoting productivity growth, investment, trade, development of the service sector, and investing in human capital.

What awaits us in the upcoming decade? Projections show that the period of slowing potential growth and all its traditional drivers will continue in the next ten years. Global potential growth will further decrease and is expected to average around 2.2% in the 2022-2030 decade (after 2.6% in the 2011-2021 decade), which is the lowest rate since 2000. The primary cause of this slowdown is population aging (contributing to about 50%), along with a reduction in the labour force and labour market participation rate.

Regarding investments, their unsatisfactory trend and weak growth, evident since the beginning of this millennium, escalated in 2020 with the emergence of the COVID-19 crisis. Later, the conflict in Ukraine, tightening financial conditions, and the lack of fiscal space for effective measures compounded the situation. It is expected that in EMDE (Emerging Market and Developing Economies) economies, investment growth will halve (to 3.5%) in the period 2022-2024 compared to the period 2000-2021. By 2025, their return to pre-pandemic levels is not expected.

Global trade will also continue to decline, averaging a 0.4 percentage point reduction annually. At the root of this trend are increased costs that, in some countries, raise the prices of imported products by 100%, thereby doubling the price compared to domestic products. Trade costs are far higher for agricultural and food products than for industrial products, and this difference is more pronounced in EMDE than in developed economies. Tariffs are not the only component of the cost; it also includes transportation costs, bureaucratic fees, and various other non-tariff barriers.

The only bright spot in the economic future could be the services sector, as its potential is only beginning to be tapped. Moreover, the trends that have constrained all other economic segments have had a stimulating effect on the service sector in terms of accelerated digitization and transition to online platforms, increasing the productivity of this sector. The development of services has been the main driver of growth in EMDE economies over the past thirty years and currently contributes about two-thirds of the GDP growth of these economies and employs around 50% of the workforce.

All of this is reminiscent of the 'roaring twenties,' i.e., the period of the 1920s, immediately after the Spanish flu epidemic, when thanks to the penetration of technology in Europe and America, a period of rapid modernization and strong growth began. Cars replaced horses, production lines reduced costs and production time, and electrification accelerated industrial development. Unfortunately, the World Bank states that 'our twenties' will not be anywhere near as noisy, but rather disappointing in many segments of the world economy, unless appropriate measures are taken in a timely manner."

Measures to Increase Potential Growth. The World Bank's analysis has shown that the negative trend in potential growth can be reversed through the implementation of appropriate economic measures aimed at boosting investments, human capital, labour force, trade, services, and international cooperation. It is possible to achieve global potential growth 0.7 percentage points higher (compared to a scenario without taking measures) in the period from 2022 to 2030 if selected packages of economic measures in these areas are implemented, accompanied by supportive fiscal, monetary, and financial measures. In this case, global potential growth would reach an average of 2.9% (instead of the projected 2.2%), which would still be below the 3.5% from the 2000-2011 period, but would at least initiate a process of acceleration.

- Investments – Given the current extremely dire situation related to climate change, the World Bank suggests that investments in this area would not only increase potential growth but also reduce poverty. Climate change poses the greatest threat to the impoverished population dependent on agriculture, but it also negatively affects global food and water supply, as it triggers weather disasters, earthquakes, floods, and other catastrophes that destroy physical capital and the fiscal position of the state. In this sense, gaps in agricultural infrastructure (various types of protection against hail, drought, floods, etc.) can be filled with appropriate investments. "Green infrastructure projects" would also contribute to increased employment, productivity, and potential growth, as they are primarily labour-intensive. The state can facilitate the entire process by providing various fiscal incentives to mobilize private capital in this area, as well as by improving the general business climate, which will be attractive to foreign investors.

- Human Capital and Labor Force – Measures in this area mostly boil down to increasing the contingent of active population[2], i.e., "reactivating" inactive individuals from population groups with traditionally low labour market participation rates: women, youth (19-29 years), and elderly individuals (55+). These indicators are particularly low in EMDE countries. For comparison, in EMDE, the labour force participation rate for men is 25 percentage points higher than for women, while at the global level, this gap is 18 p.p. (54% for women and 72% for men). Regarding individuals over 55 years old, their global labour force participation rate is half that of individuals aged 30-45, and it is similar for the young population. Therefore, there is room for reforms, and their implementation could increase global potential growth by about 0.2 p.p. in the 2022-2030 period. Likewise, reforms related to improving the health and educational performance of the population would contribute to potential growth in this period by 0.1 p.p. annually. These reforms are indirectly related to the labour market situation, as better-educated and healthier populations find jobs more easily and remain in the contingent of active individuals for longer.
- Trade – The primary cause of the collapse in global trade is the excessively high costs of transportation, delivery, and administration imposed in the last three years. Since these involve various regulatory and non-tariff barriers, both international and imposed, they require a package of complex and comprehensive reforms. Above all, international cooperation is crucial, which entails the introduction of various trade arrangements and incentives that will reduce costs and promote trade between signatory countries. An encouraging circumstance is that individual countries can initiate these initiatives even when the global situation is discouraging, thus reviving regional trade. In terms of domestic reforms, it is possible to introduce facilitating customs conditions, improve infrastructure that promotes trade, remove market deviations such as monopolies, and reduce corruption. Trade has a much larger and broader role than just market supply. It holds significant importance in climate transition, as it has the potential to promote goods and services necessary for transitioning to a low-emission economy. Additionally, trade supplies the country with products and services essential for post-climate disaster recovery. Furthermore, from an environmental pollution perspective, trade needs to be specifically reconsidered, as transportation costs account for about 7% of global carbon dioxide emissions and 15% of sulphur and nitrogen emissions.
- Services – In this sector, economic measures aim to unlock potential that will contribute to increased value-added growth. This includes incentives for digitization, investment in ICT infrastructure, and strengthening the managerial capacities and educational performance of employees. All of this will contribute to reducing barriers in service trade, enable more efficient government service, lower operating costs, and provide access to financial resources in the poorest countries. Here too, there is a connection with climate transition – namely, financial services play a crucial role in mobilizing resources for implementing the green agenda, while expert consulting services in engineering and ecology enable better resource allocation and priority setting.
- Macroeconomic Policies – Consistent and robust macroeconomic policy plays a significant role in the long-term increase of potential growth by eliminating distortions caused by external shocks and creating an atmosphere of trust and support. In the realm of fiscal policy, fiscal rules and a medium-term budget framework will ensure financial sustainability and accumulation of reserves in times of cyclical growth. Fiscal discipline is more necessary today than ever, given the enormous public debt and challenging financial conditions. Fiscal priorities should focus on investing in areas that will bring long-term benefits (healthcare, education, transport), a policy of neutral deficit, and avoiding pro-cyclical spending. In the monetary sphere, the focus is on a transparent and independent central bank with the capacity to ensure price stability and contribute to creating a stimulating macro environment. This will provide support to private investors for entering investments related to green infrastructure. The central bank, with its counter-cyclical instruments, can mitigate economic phases of growth and downturn by managing interest rates and credit activity, thus enabling access to financial resources for investors even in times when economic activity in the environment is weak.

[2] The total population, in terms of the labour market, can be divided into active and inactive. The active population consists of employed individuals (those who earn for a living, whether formally or informally employed) and the unemployed (those without a paid job, but actively seeking and willing to work). The inactive contingent consists of individuals who are neither employed nor willing to work.

Europe and Central Asia – Key Conclusions. Over the past three years, the Europe and Central Asia (ECA[3]) region has experienced two significant external destabilizing shocks: the COVID-19 pandemic and the Russo-Ukrainian conflict. Both events have had a strong impact on the region's economy, with negative effects reflected in the financial and stock markets, supply chains, economic sentiment, and a decline in demand from the EU, which is the region's largest trading partner.

However, the average annual growth of potential output in the ECA region began to decline long before these shocks. After a stable 4.2% growth in the 2000-2010 decade, it fell to 3.6% in the period of 2011-2021. A growth of 3% is projected for the 2022-2030 decade. Before the Great Recession (2008-2009), the region's growth was stable and substantial. Following that, a series of successive negative shocks occurred: the EU debt crisis (2010-2012), the fall in oil prices (2014-2016), followed by the epidemic and the Russo-Ukrainian conflict. In addition, various internal factors, including social and political unrest, further contributed to the decline in the growth rate of potential output per capita from 3.8% in the 2000-2010 decade to 3.4% in the 2011-2021 decade.

Regarding the sources of potential output, the largest contribution to its growth was achieved through **capital accumulation (investment)**, with an average contribution of 2.4 percentage points since 2000. However, noticeable negative trends are observed in this segment. Private investments decreased from 7% (average annual growth rate) in the period 2000-2010 to 4.9% in the period 2011-2021, while total investments decreased from 8% to 4.7% in the same periods. The investment crisis began after 2010, starting with the European debt crisis, followed by the drop in oil prices - which threatened energy exporters. Geopolitical tensions, especially in Ukraine, and disruptions in supply chains from 2020 to the present, have further exacerbated the situation. Additionally, the ECA region traditionally grapples with a high degree of state intervention in all sectors. This means that private capital owners are constantly in competition with the state for access to financial resources, suitable workforce, and specific markets. This state interventions are also connected with inflation trends from the demand side. The production side i.e. disruptions in supply chains is one most important factor of inflation trends.

The second component of potential growth – **labour force** – has been adversely affected by an aging population, low birth rates, and significant emigration over the past two decades, which has had a highly negative impact on economic and potential growth. The situation is particularly challenging in Central Europe, where, for example in Poland, the proportion of the population aged 65+ has increased by 5 percentage points in the last 12 years, compared to the EU average growth of 3 percentage points. Central Asia and Turkey, in terms of demographics, are in a much better position; in fact, some countries even record population growth. The demographic situation has had a negative impact on the labour market, creating labour shortages and other deviations (informal employment, growth in the supply of low-quality jobs, a decrease in the participation rate). In general, the accumulation of human capital began to decline around 2010 when all achievements related to the increase in life expectancy and educational goals lost momentum. In terms of educational quality, the Region lags behind the rest of Europe, as evidenced by low PISA scores, and state spending on education has decreased from an average of 4.2% to 3.9% in the last ten years. Inadequately educated labour force entered the labour market unprepared, creating numerous problems – a mismatch between supply and employer needs, an increase in young people who are neither employed nor in education – thereby burdening the prospects for overall economic growth. COVID-19 has further exacerbated human capital formation, and the consequences of school closures and online learning will be evident when the current generation of students enters the labour market.

The third factor of potential growth – **Total Factor Productivity (TFP)**, which includes the educational system – has seen a rapid slowdown in growth in the last 10 years, and its contribution to potential growth has decreased from 1.7 percentage points in the period 2000-2010 to less than 1 percentage point in the period 2011-2021. Reforms that were necessary for EU accession were abruptly halted after the completion of this process, which negatively affected the overall business climate and investment in technological capacity. The share of informal sectors, the public sector, and corruption increased, and institutional weaknesses came to the fore, further displacing the private sector (for example, tax policy, market deviations related to competitiveness, etc.). Meanwhile, investments in R&D have remained at about 1% of GDP over the past 15 years, while in the same period, the EU increased this figure from 2% to 2.2%. The COVID-19 pandemic has highlighted issues with digitalization and brought to the forefront phenomena such as computer literacy, access to the internet, and digital technologies. World Bank data shows that less than half of the population in the ECA region possesses basic digital literacy, which hinders the provision of ICT-based services.

[3] This encompasses both growing and developing countries in the Europe and Central Asia region: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Georgia, Kazakhstan, Kosovo*, Kyrgyzstan, Moldova, Montenegro, North Macedonia, Poland, Romania, Russia, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan.

In essence, the ECA region faces significant challenges in catching up with the living standards of the EU. Despite this, there is a significant reform space that has not been utilized: improving labour market parameters by increasing the participation rate; reducing trade barriers to boost exports; increasing investments in R&D; promoting investments in green technologies, which will have a favourable impact on TFP, increase in physical capital, and higher employment; promoting the rule of law and reducing state participation in the economy. Only in this way will resilience to shocks be strengthened and sustainable growth promoted in the decade ahead.

2. ENABLING STRATEGIC ENERGY SECURITY IN THE WORLD WITH REFERENCE TO THE WESTERN BALKANS AND SERBIA - KEY DATA AND FINDINGS

INTRODUCTION

Electricity serves as the driving force behind rapid economic development of a country. Access to energy sources and ensuring energy stability is indispensable for the population well-being.

The security of electricity supply is an anchor for the human society, underpinning the 24/7 operation crucial for the digital economy. To secure this vital resource, it is necessary to continuously scrutinize the world's ability to meet rising energy needs and strategically determine the sources of energy that will have the least ecological consequences. In essence, the question of how nations will address future energy consumption and its environmental ramifications demands constant attention and action from stakeholders in the field.

Following the unprecedented pandemic-induced energy demand reduction in 2020, the consumption of energy rebounded strongly in 2021. This rebound resulted in substantial imbalances in energy markets, triggering soaring energy prices as well as significant growth in greenhouse gas (GHG) emissions. The situation was further compounded by Russia's invasion of Ukraine as the energy markets and systems were already under pressure when Russia started its war in Ukraine. The war's shock waves were felt throughout interconnected energy markets and led to a global energy crisis with severe economic consequences. In the first place, surge of energy prices are putting at risks economic growth of many regions and have raised the cost of living. Progress on energy access has stalled and countries face imminent energy security risks. The consumption of fossil fuels has also increased substantially, driving emissions up to their highest levels in history.

All this demands from the countries to review their recovery choices in the short and mid-terms and the strategies for enabling their energy security[4] in the long run. Achieving strategic energy security is essential for global stability and development. However, it is not a one-size-fits-all solution. Different world regions face unique challenges and opportunities that require tailored approaches and policies.

In the continuation of this paper, Energy security situation in each region will be explored and accompanied with an overview of the strategies for enabling strategic energy security for each region. As for majority of countries in the world, the development of the energy sector is one of the most critical issues in the Western Balkans region. Therefore, the paper will cover the most critical issues regarding energy security in the WB6 countries. The structure of the energy sector and its particularities will be explained with reference to main challenges present on the road toward energy transition.

[4] According to International Energy Agency (IEA 2019) security can be defined as the ability of a nation or region to reliably and affordably access sufficient energy supplies to meet its needs at an affordable price. Energy security : Ensuring the uninterrupted availability of energy sources at an affordable price. https://www.iea.org/areas-of-work/ensuring-energy-security

ENERGY SECURITY IN THE WORLD

Energy security is a critical global imperative, heavily linked to economic stability, national security, and environmental sustainability.

The availability, affordability, and reliability of energy sources are fundamental to the functioning of modern societies. Energy security ensures that nations can meet their energy needs consistently, without disruptions, and at reasonable costs. Achieving strategic energy security is essential for global stability and development. However, it is not a one-size-fits-all solution. Different world regions face unique challenges and opportunities that require tailored approaches and policies.

Before digging further into region-specific strategies, it's crucial to understand the energy security situation in each world region. It is important to note that there are variety of factors affecting energy security globally, but with different magnitude – such factors are the availability and diversity of energy resources, geopolitical considerations, economic factors, and environmental concerns.

As the global energy landscape is diverse, with regions characterized by varying degrees of energy security, it is reasonable to explore each region separately.

Energy Security in North America: North America enjoys a relatively high level of energy security due to its abundant domestic energy resources and well-developed infrastructure. The key aspects of its energy security are as follows:

1. Energy Resources: North America possesses significant energy reserves, including vast shale gas and oil deposits. According to the U.S. Energy Information Administration (EIA), in 2020, the United States produced over 12,2 million barrels of crude oil per day, becoming the world's leading oil producer. The region also has substantial coal reserves and a growing renewable energy sector.
2. Infrastructure: The United States and Canada have extensive energy infrastructure networks, including pipelines, refineries, and power generation facilities. The North American energy grid is interconnected, ensuring reliable electricity supply across the continent.
3. Energy Diversification: While fossil fuels dominate the energy mix, there is a growing emphasis on diversification. According to the EIA, in 2020, renewable energy sources accounted for about 12% of total U.S. energy consumption.
4. Environmental Sustainability: Both the United States and Canada are committed to reducing carbon emissions. The U.S. has seen a notable shift towards natural gas and renewable energy sources, contributing to a decrease in emissions (EIA 2021). [2]

Energy Security in Europe: Europe faces distinct energy security challenges, given its high energy consumption, dependence on imports, price surges and geopolitical complexities. Namely, the energy crisis of 2022, triggered by the war between Russia and Ukraine, presented the European Union with issues concerning both energy security and the affordability. As a result of various measures implemented in 2022, the EU has managed to avert energy shortages until now. However, it has been recognised that the EU must now make preparations for the upcoming winter, as guaranteeing an adequate level of gas storage may prove to be more challenging (EP, 2023). [3]

1. Energy Imports: A significant portion of Europe's energy needs are met through imports, particularly natural gas. Russia has been Europe's largest supplier of natural gas and distribution networks are geared towards Russian supply. In 2020, more than 40 percent of total imports of natural gas came from Russia (IMF 2022) [4]. In 2021, gas supplies were gradually reduced and rerouted to avoid passing through Ukraine and Poland. As the conflict escalated, gas supplies to Europe fell sharply and financial sanctions were applied accordingly. On September 26th, 2022, Nord Stream 1, the biggest pipeline in terms of volumes of gas delivered, was sabotaged in the Baltic Sea. This marked an abrupt loss of supply for Europe. (Enerdata 2023) [5]. As of the present, the European Union (EU) continues to receive gas through the Turk Stream and Druzba pipelines, along with liquefied natural gas (LNG) imports from Russia. The most recent data available indicates that during the third quarter of 2022, the EU sourced just 13% of its coal, 18% of its gas, and 14% of its oil from Russia (EP, 2023). [3]

2. Renewable Energy Transition: Europe is aggressively pursuing renewable energy adoption. In May 2022, the European Commission disclosed the REPowerEU plan, which was formulated with the aim of achieving several key objectives. These objectives include diversifying energy supplies, curbing energy demand, enhancing energy efficiency, and promoting the expansion of renewable energy sources. The EU aims to achieve 32% renewable energy consumption by 2030, with a long-term target of becoming carbon-neutral by 2050. (IRENA) [6]

   Furthermore, the REPowerEU plan encompassed a comprehensive solar energy strategy, setting forth ambitious targets for solar photovoltaic capacity expansion. The plan aimed for the installation of over 320 GW (gigawatts) of new solar photovoltaic capacity by 2025, followed by a target of nearly 600 GW by 2030. These initiatives were subsequently complemented by Council Regulation (EU) 2022/2577 establishing a framework designed to expedite the deployment of renewable energy sources. One of the key objectives of this regulation is to streamline the permitting procedures for renewable energy projects, with a particular focus on solar installations, heat pumps, and initiatives involving the repowering of existing renewable energy facilities. (EP, 2023). [3]

3. Interconnectivity: Efforts to enhance energy interconnectivity among EU member states and neighbouring countries are underway. The Clean Energy Package adopted in 2019 as the Fourth Energy Package set the ambitious, though non-binding, goal to achieve cross-border interconnections of at least 10% of each Member State's installed electricity production capacity by 2020, rising to 15 % by 2030[5]. However, construction of additional cross-border electricity interconnectors has remained largely unachieved, with only 17 out of 28 member countries having reached the 10% goal by 2020 (Pepe Maria, J., 2022). [7]. In addition, projects like the Southern Gas Corridor and the Baltic connector[6] aim to diversify energy sources and reduce dependence on Russian gas.

4. Energy Efficiency: Europe is committed to improving energy efficiency. According to Eurostat, the EU's energy intensity (energy used per unit of GDP) has declined by 36% between 2000 and 2019, indicating improved energy efficiency [8].

   In its resolution of October 2022[7] addressing "The EU's response to the rise in energy prices in Europe", the European Parliament emphasized the crucial role played by investments in renewable energy, energy efficiency, and essential infrastructure. This includes specific, well-defined cross-border projects that receive funding through initiatives like Next Generation EU and REPowerEU. These investments are seen as vital steps toward enabling the European Union (EU) to attain energy sovereignty, foster strategic autonomy, and bolster energy security.

Energy Security in Southeast Asia. Southeast Asia's energy security situation is influenced by its diverse energy landscape and rapid economic growth over the past two decades even as trends were disrupted by the Covid-19 pandemic. Economic growth has been accompanied by major changes in societies across the region, notably the forces of urbanisation and motorisation, which have had strong influences on patterns of energy use.

1. Energy Diversity: Southeast Asia boasts diverse energy resources. Southeast Asia has considerable potential for renewable energy, but (excluding the traditional use of solid biomass) it currently meets only around 15% of the region's energy demand. Hydropower output has quadrupled since 2000 and the modern use of bioenergy in heating and transport has also increased rapidly. Southeast Asia is also rich in the raw materials required for clean energy products. These include bauxite, nickel, tin and rare earth elements, which can variously be found throughout the region, particularly Indonesia, Myanmar, the Philippines and Thailand. In addition, Malaysia and Viet Nam are among the world's largest solar modules' makers. However, at the same time, many Asian countries have shallow financial and capital markets, and domestic banks have limited experience in financing clean energy assets. Long-term, low-cost debt is often not available and access to international private capital can stay in the way to investments toward energy transition.

[5] European Commission (2019): Clean Energy for All Europeans, https://energy.ec.europa.eu/topics/energy-strategy/clean-energy-all-europeans-package_en
[6] The Balticconnector is the first gas interconnector between Finland and Estonia, aiming to end the gas isolation of Finland, connecting it to the rest of Europe.
[7] European Parliament resolution of 5 October 2022 on the EU's response to the increase in energy prices in Europe (2022/2830(RSP)). Downloaded from https://www.europarl.europa.eu/doceo/document/TA-9-2022-0347_EN.html

2. Rapid Demand Growth: Asia's energy consumption has grown rapidly. According to BP's Statistical Review of World Energy 2021, Asia Pacific accounted for 42.2% of global energy consumption in 2020, with China as the primary driver.

3. Geopolitical Tensions: Geopolitical tensions, such as territorial disputes in the South China Sea, can affect energy security. These disputes can disrupt energy trade routes and access to resources. Also, the recent price increases further accentuated by the invasion of Ukraine – may have long-term repercussions for the role of natural gas in the region, by changing perceptions on affordability and policy attitudes towards investments in gas import infrastructure.

4. Energy Efficiency: Many Asian countries are focusing on energy efficiency measures to balance rising demand. For instance, there are multiple initiatives to support energy transition. Among these are country-level work in Indonesia to mobilize finance for clean energy in partnership with the country's Chamber of Commerce (KADIN), support for the development and implementation of Malaysia's National Energy Policy through a series of roundtables held with the government and private-sector energy companies; and establishing the ASEAN Energy Leaders for Just Energy Transition community. The latter is aimed at strengthening intra-regional and international cooperation to help accelerate a just and responsible energy transition. [9]

Energy Security in the Middle East. Despite having enormous fossil fuel resources, the Middle East is susceptible to drops in oil and gas prices, which hurts the country budget. In order to address the current energy crisis and strengthen energy security, the Middle Eastern governments have established commendable renewable energy projects over the years. However, there is still a sizable gap between the potential of renewable energy and production that can be exploited due to rising demand and population growth.

1. Resource Abundance: The Middle East holds approximately 48% of the world's proven oil reserves and 38% of global natural gas reserves, according to the EIA. Over 70 % of global proven reserves were in OPEC member countries. [10]

2. Geopolitical Instability: Political instability and conflicts in the region pose a constant threat to energy security. Events like the Arab Spring and conflicts in Syria and Yemen have disrupted oil production and export while Covid-19 and the war between Russia and Ukraine deepened energy market volatility. Therefore, From the perspective of the investor, Middle Eastern politics and commerce seem to be the main obstacles or possibly the root of the likely market risk.

3. Economic Diversification: Many Middle Eastern nations are pursuing economic diversification away from oil dependence. For instance, Saudi Arabia's Vision 2030 aims to transform the country's economy by developing non-oil sectors. By 2030 Saudi Arabia plans to generate 50 percent of its electricity from renewables and the other half from gas.

4. Renewable Energy: The Middle East is increasingly investing in renewable energy. The ACWA Power (Saudi Arabia's investor and operator of electricity generation and water desalination plants) launched NEOM green hydrogen project in Saudi Arabia to develop a green hydrogen facility powered by solar and wind energy. The obtained green hydrogen will be converted into liquid ammonium and then shipped to Asia, predominantly South Korea and Japan.

Energy Security in Africa. Africa faces unique energy security challenges. The paradox is that Africa is responsible for just 4% of the world's greenhouse gas emissions, but suffers from some of the biggest impacts of climate change (Reuters 2023). Above all, the continent is rich in the commodities needed for the green energy transition and has abundant solar power, but many governments are also burdened with cripplingly high debts.

1. Energy Access: A substantial portion of Africa's population lacks access to electricity. Russia's invasion of Ukraine has sent food, energy and other commodity prices soaring, increasing the strains on African economies already hard hit by the Covid-19 pandemic. The overlapping crises are affecting many parts of Africa's energy systems, including reversing positive trends in improving access to modern energy, with 600 million people, or 43% of the total population in Africa, lacking access to electricity, most of them in sub-Saharan Africa. Also there are deepening financial difficulties of utilities, increasing risks of blackouts and rationing. These problems are contributing to a sharp increase in extreme poverty in sub-Saharan Africa.

2. Resource Potential: Africa is a continent rich in land, water and energy resources, with a young and fast-growing population. Being the world's youngest continent, it is expected to grow to nearly 2,5 billion people by 2050, 80% of them in Sub-Saharan Africa (UNPD, 2019). Also, Africa possesses abundant renewable energy resources, including solar, wind, and hydropower. Unlocking this potential is crucial for energy security and economic development. For instance, according to IEA Africa Energy Outlook 2022, Africa is home to 60% of the best solar resources globally, yet only 1% of installed solar PV capacity. In addition, Africa has vast resources of minerals that are critical for multiple clean energy technologies. Namely, Africa

accounts for over 40% of global reserves of cobalt, manganese and platinum – key minerals for batteries and hydrogen technologies (IEA Africa Energy Outlook 2022).

3. Infrastructure Deficits: Inadequate infrastructure, such as transmission lines and energy storage facilities, hinders energy distribution and reliability. In recent years, transmission and distribution infrastructure has received much less attention than generation capacity. Yet both are necessary to achieve SDG 7 and green industrialization in Africa (RES4Africa 2023). [11]

4. Regional Cooperation: Regional cooperation is crucial to developing energy infrastructure and sharing energy resources efficiently. Initiatives like the African Union's Programme for Infrastructure Development in Africa (PIDA) aim to promote regional energy integration focusing manly on major hydroelectric projects and interconnects of the power pools to meet the forecast increase in demand. Regional petroleum and gas pipelines are also included.

ENERGY SECURITY IN WESTERN BALKAN WITH REFERENCE TO SERBIA

Structure of the energy sector and its dependence on coal. In the Western Balkans, particularly in Serbia and Bosnia and Herzegovina, the energy sector remains largely under the control of state-owned utility companies. This dominance is most pronounced in the realms of electricity and natural gas, whereas the oil sector has experienced extensive privatization. Among the top three energy companies in the region, ranked by revenue and market capitalization, two operate under public ownership - Elektroprivreda Srbije (EPS) and JP Srbijagas - while one, Naftna Industrija Srbije (NIS), is privately owned, having been sold to Russia's GazpromNeft in 2008.

State-owned utilities in the Western Balkans deliver essential social and political functions. They function as tools for ensuring that energy remains affordable for consumers through various mechanisms such as energy subsidies and cross-financing. Simultaneously, they serve as sources for rent-seeking activities.

Having joined the Energy Community, all Western Balkan countries have committed to aligning with EU legislation, particularly in terms of liberalizing their energy markets. This entails the separation of vertically integrated national electricity and gas companies into distinct entities that focus on production and distribution/supply. This structural reform, along with other changes like establishing independent regulatory bodies and energy market exchanges, aims to attract foreign direct investment (FDI) into the energy sector. It also seeks to promote healthy competition among energy traders, empower businesses and households to choose from multiple energy providers, and, over time, drive down energy prices. However, in terms of compliance with EU legislation, Serbia has yet to fully unbundle EPS to establish a fully autonomous Transmission System Operator (TSO), specifically Elektromreže Srbije (EMS). Additionally, the authority over the energy sector has not been entirely transferred from the Energy Ministry to a special regulatory body (Energy Community 2022). [12]

The Western Balkans' energy landscape is heavily skewed towards coal, with renewable energy primarily represented by hydro generation. All WB6 countries predominantly rely on domestic coal as a substantial component of their total energy supply, except for Albania, which leans on hydropower in the first place. In this group of nations, coal contributed to over 60% of the gross electricity generated in 2020 (Eurostat, 2022).

Furthermore, Energy Community data for 2020 underscores the prominence of coal in electricity production for several WB6 countries (Energy Community 2022). Serbia, Bosnia and Herzegovina, and Kosovo* rank among the world's top 10 nations in terms of the share of coal in electricity generation, with percentages of 94.9%, 70%, and 67,7%, respectively. In contrast, North Macedonia and Montenegro maintain relatively more balanced energy mixes, with coal accounting for 51% and 46%, respectively (Table 1).

Table 1. Thermal power plants (TPPs) running on coal in the WB6.

Country	Number of TPPs	Installed capacity (gigawatt)	Share in total electricity, %
Albania	-	-	-
Bosnia and Herzegovina	5	2.0	67.7
Kosovo*	2	1.2	94.9
Montenegro	1	0.2	41.0
North Macedonia	2	0.8	51.0
Serbia	8	4.3	70.0

Source: Energy Community

* This designation is without prejudice to status and is in accordance with United Nations Security Council Resolution 1244 and the opinion of the International Court of Justice on the declaration of independence of Kosovo.

On the other side, the majority of oil and natural gas supplied to the region is brought in from external sources. There is virtually no local oil production, and the quantities of natural gas extracted are minimal. For instance, in 2019, Serbia's domestic natural gas extraction amounted to a mere 0,438 billion cubic meters, which accounted for slightly more than one-fifth of its annual demand (Energy community data). [13]

Energy challenges for the WB6 in relation to the ongoing geopolitical crisis

The multifaceted crisis of 2021-2022 caused the domestic energy supply of the WB countries to fall short in meeting the demand. This was particularly evident during the cold winters from November to December last year. Subsidized retail energy prices, lower than wholesale market rates, and the limited availability of district heating systems outside major urban areas contribute to increased electricity consumption by households. However, coal-fired power plants struggle to cope due to outdated technology and bottlenecks in coal mining. Moreover, in countries heavily reliant on hydropower, like Albania, the dwindling water levels in dams during the summer pose significant hurdles, exacerbated by climate-induced droughts. To bridge these supply gaps, electricity must be imported, either from neighbouring countries or within the region.

In contrast, during milder conditions, countries such as Serbia and Bosnia often generate surplus electricity, which they export to neighbouring nations. The competitiveness of coal-generated energy in these countries stems from their lack of carbon emissions taxation, unlike the European Union.

The demand-supply gap became particularly pronounced from late 2021 through 2022, resulting in retail electricity prices plummeting to levels ten times lower than record wholesale prices, which were influenced by European natural gas prices. In December 2021, an incident at the TENT TPP serving Belgrade, caused by subpar lignite quality due to underinvestment and inadequate pit management, compelled EPS to import unprecedented quantities of coal. [14]

It's worth noting that these challenges were already in motion before the outbreak of the Ukraine conflict in February 2022, which further exacerbated energy prices across Europe and heightened the sense of insecurity in the Western Balkans.

Renewables. Transitioning from coal to renewables is part of moving closer to the EU in the WB6. In October 2020, leaders from the region adopted the Sofia Declaration on the Green Agenda for the Western Balkans. Apart from that, the Western Balkans will also be subject to the so-called Carbon Border Adjustment Mechanism (CBAM), which will take effect in 2026. Also, in April 2021, Serbia adopted a new law on renewables which overhauls state aid and limits the scope of feed-in tariffs.

Foreign influence in the energy sector. The Western Balkans' reliance on Russian gas has raised alarms for both the European Union (EU) and the United States. The ongoing conflict in Ukraine could potentially accelerate efforts to diversify energy sources in the region. The United States is backing the construction of a liquefied natural gas (LNG) floating storage and regasification unit in northeastern Greece, set to become operational in late 2023 or shortly thereafter. Once Serbia completes a 1,8 billion cubic meters per year interconnector with Bulgaria, a Project of Common Interest (PCI) supported by the EU, it could receive gas from this facility.

Throughout the 2010s, China established a presence in the Western Balkans' energy sector through the Belt and Road Initiative (BRI). China's soft loans were directed toward modernizing and expanding coal-fired thermal power plants like Kostolac in Serbia and some other in Bosnia. Typically, these projects were executed by Chinese contractors, with limited economic benefits flowing into the host countries.

The following initiatives are to pave the way for the energy transition in the WB6, with the reference for Serbia:

With the aim to achieve the energy transition, Serbia has already taken an active role in the EU initiatives regarding this area. All this initiatives stemmed from the Sofia Declaration on the Green Agenda in which all six Western Balkan economies made a collective commitment to ambitious environmental and climate objectives, structured around five core pillars: climate, energy, and mobility; circular economy; depollution; sustainable agriculture and food production; and biodiversity. In alignment with the Paris Agreement, the Western Balkan countries have pledged to attain climate neutrality by 2050, aiming to reduce greenhouse gas emissions by 55% by 2030. Consequently, these governments have committed to advancing a transition towards clean energy. [14]

It is also important to mention that the regional collaboration between some WB6 countries has been boosted as a response to the ongoing energy crisis. Serbia, Albania, and North Macedonia, as participants in the Open Balkan[8] initiative, have formed a working group specifically dedicated to tackling the energy crisis. Within this framework, they are actively devising joint strategic projects, which notably include the development of gas interconnections among their respective economies. [14]

The mentioned EU initiatives are as follows:

The initiative for Coal Regions in Transition in the Western Balkans and Ukraine which was launched in December 2020 to support countries and regions to move away from coal towards a carbon-neutral economy, while ensuring that this transition is just. The initiative delivers support to coal regions in EU neighbouring countries, namely in Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia, Serbia, and Ukraine.

The initiative also aims to help coal regions access financing for transition projects or programmes, based on various sources available from the European Commission, the World Bank, the European Bank for Reconstruction and Development, and the European Investment Bank. [15]

The South-East European Gas (SEEGAS) Initiative which was launched by the Energy Community Secretariat in December 2020, is a response to stakeholders' increasing interest to establish organized gas exchanges and improve cross-border trading.

The initiative aims to foster closer cooperation between gas exchanges and transmission system operators central, southern and Eastern Europe. The goals are to enable market opening, better services for traders and ultimately to benefit end-consumers through increased competition in gas trading.

The launch of the Croatian LNG terminal on the island of Krk in Omišalj has placed the country at the heart of a new supply hub for south-East Europe, bringing diversification not only for its own market but also for the region. The terminal, using its own floating storage and regasification unit (FSRU), has been recently expanded by 0.3bcm to 2.9bcm annually but pipeline expansion projects linking to Slovenia, Hungary and the Balkans via Serbia could help increase that capacity further. [16]

[8] Open Balkan Initiative is an economic and political zone formed by Albania, North Macedonia and Serbia with an aim to encourage more intra-regional co-operation and integration in the Western Balkans.

CONCLUSION

Strategic energy security is a global imperative that must be addressed through region-specific strategies. North America, Europe, Asia, the Middle East, and Africa each face unique challenges and opportunities on the path to energy security. Diversifying energy sources, strengthening infrastructure, enhancing cooperation, and embracing renewable energy are common themes in these strategies.

The achievement of strategic energy security has far-reaching implications for global stability and sustainability. As the world navigates complex geopolitical, economic, and environmental challenges, it is imperative for nations and regions to collaborate and innovate in their pursuit of energy security. Energy diversity and shift toward clean energy are imperative.

In case of the WB6, the above shift depends upon institutional and regulatory reforms are imperative which has to facilitate investment and diversify energy sources. This includes bolstering renewable capacity, enabling it to compete with electricity generated from coal by established companies. These reforms are essential for steering the Western Balkans toward a more secure, sustainable, and diverse energy future while mitigating the influence of foreign actors in the region's energy landscape.

AS A WAY FORWARD – REFERENCE TO SERBIA

Given all the above, Serbia must prioritize measures to enhance energy stability and security, particularly through the phased reduction of coal in its energy portfolios. This is of paramount importance, especially with the European Union's implementation of the Carbon Border Adjustment Mechanism (CBAM)[9], which could render energy-intensive industries in the region less competitive.

Here are the key strategies to be considered.

Infrastructure Modernization: It is required a significant investment to address the aging energy infrastructure focusing on reducing electricity distribution losses which is a prerequisite for improving the efficiency and reliability of energy supply.

Closely related to the above, Energy Efficiency Improvements are the next important strategy to be considered as it is pivotal for reducing domestic energy demand. Public awareness campaigns followed by targeted advisory services provided by relevant public agencies or business associations are necessary to engage the private sector more effectively to adjust their practices toward energy transition. Additionally, expanding the availability and coverage of energy efficiency funding, including options like affordable loans tied to energy efficiency criteria and financial incentives, should accelerate energy-saving measures across society.

Fossil Fuel Subsidy Elimination: It is imperative to phase out subsidies for fossil fuels and introduce carbon pricing mechanisms such as Emissions Trading Schemes (ETS), fossil fuel support reductions (FFS), and carbon taxes. This is particularly crucial as climate pressures mount on energy markets, and subsidies for renewable energy sources become increasingly vital.

Renewable Energy Expansion: Serbia should significantly boost investments in renewable energy, particularly in solar and wind power by transitioning from feed-in tariffs to feed-in premiums or contract-for-difference support schemes[10]. By doing so Serbia will enhance investor confidence and align the market with competitive dynamics and sustainability.

The next important strategy to be considered is Vulnerable Population Support. During the energy transition program, the Serbian government must be aware of its influence on the vulnerable consumers – at the same time, it is crucial to establish assistance programs to protect those who are at risk of energy poverty. Only then, will Serbia reach sustainable energy transition.

[9] The Carbon Border Adjustment Mechanism (CBAM) is a carbon tariff on imports of certain goods and selected precursors whose production is carbon intensive and at most significant risk of carbon leakage: cement, iron and steel, aluminium, fertilisers, electricity and hydrogen, imported by the European Union. It is legislated as part of the European Green Deal, and will take full effect in 2026. Until than, it will enter into force in its transitional phase as of 1 October 2023.

[10] Under a feed-in tariffs (FIT), every kilowatt-hour injected to the grid by registered plant (e.g. rooftop solar panels, etc.) will receive a price for that electricity. The producer will be offered long-term contracts so as to produce the electricity from renewable energy sources (RES) at certain price, which is an above-market price – this provides price certainty and long-term contracts which in turn help finance renewable energy investments. Typically, FITs award different prices to different sources of renewable energy in order to encourage the development of one technology over another. Under a feed-in premium (FIP) scheme, electricity from renewable energy sources (RES) is typically sold on the electricity spot market and RES producers receive a premium on top of the market price of their electricity production.

Regional Integration: is a cornerstone for mitigating price fluctuations and enhancing energy security. Therefore Serbia is to prioritize its regional integration and cooperation. It has been already initiated through the Open Balkan initiative which should pave the way for the integrated regional energy market with the final aim t facilitate the WB6 integration into the European Union's internal energy market.

KEY OFFICIAL DATA HIGHLIGHTS REGARDING ENERGY SECURITY IN THE WORLD

Energy developments. According to Energy Institute, 2022 saw a 1% increase in total primary energy consumption taking it to around 3% above the 2019 pre-COVID level.

Renewables' (excluding hydroelectricity) share of primary energy consumption reached 7.5% in 2022, which is an increase of nearly 1% over the previous year, while fossil fuel consumption as a percentage of primary energy remained steady at 82%.

Oil. Regarding crude oil, the price hikes have been reported on its world market. Namely, brent crude oil prices averaged $101/bbl in 2022, its highest level since 2013. At the same time, oil consumption continued to increase, rising by 2,9 million barrels per day (b/d) to 97,3 million barrels per day (b/d) in 2021, while consumption remained 0,7% below 2019 levels (Energy Institute 2023).

Natural gas. In Europe and Asia, natural gas prices reached record levels in 2022, rising nearly threefold in Europe, while doubling in the Asian LNG spot market. On the other hand, global natural gas demand declined by 3% in 2022. Its share in primary energy in 2022 decreased slightly to 24% (from 25% in 2021).

As for global gas production it remained relatively constant in 2022 compared to 2021. However, overall natural gas pipeline net trade fell around 15% globally in 2022 (78 Billion cubic meters). European pipeline imports fell by 35% (82 Billion cubic meters), almost entirely attributable to supplies from Russia. Overall, Russian total pipeline exports fell 38%. On the contrary, the Middle East increased its pipeline exports by 12%. China increased its pipeline imports by 5 Billion cubic meters. (Energy Institute 2023).

Coal. According to Energy Institute, coal prices reached record levels in 2022, with European prices averaging $294/tonne and the Japan CIF spot price averaging $225/tonne (increases of 145% and 45% over 2021 respectively).

As for coal consumption, it continued to increase, rising 0,6% in 2021 to 161 EJ; the highest level of coal consumption since 2014. The growth in demand was largely driven by China (1%) and India (4%).

Coal consumption in both North America and Europe declined by 6.8% and 3.1% respectively. At the same time, global coal production increased by over 7% compared to 2021, reaching a record high of 175 EJ while China, India, and Indonesia accounted for over 95% of the increase in global production.

Renewables. When it comes to renewable power (excluding hydro), it rose 14% in 2022 to reach 40,9 EJ . Namely, solar and wind capacity continued to grow rapidly in 2022 while the largest portion of solar and wind growth was in China accounting for about 37% and 41% of global capacity additions respectively (Energy Institute 2023).

Electricity. According to the Energy Institute, global electricity generation increased by 2.3% in 2022. Wind and solar reached a record high of 12% share of power generation with solar recording 25% and wind power 13.5% growth in output. Nevertheless, coal remained the dominant fuel for power generation in 2022, with a stable share around 35.4%, marginally down from 35.8% in 2021. At the same time, natural gas-fired power generation remained stable in 2022 with a share of around 23%.

As it is a subject of heated debates – it is worth mentioning about key minerals. Namely, due to the recent energy market shifts and corresponding sharp rise in production of Lithium and cobalt production by 21%, lithium carbonate prices increased 335% to a record high average of $47.000/tonne, while the price of cobalt increased 24% in 2021 to average $64.000/tonne (Energy Institute 2023).

3. FOOD SECURITY

Global Hunger. Global hunger, as measured by the prevalence of undernourishment (Sustainable Development Goals- SDG Indicator)[11], remained relatively unchanged from 2021 to 2022. However, it is still significantly higher than pre-COVID-19 levels, affecting around 9.2 percent of the world population in 2022 compared to 7.9 percent in 2019. While there was progress in reducing hunger in Asia and Latin America from 2021 to 2022, hunger increased in Western Asia, the Caribbean, and all subregions of Africa during the same period. The majority of individuals unable to afford a healthy diet in 2021 were concentrated in Southern Asia, Eastern Africa, and Western Africa. It is projected that almost 600 million people will be chronically undernourished in 2030. This is a significant challenge, particularly in Africa, and it points to the difficulty of achieving the Sustainable Development Goal (SDG) target to eradicate hunger.

Food Insecurity. The prevalence of moderate or severe food insecurity (SDG Indicator) remained unchanged globally in 2022. Approximately 29.6 percent of the global population, or 2.4 billion people, were moderately or severely food insecure, with 900 million people being severely food insecure. *The Black Sea Agreement* which was reached almost a year ago in July 2022, was supposed to be renewed every four months. It was renewed three times, but the last two renewals lasted only two months each due to Russia's complaints about obstacles to its food and fertilizer exports.

Russia's recent withdrawal from the Black Sea Agreement has led to a 70% reduction in daily deliveries of grains and fertilizers due to insecurity and transport instability. This has once again affected the least developed countries around the world, such as Afghanistan, Ethiopia, and Kenya, as significant quantities of grains were being delivered to these countries to alleviate hunger.

The start of the war in Ukraine caused grain prices in exports to reach a level of $1360 per ton. However, with the establishment of the Black Sea Agreement, grain prices in the market stabilized at $800 per ton. Nevertheless, the recent escalation of the conflict and Moscow's dissatisfaction with the agreement led to its termination. Since the beginning of the Russo-Ukrainian war, Russia's reliance on Ankara and Beijing as trading partners has exponentially grown, as they refuse to join the sanctions imposed by the West on Moscow. Beijing has previously emphasized the importance of continuing the grain agreement, even including it in its peace plan. Refusing to rejoin the agreement could have consequences for Russia-China relations. The fate of the Black Sea grain export initiative primarily depends on the actions of China and Turkey, as they represent significant trading partners with Moscow.

Gender and Food Security. Food insecurity disproportionately affects women and people living in rural areas. In 2022, food insecurity affected more adults in rural areas compared to peri-urban and urban areas, but the gender gap in food insecurity narrowed slightly. More than 3,1 billion people worldwide (42 percent) were unable to afford a healthy diet in 2021. While this number increased compared to pre-pandemic levels, it decreased from 2020 to 2021. In 2022, millions of children under five years of age faced various nutrition challenges, including stunting, wasting, and overweight. Progress has been made in some areas, but the world is not on track to achieve 2030 targets. There is a growing concern about child overweight, driven by the consumption of highly processed foods and eating out, which is spreading from urban areas to peri-urban and rural areas. Here are some examples of countries where these characteristics may be particularly pronounced:

- Sub-Saharan Africa: Sub-Saharan Africa often faces high levels of malnutrition, especially in rural areas. Gender inequality in food security can also be prevalent in many countries in this region.
- South Asia: South Asian countries, such as India and Bangladesh, have a large rural population, where food security can sometimes be a serious issue.
- Latin America: In rural areas of some Latin American countries, like Brazil and Peru, high levels of malnutrition can exist. Gender inequality in food security can also be visible.

Urbanization and Agrifood Systems. Increasing urbanization is changing agrifood systems, presenting both challenges and opportunities. Challenges include the availability of unhealthy convenience foods, insufficient access to fruits and vegetables, and land loss due to urban expansion. However, urbanization also offers opportunities for income generation, improved access to agricultural resources, and diverse food options. The cost of a healthy diet witnessed a global increase of 6.7 percent between

[11] The Sustainable Development Goals (SDGs) represent a global set of goals and methods adopted by the United Nations to achieve sustainable development on a global scale. These goals provide a framework for addressing key global challenges, including poverty, inequality, economic growth, environmental protection, and the promotion of social justice. There are a total of 17 Sustainable Development Goals, each with specific targets and tasks. These goals were adopted in 2015 and are planned to be achieved by 2030.

2019 and 2021. Changes in agrifood systems, i.e., challenges and opportunities, can occur to varying degrees in different parts of Europe and Asia, depending on specific factors and dynamics in each country or region. For example:

- In the rapidly growing economies of Asia, such as China and India, significant changes in dietary patterns and the proliferation of fast food in urban areas may contribute to challenges related to unhealthy eating. On the other hand, in rural parts of Asia, issues with access to an adequate amount of fruits and vegetables may be more pronounced.
- In Europe, urbanization can also bring about changes in diet and food availability, but this can vary from country to country depending on the level of economic development, policies, and cultural factors.

The impact of the pandemic and the war in Ukraine. Lockdowns, economic downturns, and other disruptions linked to the pandemic in 2020 resulted in job losses and reduced incomes for numerous individuals. This disproportionately affected low-income households since they allocate a greater proportion of their income to food. In many countries, the rise in the cost of a healthy diet coincided with a decrease in disposable income, a consequence of the ongoing repercussions of the pandemic and the war in Ukraine. We can say that the states most affected by the war in Ukraine are the European countries and the least developed countries in the world that depend on the import of cereals from Ukraine and Russia. A clear indicator is the inflation rate in European countries, which was 1.1% in 2020, and by 2022, the average inflation rate in Europe was 9.9%. Among all the countries in Europe, the highest inflation rate was recorded in Turkey, amounting to 12.3% in 2020, while by 2022, the average inflation rate in Turkey was 72.3%. Our neighbouring country, Hungary, faced a similar issue, with inflation at 3.3% in 2020, while by 2022, the average inflation rate in this country was 14.5%. Estimates show that from 2023, there is expected to be a stabilization of inflationary pressures in all European countries, with a trend of slight decline in the coming years.

In addition to the COVID-19 pandemic and the war in Ukraine, which have contributed to the global economic crisis and have had an impact on the affordability and prices of food, each continent had specific difficulties and issues related to food access and security even before these events.

Here's how each continent faced its own challenges regarding food access and security prior to these crises:

Africa: Africa has long struggled with food security issues, including droughts, conflicts, poverty, and inadequate infrastructure for agricultural development. These challenges have contributed to hunger and malnutrition on the continent.

Asia: Asia, despite its economic growth, has areas with high levels of poverty and food insecurity. Challenges include population growth, limited arable land, and the need for sustainable agricultural practices. It should be listed which are the 'areas'. Some of the countries facing high levels of poverty and food insecurity, especially in rural areas, include: India, Bangladesh, Pakistan, Nepal, Afghanistan.

North America: North America faces issues of inequality in food access and quality. Some communities, particularly those with lower incomes, may have limited access to nutritious and affordable food.

South America: In South America, food access inequalities exist, and there are concerns related to deforestation and natural resource management that can impact food security.

Deforestation refers to the cutting down of forests and is a significant problem in certain South American countries such as Brazil and Peru. In these countries, the forests in the Amazon region are particularly endangered, and deforestation often results from land clearing for agriculture, especially cattle ranching. The damages from deforestation in the Amazon are enormous and have a serious impact on the natural ecosystem, biodiversity, and the global climate.

At this rate of deforestation, according to WWF (World Wildlife Fund) estimates, by 2030, as much as 60% of the Amazon's surface area could be destroyed or permanently damaged. Therefore, the positive trends in Europe in terms of increasing forested areas may be just a drop in the ocean compared to the very rapid rate of deforestation in South America and other parts of the world with lower levels of economic development.

Europe: Europe generally has lower levels of food insecurity compared to other continents, but some regions and communities still face challenges related to access to nutritious food. (In the text below is a tabular overview for the Western Balkan countries and Europe.)

Oceania: Oceania has food security challenges, particularly in remote and rural areas. Climate change and environmental issues have added to the complexities of food production and access. Some of these countries include: **Papua New Guinea**, **Vanuatu**, **Solomon Islands**, **Fiji**, **Tonga**.

These pre-existing challenges varied across continents and regions and were often influenced by a combination of factors such as geography, climate, governance, and socioeconomic conditions. Addressing these challenges requires a multi-faceted approach, including investment in agriculture, infrastructure, education, and social safety nets, to ensure that everyone has access to safe and affordable food.

WESTERN BALKANS

Below is a tabular presentation and explanation of indicators used to monitor and assess various aspects of nutrition, nutritional status, and health in the population

The tables display data related to the Western Balkan countries and the surrounding region, as well as data related to the entire Europe.

PREVALENCE OF UNDERNOURISHMENT IN THE TOTAL POPULATION: This indicator measures the frequency or rate of undernourishment in the total population, indicating how many people in the entire population suffer from inadequate food intake or nutritional deficiencies.

Table 2. Prevalence of undernourishment in the Total Population (%)

	2004-06	2020-22
Europe	<2.5	<2.5
Albania	8.9	4.1
Bosnia and Herzegovina	<2.5	<2.5
Montenegro	5.4	<2.5
North Macedonia	4.9	3.6
Serbia	<2.5	<2.5
Croatia	<2.5	<2.5

PREVALENCE OF SEVERE FOOD INSECURITY IN THE TOTAL POPULATION: This indicator measures the frequency or rate of severe food insecurity in the total population, indicating how many people in the entire population suffer from severe lack of access to food.

Table 3. Prevalence of severe food insecurity in the total population (%)

	2014-16	2020-22
Europe	1.5	1.7
Albania	10	7.5
Bosnia and Herzegovina	1.2	1.8
Montenegro	2.1	3.3
North Macedonia	3.6	6.9
Serbia	1.7	4.1
Croatia	0.6	1.9

PREVALENCE OF MODERATE OR SEVERE FOOD INSECURITY IN THE TOTAL POPULATION: This indicator measures the frequency or rate of moderate or severe food insecurity in the total population, showing how many people in the entire population suffer from moderate to severe food access problems.

Table 4. Prevalence of moderate or severe food insecurity in the total population (%)

	2014-16	2020-22
Europe	8.7	7.8
Albania	38.8	30.2
Bosnia and Herzegovina	8.6	5.7
Montenegro	12.6	12.9
North Macedonia	15.1	24
Serbia	11.4	14.8
Croatia	6.5	9.7

PREVALENCE OF OVERWEIGHT IN CHILDREN (<5 YEARS): This indicator measures the frequency or rate of overweight in children under five years old. It indicates how many children in this age group have excess body weight relative to their age and height.

Table 5. Prevalence of overweight in children (<5 years) (%)

	2012	2022
Europe	9.2	7.3
Albania	22.4	13.4
Bosnia and Herzegovina	n,a	n,a
Montenegro	15.8	8
North Macedonia	13.6	9.9
Serbia	15.6	9.9
Croatia	n,a	n,a

PEOPLE UNABLE TO AFFORD A HEALTHY DIET: It represents the percentage of people in the population who are unable to afford a healthy diet. This indicator indicates the frequency or rate of people facing financial constraints when it comes to acquiring food that would meet their nutritional needs and standards for a healthy diet.

Table 6. People unable to afford a healthy diet (%)

	2017	2018	2019	2020	2021
Europe	2.5	2	1.8	1.8	1.5
Albania	31.3	23	22.2	19.9	15.9
Bosnia and Herzegovina	4.7	4	3.9	3	3
Montenegro	15.9	17.2	17.4	17.3	14.9
North Macedonia	20.1	17.7	16.6	17.5	15.5
Serbia	27.2	13.1	16.2	13	10.9
Croatia	6.2	4.1	3.4	3.3	1.8

CONCLUSION ON FOOD SAFETY IN THE REPUBLIC OF SERBIA

Serbia takes pride in its wealth of natural resources that constitute a fundamental basis for food production. According to the Farm Structure Survey 2018 (FSS), the Republic of Serbia has 3,5 million hectares of utilized agricultural land, while the total number of agricultural holdings in the Republic of Serbia is approximately 560,000. This enables a diversity of agricultural crops and livestock, including cattle, pigs, sheep, and the cultivation of various crops such as corn, lucerne, and barley.

The food industry constitutes a significant part of the Serbian economy, accounting for up to one-fifth of the processing industry. This sector encompasses food processing and packaging, creating a wide range of products, including meats, dairy, cereals, fruits, and vegetables. The importance of this industry for the country's economic growth is undeniable.

In order for Serbia to realize the full potential of its agro-industry, the food industry must be improved. This involves modernizing technology, better resource management, providing training for farmers, and promoting innovation in food production approaches. This approach will not only enhance competitiveness in the food market but also ensure a sustainable future for farmers and the food industry.

Investment is a crucial component of improving Serbia's agro-industry. Whether it is domestic or foreign investment, support for this sector will help modernize and increase productivity. Investments may encompass financial support, infrastructure projects, and research and development in agriculture, thereby securing a sustainable future for this sector.

It is essential to emphasize the inseparable connection between livestock farming and crop production in the agro-industry. Farms that raise livestock often rely on their own food production to feed animals, including crops such as corn, lucerne, and barley. This harmony between livestock farming and crop production contributes to sustainable food production.

Serbia has the potential to become a key player in food production in the region, and investments in primary production, industrial enhancement, and innovation support will be critical factors in achieving this goal. This sector has deep roots in Serbian culture and the economy, and it has the potential to contribute to both economic growth and the sustainable provision of food for all Serbian citizens.

For comparison, in the table below, we can see that in 2021, the Republic of Serbia produced nearly 80% more wheat and corn compared to the total production of other Western Balkan countries."

Table 7. Wheat and Corn Production in Western Balkan Countries in 2021 (in tons)

Country	Maize	Wheat
Serbia	6 027 131	3 442 308
Bosnia and Herzegovina	893 124	314 382
Albania	414 271	225 171
North Macedonia	134 036	243 676
Montenegro	2 584	2 392
Total Production (B + C + D + E)	1 444 015	785 620
In relation to Serbia (%) (F/A)	24.0%	22.8%

4. WATER SECURITY

WATER SECURITY – DEFINITION AND GLOBAL SITUATION

Water security is defined as a sustainable and efficient access to appropriate quantities of water with acceptable quality required for human life sustenance, well-being and socio-economic development. Also, water security includes protection and prevention of water pollution and contamination, water disasters (floods and draughts) and waterborne diseases (related to sanitation) so as protection and restoration of water-related ecosystems (rivers, lakes, forests, grasslands, mountains, wetlands).

Water represents the natural good which is essential for human life, health, hygiene and well-being but also as a indispensable input for the fundamental economic activities such as agriculture, food production, energy and transportation. National socio-economic and political security and well-being of citizens of an country is unimaginable without securing this precious and scarce natural resource. Also, global political and socio-economic stability (including food and health security) is unimaginable without global, coordinated water security policies agreed between countries. That requires their mutual cooperation and partnership in responsible management and stewardship of water resources. Water security is a precondition for achieving other SDGs and failing to achieve water security goals will jeopardize the SDGs as a whole.

Water security is permanently, and in recent history increasingly, exposed to various threats and challenges, primarily due to the climate crisis and rise of temperature which causes irregularities in rain-fall, more frequent, more severe and extended draughts and drying up of rivers, lakes and wells (reservoirs) endangering not just water supply but also local and international ecosystems. Moreover, growth of the world population and its concentration in cities, economic development, political and military conflicts - accelerate depletion and water pollution (industrial and human-caused). Combined with the climate-related factors, this leads to increased threats to water resources, both their availability and quality and, consequently, endanger national and global water security.

Abundant water resources of a country does not necessarily ensure water security. Many countries (including Serbia) have rich freshwater resources but without appropriate water and sewage infrastructure, water management and water security policies. Protection and development of water resources must be sustainable in a long-term. It must permanently react to challenges and threats posed by climate change and global and regional socio-economic and political processes.

According to the UN Global Water Security Assessment, out of the total world population of 7,78 billion, 72% i.e. 5,52 billion are considered water-insecure, and additional 8% (around 600 million) as critically water-insecure. That means that 80% of world population is facing water insecurity (mostly in Africa, Southern Asia and Small Island Developing States – SIDS).

More than 10% of world population (close to 800 million) do not have access to even basic drinking water and more than 22% are living without basic household sanitation (sewage and waste-water disposal and treatment).

According to the findings of the *Global Commission on the Economics of Water*, the world is facing an imminent water crisis because global freshwater demand will exceed its supply by 40% by the end of 2030. [17]

WATER SECURITY REGIONAL AND NATIONAL RANKING

UN classifies countries by water security in four groups: 1) secure 2) moderately secure 3) insecure and 4) critically insecure[12].

Among the 23 critically water-insecure countries, 16 are the Least developed countries and 7 are Small Island Developing States (SIDS). The least developed countries are: Eritrea, Sudan, Ethiopia, Afghanistan, Djibouti, Somalia, Liberia, Libya, Madagascar, Pakistan, South Sudan, Niger, Sierra Leone, Yemen, Chad, and Sri Lanka. The Small Island Developing States are: the Solomon Islands, Vanuatu, Haiti, Papua New Guinea, St Kitts & Nevis, Micronesia and Comoros These 23 countries face chronic water insufficiency and are most likely to suffer from water crises which restricts their economic perspectives and sustainability of economic growth.

North America (USA and Canada), Australia and Europe are considered as mostly water-secure regions but with differences at sub-regional level.

Even in Europe, which is considered as the water-secure region, almost 66 million people (8.8%) are facing water-insecurity. Almost 27 million people (3.6%) in Europe do not have access to basic sanitation services, and over 136 million people (>18%) do not have access to safely managed sanitation.

Eastern and Southern Europe is considered as more water-insecure than Northern and Western Europe.

WATER SECURITY IN SERBIA AND SOUTHEASTERN EUROPE

According to the UN Global Water Security Assessment, Western Balkan countries are considered as water-insecure, facing potential water crisis.

Serbia is among the 8 lowest-scoring countries in Europe which are classified as water-insecure countries. These countries are: Bosnia Herzegovina, Malta, and Ukraine (score 62), Albania (score 60), Serbia and Moldova (score 57), Montenegro, and North Macedonia (score 51).

Among 39 European countries, Serbia is ranked 36th with the water-security score of 57. Bellow Serbia are only Moldova, North Macedonia and Montenegro.

Serbia has good water-security scores for water availability (proportion of the population with access to safely managed drinking water, around 75%), level of water stress (water exploitation index is 2.95% and Serbia is considered as non-stressed country), safety due to water-disasters and water resources stability (interannual hydrological variability).

But for the rest of the water-security components, the scores of the Republic of Serbia are relatively low. The major problems regarding water-security are sewage and wastewater disposal and water treatment (including water recovery and reuse/recycling), especially in rural and suburban areas. The percentage of population connected to sewage network is relatively low (67%), industry is treating only 25% of its wastewater, and only 15.9% of population is covered by the waste-water treatment facilities. Moreover Serbia needs to improve and promote efficiency of water consumption and water governance (institutions,

[12] Classification of countries is based on the scoring system which evaluates 10 major components of water security. Each component has score from 1 to 10. Maximum total score is 100. Secure countries are those with total score higher than 75, moderately secure with total score 65-74, insecure with total score 41-64 and critically insecure with total score 40 and lower.
The components of water security and the indicators used for their measurement by the UN are as follows:
1) Drinking water - Proportion of the population with acess to safely managed drinking water (%);
2) Sanitation - Proportion of the population using basic or safely managed managed sanitation services (sewage and wastewater disposal);
3) Good health - Mortality rate attributed to exposure to unsafe Water Sanitation and Hygiene (WASH) (deaths per 100,000 population);
4) Water quality - Proportion of household wastewater treatment (%);
5) Water availability - Level of water stress: freshwater withdrawal as a proportion of available freshwater resources (%);
6) Water value - Water Use Efficiency (USD/m3) – GVA of Agriculture, Industry and Services weighted by the proportion of sectoral water use to total water use ;
7) Water governance - Degree of Integrated Water Resource Management (%) - Institutions, laws, policies, plans, management instruments, and financing mechanisms related to water security;
8) Human safety Mortality due to water-disasters (deaths per 100,000 population);
9) Economic safety - Direct economic losses attributed floods and draught in relation to gross domestic product (GDP);
10) Water resource stability - Interannual hydrological variability; Large dam storage /capita (m3/capita).

legislative and programs for sustainable water-management including protection from industrial and household pollution, depletion and degradation of water resources).

Positive aspect of the overall water-security of Serbia is that Serbia is not facing natural scarcity of water and is considered as „non-stressed" in terms of availability of its water resources (percentage of usage of the total water resources). The major issues related to water-security are those which can be reduced or minimized by implementing appropriate water security policies and investments in water and sewage infrastructure and other areas of water security (treatment, recovery and reusage etc).

Among Southeastern Europe countries, Greece has the highest water-security score (80), followed by Slovenia (76) and Hungary (75) (green cells in Table 7). These countries are considered as water-secure. Croatia, Romania and Bulgaria are considered as moderately secure (blue cells in Table 7). The rest of the Southeastern European countries (Bosnia and Herzegovina, Albania, Serbia, Montenegro and North Macedonia) are considered water-insecure (red cells in Table 7).

Table 7. Southeastern Europe countries, water-security scores and ranking

Country	Water-security score	Water-security classification
Greece	80	Secure
Slovenia	76	Secure
Hungary	75	Secure
Croatia	75	Moderately Secure
Romania	70	Moderately Secure
Bulgaria	67	Moderately Secure
Bosnia and Herzegovina	62	Insecure
Albania	60	Insecure
Serbia	57	Insecure
Montenegro	51	Insecure
North Macedonia	51	Insecure

The most water-secure countries in Europe (and also worldwide) are: Sweden (score 90), followed by Austria (score 85) and Denmark (score 85). Almost all Western European countries (except Netherlands and Belgium) are classified as water-secure.

Eastern European countries (including Russia) are split between secure (6 countries), moderately secure (5 countries) and two water-insecure countries, with the highest scores for Baltic Countries – Lithuania (score 81), Latvia and Estonia (score 78), followed by Slovakia (score 76) and Czechia and Hungary (score 75). These Eastern countries are classified as water-secure. The five Eastern European Countries – Russia, Romania, Poland, Belarus and Bulgaria are classified as moderately water-secure (score between 65-74). Ukraine (score 62) and Moldova (score 57) are classified as water-insecure countries.

In order to address the issues of water-security, Serbia has initiated the Project "Clean Serbia" which includes investment of 3,5 billion EUR in construction of the municipal sewage network and wastewater treatment plants. The project will be implemented in 89 locations of 73 municipalities. The number of residents covered by this programme is approximately two and a half million and includes construction of over 5 million meters of sewage network. The objectives of the Project „Clean Serbia" are to completely solve the problems of cities and municipalities with severe problems in water supply and sanitation due to insufficient activity of the municipalities or due to the lack of financial funds. The programme focuses on three parts: maintenance of drinking water systems in cities and municipalities which have been jeopardized by the uncontrollable effusion of the sewage (this is especially true for the area of the Morava river basin), protection of rivers from excessive pollution (focus is on the river Drina, basins of rivers Morava, Pek, Timok, Kolubara, Mlava, Sava and Danube) and preservation of the water resources and water related ecosystems.

5. HUMAN RESOURCES

DEMOGRAPHIC TRENDS

In November 2022, the United Nations announced that the human population had surpassed 8 billion people, and also that two thirds of people were living in places where fertility rates had fallen below the so-called "replacement level" of 2.1 births per woman. These trends offer a nuanced look at demographic transition — the shift from higher to lower mortality and fertility. Globally, life expectancy reached 72.8 years in 2019, an increase of almost 9 years since 1990. Further reductions in mortality are projected to result in an average longevity of around 77.2 years globally in 2050. Fertility rates have fallen rapidly across the world in recent decades. In 1950, the average woman gave birth around 5 times. Since then, fertility rates have more than halved. In 2021, this global figure was 2.3 births per woman.

Rates of population growth vary significantly across countries and regions

In 2022, the two most populous regions were both in Asia: Eastern and South-Eastern Asia with 2,3 billion people (29% of the global population), and Central and Southern Asia with 2,1 billion (26%). China and India, with more than 1,4 billion each, accounted for most of the population in these two regions. India is projected to surpass China as the world's most populous country during 2023.

More than half of the projected increase in global population up to 2050 will be concentrated in just eight countries: the Democratic Republic of the Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, the Philippines and the United Republic of Tanzania. Disparate growth rates among the world's largest countries will re-order their ranking by size.

Countries of sub-Saharan Africa are expected to continue growing through 2100 and to contribute more than half of the global population increase anticipated through 2050.

Whereas the populations of Australia and New Zealand, Northern Africa and Western Asia, and Oceania (excluding Australia and New Zealand) are expected to experience slower, but still positive, growth through the end of the century, the populations of Eastern and South-Eastern Asia, Central and Southern Asia, Latin America and the Caribbean, and Europe and Northern America are projected to reach their peak size and to begin to decline before 2100.

The current age distribution of a population has a major impact on future population trends due to a phenomenon known as "population momentum". Due to its advanced process of demographic ageing, Europe, where fertility has been below the replacement level since the late 1970s, is the only region where population momentum is expected to contribute to population decline between 2022 and 2050 (minus 7%).

The population of older persons is increasing both in numbers and as a share of the total

The share of the global population aged 65 years or above is projected to rise from 10% in 2022 to 16% in 2050. By 2050, the number of persons aged 65 years or over worldwide is projected to be more than twice the number of children under age 5 and about the same as the number of children under age 12.

More and more countries have begun to experience population decline

Among countries with at least half a million people, the largest relative reductions in population size until 2050, with losses of 20% or more, are expected to occur in Bulgaria, Latvia, Lithuania, Serbia and Ukraine.

International migration is having important impacts on population trends for some countries

In some parts of the world, international migration has become a major component of population change. For high-income countries between 2000 and 2020, the contribution of international migration to population growth (net inflow of 80.5 million) exceeded the balance of births over deaths (66.2 million). Over the next few decades, migration will be the sole driver of population growth in high-income countries. By contrast, for the foreseeable future, population increase in low-income and lower-middle-income countries will continue to be driven by an excess of births over deaths.

A sustained drop in fertility leads to an increased concentration of the population at working ages, creating an opportunity for accelerated economic growth per capita

In most countries of sub-Saharan Africa, as well as in parts of Asia and Latin America and the Caribbean, the share of population at working ages (between 25 and 64 years) has been increasing in recent years thanks to reductions in fertility. This shift in the age distribution provides a time-bound opportunity for accelerated economic growth known as the "demographic dividend". To maximize the potential benefits of a favourable age distribution, countries need to invest in the further development of their human capital by ensuring access to health care and quality education at all ages and by promoting opportunities for productive employment and decent work.

LABOUR FORCE

Global trends. Global employment is projected to expand by 1.0% in 2023, a significant deceleration from the 2.3% growth rate of 2022. Strong employment growth in 2022 raised the global employment-to-population ratio to 56.4%, up from 54.5% in 2020.

The labour market outlook for 2023 varies considerably by region. Africa and the Arab States should see employment growth in the order of 3% or more. However, with their growing working-age populations, both regions are likely to see unemployment rates decline only modestly (from 7.4 to 7.3% in Africa and from 8.5 to 8.2% in the Arab States). In Asia and the Pacific and in Latin America and the Caribbean, annual employment growth is projected to be in the order of 1%. In North America, there will be no employment gains in 2023 and unemployment will pick up. Europe and Central Asia are particularly hard hit by the economic fallout from the Ukraine conflict; employment is projected to decline in 2023, but unemployment rates should increase only slightly against the backdrop of limited growth in the working-age population. Indeed, in Europe and Central Asia the labour force is set to decline in 2023.

Regardless of these trends in headline labour market indicators, each region will continue to face a myriad of decent work deficits that are likely to worsen in the face of global economic conditions. The projected slowdown is therefore likely to force workers to accept jobs of worse quality than they might enjoy in better economic conditions. Furthermore, with prices rising faster than nominal wages, workers will experience rapidly declining disposable incomes even when they can keep their current jobs.

To address threats to decent work and well-being, including widespread poverty, informality, and lack of safe and secure workplaces, will require investment, innovation and the diffusion of technological progress. For example, investment in people's skills and capabilities is widely recognized as a central factor in labour productivity growth.

Western Balkans. The Western Balkans' labour market recovered quickly and by the end of September 2022 employment levels reached historical highs in several countries. The growth recovery which began in 2021, led by demand for transport, trade, and tourism workers, and included a booming ICT industry, brought employment to new highs, surpassing pre-crisis levels. Between mid-2021 and mid-2022, around 170 000 jobs were created in the region, of which Serbia had the strongest gains. The employment rate increased in all countries and the average for the Western Balkans reached a historical high of 47% in September 2022. Although still low when compared to 61% of the EU27, due to a spectrum of structural constraints, this is an increase by over 4 percentage points since mid-2021 underscoring the magnitude of the recovery.

Unemployment fell in five Western Balkan countries, resulting in an annual decline in unemployment of 151,000 people by June 2022. The unemployment rate in the Western Balkans declined by 2.2 percentage points to 13.5% in mid-2022 as more people found employment. This reflects a broad-based decline in all countries, with Serbia reaching its pre-crisis low of 8.9%. The broad-based recovery in the labour market has also benefitted vulnerable groups. Youth unemployment declined to 27.1% in mid-2022, the lowest on record, and down by 5.5 percentage points year-over-year. Around 30,000 young people were moved out of unemployment over the year, with the largest improvements recorded in Serbia and Bosnia and Herzegovina, accounting for two-thirds of this success.

In the first quarter of 2023, labour market outcomes has been further improved. Employment grew at an average pace of 2.2% year-over-year while labour force participation increased in some countries.

However, labour shortages emerged as a key concern raised by businesses. Similar to advanced economies in Europe, the post-COVID growth recovery has resulted in a sharp increase in unfilled vacancies, and a widening of the skills mismatches that firms in the region have reported for some time. Some of the countries of the Western Balkans—Albania, North Macedonia, and Serbia—are looking at liberalizing the work permit regimes to enable cross-border labour mobility.

Serbia. The labour market in Serbia has recovered from the impact of the COVID-19 pandemic. Strong economic growth in the years before the pandemic was reflected in continuously improving labour market indicators. Thus, prior to the COVID-19 crisis, activity and employment rates increased steadily, while the unemployment rate decreased.

The labour market outcomes continued to improve in 2022. As a result of a solid growth, the employment rate reached a record high level of 50.3%, well above pre-COVID levels of 47% (average in 2019). Meanwhile, unemployment gradually declined to 9.4% in 2022 from pre-COVID level of 11.2% in 2019. The activity rate increased from 52.9% in 2019 to 55.6% in 2022. Overall, wages continued to increase, by a further 13.8% in nominal terms (1.7% in real terms) in 2022 compared to 2021. Unlike in previous years, private sector wages increased faster than public sector wages. The former went up by 17% in nominal terms, compared to a 7.3% increase in public sector wage.

However, in structural terms, the labour force may have peaked as the declining working age population is taking its toll on labour supply. A steady population decline of around 0.5% every year, along with large-scale emigration across the occupational spectrum remains a key medium- to long-term challenge for economic development. In addition, persistent skills mismatches, the gender employment gap as well as large regional disparities have continued to weigh on the functioning of the labour market. The strategy on economic migration for 2021-2027 aims at fostering circular migration by retaining workers and encouraging the diaspora to return to the country. An extra gain regarding labour market of skilled young population have come by immigration from Rusia and Ukraine. The two only possibilities to recover population trends are, population policy and balanced regional and rural development.

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1. MACROECONOMIC FORECASTS

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

1.1. FORECAST OF CONSUMER PRICE TRENDS[13] FOR Q1 2024

Chart 1.1. Comparison of the cycle of the SORS leading indicator of consumer prices (SORS CPI) and total consumer prices in the Republic of Serbia, seasonally adjusted, detrended and standardised data, deviation from the average for the period, Q1 2007 – Q1 2024 (%)

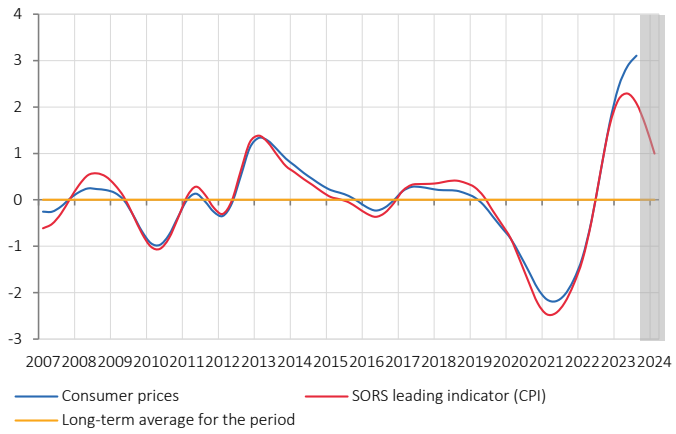
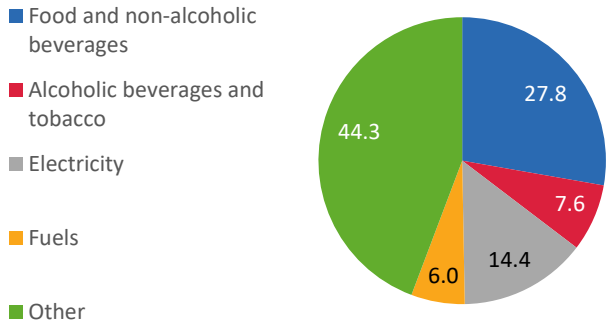


Chart 1.2. Structure of forecast year-on-year consumer price growth for Q1 2024 (of 5.3%), (total 100) (%)



[13] The leading SORS consumer price indicator (SORS CPI) is a result of a research and analytical work by the SORS. The indicator consists of the coverage of previously developed composite food price indicators (IPC-H, i.e. CPI – F), fuel price (IPC-G,, i.e. CPI-F) and tobacco price (IPC-D, i.e. CPI-T), as the largest generators of inflation on the long-term. 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 consumer price indicator (SORS CPI), the existing long standing biggest strategic elements of consumer price growth (food , tobacco and fuels for passenger cars), has been modified by directly including additional factors of price growth of electricity, gas and solid fuels.

RESULTS OF THE MODEL OF THE CONSUMER PRICE LEADING INDICATOR (SORS CPI) AND INDIRECT FACTORS OF INFLUENCE FROM Q4 2023 TO THE FORECAST IN Q1 2024.

The inflation of consumer prices in Q4 2023 is expected to be about 8.0%, and for the whole 2023 about 12.6%.
Using the model of consumer price leading indicator (SORS CPI) a year-on-year consumer price growth of about 5.3% is forecast in Q1 2024.

As for the forecast of the year-on-year inflation rate of consumer prices it is worth mentioning the four most important events from Q3 2023 that will also impact indirectly consumer prices in Q1 2024:

- **Action undertaken by retailers and the Government of Serbia, "better price" since October 2023**. The results of the quantitative analysis and analysis of the impact of this group of products is presented in the following subtitle. Generally, the results clearly indicate that this group of products has significantly slowed down inflation growth in Q4 2023, primarily through the products from the group of food and non-alcoholic beverages, which, as forecast, should have a year-on-year price growth of about 9.3% (a share in CPI growth growth rate of 36.4%), and in Q1 2024 the growth of the prices of this group of products is forecast to 4.7%.
- **Growth of excises on cigarettes and tobacco products and coffee** of 8.0% on each of these items from October 2023, respectively, with the growth of all other costs. The year-on-year growth of the prices of alcoholic beverages, cigarettes and tobacco products in Q4 2023 is forecast at about 9.0%, accounting for about 7.6% of the annual growth rate of total consumer prices. It is also forecast that with additional increase in the prices of alcoholic beverages and tobacco due to the regular increase in excises in 1 January 2024 (when the inflation of producers' prices inflation for tobacco from 2023 is calculated along with the excise of tobacco prices) the annual growth rate of the prices of alcoholic beverages and tobacco products will amount to 6.8% in Q1 2024.
- **Growth of the prices of electricity for households and gas since November 2023 of 7.3% and 9.4%,** respectively (relative to October 2023). The annual growth rate of electricity for households is estimated at about 20.0% in Q4 2023, thus increasing the annual growth of total consumer prices in Q4 2023 by about 1.0 percentage points and accounting for 12.9% of the year-on-year CPI growth rate. Knowing that further increase in the price of electricity is not anticipated, the price of electricity for households is expected to be higher by about 15.0% in Q1 2024 than the price from Q1 2023.
- **Fall of the price of *BRENT* crude oil on world market** (it is expected to amount to about 17.0% in December, relative to October 2023) **and the growth of the excises on fuel of 8.0% (since October 2023)** will result, as estimated, in a year-on-year fall of fuel price of about -0.2% in Q4 2023. As already mentioned in the previous issues of *Trends* and empirically confirmed, the price of crude oil on world market is, on average, one month ahead of the price of fuel in Serbia, thus it is only in November 2023 that the price of fuel in Serbia fell significantly. All the cited circumstances gathered, the analysis and forecast of price trends on the market of oil derivatives in Serbia, based on the model of fuels (SORS CPI-F), the average price of fuel is expected to increase by about 5.2% in Q1 2024 to Q1 2023.

INFLUENCE OF THE ANTI-INFLATION BASKET "BETTER PRICE" ON THE CONSUMER PRICE INDEX

In order to decelerate the inflation of consumer prices and as agreed by the Government and larger retailers in Serbia a list of 38 products[14] was drawn up in mid-September where a more favourable price was determined in comparison with the products belonging to the same group. SORS conducted a survey on the measurement of the influence of the selected products "better price" on the total consumer prices. Here, it is worth mentioning that the coverage of the methodology of collecting monthly data on the prices of products did not necessarily included only the products labeled "better price", but due the representativeness of the sample, those (of other producers and brands) that were measured so far.

[14] The products that were not included in the anti-inflation basket "better price" are: chicken meat ("grill" chicken" - eviscerated with head removed), chicken bologna sausage, hod dogs, liver paste, potatoes, cabbage, onions, beans, frozen peas, apples, feta cheese, yoghurt, long life milk, cheese spread, cocoa biscuit, flour T-500, pastry of with white flour and eggs, sunflower oil, margarine spread, non-alcoholic beverages, non-carbonated juices, coffee, marmelade, jam, seasonings, baby food, laundry washing machine detergent, hand dish washing detergent, children's nappies, toilet paper, soap, toothpaste, hair shampoo, hygiene pads, baby bath lotions, baby shampoo and bath lotions for adults. All 38 products from the basket "better price" are adequately weighted according to the group of the same products they belong to in consumer price index (but of different trade marks) and which prices in retail facilities are monitored by SORS on regular basis. The seasonal component has been previously removed by way of seasonal adjustment from the monthly time series for the data of the groups of products having a seasonal component. After having aggregated price indices of this groups of products in one indicator the indirect influence of the basket of products "better price" on total consumer prices has been measured.

Therefore, even though the basket "better price" was not included in the sample coverage in whole, the analysis indicated that the basket "better price" influenced significantly total consumer prices, primarily **due to the occurrence of the effect of substitute goods**[15] by consumers.

The action "better price" contributed, on average, to stopping the producers' prices for products from the same group, but of another trade mark or to even decreasing them sightly so that those products can remain competitive in the eyes of a rational consumer.

Based on the calculated elasticity coefficient of the influence of the anti-inflation basket "better price", it can be concluded that the consumer basket "better price", by way of the already mentioned goods substitute effect, slowed down the growth of the year-on-year inflation rate (over October-November 2023 to September 2023, on average, by about 18.1% (i.e. by 0.3 percentage points).

Table 1.1. Consumer prices and anti-inflation basket of the group of products to which the products of the action "better price" belong.

2023	Consumer prices, annual growth rate, %	Anti-inflation basket, group of products to which the products of the action "better price" belong, annual growth rate, %	Structure of the anti-inflation basket in the annual rate of total consumer prices, %	Seasonally adjusted monthly (chain) consumer price growth rates, %	Seasonally adjusted monthly (chain) anti-inflation goods basket growth rates, %
January	15.8	25.6	17.1	1.2	1.2
February	16.1	26.7	17.5	1.2	1.3
March	16.2	29.0	18.9	0.9	1.9
April	15.1	28.8	20.1	0.5	0.7
May	14.8	27.6	19.6	0.9	3.3
June	13.7	25.8	19.9	0.6	1.2
July	12.5	24.7	20.8	0.3	0.5
August	11.5	20.5	18.8	0.4	-0.9
September	10.2	16.3	16.8	0.4	-0.6
October	8.5	9.7	12.0	0.2	-1.0
November	8.0	7.8	10.2	0.6	-0.5

Note: The data are seasonally adjusted on the full coverage in time series for the groups of products where the seasonal component was detected, from January 2007 to November 2023.

The analysis of the year-on-year consumer price growth rate indicates that since the beginning of 2023, **and especially from September to November** (when the action "better price" started) consumer price inflation has suddenly slowed down. This can be best seen based on the previously **removed effect of seasonal influences in data,** on growth rates (October 2023/September 2023) of consumer prices on which in October 2023 the seasonally adjusted anti-inflation **basket "better price" had a deflationary effect** with a fall of -1.0%, even though the seasonally adjusted monthly growth rate of total consumer prices saw a fall of 0.2%. This initial impulse from October was weaker in November 2023, but still significantly deflationary in the context of chain values of growth rates (-0.5%).

On the other side, the the group of products "better price" accounted for 12.0% of the year-on-year growth rate of consumer prices in October 2023 (of 8.5%), while in November it accounted for 10.2%, recording thus a fall. When compared to the previous months (especially to September 2023), the share of the group of products "better price" showed in October and November 2023 a significant fall in the structure of the year-on-year growth rate of consumer prices, this suiting its anti-inflationary mission.

Therefore, the anti-inflationary basket "better price" had an indirect influence on taming the inflation of all those groups of products (mostly from the group of food and beverages) to which the products of the basket "better price" belong, and its measured deflationary influence is de facto the measure and consequence of the effect of substituted goods by consumers.

[15] According to the theory of consumers' behaviours, **the effect of substitute goods** implies naturally that a rational consumer chooses cheaper goods, compared to the same goods which prices have not been lowered, and **is the most obvious in essential goods (food, beverages and fuel),** being the opposite of the more expensive and luxury goods where more snobbish phenomena, so-called "consumer caprice", such as in Veblen effect (when demand increases with the increase of the prices of luxury goods, and vice versa).

1.2. FORECAST OF INDUSTRY GVA TRENDS

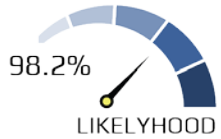
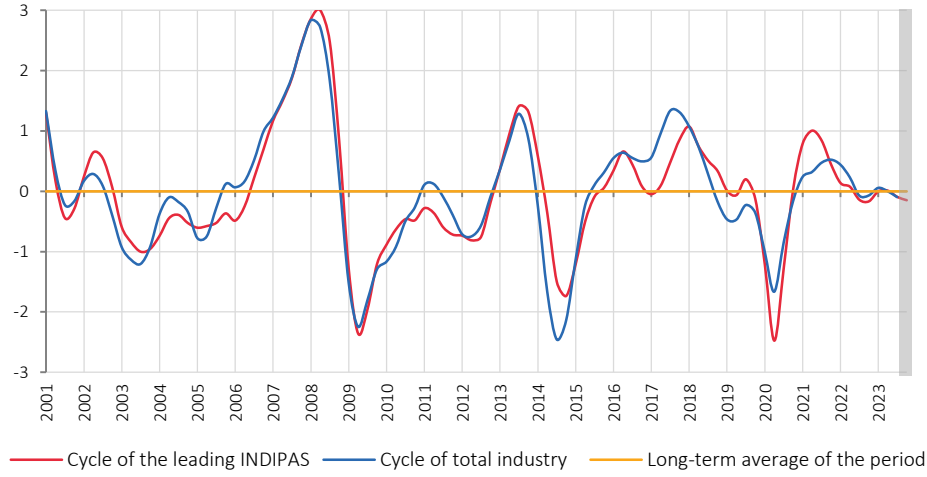


Chart 1.3. Comparison of the cycle of the leading indicator INDIPAS and industry physical volume, seasonally adjusted, detrended, leveled out and standardised data, deviation from the average for the period, Q1 2001 – Q4 2023 (%)



Based on the model of the leading indicator (INDIPAS), in Q3 the year-on-year **growth** of industry GVA is forecast at **about 2.8%.** It is expected that this growth will be **mostly affected** by the growth in the division of manufacture of basic metals, pharmaceutical products, food products and manufacture of computers, electronic and optical products.

Chart 1.4. Comparison of the realised and forecast annual industry GVA growth rates (%)

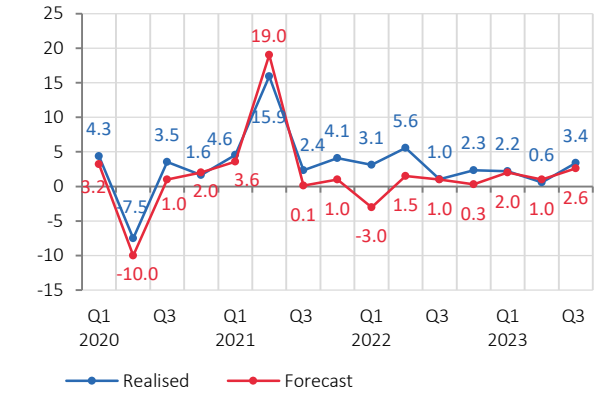
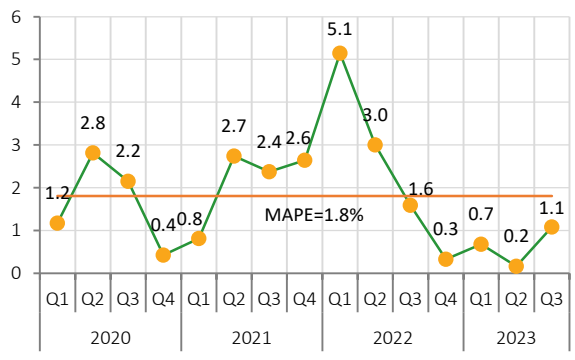


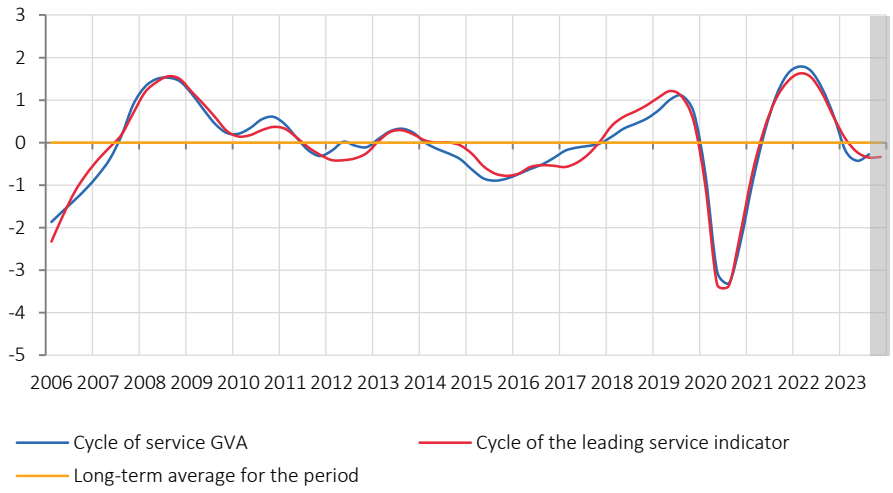
Chart 1.5. Mean Absolute Percentage Error - MAPE)[16], forecast of industry GVA growth, Q1 2020 – Q3 2023. (%)



[16] 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 $\mathrm{MAPE} = \frac{100\%}{n}\sum_{t=1}^{n}\left|\frac{A_t - F_t}{A_t}\right|$, 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 likelyhood 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. FORECAST OF SERVICE GVA TRENDS

Chart 1.6. Comparison of the cycle of the leading service indicator and service GVA, seasonally adjusted, detrended, leveled out and standardised data, deviation from the average for the period, Q1 2006 – Q4 2023 (%)



Based on the model of the service leading indicator, a year-on-year **growth** of total services **of about 3.0%** is expected in **Q4 2023**. It is estimated that this growth of total services will be mostly determined by the growth of services in telecommunications and computer programming, transportation, retail trade, scientific activities and administration, participating in the structure of the year-on-year service growth rate in Q4 2023 with about 61.0%.

Chart 1.7[17] Comparison of the realised and forecast annual service GVA growth rates (%)

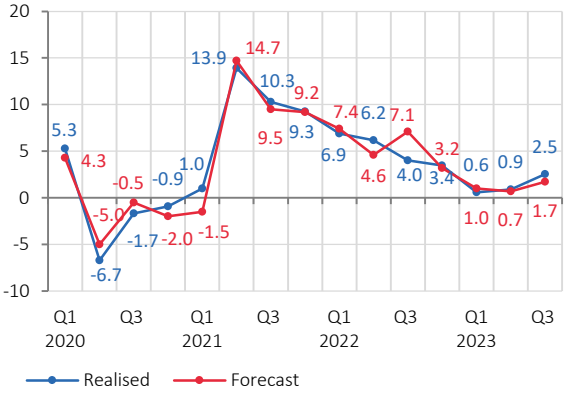
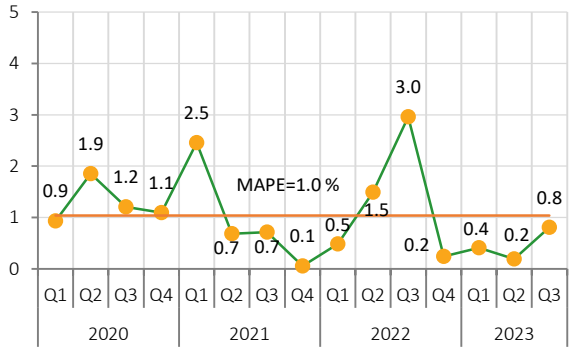


Chart 1.8. Mean Absolute Percentage Error - MAPE), forecasts of service GVA growth, Q1 2020 – Q3 2023. (%)



[17] Forecast values mentioned in the chart are always published one quarter before the realised data are available, and are presented in the previous issues of *Trends*.

1.4. FORECAST OF CONSTRUCTION GVA TRENDS

Construction GVA growth over Q1–Q3 2023 (relative to the same period of 2022) amounted to 9.2%. This growth is still **contributing the most** to the activity on the **construction of the transport infrastructure** (modernisation of the Hungarian-Serbian railway; Morava corridor, highway Belgrade - South Adriatic (section Preljina-Pozega); highway Ruma-Sabac-Loznica and corridor Fruska gora, highway Pozarevac-Golubac and Iverak-Lajkovac), **pipelines, communication and electrical power lines** (construction of the municipal and sewage infrastructure under the project "Clear Serbia").
By applying SORS forecast model in Q4 2023 construction GVA is expected to increase by about 13.0%.

Table 1.2. Structure of the contribution to the annual construction GVA growth rate

	2021				2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Construction GVA, annual growth rate, % (1+2)	**20.5**	**18.9**	**20.0**	**15.1**	**-5.6**	**-6.8**	**-12.1**	**-12.5**	**-1.6**	**14.8**	**12.8**	**-**
1. Buildings, pp. (1a+1b)	**13.8**	**7.5**	**5.5**	**6.0**	**-5.2**	**-2.6**	**-6.3**	**-4.4**	**-10.7**	**4.5**	**1.5**	**-**
1a. Residential buildings	*10.7*	*3.8*	*1.1*	*-0.1*	*-5.9*	*-1.5*	*-2.0*	*-0.1*	*-3.9*	*2.2*	*2.2*	*-*
1b. Non-residential buildings	*3.1*	*3.7*	*4.3*	*6.1*	*0.7*	*-1.1*	*-4.3*	*-4.3*	*-6.8*	*2.3*	*-0.7*	*-*
2. Other buildings, pp. (2a+2b+2c+d)	**6.6**	**11.4**	**14.6**	**9.1**	**-0.4**	**-4.2**	**-5.8**	**-8.1**	**9.1**	**10.3**	**11.3**	**-**
2a. Transport infrastructure	*1.1*	*14.4*	*14.8*	*13.4*	*4.3*	*-1.8*	*-2.7*	*-6.2*	*8.8*	*5.3*	*8.1*	*-*
2b. Pipelines, communication and electric power lines	*3.0*	*-4.7*	*1.5*	*-2.4*	*-5.5*	*-2.4*	*-3.8*	*-3.6*	*0.6*	*4.1*	*4.6*	*-*
2c. Complex construction on building sites	*2.2*	*1.8*	*-0.5*	*-2.6*	*0.0*	*-0.1*	*1.0*	*2.0*	*0.3*	*0.6*	*-1.6*	*-*
2d. Other civil engineering, not elsewhere classified	*0.3*	*-0.1*	*-1.2*	*0.6*	*0.8*	*0.0*	*-0.3*	*-0.3*	*-0.6*	*0.3*	*0.2*	*-*
Contribution to construction GVA growth rate, pp.	**0.9**	**1.0**	**1.1**	**1.0**	**-0.3**	**-0.4**	**-0.8**	**-0.9**	**-0.1**	**0.8**	**0.7**	**-**

Chart 1.9. Comparison of the realised and forecast[18] annual construction GVA (%)

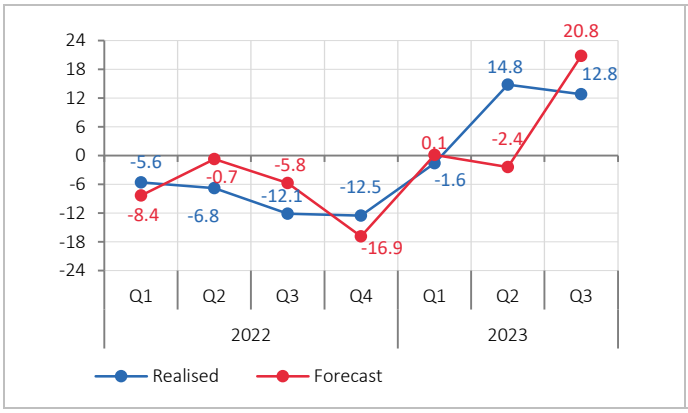
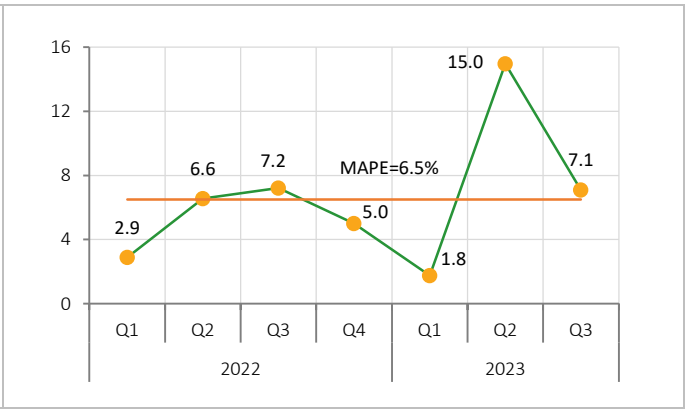


Chart 1.10. Mean Absolute Percentage Error - MAPE), forecast of construction GVA growth, Q1 2020 – Q3 2023 (%)



1.5. SUMMARY OF THE OBTAINED RESULTS OF THE FORECAST OF LEADING INDICATORS BY GVA SECTIONS FOR Q4 2023

Table 1.3. Forecast of GVA of selected sections and their estimated contributions to GDP, Q4 2023

Q4 2023	Agriculture	Net taxes	Industry	Construction	Services
Quarterly growth rates, %	9.5	2.0	2.8	13.0	3.0
Contribution to the growth rate of GDP (pp.)	0.6	0.3	0.6	0.7	1.6

[18] The forecast data presented in graph 1.11 was obtained by simulating the forecast based on the returned sample from Q1 2022 (by successively repeating the forecasting procedure after each "new" data of the leading indicator of construction activity SORS GRIPAS). Only the data for Q4 2022 was officially published in the previous (December 2022) issue of Trends.

2. GROSS DOMESTIC PRODUCT

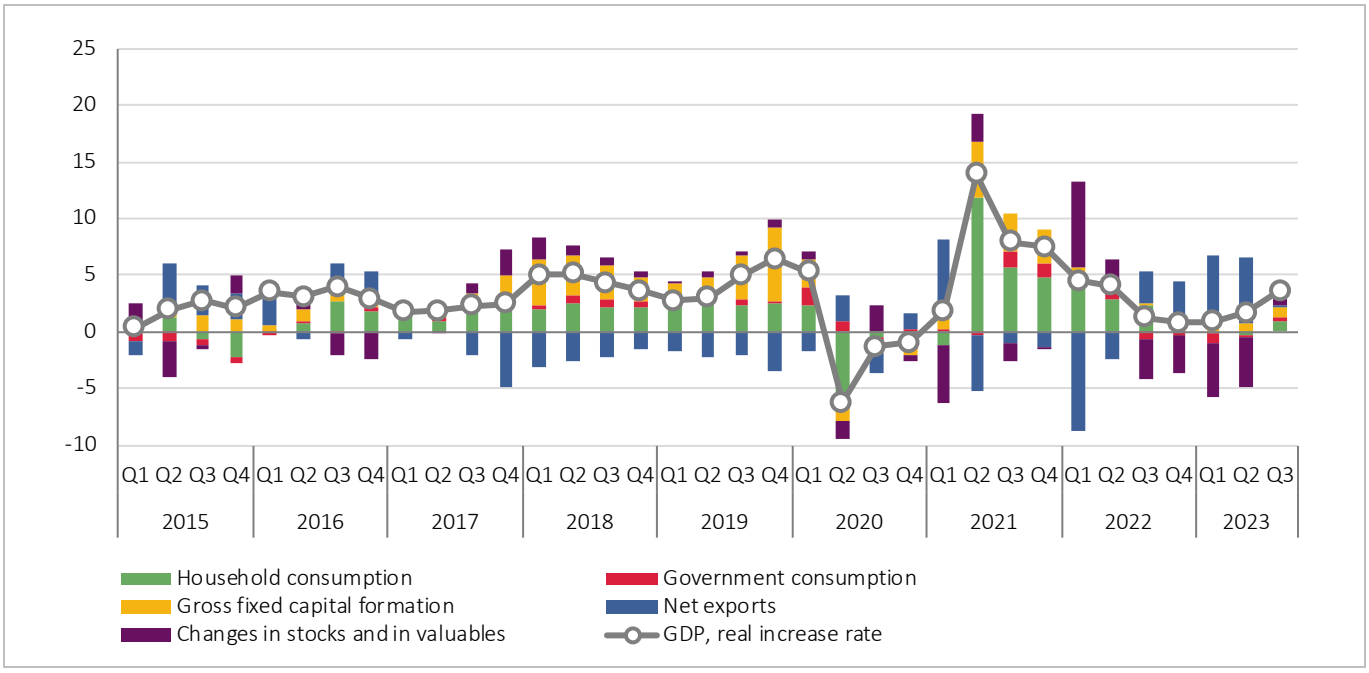
In the third quarter of 2023, GDP real increase of 3.6% was recorded relative to the same period last year. The dominant growth carrier in this quarter related to the section of services, excluding trade and the section of agriculture, with 1.3 .p. and 0.9 p.p., respectfully.

Observed by expenditure aggregates, in the third quarter of 2023, relative to the same period last year, household consumption, government consumption and gross fixed capital formation recorded real growth of 1.3%, 1.7%, 4.1% and positively contributed to GDP trend with 1.0 p.p., 0.3 p.p. and 1.0 p.p., respectively. Export and import decreased by 1.5% and 1.2% and resulted in negative contribution to GDP trend with 0.9 p.p. and 1.0 p.p., respectively.

Table 2.1. GDP – expenditure aggregates, real inter-annual growth rates, Q1 2021 – Q3 2023 (%)
(comparison with the same period of the previous year)

	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GDP	**1.9**	**13.9**	**7.9**	**7.5**	**4.5**	**4.0**	**1.2**	**0.8**	**0.9**	**1.6**	**3.6**
Household consumption	-1.9	17.5	8.4	7.4	7.1	4.1	3.5	1.6	-0.1	-0.5	1.3
Government consumption	1.6	-1.4	9.3	7.2	2.6	5.0	-3.8	-1.8	-5.1	-1.6	1.7
Gross fixed capital formation	11.4	24.9	15.6	12.6	3.3	4.5	0.8	-0.3	1.9	3.9	4.1
Exports	9.5	37.4	23.4	15.1	18.5	20.5	16.2	12.1	8.3	2.4	-1.5
Imports	-1.3	42.4	21.7	15.3	32.9	21.2	9.5	5.1	-1.6	-5.5	-1.2

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

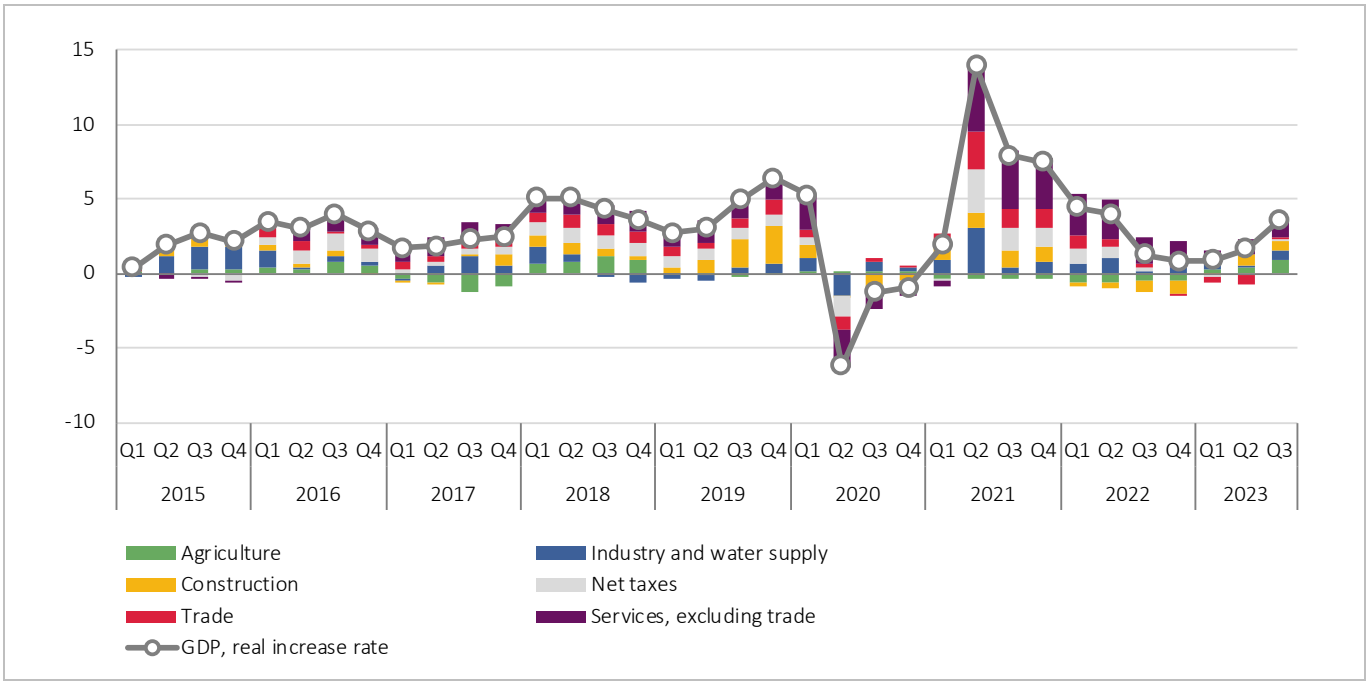


Observed from the **production side**, the greatest positive contribution to GDP increase in Q3 2023 resulted from increased activity in service section (excluding trade), 1.3 p.p. and section of agriculture, 0.9 p.p., respectively.

Table 2.2. GDP– production side, real inter-annual growth rates, Q1 2021 – Q3 2023 (%)
(changes to the same period of the previous year)

	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
GDP	**1.9**	**13.9**	**7.9**	**7.5**	**4.5**	**4.0**	**1.2**	**0.8**	**0.9**	**1.6**	**3.6**
Agriculture	-5.7	-5.2	-5.4	-5.6	-8.3	-8.6	-8.5	-7.8	9.3	7.9	9.5
Industry and water supply	4.6	15.9	2.4	4.1	3.1	5.6	1.0	2.3	2.2	0.6	3.4
Construction	20.5	18.9	20.0	15.1	-5.6	-6.8	-12.1	-12.5	-1.6	14.8	12.8
Trade	8.5	23.7	10.9	10.4	7.2	4.9	2.5	-0.3	-3.0	-5.3	0.5
Services, excl. trade	-1.0	11.3	10.2	9.0	6.8	6.6	4.5	4.6	1.7	2.8	3.1
Net taxes	-0.9	16.8	9.2	8.3	6.7	3.8	1.3	-0.2	-1.2	0.0	0.6

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 the Republic of Serbia, in the period January - September of 2023 increased by 2.4% relative to the same period of 2022. Growth was noted in the sections of *Mining and quarrying* (1.7%) and *Electricity, gas, steam and air conditioning supply* (15.0%), while *Manufacturing* recorded fall (-0.1%).

Chart 3.1. Cumulative trend of total industrial production and its sections, growth rates (%)
(January - September 2023 relative to the same period of 2022)

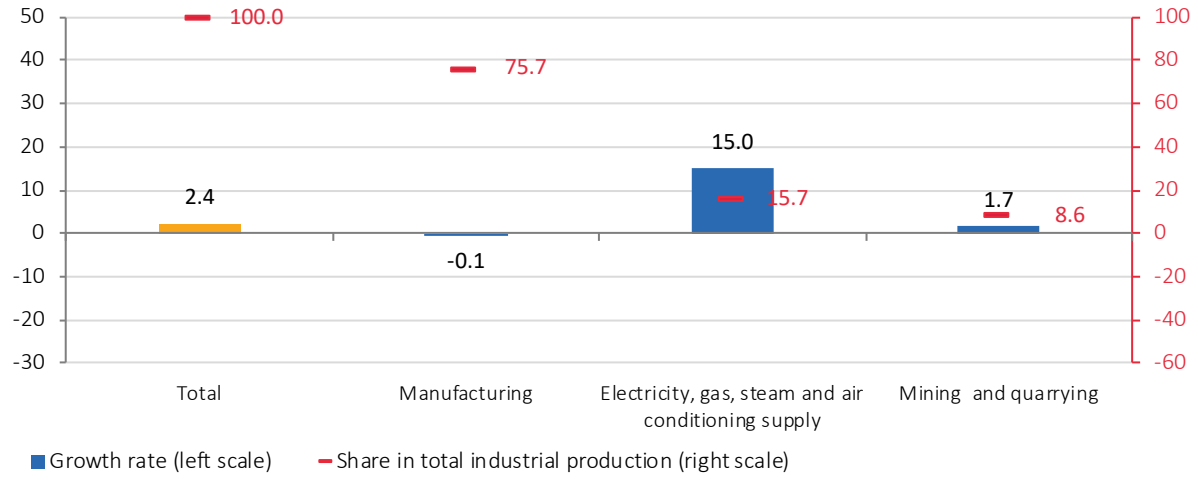
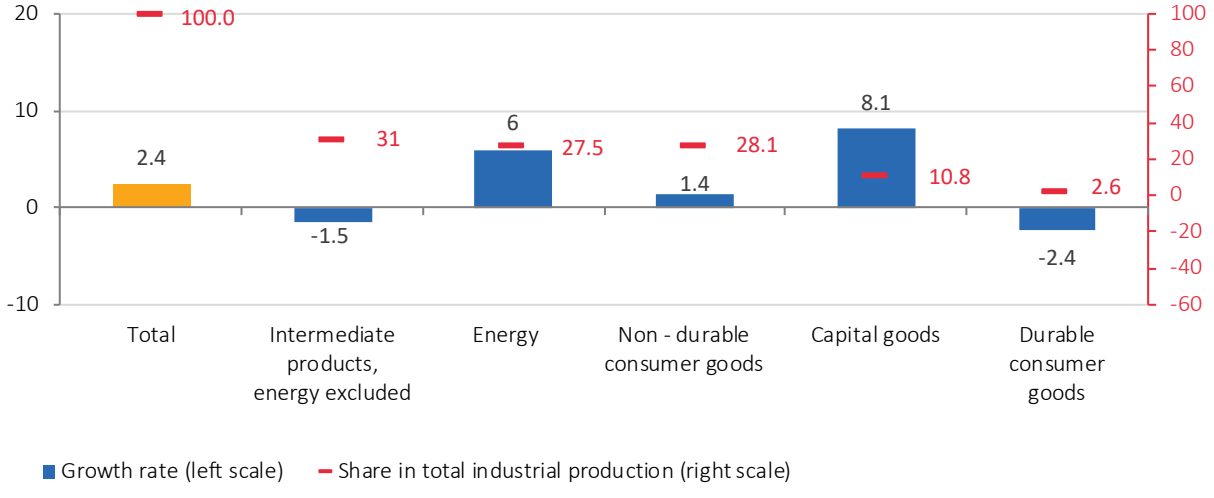


Chart 3.2. Industrial production growth rates by MIGs (%) (January - September 2023 relative to the same period of 2022)



In the period January - September of 2023, the section of **Electricity, gas, steam and air conditioning supply** contributed to industry growth with 2.3 p.p. **Manufacturing** and **Mining and quarrying** had negative contributions to industry trend, (-0.07 p.p.) and (0.13 p.p.), respectively.

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

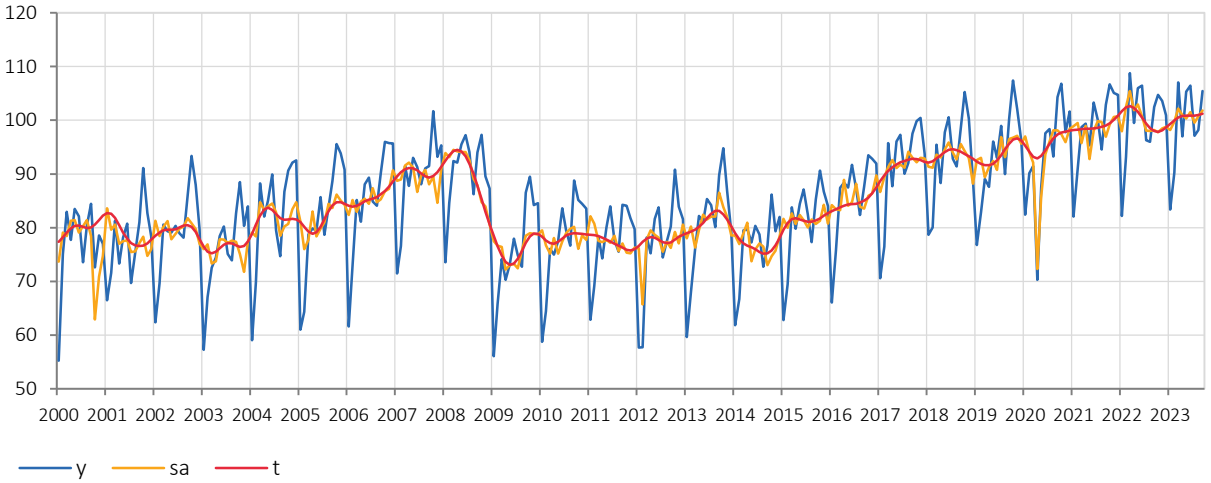
	2021				2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q1-Q4[1]
Industrial production – total	104.2	116.0	102.6	103.7	101.9	104.8	99.4	100.7	102.5	100.9	103.7	**103.0**
Manufacturing	103.2	117.0	100.4	102.9	104.1	104.7	99.1	97.8	98.5	99.0	102.1	**101.0**
Electricity, gas, steam and air conditioning supply	109.1	107.5	96.0	90.6	80.9	91.8	95.8	106.2	118.6	114.8	111.1	...
Mining and quarrying	109.0	124.6	140.8	142.9	139.0	132.4	108.5	116.5	104.5	94.3	105.8	...

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

3.2. MANUFACTURING (C) (share of 75.7% total industrial production index)

Trend-cycle component of Manufacturing in the third quarter of 2023, records increasing trend (chart 3.3).

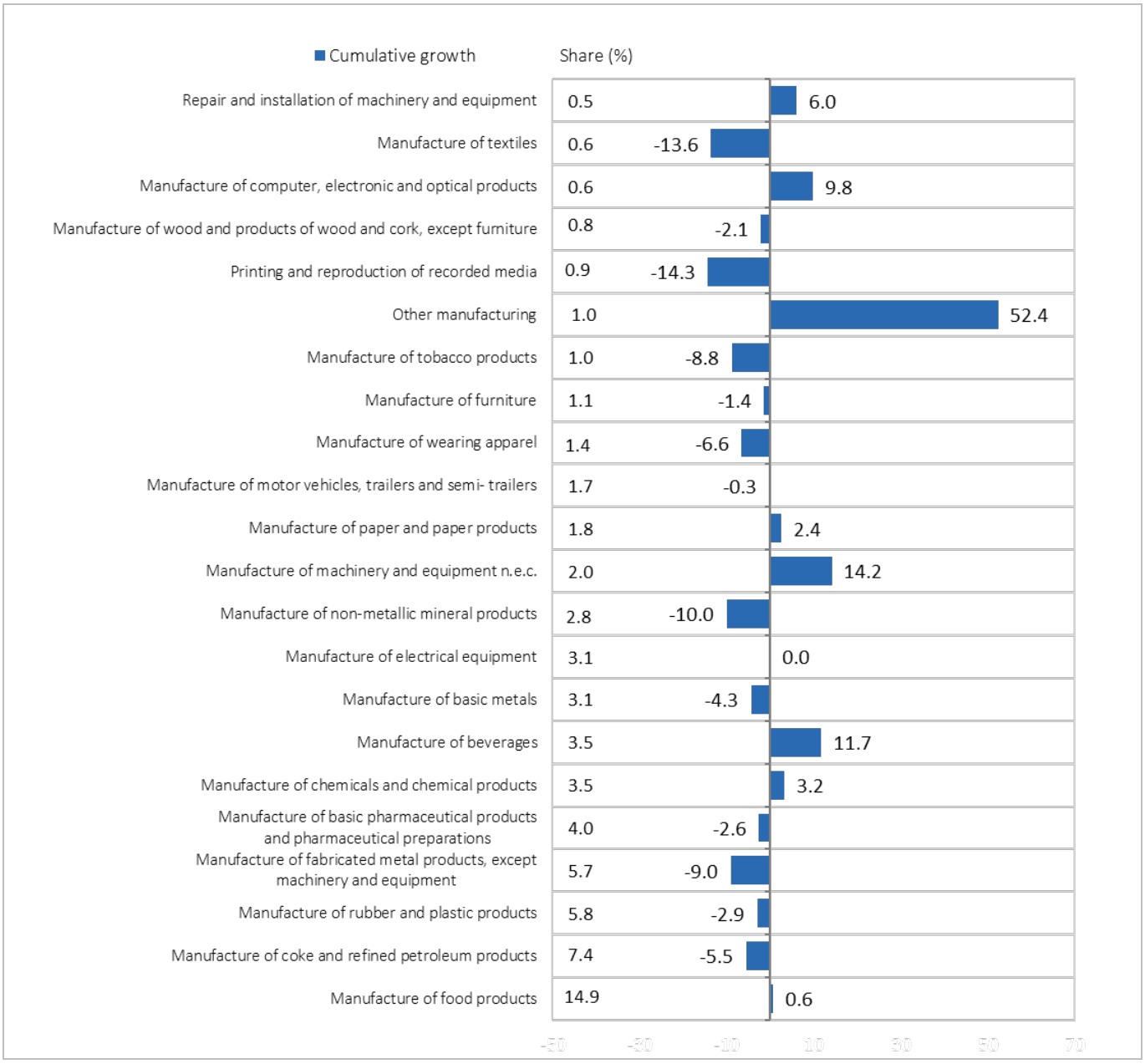
Chart 3.3. Components of Manufacturing time series, indices (y – original series, sa – series with excluded seasonal component, t – trend-cycle component, average 2022 = 100)



Observed by divisions, Manufacturing in the period January - September 2023 increased in 9 out of 24 divisions (mutually participating with 32.6% in total industry), if compared with the same period of 2022. 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 0.6%), Manufacture of basic pharmaceutical products and pharmaceutical preparations (growth of 13.8%), Manufacture of electrical equipment (growth of 3.2%).

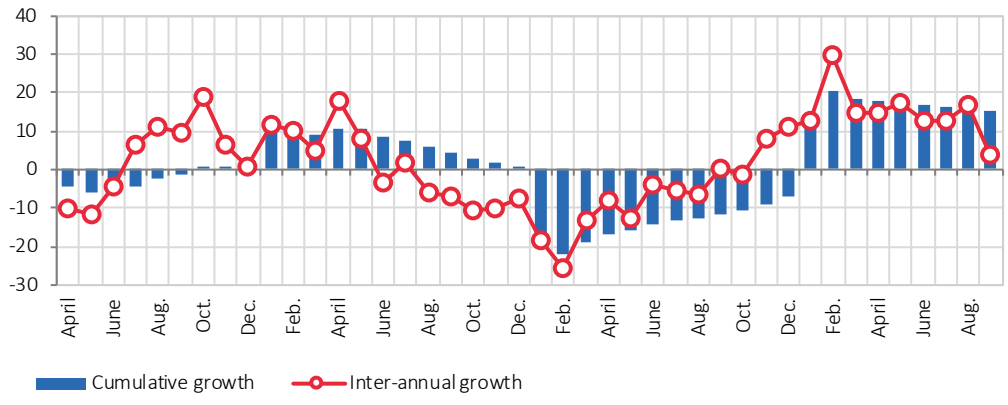
Decrease was recorded in 14 divisions (mutually participating with 40.6% in total industry): Manufacture of coke and petroleum derivatives (fall of -5.5%), Manufacture of rubber and plastic products (fall of -2.9%), Manufacture of metal products, except machinery (fall of -9.0%).

Chart 3.4. Manufacturing by divisions, cumulative growth rates (%) (January - September 2023 relative to the same period of 2022); 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 15.7% 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)

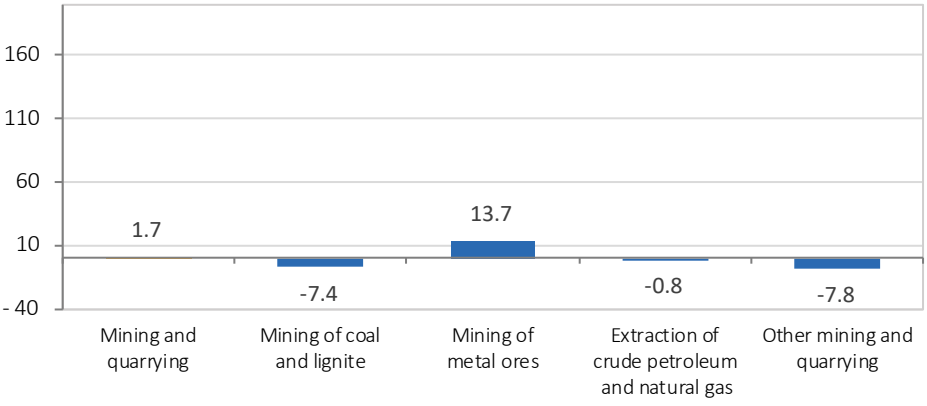


Section of Electricity, gas, steam and air conditioning supply recorded growth of 15.0% in the period January - September 2023 relative to the same period of 2022.

In the third quarter of 2023 production increased in all three months (relative to the same months 2022): in July (12.6%), August (16.6%), and in September (3.9%).

3.4. MINING AND QUARRYING (B) (share of 8.6% in total industrial production index)

Chart 3.6. Cumulative growth rates in Mining and quarrying section (%) (January - September 2023 relative to the same period of 2022)



Production of the section of Mining and quarrying recorded growth of 1.7% in the period January – September 2023 relative to the same period 2022.

Observed by months, fall was recorded in July (-0.5%), relative to the corresponding month in 2022, while in August and September, growth was noted (17.0%) and (1.1%), respectively.

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

In the third quarter of 2023, construction activity on the territory of the Republic of Serbia, compared to the same period of the previous year, increased by 19.3% at current prices, while at constant prices it increased by 15.8%. The price index of construction materials, which is used as a deflator of value in construction, amounted to 103.0 in the observed period.

The value of construction works, expressed at constant prices, increased by 22.3% regarding civil engineering constructions (transport infrastructure, pipelines, complex industrial constructions, etc.), and regarding buildings, it increased by 3.1% compared to the third quarter of 2022.

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

	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Current prices	116.7	124.7	128.8	127.1	110.3	108.4	102.7	99.9	109.2	121.1	119.3
Constant prices	117.4	114.9	115.0	110.4	94.1	91.2	86.5	86.3	99.5	117.9	115.8

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

(y – original series, sa – series with excluded seasonal component, t – trend cycle component average 2015 = 100)

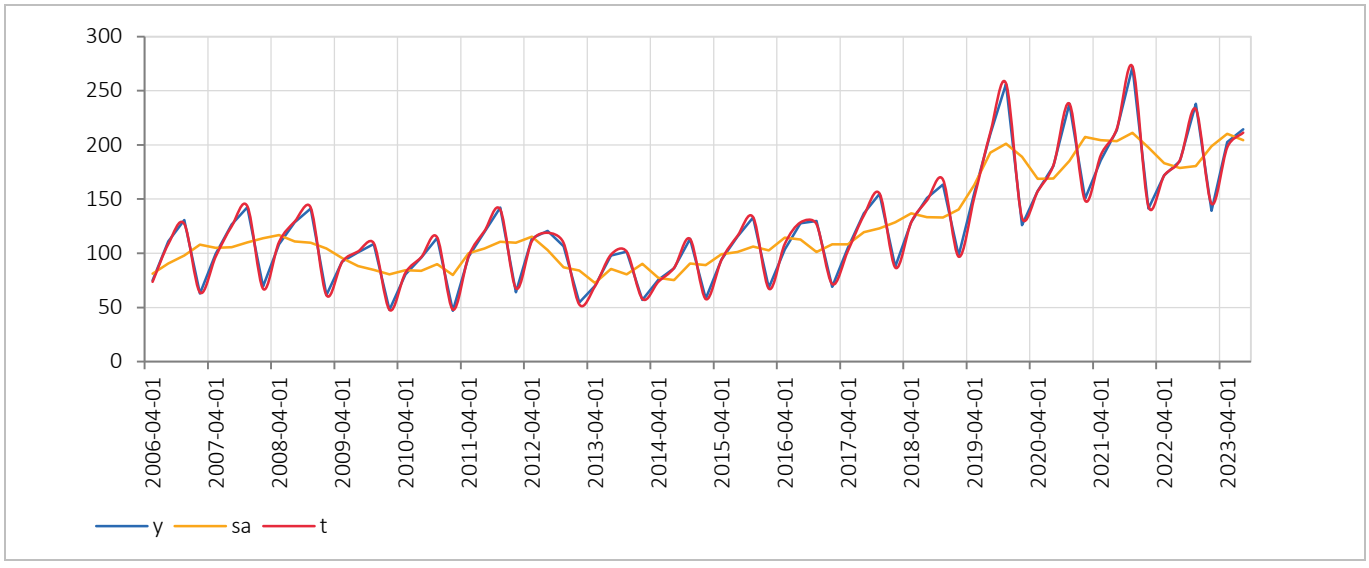
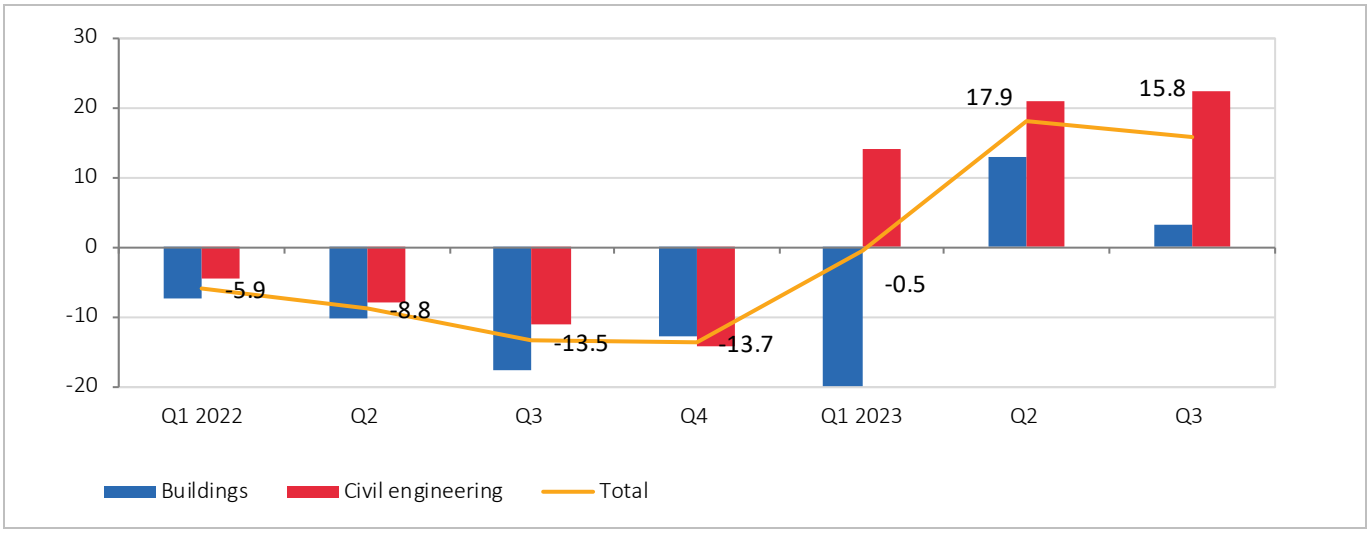


Chart 4.2. Value of performed construction works at constant prices, growth rates (%)
(quarter relative to the same quarter of the previous year)



Observed by regions (graph 4.3), in the third quarter of 2023, the highest growth rate, compared to the same period of the previous year, was recorded in **Region Vojvodina** and amounted to 54.6%, in constant prices. The most significant contribution to such a large growth in construction activity is the construction of the Hungarian-Serbian railway, and the final works on the construction of Ruma-Šabac highway.

In **Region of Southern and Eastern Serbia**, a growth of 2.4% at constant prices was achieved. An increase in activity was recorded regarding: residential buildings (a large residential and business complex is being built in Niš, with over 400 dwellings), pipelines (construction of the gas interconnector Niš–Dimitrovgrad) and transport infrastructure (highway Požarevac–Golubac).

In **Region of Šumadija and Western Serbia**, the value of construction works decreased by 5.0% compared to the same period last year. A slightly lower intensity of work on transport infrastructure constructions (the Moravian Corridor and Preljina-Požega section) is noticeable, as well as on non-residential constructions (the Lidl distribution centre in Lapovo of 60,000 m² has been completed).

In **Belgrade region**, the value of construction works at constant prices increased by 12.1% compared to the third quarter of 2022. Observed according to the type of constructions, the value of the performed works increased on residential and non-residential buildings. In addition to Belgrade waterfront, the largest residential complexes include "Depot", "Voždove kapije", "Wellport", "Viva Residences" and "Zelena Avenija", while "Centre for Inclusion" and the railway station "Belgrade centre" stand out among non-residential constructions.

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)

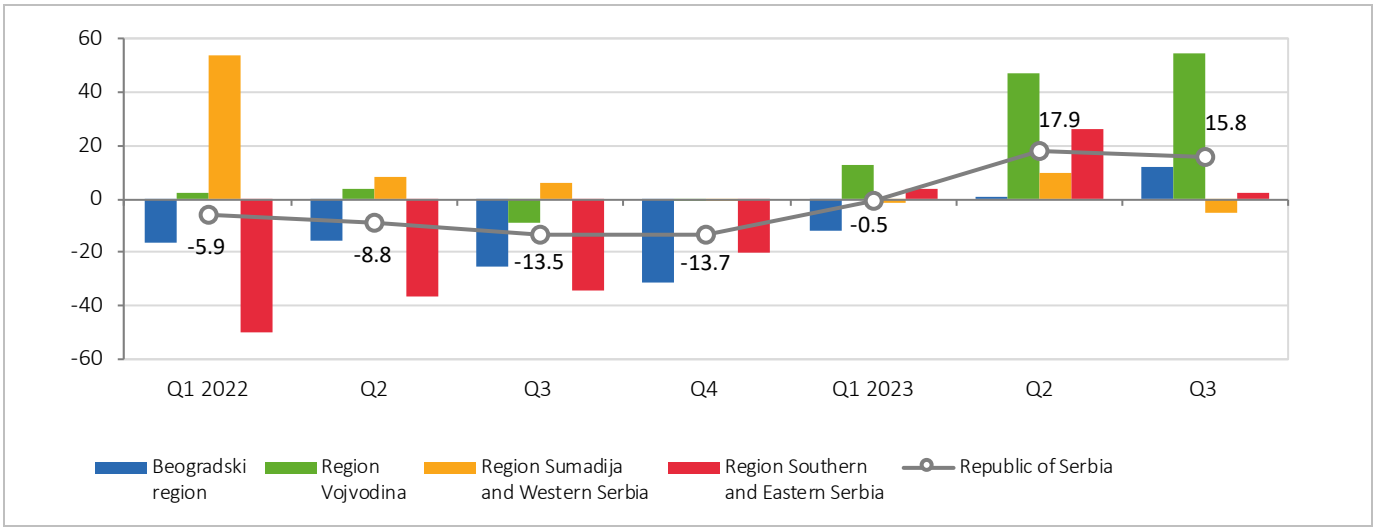


Chart 4.4. Value of performed construction works and hours of work on construction sites, comparative overview, indices
(quarter compared to the same quarter of the previous year)

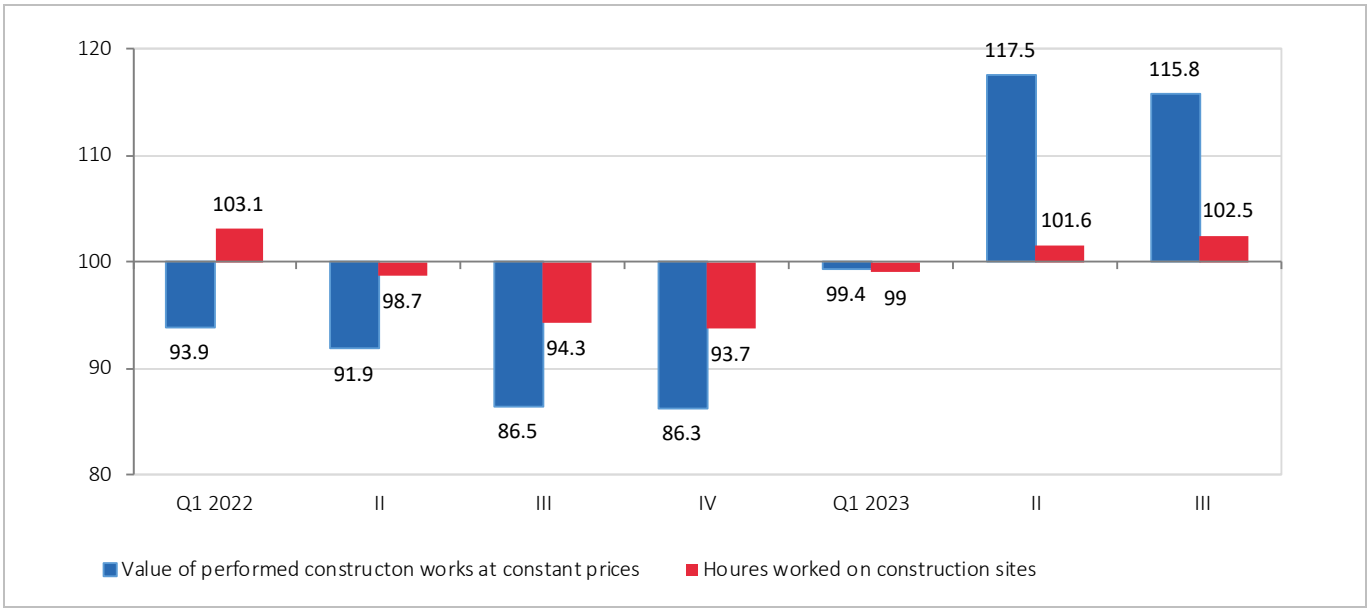


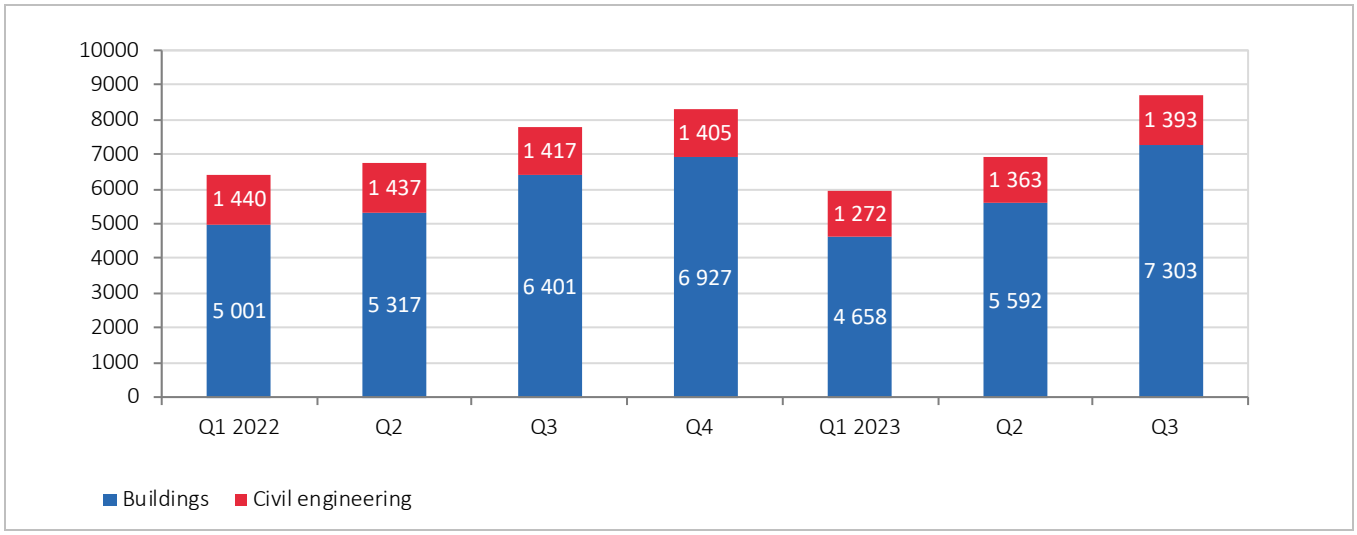
Chart 4.4 shows a comparative overview of the movement of working hours and the value of works performed on construction sites. As can be seen, in the first quarter of 2022, the value of works was lower, but the number of engaged workers was higher. In the second, third and fourth quarter of 2022, both indicators confirm slight decrease of construction activity. Both indicators also show slight decrease of construction activity in the first quarter 2023. Value of works in the second quarter of 2023 increased by 17.5% relative to the same period 2022. Hours worked increased by 1.6% in the second quarter and by 2.5% in the third quarter relative to the same period 2022.

4.2. 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 2023,** 8 696 building permits were issued. The greatest part of permits (7 303) related to construction works on buildings, while the rest (1 393) related to transport infrastructure works, pipelines, complex industrial structures, etc. Total number of issued permits in the third quarter 2023 increased by 11.2% related to the same period of the previous year.

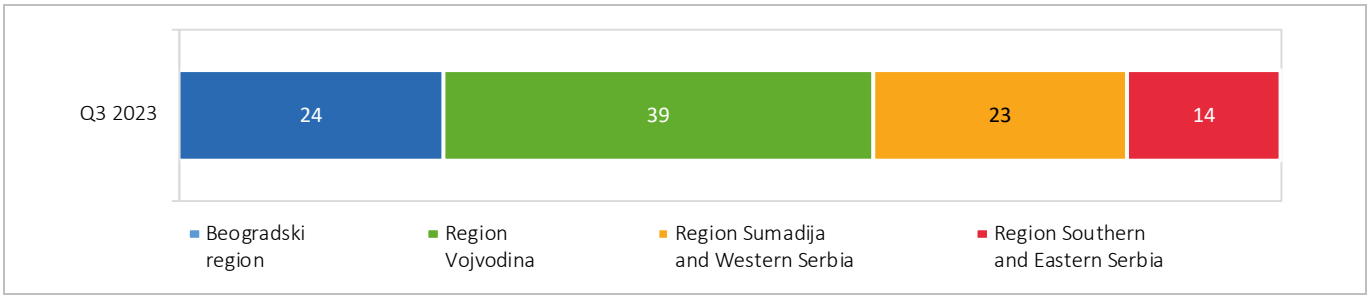
Chart 4.5. Number of issued building permits for buildings and civil engineering



The anticipated value of works, according to the issued permits, in the third quarter, amounts to RSD 289 654 million, which represents an increase of 5.9% compared to the same quarter of the previous year.

The greatest share in estimated value in the third quarter is seen in Vojvodina region (39%), followed by Belgrade region (24%), Šumadija and Western Serbia region (23%) and Southern and Eastern Serbia region (14%).

Chart 4.6. Anticipated value of works according to issued permits, by regions; share in % [19]



[19] Note: Instead of the previously published data on the percentage share of the number of permits by region, in the future we will show the share of the anticipated 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 2023 increased by 5.6%, relative to the same period 2022. Total export results were mostly influenced by manufacturing increase of 7%, as it presents 85.8% of total export, and increase of 89.3% in the section of electricity, gas and steam, presenting 4.9% of total export in the first three quarters of 2023.

Chart 5.1. Components of export's time series, indices (y – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2022 = 100)

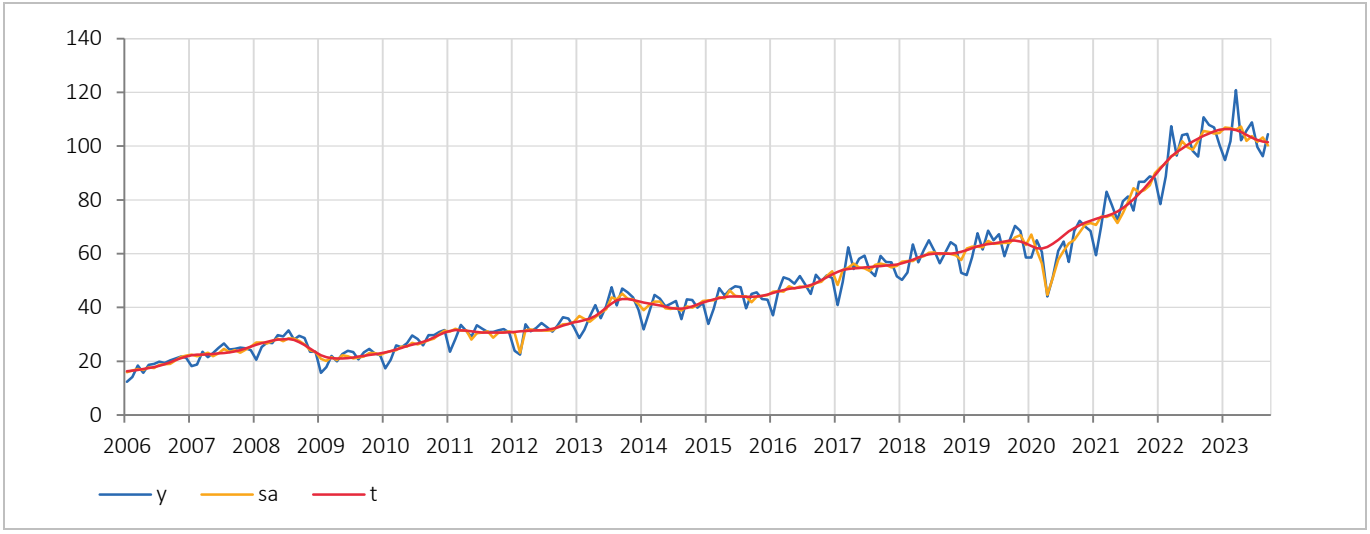
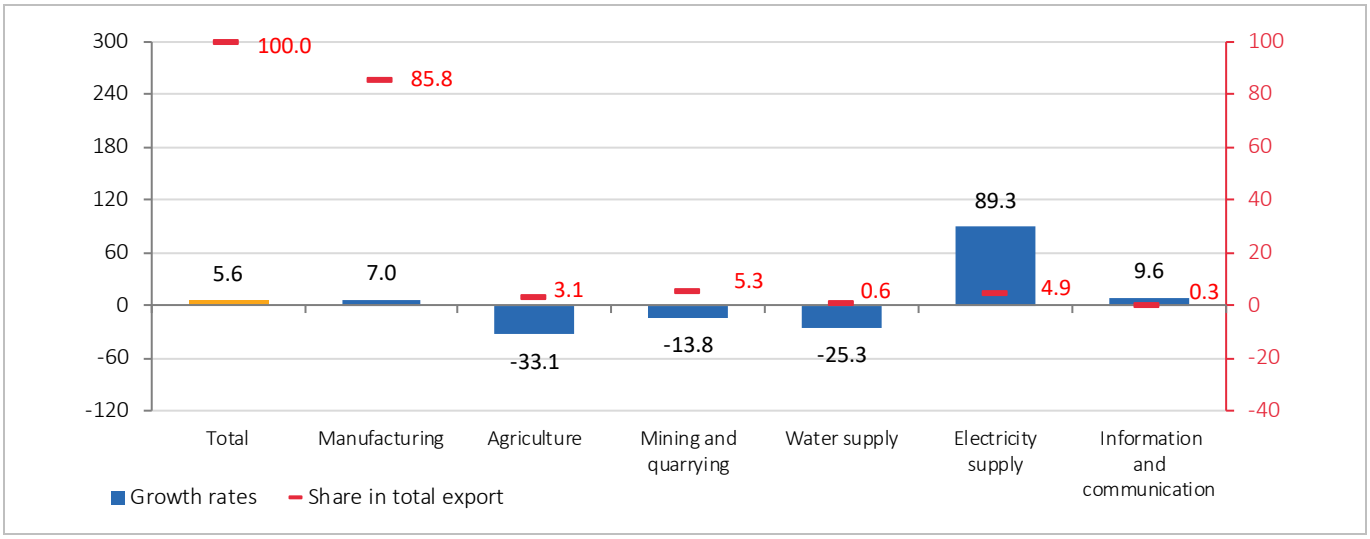


Table 5.1. Export of goods by CA (2010) sections, quarterly indices (comparison with the same period of the previous year)

	2021				2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q1-Q4[1]
Export – total	114.2	145.6	127.2	123.4	128.5	132.7	122.9	119.5	115.8	103.5	98.4	106.0
Manufacturing	111.5	145.4	122.4	122.4	125.9	126.3	122.3	117.5	112.0	107.4	101.8	...
Agriculture, forestry and fishing	132.7	97.1	119.2	73.5	76.3	117.6	98.0	95.6	72.4	56.1	72.1	...
Mining and quarrying	202.8	916.1	1369.6	366.8	1129.0	330.3	160.1	122.2	129.4	56.9	81.0	...

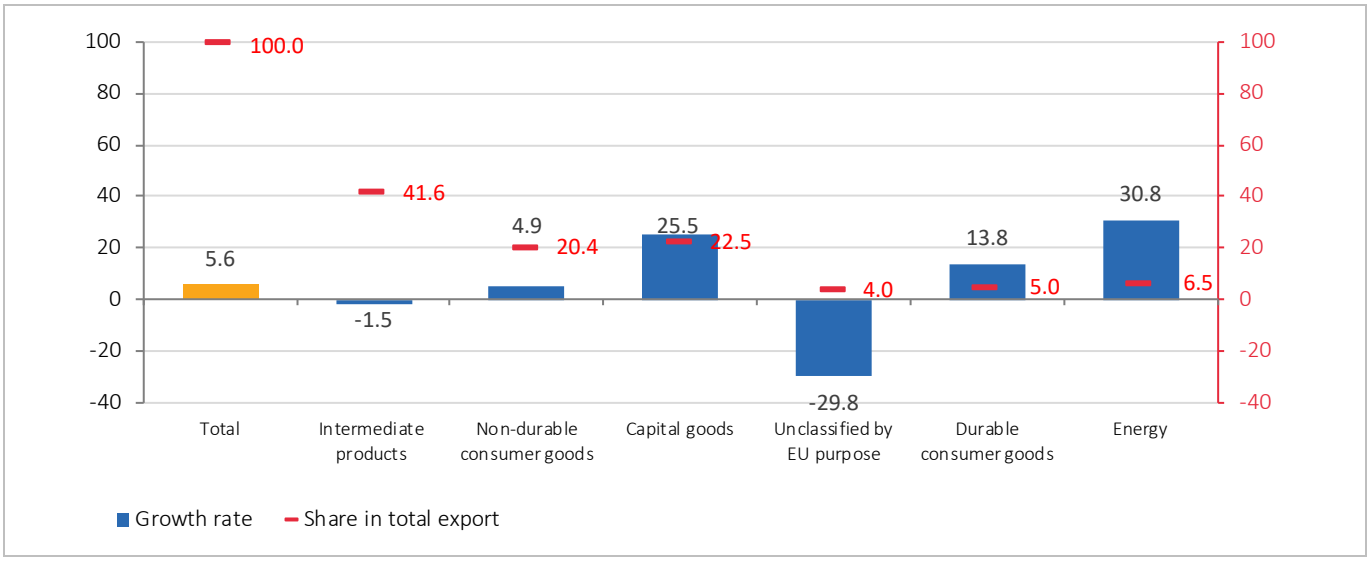
[1] Prognosis (obtained on the basis of a time series analysis model).

Chart 5.2. Cumulative growth rates of export by CA (2010) sections and sections' share in export (%)
(January – September 2023 relative to the same period 2022)



Observed by economic purpose, total export results in the period January - September 2023 were mostly influenced by increased exports of **capital goods** (share of 22.5% and increase of 25.5%) and **energy** (share of 6.5%, increase of 30.8% and contribution of 1.6 p.p.).

Chart 5.3. Cumulative growth rates of exports according to the economic purpose of the European Union (%)
(January – September 2023 relative to the same period 2022)



5.2. IMPORTS OF GOODS (EUR current exchange rate)

Total value of goods import in Serbia in the first nine months 2023 decreased by 6.1% relative to the same period 2022.

Import results were mostly influenced by the section of manufacturing (decrease of 6.2%), as it presents 71% of total imports, and 14.7% increase in the section of unclassified products according to the economic purpose of the European Union (12.6% of total imports) in the first three quarters of 2023.

Chart 5.4. Components of import's time series, indices (y – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2022 = 100)

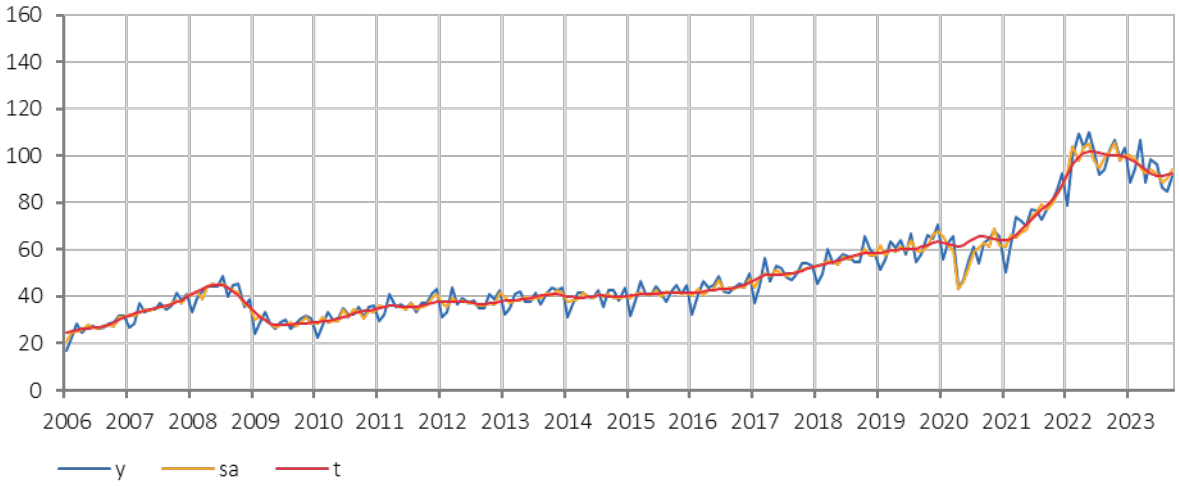
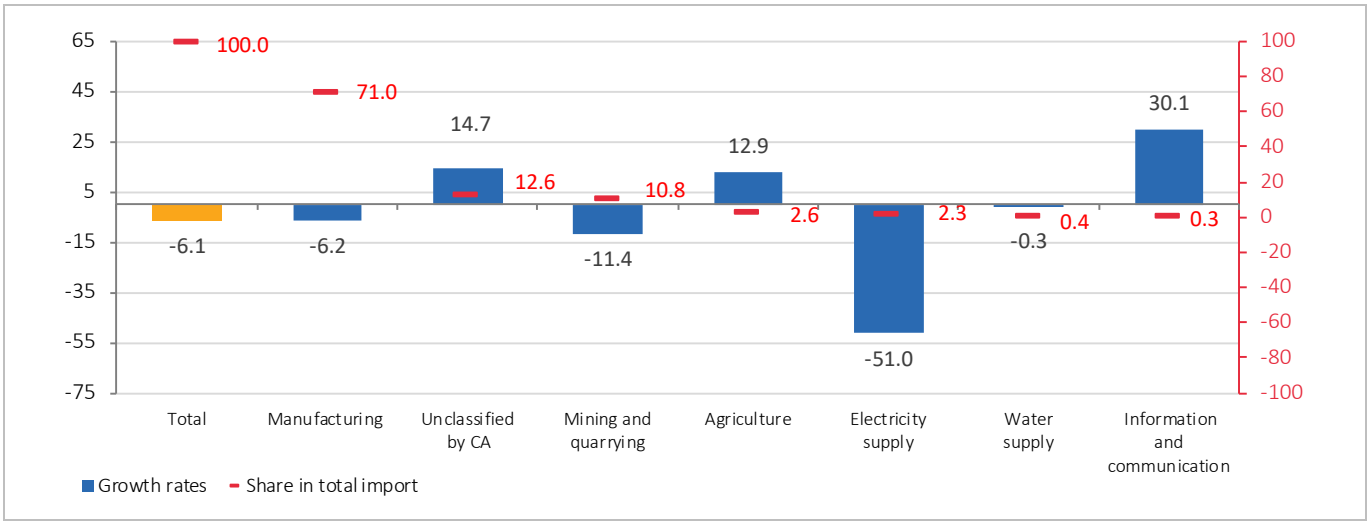


Table 5.2. Import of goods by CA (2010) sections, quarterly indices (comparison with the same period of the previous year)

	2021				2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q1-Q4[1]
Import – total	100.5	149.4	125.9	127.5	148.5	143.8	123.1	119.7	100.7	89.5	91.2	94.0
Manufacturing	104.8	148.9	120.6	123.3	130.6	134.2	119.6	112.5	101.3	87.4	92.1	...
Agriculture, forestry and fishing	102.3	101.0	113.6	143.8	127.6	123.5	134.5	127.0	124.5	110.3	98.4	...
Mining and quarrying	58.2	206.4	181.1	158.2	373.7	210.8	140.0	186.3	95.4	81.2	86.6	...

[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 2023 relative to the same period 2022)



Observed by MIGs, the greatest influence (negative contribution of -5.1 p.p.) on total import in the first nine months 2023 related to **energy** (share of 14.2%, decrease of 27.5%) and **intermediate products** (share of 34.8%, decrease of 7.1%, and negative contribution of -2.5 p.p.).

Chart 5.6. Cumulative growth rates of imports according to the economic purpose of the European Union (%)
(January - September 2023 relative to the same period 2022)

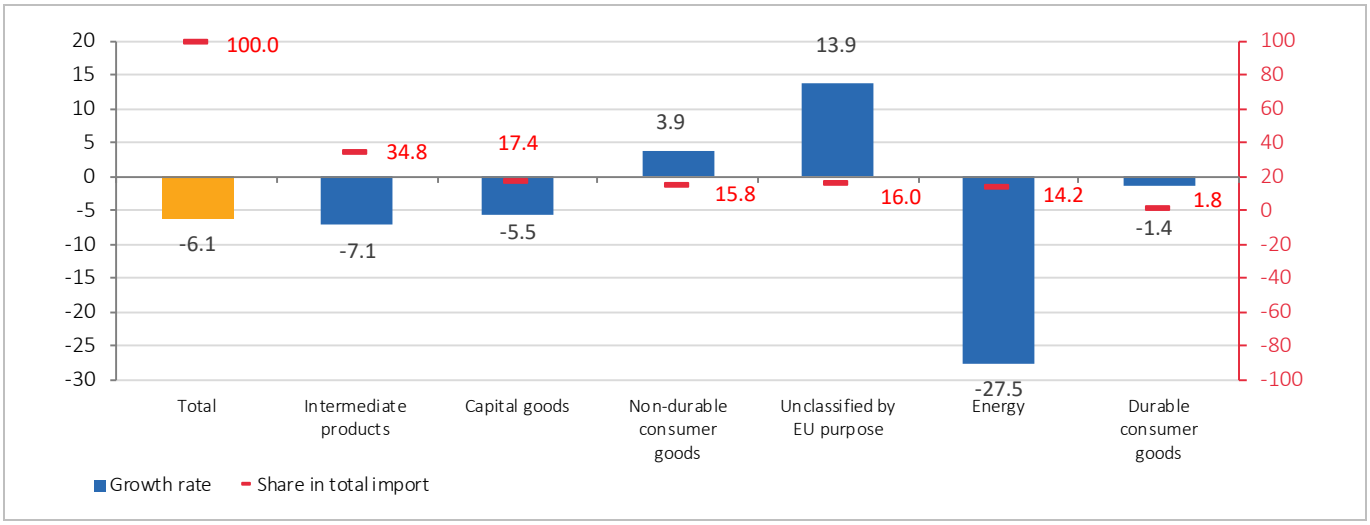
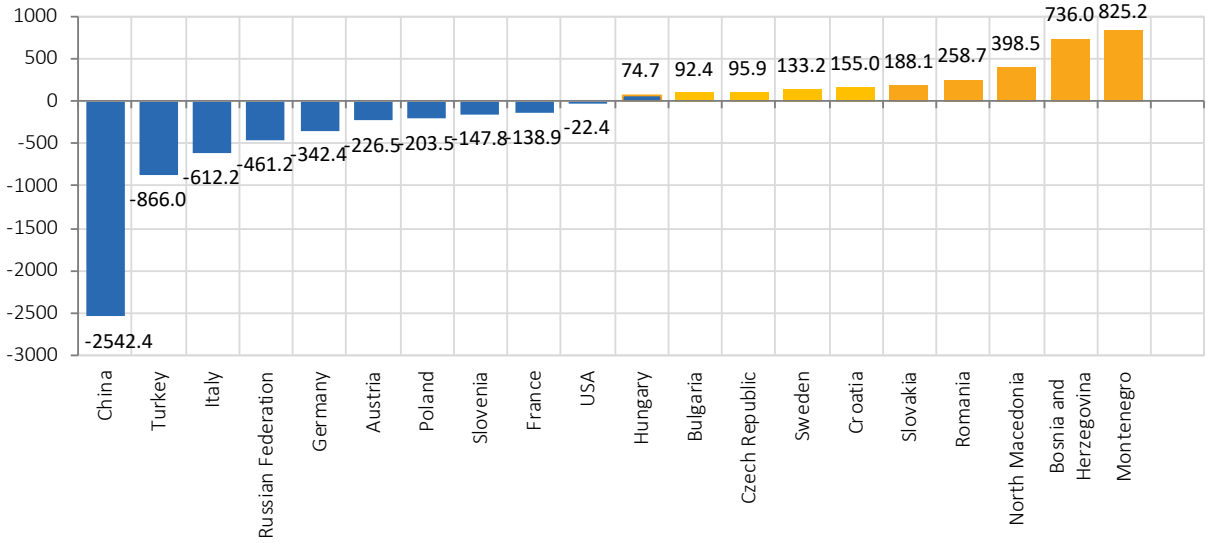


Chart 5.7 shows the 20 largest external trade partners of the Republic of Serbia, which account for 79.4% of the total external trade exchange. The Republic of Serbia achieved a positive external trade balance in the first nine months of 2023, i.e. a surplus, with nine European countries (a total of about EUR 2.8 billion), of which Montenegro is on the first place (a surplus of EUR 825.2 million). In this period, the Republic of Serbia exported the most food products to Montenegro (17.2% of total export to MNE), electricity, gas and steam (11.5% of total export to MNE) and beverages (7% of the total export to MNE).

On the other hand, a negative external trade balance, i.e. deficit, was also recorded in 11 countries and amounts to a total of -EUR 5.8 billion. The largest external trade deficit in the period January – September 2023 was recorded in trade with China (EUR -2.5 billion) and Turkey (balance EUR -866 million). Observed by CA product activities (2010), product imports from China mostly consisted of unclassified products (18.7% of total imports from China), imports of computers, electronic and optical products (16.6% of total imports from China), as well as n.e.c. machinery and equipment (15.7% of total imports from China). With Turkey, the negative external trade balance is the result of the high value of basic metals import (13.9% of total imports from Turkey) and electrical equipment (12.9% of total imports from Turkey). Italy (deficit of EUR -612.1 million), the Russian Federation (EUR -461.2 million), and Germany (EUR -342.4 million) follow.

Chart 5.7. External trade balance of the Republic of Serbia by countries, January-September 2023 (EUR mill.)



5.3. THE MOST SIGNIFICANT EXTERNAL TRADE PARTNERS

Table 5.3. The major external trade partners

Export	EUR mill.	Import	EUR mill.
Germany	3229.3	Germany	3571.7
Bosnia and Herzegovina	1507.1	China	3364.9
Italy	1341.1	Italy	1953.2
Hungary	1172.0	Russian Federation	1315.4
Romania	1076.1	Turkey	1253.2

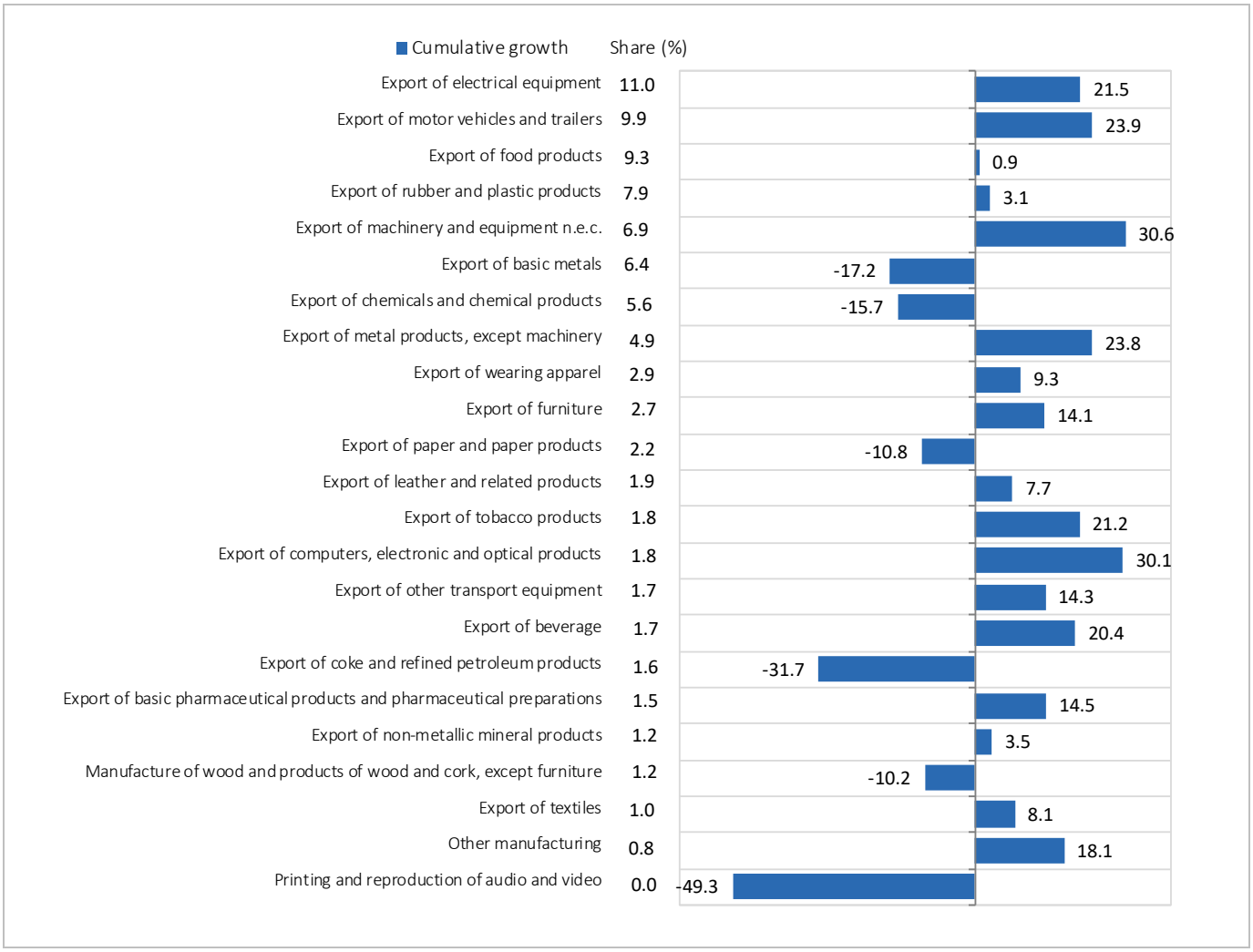
The most significant external trade partners in the first nine months of 2023 were the countries with which Serbia has signed agreements on free trade. The EU member countries account for 59.5% of total external trade, followed by Asia – Pacific Economic Cooperation, APEC, with share of 18.0%. The major external trade partners are separately presented in Table 5.3.

5.4. MANUFACTURING (C) (share of 85.8% in total export and 71% in total import)

Export of manufacturing recorded growth of 7% in the first nine months 2023, relative to the same period 2022. Out of 23 divisions, cumulative growth was recorded in 17 divisions, mutually participating with 68.9% of total export.

The export of **electrical equipment**, the division with the greatest separate export value (EUR 2.4 bill.) recorded a cumulative growth of 21.5%, with a share of 11% in total exports (9.6% in the same period in 2022). Export of **motor vehicles and trailers**, division with an export value of EUR 2.1 billion and a share of 9.9% in total exports (8.5% last year), recorded a cumulative growth of 23.9%. The export of **food products**, the division with the export value of EUR 2.0 billion and share of 9.3%, achieved a cumulative growth of 0.9%. The export of **rubber and plastic products** with the export value of EUR 1.7 bill. and share of 7.9% in total exports, recorded cumulative growth of 3.1%. Export of **machinery and equipment n.e.c.**, positioned on the fifth place, with a participation in total exports of manufacturing with 6.9%, records a cumulative growth of 30.6% and an export value of EUR 1.5 billion.

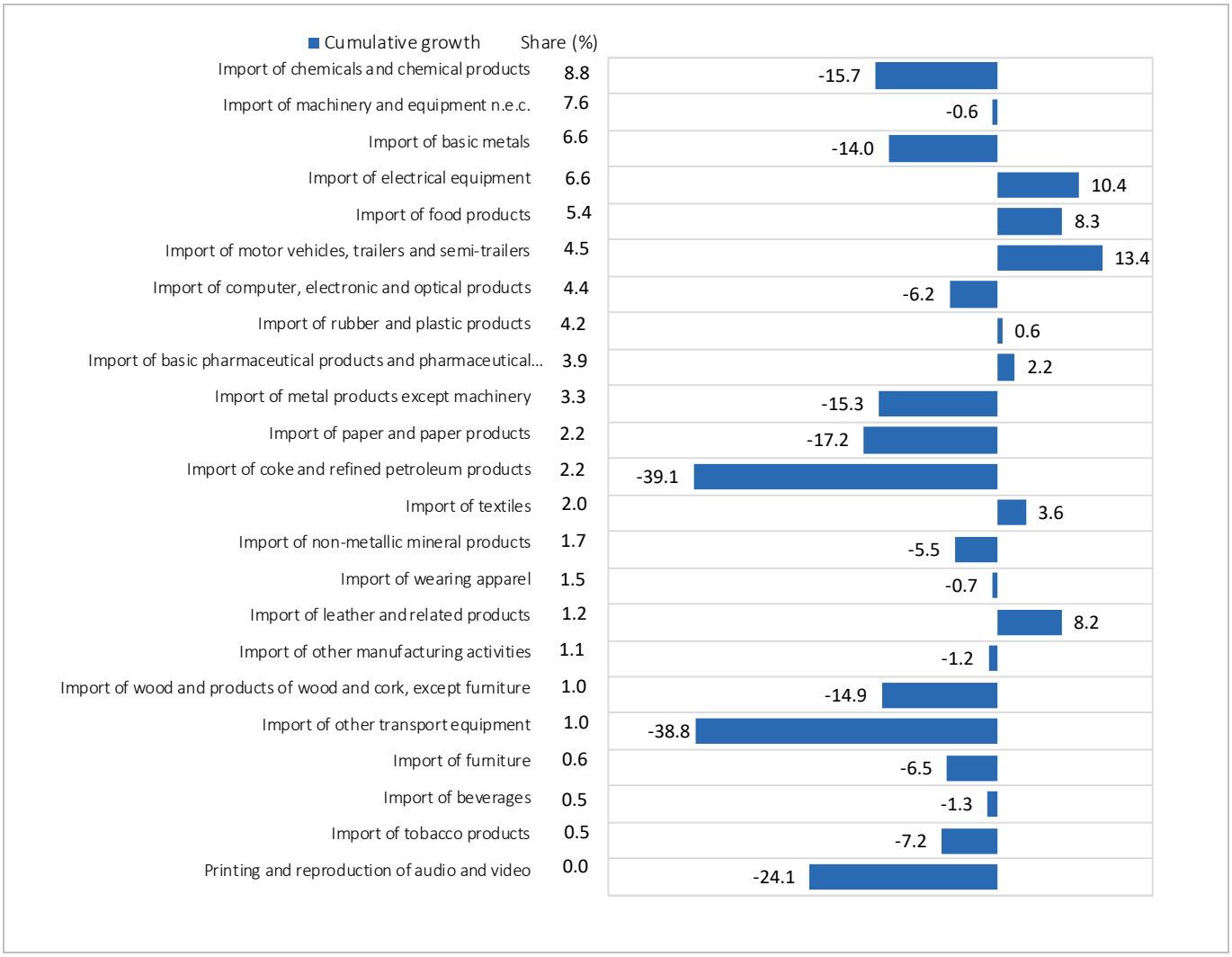
Chart 5.8. Export of manufacturing by divisions, cumulative growth (%) (January - September 2023 relative to the same period 2022, by descending share in total export)



Imports of manufacturing in the period January-September 2023, compared to the same period of the previous year, achieved a decrease of 6.2%. Out of 23 divisions, cumulative growth was recorded in 7 divisions, which together make up 27.8% of total manufacturing imports.

Import of **chemicals and chemical products** with the import value of EUR 2.4 bill, recorded cumulative fall of 15.7% (with the share in total imports of 8.8% (9.8% in the same period 2022). Import of **machinery and equipment n.e.c.** (cumulative fall of 0.6% and import value of EUR 2.1 bill. and share of 7.6% in total imports (7.2% in the same period 2022). Import of **basic metals** had the import value of EUR 1.8 bill. and share of 6.6% recorded cumulative fall of 14%. Import of **electrical equipment**, with the value of EUR 1.8 bill. and share of 6.6% in total import achieved cumulative growth of 10.4% Import of **food products** is the division positioned on the fifth place according to the import value in total imports of manufacturing, had the share of 5.4%, and recorded cumulative growth of 8.3% and import value of EUR 1.5 bill.

Chart 5.9. Import of manufacturing by divisions, cumulative growth (%) (January - September 2023 relative to the same period 2022, by descending share in total import)



5.5. AGRICULTURE, FORESTRY AND FISHING (A)
(share of 3.1% in total export and 2.6% in total import)

Export in this section in the first nine months of 2023 realized decrease of 33.1%, as well as decreased share from 4.9% to 3.1% relative to the same period 2022. The cumulative drop of 45.2% in exports of cereals (except rice), leguminous crops and oil seeds, a group that makes up 52.8% of the entire section's exports in the observed period, contributed the most to this result. Export fall was achieved in export of pome and stone fruits, the next group by share (15.6%), as it recorded fall of 20.8% in the period January – September 2023 relative to the same period 2022.

Import recorded growth of 12.9% relative to the same period 2022, as well as the share of 2.6% in total imports. The group with the largest participation in the section (20.2%) - Growing of vegetables, root and carotid plants - recorded a growth of 29.6% in the first nine months of 2023. The next group, according to realized share (19.3%), the group of cereals (except rice), leguminous and oil seeds - achieved an import growth of 46.3% in the observed period, as well as tobacco growing- that noticed growth in the import of this section of 14.0% and share of 10.8%.

5.6. MINING AND QUARRYING (B) (share of 5.3% in total export and 10.8% in total import)

The section of Mining and quarrying records the decrease in total export, from 6.5% in the first nine months 2022 to 5.3% in the same period 2023. The realized value of exports in the first three quarters is EUR 1134.3 million, which is by 13.8% less than exports in the same period last year. This result is a consequence of the fall in the export of metal ores, a group that accounts for 98.5% of the exports of the entire section, and which achieved a fall of 13.6% compared to the same period last year.

Import of this section in the first nine months of 2023 amounts to EUR 2.9 billion, presenting the share of 10.8% in total import (11.4% in the same period 2022). In the first nine months 2023 in the section of Mining and quarrying, recorded was import decrease of 11.4% relative to the same period 2022.

The fall in import was largely caused by a 21.6% decrease in the import of crude oil and natural gas, a group that accounts for 77.9% 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 2023, relative to the same period 2022, increased by 8.4% at current prices and decreased by 3.9% at constant prices.

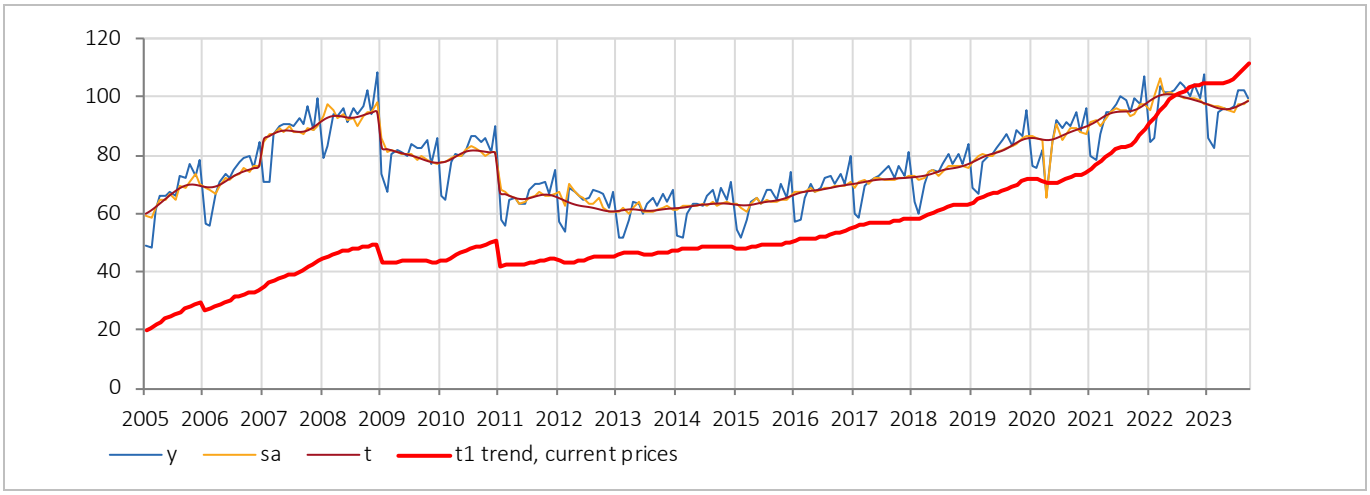
Table 6.1. Retail trade turnover, indices (comparison with the same period of the previous year)

	2021				2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q1-Q4[1]
Current prices	104.8	124.2	114.3	118.9	124.0	121.4	123.0	120.1	111.7	106.1	107.8	**109.0**
Constant prices[2]	104.7	118.6	107.7	108.4	111.0	106.2	105.0	102.2	96.6	93.9	98.4	**98.7**

[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. After a stable level in the first half of 2023, in the third quarter, the trend of turnover of goods in retail trade at current prices records further growth. Turnover growth rates at current prices are significantly higher than at constant prices, which is a consequence of accelerated inflation.

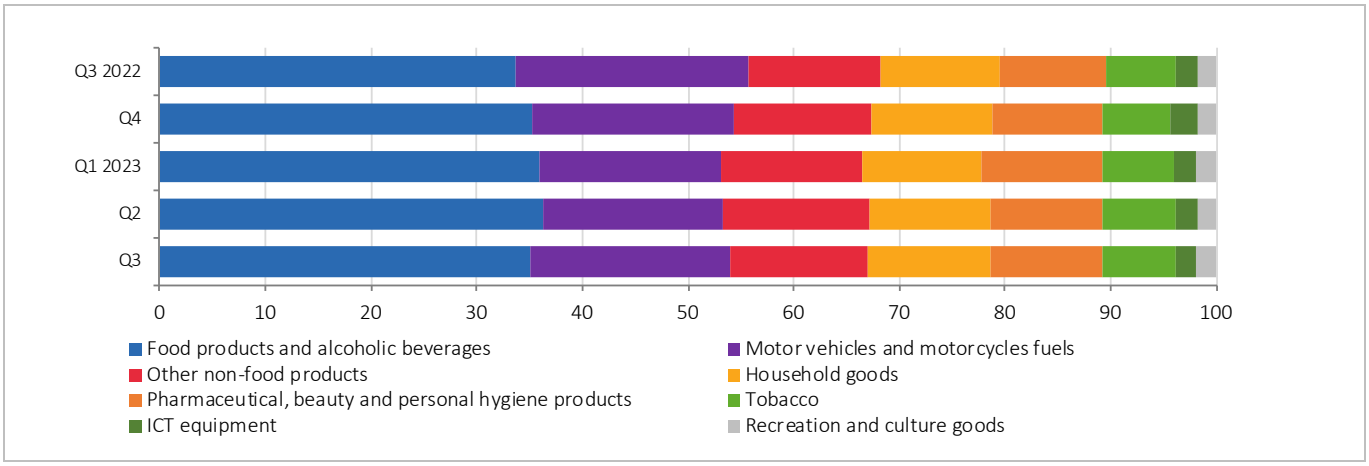
Chart 6.1. Components of time series of retail trade turnover at constant prices, indices
(u – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2022 = 100)



Observed according to the basic aggregates of CA (2010), **in the first nine months of 2023**, compared to the same period of the previous year, the highest turnover growth was achieved in trade of food, beverages and tobacco (13.4%), followed by trade of non-food products (9.8%). On the other hand, the category of motor fuels recorded fall of 4.4%. In contrast to current prices, all observed commodity groups, in the first nine months of 2023, compared to the same period of the previous year, recorded a drop at constant prices. The largest decrease in trade at constant prices was recorded in the categories Food, beverages and tobacco (decrease of 4.8%) and Non-food products, except motor fuels (decrease of 3.7%), while the smallest decrease was recorded in the category Motor fuels (2.3%).

Observed by the structure of trade divisions and commodity groups, **in the third quarter 2023,** the most notable were food products and alcoholic beverages (35%), followed by motor vehicles and motorcycles fuels (19%) and other non-food products (13%).

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)

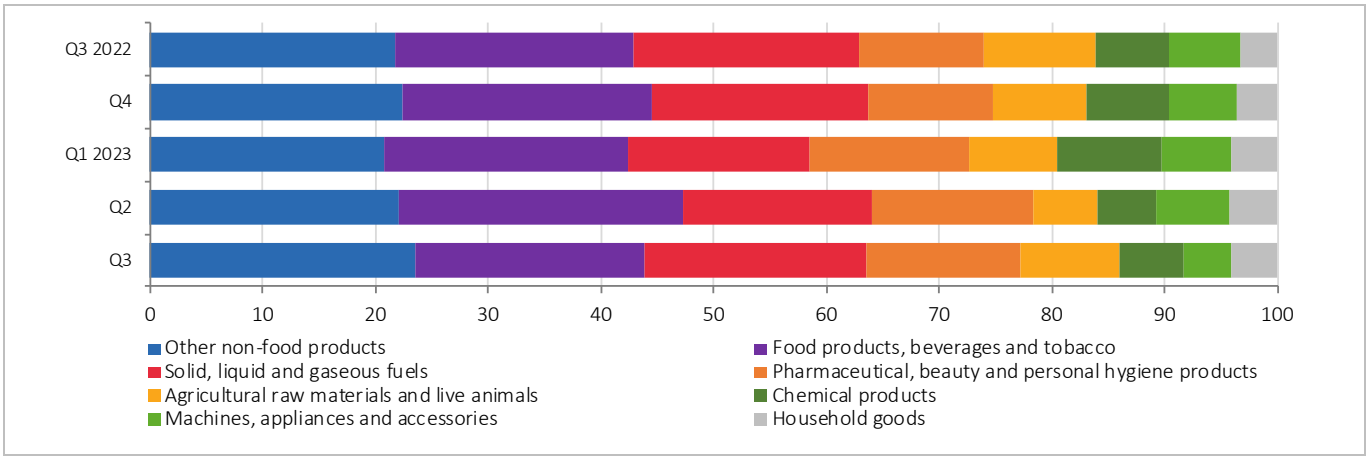
Wholesale trade turnover **in the third quarter 2023**, compared with the same period 2022 noted decrease of 1.1% at current prices. **In the first nine months**, wholesale trade turnover decreased by 1.4% relative to the same period last year.

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

	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Current prices	110.9	133.5	123.6	126.5	120.1	122.6	115.2	111.4	104.3	93.2	98.9

Observed by trade divisions and commodity groups, in wholesale trade turnover, in the third quarter of 2023, the most notable were food products, beverages and tobacco (23.5%), other non - food products (20.4%), and solid, liquid and gaseous fuels, (19.7%).

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)

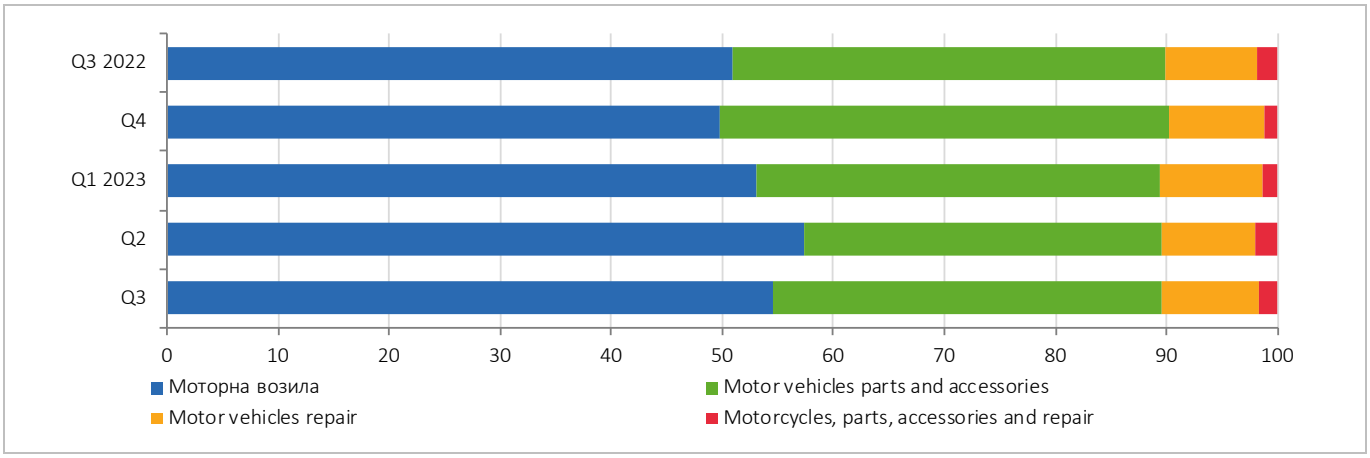
Turnover of goods in wholesale and retail trade and repair of motor vehicles in the third quarter 2023, relative to the same period 2022, recorded increase of 11.7% at current prices. In the first nine months, this division recorded increase of 11.9% relative to the same period 2022.

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

	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Current prices	111.1	138.4	113.6	116.1	124.5	124.8	118.8	121.3	112.5	111.7	111.7

Observed by trade divisions and commodity groups, in the third quarter 2023, similarly to the previous quarters, in the structure of wholesale and retail trade turnover and motor vehicles repair, the most notable were motor vehicles (54.5%), and motor vehicles parts and accessories (35.1%).

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

After the first three quarters of 2023 the average year-on-year consumer price growth amounted to 13.9%. As in the first half of the year, the largest influence on consumer price growth after Q3 were still recorded in the following groups of products: **dairy products, vegetables, meat, electricity for households, bread and cereals and solid fuels (fuelwood).** Even though the intensity of the prices of these groups of products in Q3 2023 has become weaker since the beginning of 2023, they still influence the formation of consumer prices, when compared to the other groups of products.

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

	2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Consumer price	8.7	10.6	13.3	15.1	16.0	14.5	11.4	-

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

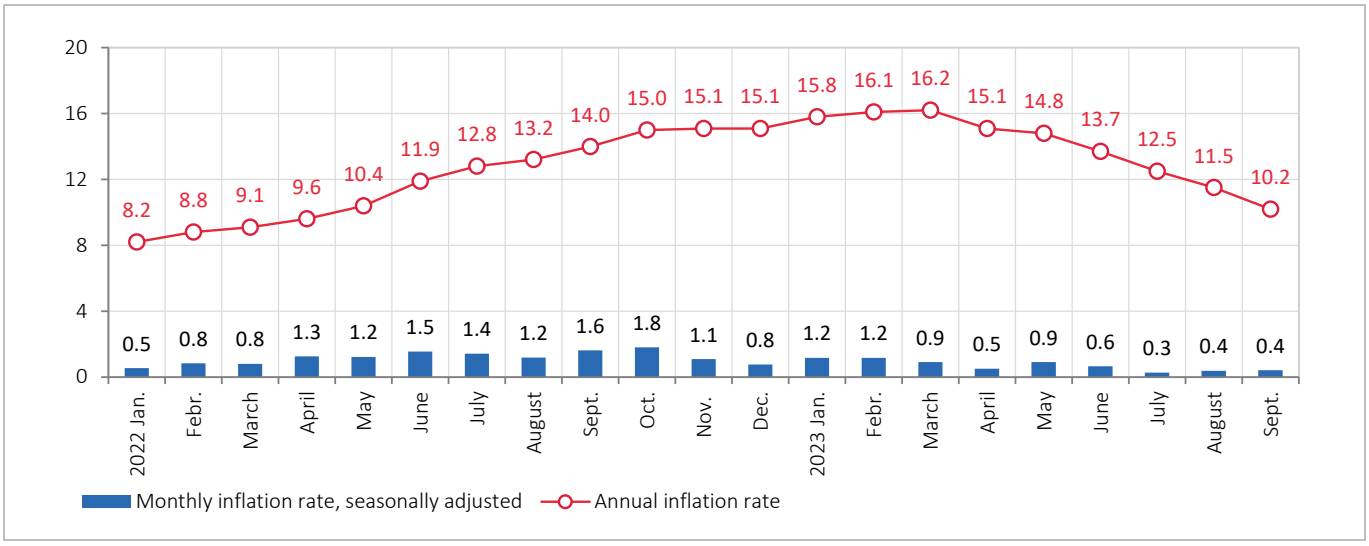
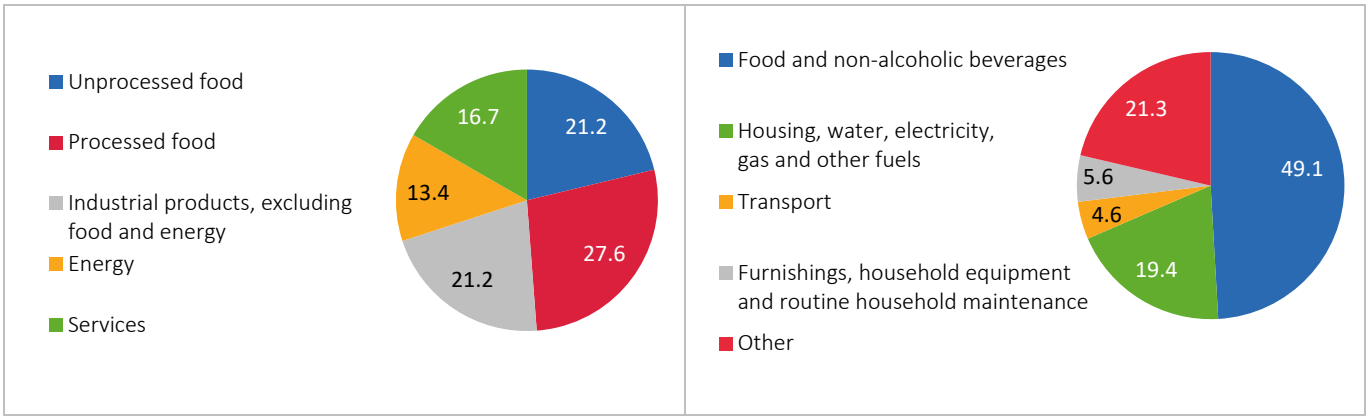


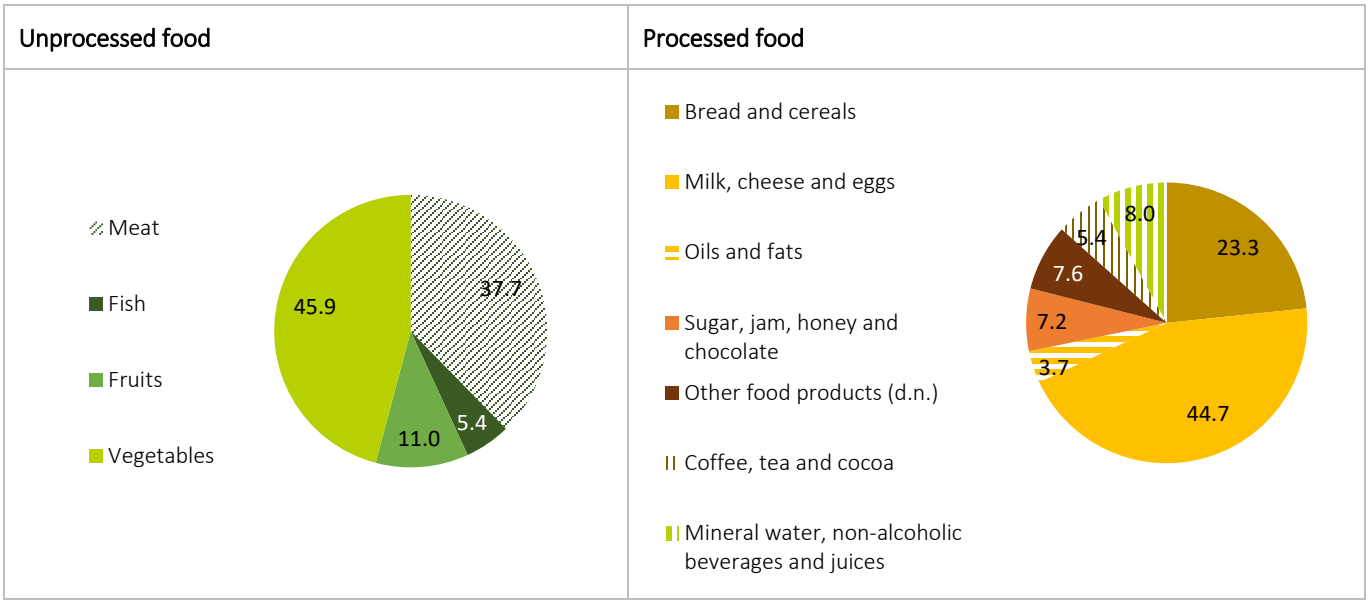
Chart 7.2. Structure of the **average annual consumer price growth rate** (13.9%) by purpose and main groups of products, after the first three quarters (Q1-Q3) 2023 (total = 100) (%)



7.1. DAIRY PRODUCTS, VEGETABLES, MEAT, BREAD AND CEREALS

(share in the annual consumer price growth rate in the first three quarter of 2023 – 36.7%)

Chart 7.3. Structure of the **average annual growth rate** of consumer prices of **unprocessed food** (first chart) and **processed food** (second chart), over Q1–Q3 202 (total = 100) (%)

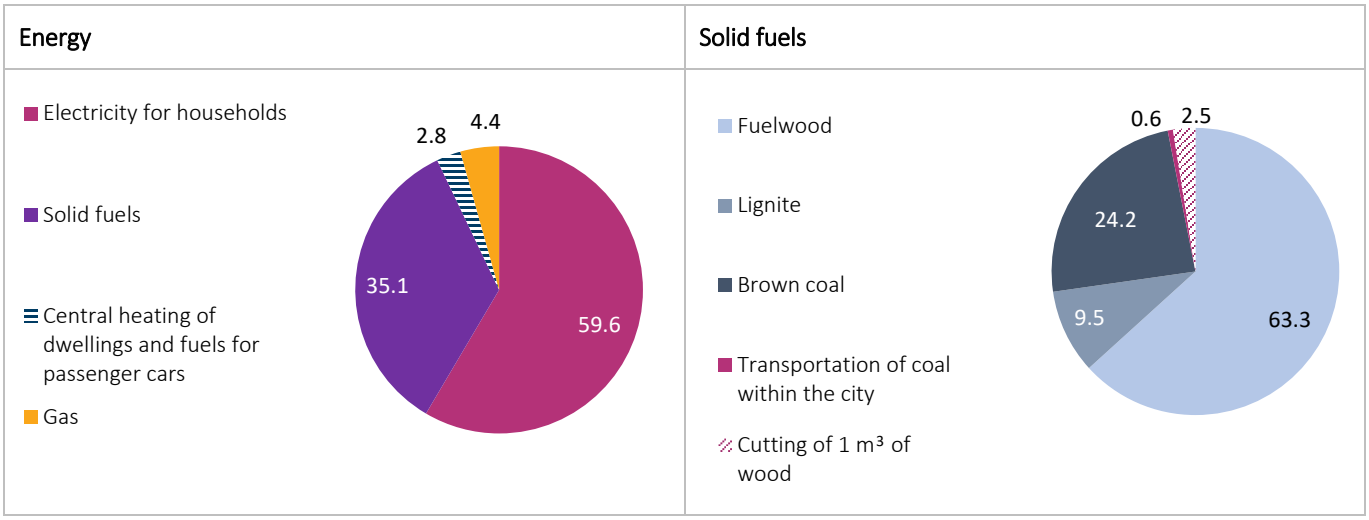


Just like in the period after the first half of 2023, the year-on-year growth of food prices in the first three quarter of 2023 (22.3%) was mostly determined by the **growth of the prices of dairy products (33.9%),** i.e. by the growth of yoghurt price (fruit juice with cereals added, "kefir", etc.), fresh (white) cheese (of all kinds) and whole milk (with 2.8% and more fat content and shelf life up to 21 days), accounting for 12.4% of the total structure of consumer price growth rate. Even though the year-on-year **growth of vegetables price (of 32.6%) is gradually slowing down relative to the first half of 2023,** it is still mostly determined by the price of onions, potatoes (especially the red ones), paprika, carrots and tomatoes, which makes the core of the growth of vegetables prices in the first three quarters of 2023, while the only deflationary influence was that of the price of garlic. As far as the year-on-year growth of the price of **meat in the first three quarters of 2023 (of 16.2%),** this price was mostly determined by the growth of pork price (boneless), lard (all kinds), beef and veal (boneless) and sausages of pork, beef and mixed meat, with a total share in the structure of the annual growth rate of meat price in the first three quarters of 2023 of 41.6%. Over the period of the first three quarters of 2023, the year-on-year growth of the prices of **bread and cereals (of 18.4%)** was mostly generated by the growth of the price of white bread, savoury savoury snacks (breadsticks, "smoki" pretzels, etc.) and pastry (all kinds), participating in the structure of the total growth rate of the price of bread and cereals with 57.2%.

7.2. ELECTRICITY FOR HOUSEHOLDS AND SOLID FUELS

(share in the annual consumer price growth rate in the first three quarters of 2023 – 12.5%)

Chart 7.4. Structure of the **average annual growth rate of energy** consumer prices (first chart) and **solid fuels** (second chart), in the first three quarters of 2023 (total = 100) (%)



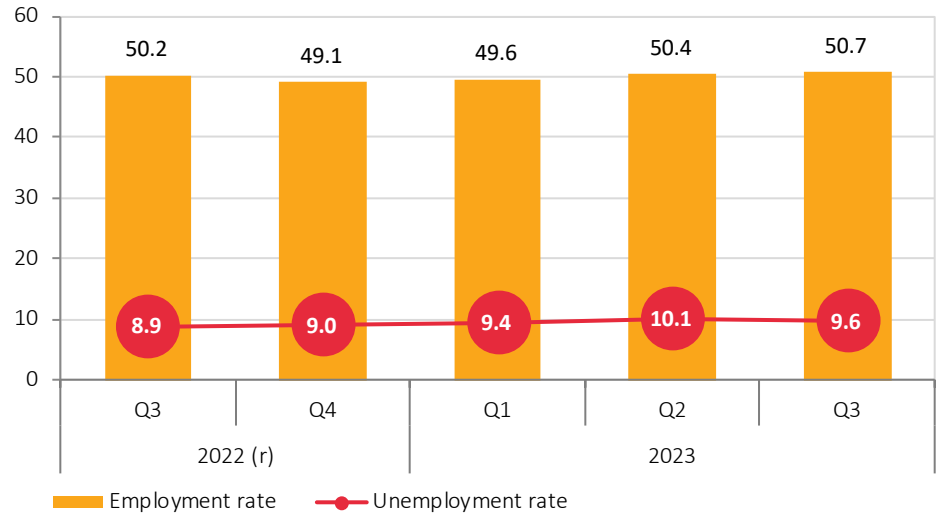
After the three quarters of 2023 the year-on-year growth of the price of **group of energy** amounted to 11.7%. The largest influence on the growth of this group was that of the price of electricity for households (21.3%) and price of fuels for heating (26.3%), together accounting for 12.5% of the total year-on-year growth rate of consumer price inflation in the first three quarters of 2023. In the structure of the year-on-year growth rate of the **price of solid fuels** (26.3%) the growth of the price of fuelwood made 63.3%, while "other" referred to the price of brown coal, lignite and price of coal transport and wood cutting.

Producers' costs of the section Electricity, gas, steam and air conditioning supply for domestic market in the first three quarter of 2023 saw a year-on-year growth of 9.3%, while **producers' costs of wood processing, except furniture** for domestic market (for which it is empirically confirmed that they are, on average, about one quarter ahead of the price of fuelwood) in the same period saw a growth of 12.5%.

8. LABOUR MARKET

In the Republic of Serbia in the third quarter of 2023 there were 2.889 million persons employed, 285.7 thousand persons unemployed, and 2.519 million outside the labour force aged 15 and over.
The unemployment rate was 9% and, compared to the second quarter of 2023, lower by 0.6 pp., the number of persons unemployed down by 20.9 thousand, while the number of persons outside the labour force was down by 2.3 thousand.
Observed by region, the unemployment rate in the third quarter of 2023, compared to the previous quarter, saw a fall in most of the regions: in Belgrade Region (from 7.7% to 6.4%), in Region of Sumadija and Western Serbia (from 10.2% to 8.8%), with the exception of Region of Vojvodina, where the unemployment rate grew from 7.9% to 10.1%.

Chart 8.1. Movement of the employment and unemployment rate for persons aged 15 and over (%)[20]



Labour market movements in the third quarter of 2023 were characterised by the growth of the employment rate by 0.5 pp. in year over year period, and by the fall of the rate of the population outside the labour force by 0.7 pp.

(r) – revised data, and based on demographic estimates stemming from the final data from the 2022 Census of Population, Households, and Dwellings.

Table 8.1. Activity, employment and unemployment rates

	2022 (r)				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Activity rate (%)	54.4	54.8	55.1	54.2	55.2	55.8	55.8
Employment rate(%)	48.5	50.0	50.2	49.2	49.6	50.4	50.7
Unemployment rate (%)	10.9	8.9	9.0	9.4	10.1	9.6	9

[20] Since 2021, the Statistical Office of the Republic of Serbia has been carrying out the Labour Survey according to the new, revised Eurostat methodology. The methodology has been modified in line with the Regulation of the European Parliament and European Council, which entered into force on 1 January 2021. More information on methodological changes and their effects on major statistical indicators are available on: https://www.stat.gov.rs/vesti/20210628-anketa-o-radnoj-snazi-nova-metodologija/

Table 8.2. Labour market - persons aged 15 and over

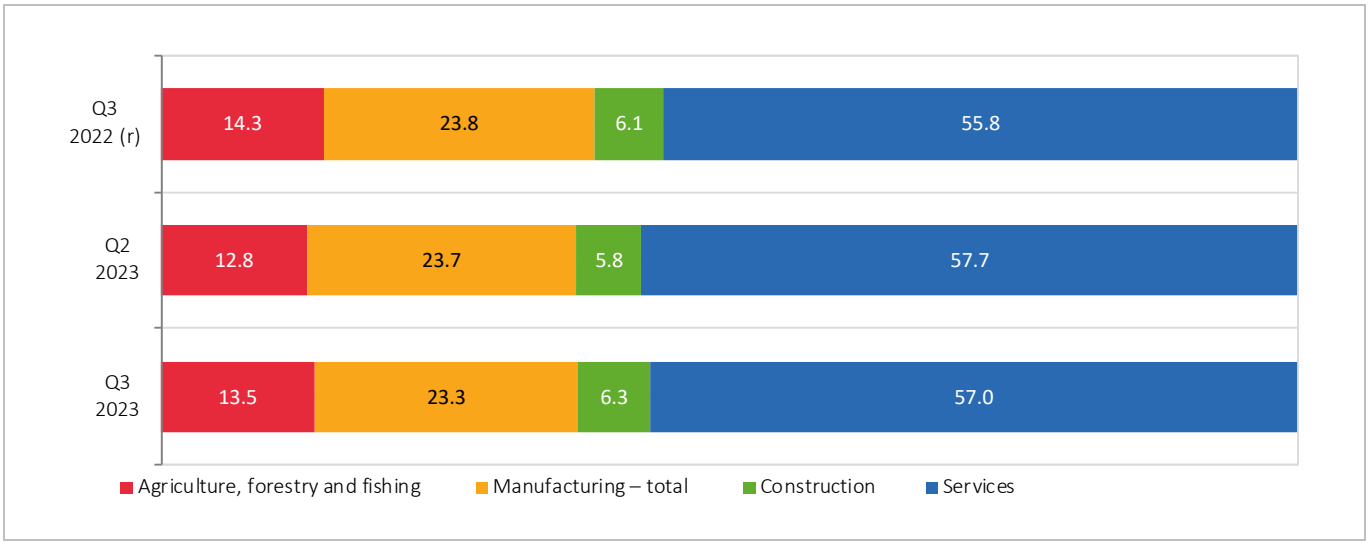
	Current quarter	Previous quarter (r)		The same quarter of the previous year (r)	
	Q3 2023 (in thous.)	Q2 2023 (in thous.)	Change, %	Q3 2022 (in thous.)	Change, %
Unemployment	285,7	306,6	-6.8	284,8	0.3
Employment	2 888,5	2 876,6	0.4	2 885,5	0.1
	%	%	Change pp.	%	Change pp.
Unemployment rate	9.0	9.6	-0.6	9.0	0.0
Employment rate	50.7	50.4	0.3	50.2	0.5

(r) – revised data

Observed by sections, the largest share of the number of employed persons in the third quarter of 2023 was recorded in Services (57%), then in Manufacturing (23.3%) and Agriculture (13.5%), and the lowest in Construction (6.3%). When compared with the previous quarter, a fall of the share of employed persons was recorded in Services (from 57.7% to 57%), and Manufacturing (from 23.7% to 23.3%). On the other hand, a growth of the share of persons employed was recorded in Agriculture, forestry and fishing (from 12.8% to 13.5%) and Construction (from 5.8% to 6.3%).

In year-on-year periodicity (quarter III of 2023 – quarter III of 2022), a fall of the share of employed persons was recorded in Agriculture, forestry and fishing (from 14.3% to 13.5%), and Manufacturing (from 23.8% to 23.3%), in contrast to Services where a growth was noted (from 55.8% to 57), as well as in Construction (from 6.1% to 6.3%).

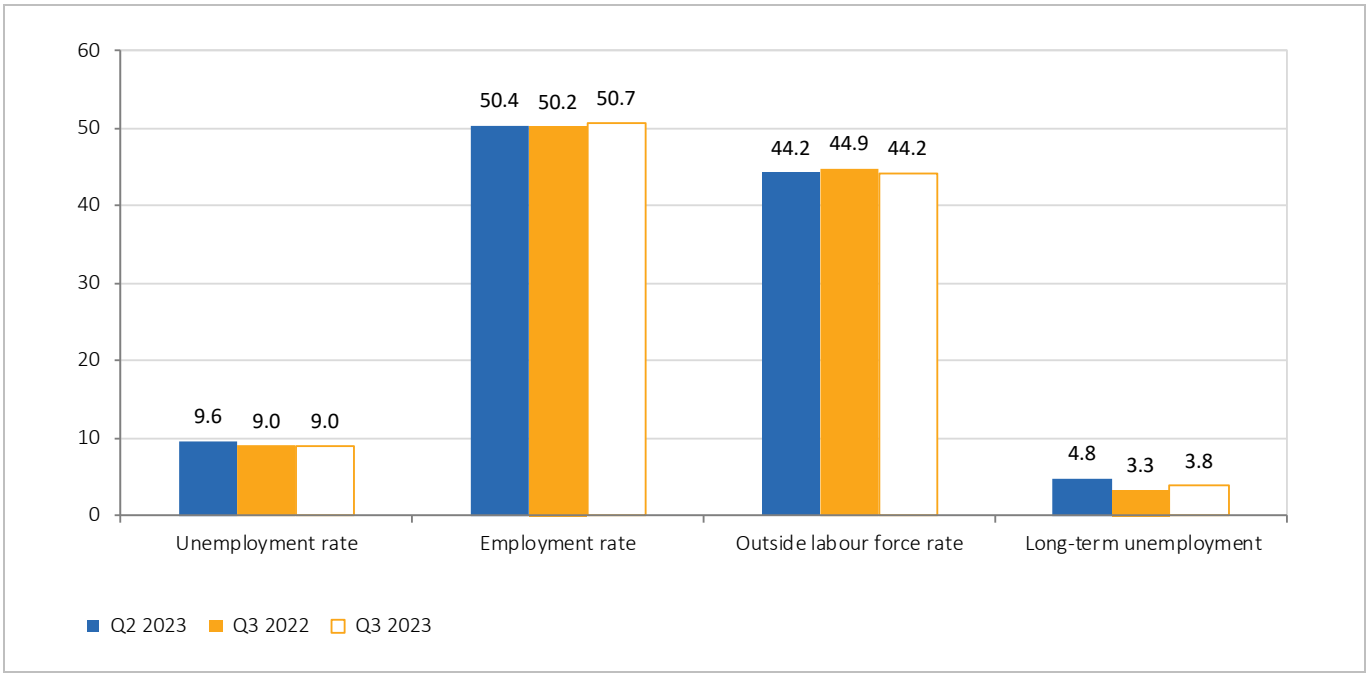
Chart 8.2. Share of employees by sections (%)



(r) – revised data

Trends in labour market remained considerably resilient to the challenges in the global environment and to the slowing down of the dynamics of the economic activity, owing primarily to the macroeconomic stability established in the previous period.

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 2023, the number of employed persons grew by 11.9 thousand, with a fall of unemployed persons of 20.9 thousand and fall of persons outside labour force of 2.3 thousand, which led to the increase in the employment rate of 0.3 pp., the decrease in the unemployment rate by 0.6 pp., while the outside the labour force rate remained unchanged.

The contingent of persons aged 15–24 saw, on the total level, a fall by 1 300 persons relative to the previous quarter. The number of active young people grew by 9 100, and outside the labour force population decreased by 10 500 persons. The result of this trend is the increase of the employment rate by 1 pp., and of the unemployment rate by 0.2 pp., while the outside the labour force rate for young people was lower by 1.4 pp.

The long-term unemployment rate amounted to 3.8%, by 1 pp. less than in the second quarter of 2023.

Observed by sex, the unemployment rate in the third quarter of 2023, compared with the previous quarter, saw a fall among men and women of 0.5 pp. And 0.7 pp., respectively.

The unemployment rate among men increased only Region Vojvodina from 7.2% to 10.4%, while the other regions saw a fall: in Belgrade Region from 8.7% to 6.4%, Region of Southern and Eastern Serbia, from 11.2% to 9.7%, and Region of Sumadija and Western Serbia, from 9.5% to 7.7%.

As far as the unemployment rate among women is concerned, growth was recorded only in Region of Vojvodina, from 8.6% to 9.6%, while the other regions noted fall: in Belgrade Region, from 6.6% to 6.5%, Region of Southern and Eastern Serbia, from 17.2% to 13.5%, and in Region of Sumadija and Western Serbia, from 11.2% to 10.1%.

Observed by professional status, and compared with the previous quarter, the number of employed persons increased only in the category of self-employed (by 0.9%), and contributing family members (by 7.3%), while the number of persons employed decreased by 0.2%.

Table 8.3. Employment by professional status, comparison Q2 2023 – Q3 2023

	Q2 2023 (in thous.)	Q3 2023 (in thous.)	Change, %
Employed persons – total	**2 876,6**	**2 888,5**	**0.4**
Self-employed	469,1	473,3	0.9
Employed workers	2 250,6	2 246,8	-0.2
Contributing family members	156,9	168,4	7.3

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 increased by 0.3% (from 284.8 thousand to 285.7 thousand). At the same time, the number of employed persons grew by 0.1% (from 2 885.5 in the third quarter of 2022 to 2 888.5 in the third quarter of 2023).

The youth unemployment rate (aged from 15 to 24) in the third quarter of 2023 amounted to 24.9%, by 0.9 p.p. less than in the third quarter of 2022.

The long-term unemployment rate recorded fall on year-on-year level. In the third quarter of 2023 it amounted to 3.8%, by 0.5% down relative to the third quarter of 2022.

Observed by sex, the unemployment rate in the third quarter of 2023, compared with the same quarter of the previous year, saw a fall of 2.7% among women and a slight growth among men, of 0.3 pp.

Observed by regions, the unemployment rate among men saw a fall in almost all the regions: in Belgrade Region from 7.6% to 6.4%, Region Southern and Eastern Serbia, from 10.4% to 9.7% and in Region of Sumadija and Western Serbia from 9.3% to 7.7%, with the exception of Region of Vojvodina, where a slight growth was recorded (from 6.5% to 10.4%)

The unemployment rate among women recorded a fall: in Belgrade Region from 7.4% to 6.6% and Region Sumadija and Western Serbia, from 13.5% to 11.2%, while, contrary to that, a growth of the unemployment rate was recorded in Region of Southern and Eastern Serbia, from 12.4% to 17.2% and Region of Vojvodina, from 7.3% to 8.6%.

The unemployment rate among women recorded a fall: in Belgrade Region from 7.2% to 6.5%, Region of Sourthern and Eastern Serbia, from 13.8% to 13.5%, Region of Sumadija and Western Serbia from 11.7% to 10.1%, while, contrary to that, a growth of the unemployment rate was recorded in Region Vojvodina, from 7.4% to 9.6.

Observed by professional status, compared with the same quarter of 2022, the number of employed persons increased only in the category of employees (by 0.1%) and contributing family members (by 2.7%), while the category of self-employed saw a fall of 0.7%.

Table 8.4. Employment by professional status, comparison Q3 2022 – Q3 2023

	Q3 2022 (in thous.)	Q3 2023 (in thous.)	Change, %
Employed persons – total	**2 885,5**	**2 888,5**	**0.1**
Self-employed	476,7	473,3	-0.7
Employed workers	2 244,8	2 246,8	0.1
Contributing family members	164,0	168,4	2.7

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 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.

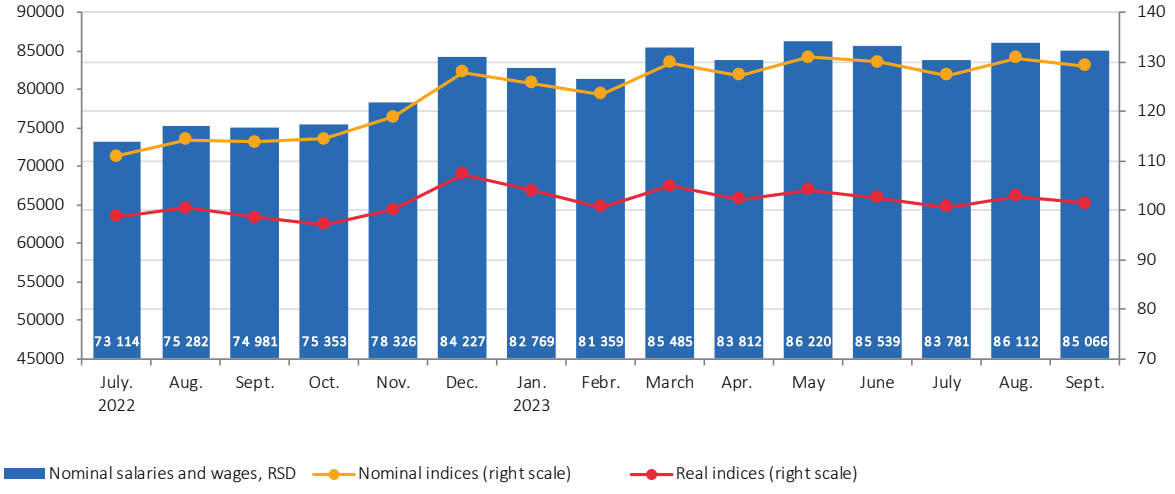
9. SALARIES AND WAGES

Average net salaries and wages calculated in the Republic of Serbia for the third quarter of 2023 amounted to 84 985 dinars. Compared with the same period of the previous year, there were nominally up by 14.1%, and by 2.4% in real terms. Compared with the previous quarter, i.e. second quarter of 2023, they were nominally down by 0.2% and by 1.3% in real terms. For the first nine months of 2023, calculated average net salaries and wages amounted to 84 465 dinars, and in relation to the same period of the previous year increased by 15%, and by 1% in real terms.

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

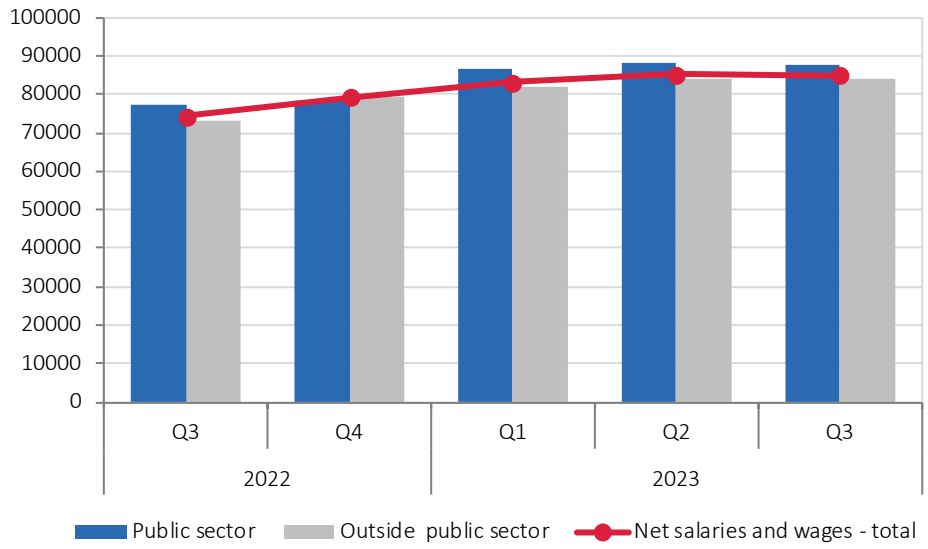
	2020				2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Real indices	108.3	107.4	107.4	107.6	105.8	106.4	104.5	104.5	104.3	102.7	101.3	98.6	99.6	100.8	102.4
Nominal indices	110.3	108.5	109.4	109.3	107.3	109.8	109.2	112.1	113.4	113.6	114.8	113.4	115.5	115.4	114.1

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 2023 amounting to RSD 85 066, reaching a year-on-year growth of 13.5% nominally, and of 3% in real terms. The decision on increasing the minimal pay from 201.2 dinars per hour of work in 2022 to 230 dinars in 2023 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 the Republic of Serbia, recorded growth also in September 2023, reaching a value of EUR 726 or year-on-year growth of 13.6%, which is close to the nominal growth of salaries and wages due to the relative stability of the exchange rate of RSD to EUR.

Chart 9.2. Net salaries and wages in and outside the public sector (in RSD)



Net average salaries and wages calculated for the third quarter of 2023 amounted to 87 621 dinars and to 83 925 dinars outside it.
The ratio of the movement of salaries and wages in and outside the public sector was variable for a long period of time, knowing that a successive growth of salaries and wages in the public sector led several times to their growth also outside the public sector, which resulted in the increase of total salaries and wages. The policy of managing salaries and wages in the public sector proved itself to be the catalyst of the impulse of internal demand and regulator of fluctuations on the labour market. Since the beginning of 2023, salaries and wages in the public sector have been higher than those outside it.

Average net salaries and wages in the public sector (January-September 2023)

Public sector - total	RSD 87 444
Public government enterprises	RSD 97 392
Public local enterprises	RSD 77 944
Administration – all levels	RSD 94 224
Government level	RSD 98 358
Autonomous province level	RSD 101 675
Local authorities level	RSD 73 581
Human health and social work	RSD 86 156
Education and culture	RSD 79 757

When comparing net salaries and wages by CA (2010), one notices that the largest real growth in the period of nine months of 2023 to the same period of 2022 was realised in the sections Retail and wholesale trade and repair of motor vehicles (1.9%), Arts, entertainment and recreation (1.8%) and Manufacturing (1.7%).

The highest net salaries and wages over January-September 2023 were recorded in the following divisions: Computer programming and consultancy activities (259 599 dinars), Air transport (192 130 dinars), Scientific research and development activities (177 556), Administrative activities; management consultancy activities (150 356) and Extraction of crude petroleum and natural gas (149 418).

In all other divisions salaries and wages ranged from 46 824 dinars (Food and beverages service activities) to 142 994 dinars (Manufacture of tobacco products).

Observed by regions, the highest average net salaries and wages over January-September 2023 were paid in Belgrade Region, 107 170 dinars. In Region Vojvodina average salaries and wages totaled 79 875 dinars, in Region of Southern and Eastern Serbia, 72 494 dinars, and in Region of Sumadija and Western Serbia, 70 450 dinars.

Chart 9.3. Real growth of net salaries and wages by CA (2010) sections
(January-September 2023 to the same period 2022)

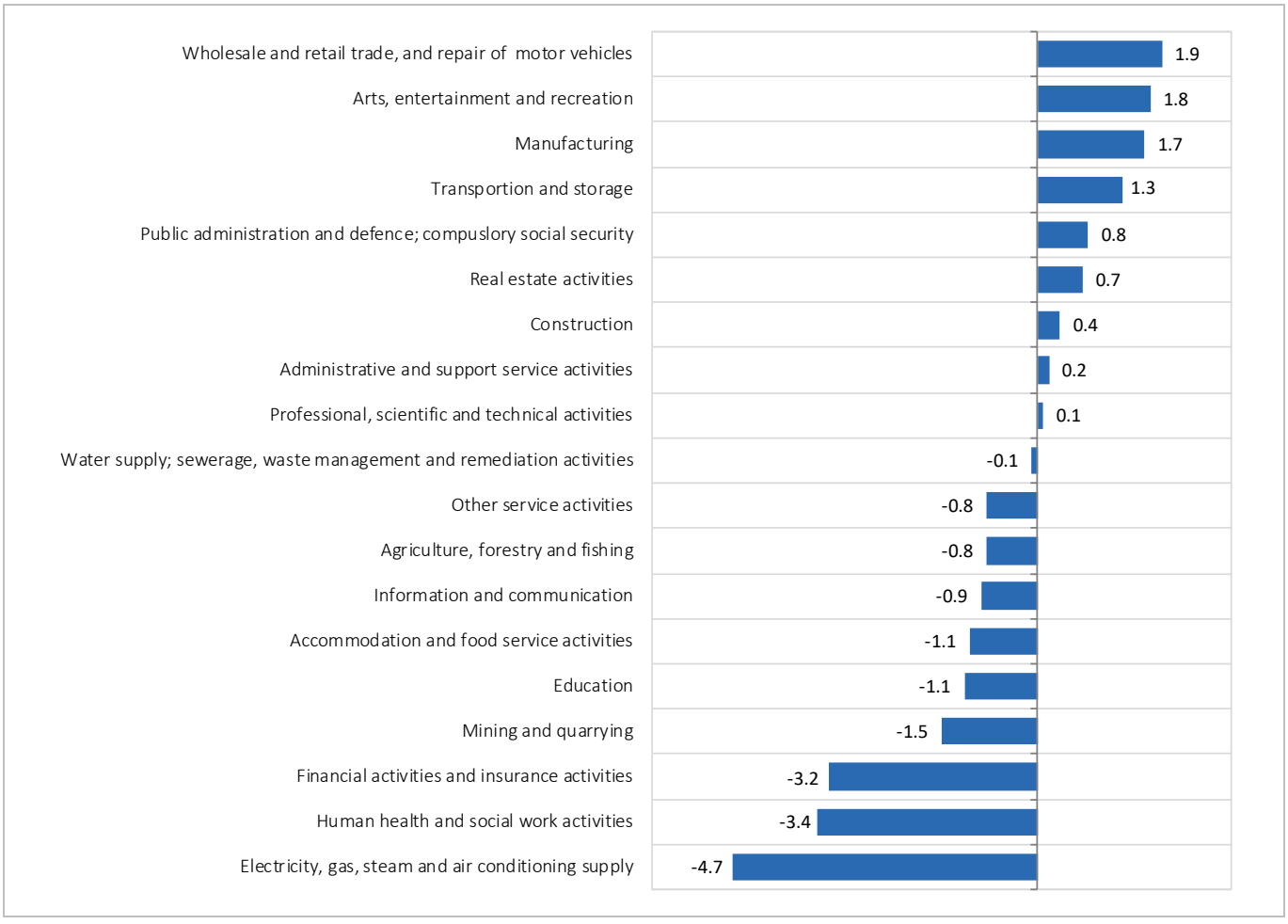
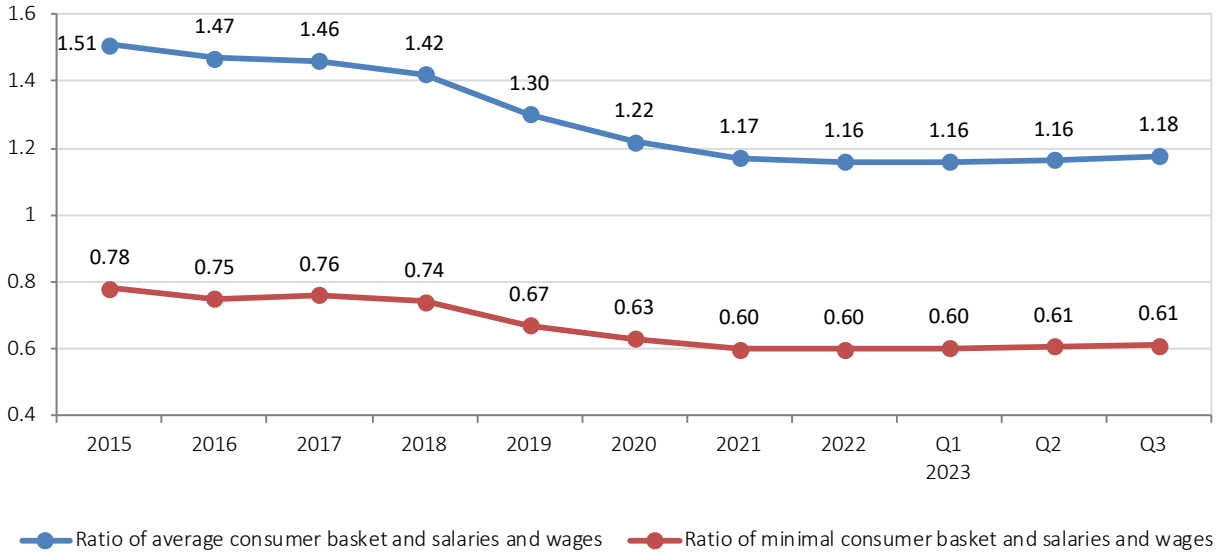


Chart 9.4. Ratio of the consumer basket[21] and net salaries and wages



Increased population living standard over 2015–2022 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 2022 it was 1.16, indicating that, while in 2015, 1.51 of the average salaries and wages was needed for the average consumer basket, in 2022 this ratio grew so that 1.16 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 2023 indicates that the purchasing power fell slightly, when compared with the previous quarter. To cover the average consumer basket in the third quarter of 2023, 1.18 average salaries and wages were needed (in the second quarter of 2023 - 1.16), while to cover the minimum consumer basket only 0.61 of average salaries and wages were needed, which is unchanged relative to the previous quarter.

When compared to the same quarter of the previous year, the ratio of net salaries and wages and the average consumer basket and net salaries and wages indicates a growth of the purchasing power, if bearing in mind that in the third quarter of 2022 1.19 average salaries and wages were needed to be set aside, while the ratio of the minimum consumer basket and salaries and wages is unchanged relative tot he same period of the previous year (0.61).

Observed by towns, in the third quarter of 2023, purchasing power (ratio of the average consumer basket and average salaries and wages) above the average of the Republic (1.18) was recorded in Belgrade (0.96), Novi Sad (1.13) and Nis (1.15), while Kragujevac (with 1.18) is on the level of the national average. In other statistically monitored towns, average salaries and wages covered the minimum, but not average household consumer basket.

[21] Minimum consumer basket – refers to 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 2008 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 food services, the 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. TOURIST 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 million nights. The year 2021 brought recovery and the number of overnight stays grew by 8.2 million. The increasing trend expressed in the number of tourist overnight stays in the Republic of Serbia continued also in the previous 2022, when there were 12,2 million overnight stays, 50% more than in 2021. Even though domestic tourists were predominant in the number of overnight stays, there were twice more foreign tourists in our country (4.9 million) than in 2021.

In the third quarter of 2023, the number of spent tourist nights amounted to 4.2 million, by 3.1% less than in the third quarter of 2022. Domestic tourists accounted for 59% and foreign ones for 41% of the total number of overnight stays.

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

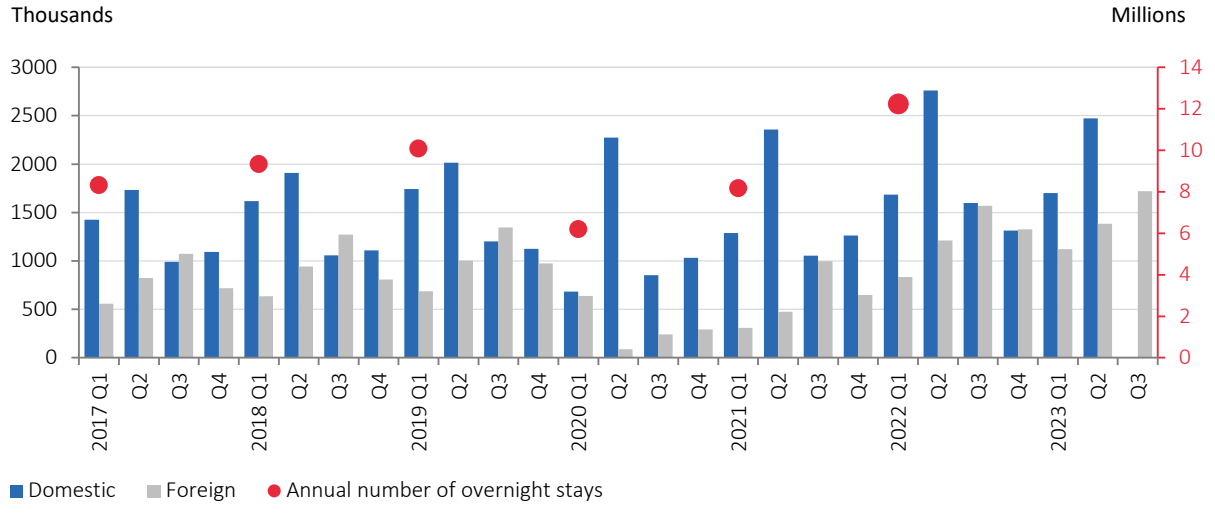


Table 10.1. Tourist overnight stays, indices (comparison with the same period of the previous year)

	2021				2022				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Total	76.1	228.4	133.3	148.2	156.3	164.1	129.2	171.7	116.0	106.6	96.9
Domestic tourists	91.9	188.5	103.6	123.5	122.2	130.8	117.2	151.4	103.9	100.8	89.6
Foreign tourists	48.3	535.8	412.6	220.0	270.1	253.8	157.5	204.7	134.4	114.5	109.6

10.2. MAJOR TOURISM RESORTS

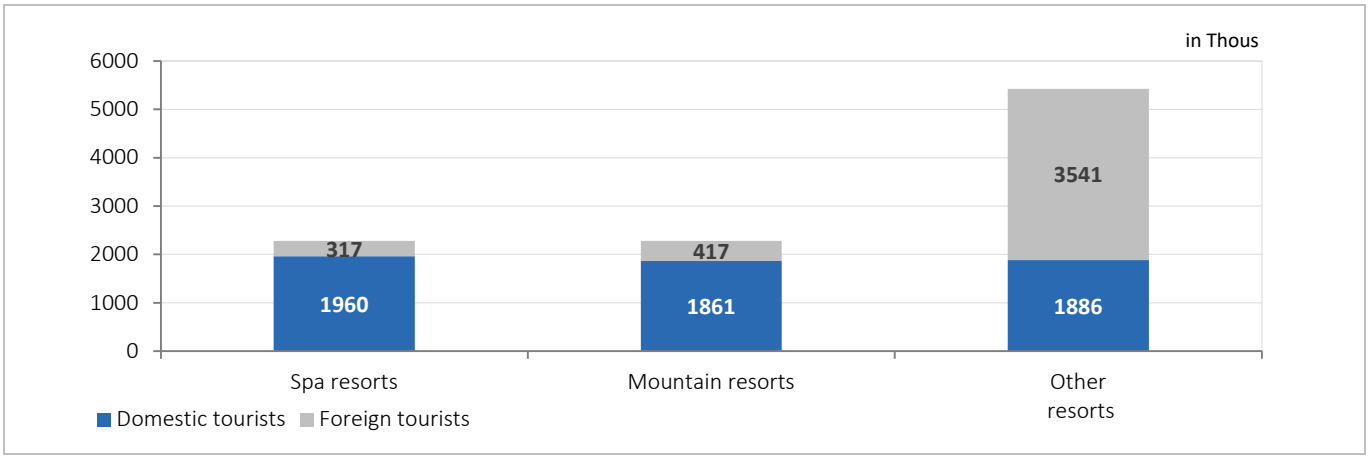
Expressed in number of tourist overnight stays[22], the most frequently visited tourism resorts in the first nine months of 2023 were **Other tourism resorts**, with 5.4 million overnight stays (or about 54.4% of total overnight stays), by 9.3% more than in the same period of 2022. This category comprises Belgrade (2.5 thousand overnight stays) and larger towns of the Republic of Serbia (Novi Sad, Subotica, Nis). Most of the visitors to Belgrade were foreign tourists (86.3%), and similar situation was recorded in Novi Sad (foreign tourists 72.9%) and Subotica, where about 58.3% of visitors were from abroad

In Mountain resorts, second category according to the number of tourist overnight stays, in the first nine months of 2023 there were 2.3 million overnight stays (or 22.8% of the total number of overnight stays), by 1.7% more than in the same period of the previous year. Zlatibor attracted the largest number of tourists (856.1 thousand), who were mostly from the Republic of Serbia (658.3 thousand). Kopaonik recorded 481.8 thousand tourist overnight stays, of which most were also from the Republic of Serbia (371.9 thousand). These two mountains accommodated about 58.7% of the total number of tourists who spent nights in mountain resorts.

In spa resorts in the first nine months of 2023 there were about 2.3 million overnight stays, by 3.5% less than in the same period of the previous year. Tourists were mainly from the Republic of Serbia (86.1%), and the most visited was Sokobanja with 561.7 thousand visitors, followed by Vrnjacka banja (553.5 thousand), Banja Vrdnik (170.5 thousand), Lukovska banja (141.1 thousand), and other spas.

The largest growth, expressed in number of overnight stays, was recorded in the first nine months of 2023 relative to the same period of 2022 in Rudnik (growth of 333.2%), Selters banja (growth of 112.5%), and Goc (growth of 74.5%).

Chart 10.2. Tourist overnight stays by selected tourism resorts, January-September 2023



[22] 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).

10.3. COUNTRY OF ORIGIN OF FOREIGN TOURISTS

In the period January-September 2023, tourists from about fifty different countries visited the Republic of Serbia. Tourists from Europe were the most numerous to have spent nights (81.5%.)

Three countries which tourists spent the largest number of nights were the Russian Federation (508.4 thousand), Turkey (382.7 thousand), and Bosnia and Herzegovina (263.2 thousand). Visitors from Germany were at the fourth place (224.4 thousand), then from China (211.2 thousand), Romania (206.8 thousand and other non-European countries (193.5 thousand). Overnight stays of tourists from these seven countries account for 47.1% of the total number of nights spent in the first nine months of 2023.

For the purpose of comparison, chart 10.4 presents the number of tourist overnight stays in first nine months of 2022.

Chart 10.3. Foreign tourist overnight stays by countries from which they came, January-September 2023

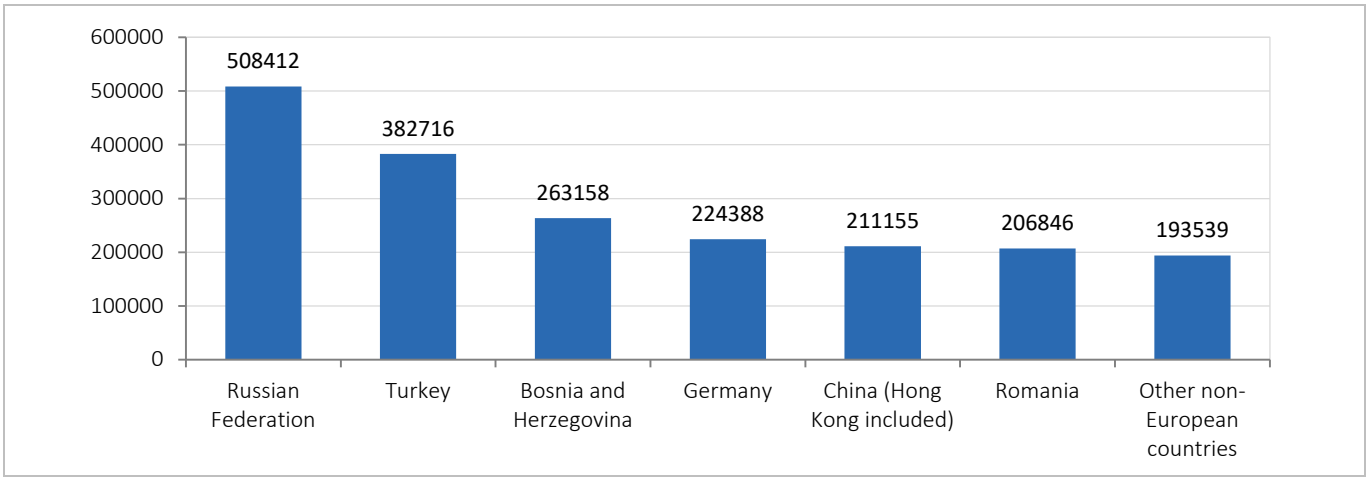
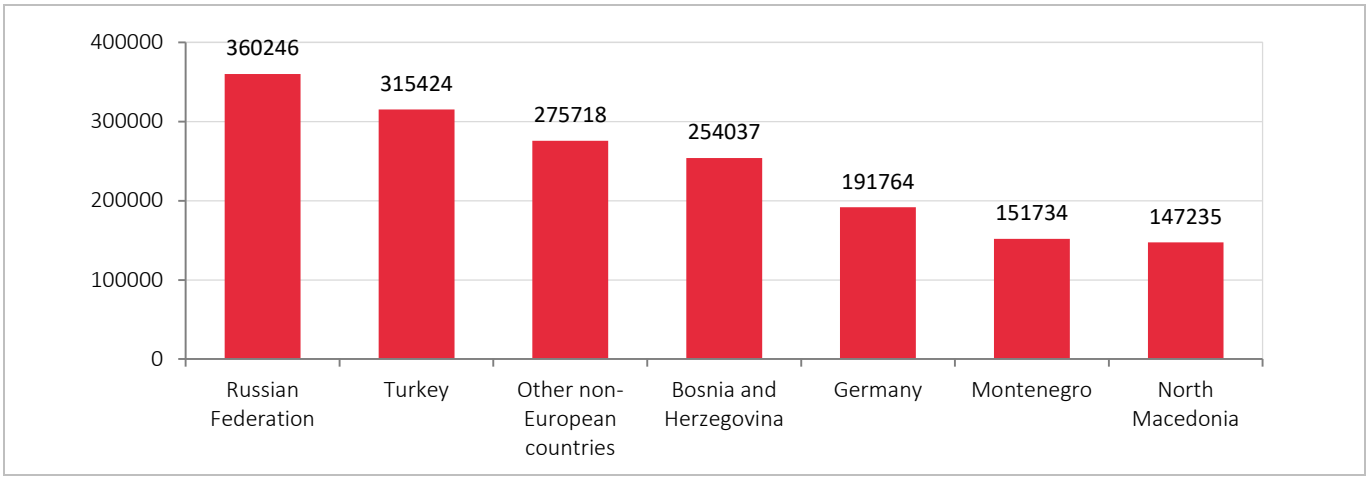


Chart 10.4. Foreign tourist overnight stays by countries from which they came, January-September 2022



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.

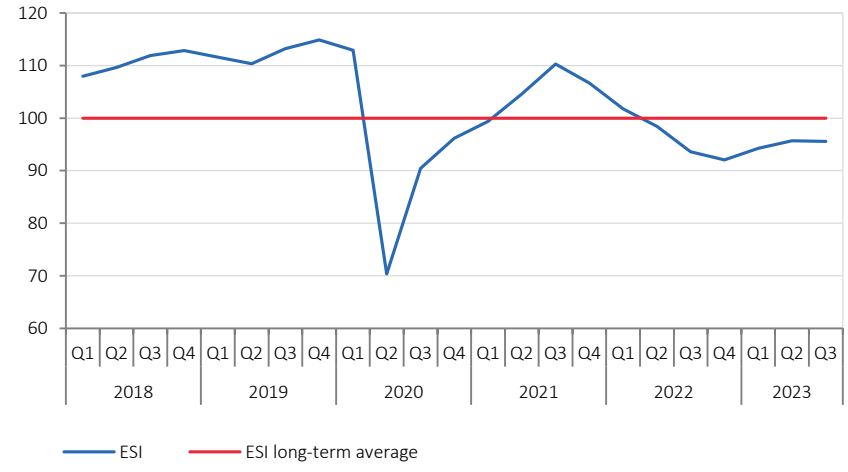
11. ECONOMIC SENTIMENT INDICATOR

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.[23]

Chart 11.1. Economic Sentiment Indicator[24] (%) (seasonally adjusted data)



The Economic Sentiment Indicator (ESI) in Serbia in the third quarter of 2023, with a value of 95.6, recorded a slight fall, 3.1 pp. relative to the previous quarter, by 3.1 pp. above the 2020 average (9.25), the year that was affected by the coronavirus pandemic. However, ESI is lagging behind the average from the period prior to the pandemic year, 2019, by 17 pp. (112.5)
The value of the indicator reflects the fall of business expectations only in the section of Manufacturing (- 1.1 pp.), while the other sections saw mainly growth: Retail trade of 2.1 pp., with the exception of the section Construction, where the business expectations (with a value of -4.4%) remained unchanged compared with the previous quarter.

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

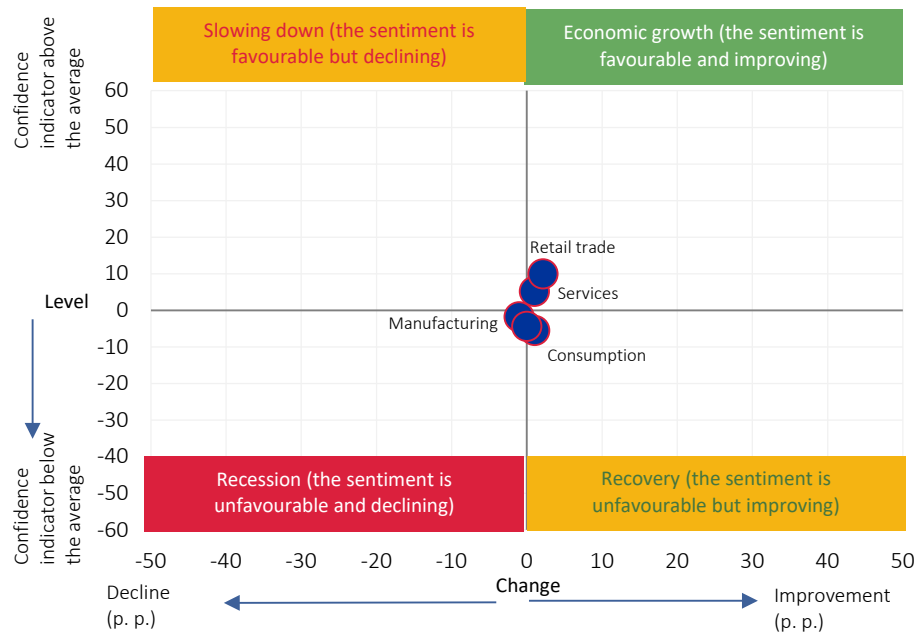
Table 11.1. Confidence indicators by sections of the Economic Sentiment Indicator - growth to the long-term average (%)

Confidence indicators	Minimum		Average	Maximum		2022				2023		
	Quarter	Value		Quarter	Value	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Manufacturing	Q2 2020	-9.4	3.4	Q3 2018	8.0	0.4	1.3	0.8	-0.7	-1.8	-0.7	-1.8
Services	Q2 2020	-43.1	6.5	Q2 2016	16.1	7.4	5.8	1.2	3.6	4.3	4.2	5.2
Retail trade	Q4 2014	-20.6	-5.0	Q1 2020	10.7	2.3	-6.0	-12.3	-17.2	-8.4	-6.5	-5.5
Construction	Q2 2020	-12.6	8.2	Q4 2019	17.8	9.8	8.1	6.6	6.4	8.6	7.8	9.9
Consumption	Q3 2013	-40.8	-10.1	Q3 2019	7.0	-1.0	-6.1	-7.9	-2.9	-2.7	-4.4	-4.4
Economic Sentiment Indicator	*Q2 2020*	*70.3*	*102.2*	*Q4 2019*	*114.9*	101.8	98.4	93.6	92.0	94.3	95.7	95.6

[23] *ESI* is calculated as an index with a mean value of 100 and standardised deviation of 10. More on the methodology on: https://economy-finance.ec.europa.eu/system/files/2023-02/bcs_user_guide.pdf

[24] Data for the Economic Sentiment Indicator (ESI) have bee revised in line with the improved methodology of data seasonal adjustment, which has been in use since April 2022 as well as with regular annual methodological adjustments.

Chart 11.2. Economic sentiment tracer

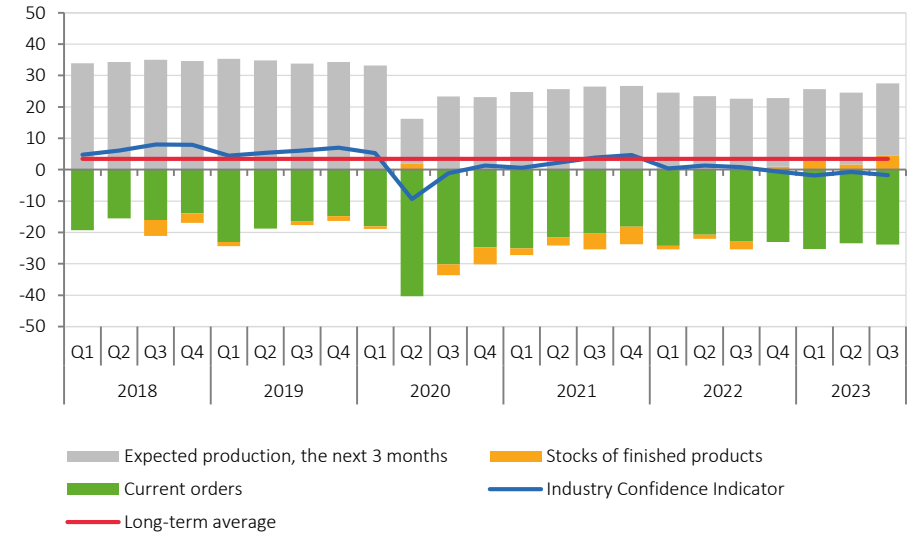


The economic sentiment tracer, created on the basis of seasonally adjusted confidence indicators, shows that only Manufacturing is in the recession phase, which is further declining. Economic growth is recorded in the sections of Services and Retail trade, while the sections of Construction and Consumption are in the phase of recovery.

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)

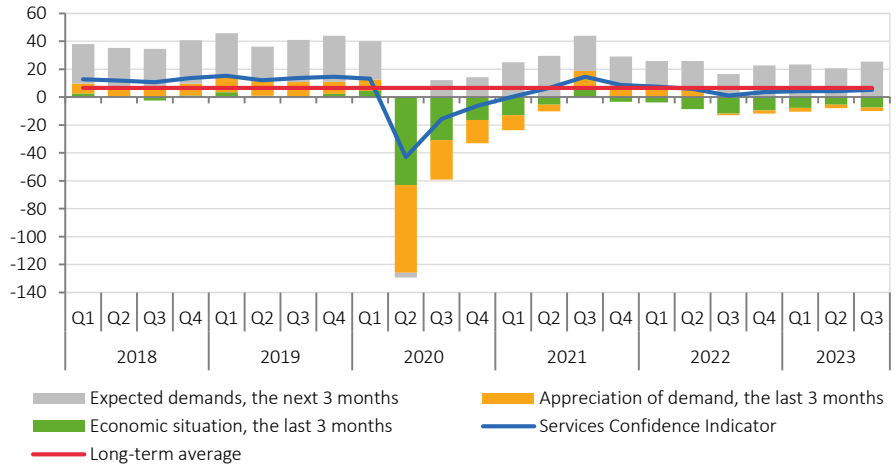


The Industry Confidence Indicator - ICI records negative values since the fourth quarter of 2022, and in the third quarter of 2023, with a value of -1.8%, saw a fall of 1 pp. relative to the previous quarter, by 5 pp. Under the long-term average.
The value of this indicator reflects additional deepening of negative appraisals of businessmen regarding the stocks of current orders (-0.5 pp.). Expectations are somehow more optimistic for stocks of finished products (+2.8 pp.), as well as for production in the next quarter (+0.1 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)

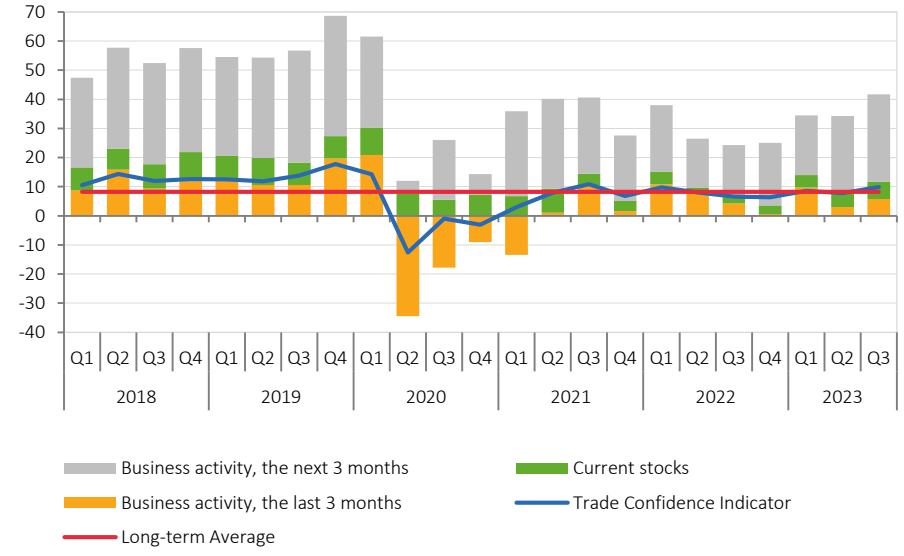


The Trade Confidence Indicator -TCI in the third quarter of 2023, with the value of 5.2%, increased by 1 pp. relative to the previous quarter, still under the long-term average by 1 pp. The movement of this indicator reflects the increase in the appraisal of demand in the next three months (+4.8 pp.), in contrast to the appraisals regarding the economic situation and demand in the last quarter, recording fall by 2 pp. And 0.1 pp., respectively.

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)

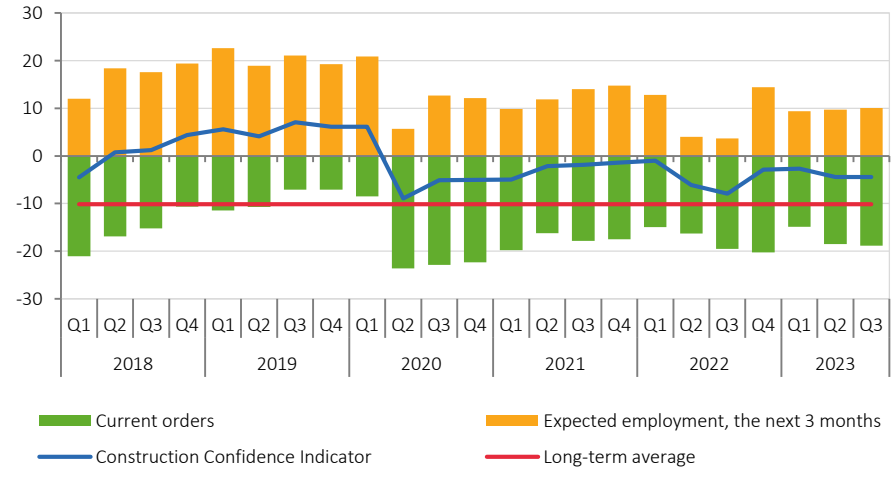


The Trade Confidence Indicator -TCI in the third quarter of 2023, with a value of 9.9%, records a growth of 2.2 pp. Relative to the previous quarter and exceeds the long-term average (8.2%) by 1.7 pp.
All three components of this indicator record growth, where the growth of business activity in the next quarter leads (+4.3 pp.), followed by the appraisals regarding business activity in the last three months (+2.7 pp.), as well as by appraisals for current stocks (+0.5 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)

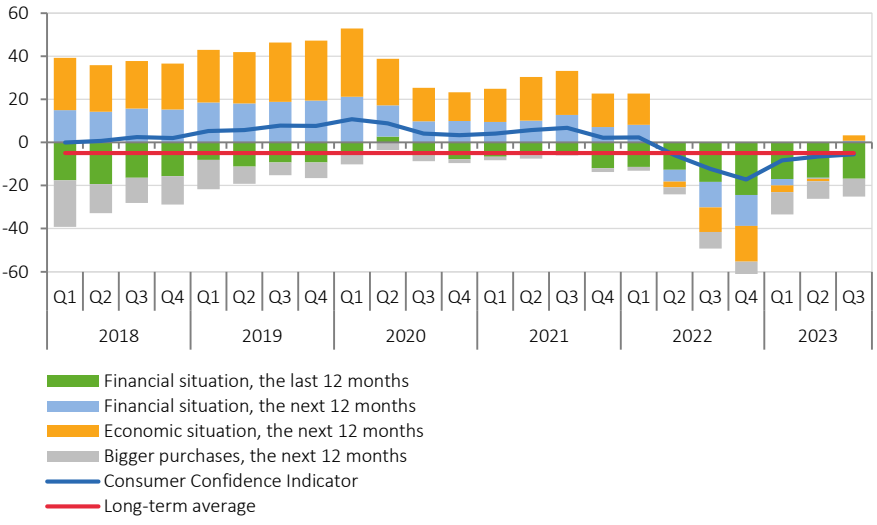


The Construction Confidence Indicator - CCI, with a value of -4.4% in the third quarter of 2023, remained unchanged relative to the previous quarter and exceeds the long-term average by 5.7 pp.
The value of this indicator reflects additional fall of already negative appraisals regarding current orders (-0.4 pp.) and slight higher expectations for employment in the next three months (of 0.3 pp.).

11.6. CONSUMER CONFIDENCE INDICATOR[25]

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)



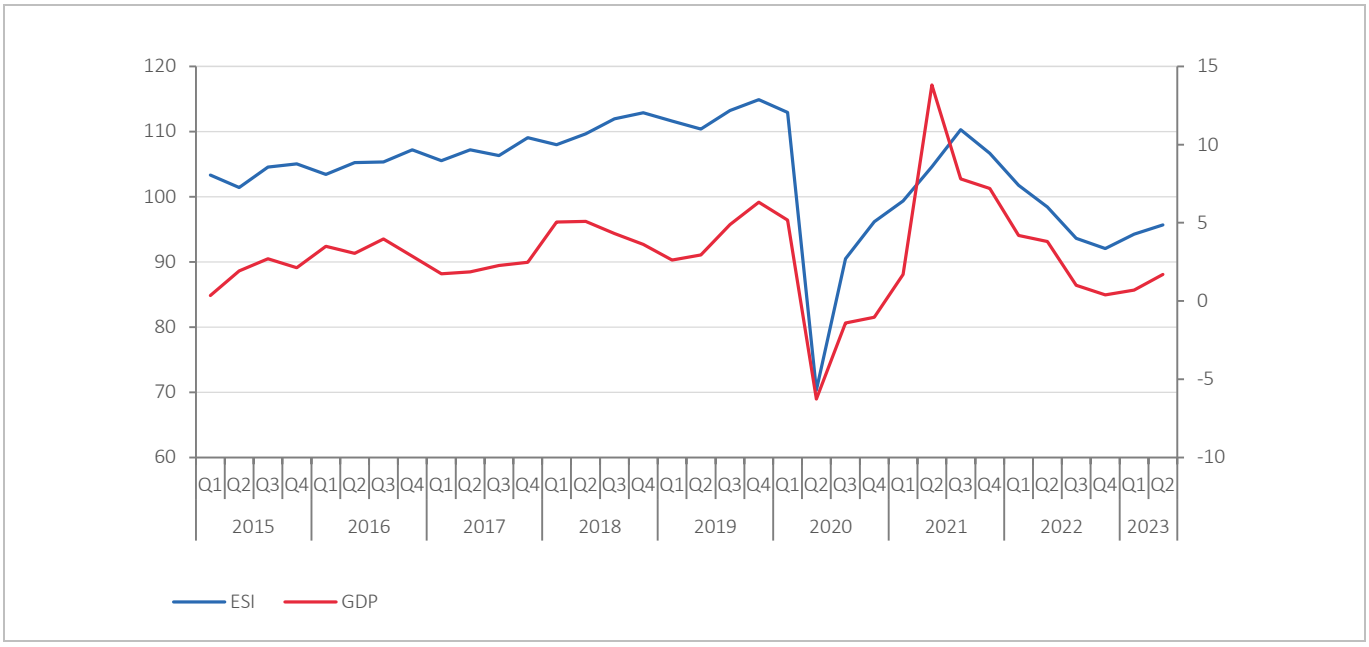
The Consumer Confidence Indicator - CCI, even though still recording minus value, grew by 1 pp. in the third quarter compared with the previous quarter, being under the long-term average by 0.5 pp.
The biggest optimism was recorded in economic and financial situation in the next 12 months (+3.7 pp. and +1.2 pp., respectively), in contrast to the appraisal of the financial situation in the last 12 months and expected bigger purchases in the next 12 months (-0.4 pp. and -0.1 pp., respectively).

[25] 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 0.67.

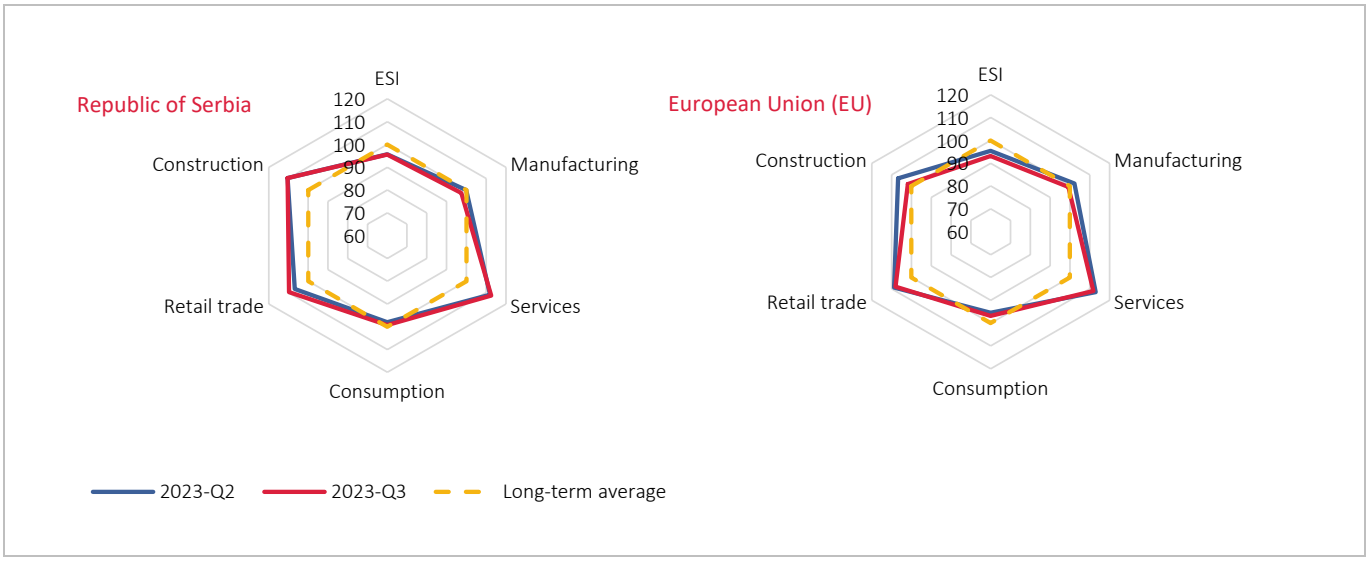
Chart 11.8. Correlation of ESI and GDP of Serbia



11.8. ECONOMIC SENTIMENT INDICATOR IN THE EUROPEAN UNION

The economic climate in most of EU member states declined in the third quarter of 2023 (relative to the previous quarter), which made ESI go down (from the value of 93.2) by 2.2 p.p. The largest fall in expectations in the EU expectations was recorded in Construction (-4.2 pp.), then in Manufacturing (-3.2 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 2023) are compared with the previous quarterly outcomes (Q2 2023) 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.

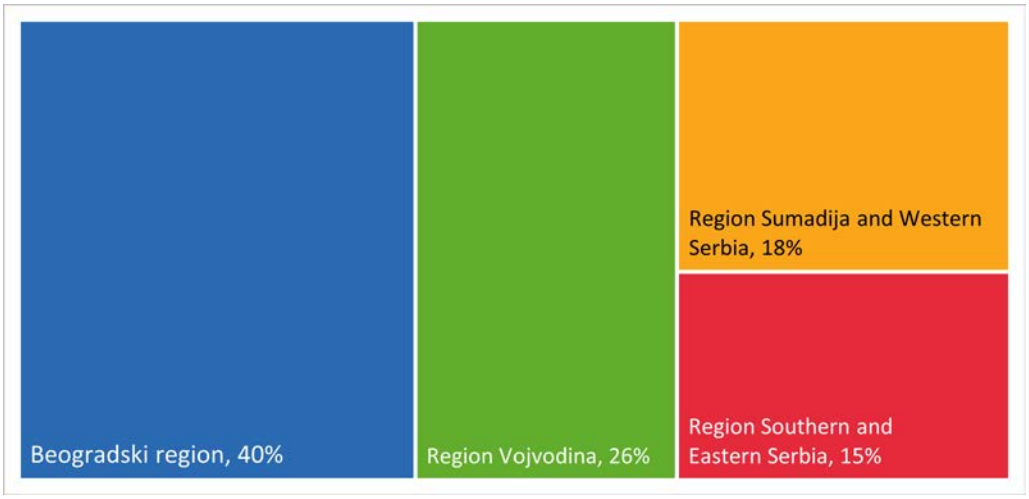
Gross domestic product

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 2022, observed by level of NSTU 2 regions, the greatest realized GDP was in Beogradski region (40%), followed by Region Vojvodina (26.4%), Region Sumadija and Western Serbia (18.4%) and Region Southern and Eastern Serbia (15.2%).

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 (1 686 000 RSD / per capita, i.e. 58.3 % above the republic average, followed by Region Vojvodina that by 0.8% exceeds the average, while other regions record GDP values per capita below the average, i.e. Region Sumadija and Western Serbia by 32.8% and Region Southern and Eastern Serbia by 28.3%.

Chart 12.1. Share of the region in the national GDP, 2022



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, where salaries and wages are the lowest. Average net salaries and wages in the period January - September 2023 in Beogradski region amounted to RSD 107 170, or 127% of RS average (RSD 84 465), in Region Vojvodina, they were insignificantly below RS average (RSD 79 875, or 95% of RS average), while in Region Southern and Eastern Serbia and Region Sumadija and Western Serbia, they were about 86% and 83% of the Republic average (RSD 72 494 and RSD 70 450, 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 15.8%.

In 79 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 Presevo (with the lowest average salaries and wages of RSD 56 804). Moreover, at the bottom of the list are the municipalities of Bojnik with an average salary of RSD 56 972, Blace (RSD 58 515) and Vlasotince (RSD 58 518).

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 13.4% in the period January-September 2023, by 39.8% exceeds the average of Serbia (9.6%). On the other hand, in Beogradski Region, unemployment rate was the lowest, 7.2%, i.e. 24.5% below the national average. Additionally, referring to employment rate, it is the highest in Beogradski region (55.5% or 10.5% above the average of Serbia), while in Region Southern and Eastern Serbia, noted was the lowest employment rate of 44.6%, or 11.2% below the Republic average (50.3%).

In the period January-September 2023, Beogradski Region noted the highest share in total employment (27.7%), with the simultaneous lowest share in unemployment (20.4%). On the contrary, Region Southern and Eastern Serbia, with 19% has the lowest share in total employment, with the highest share in unemployment (27.8%) (according to the Labour Force Survey).

Export activity

In contrast to other indicators, in the period January-September 2023, Beogradski region was not on the first place regarding total export of Serbia (share of 24.2%). Region Vojvodina is on the first place with the share of 33.1% in export, followed by Region Sumadija and Western Serbia (20.7%) and Region Southern and Eastern Serbia (19.6%). Export per capita reflects regional asymmetries – Region Vojvodina records the export of EUR 4 084 per capita, and it is by 26% above the Republic average and it exceeds by almost double the export value per capita in Region Sumadija and Western Serbia (EUR 2 444), which is by 24% below the average of the Republic. Region Vojvodina, as the leading exporter in the first nine months of 2023, recorded the greatest share in export[26] and the greatest share in export of agricultural and food products (18.8%), primarily cereals (22%), the most important export product being maize (6.1% of export of agricultural and food products).

Demographic structure

According to the census data from 2022, population density in Beogradski region is by 6.9 times greater than average population density in Serbia, while in Region Southern and Eastern Serbia, population density was the lowest – 29% below the Republic average. Although all regions participate 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 (54.7%). 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 1.3% between 2011 and 2022), while the number of population in other three regions is constantly decreasing. Simultaneously, it means that differences in population density will

[26] 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

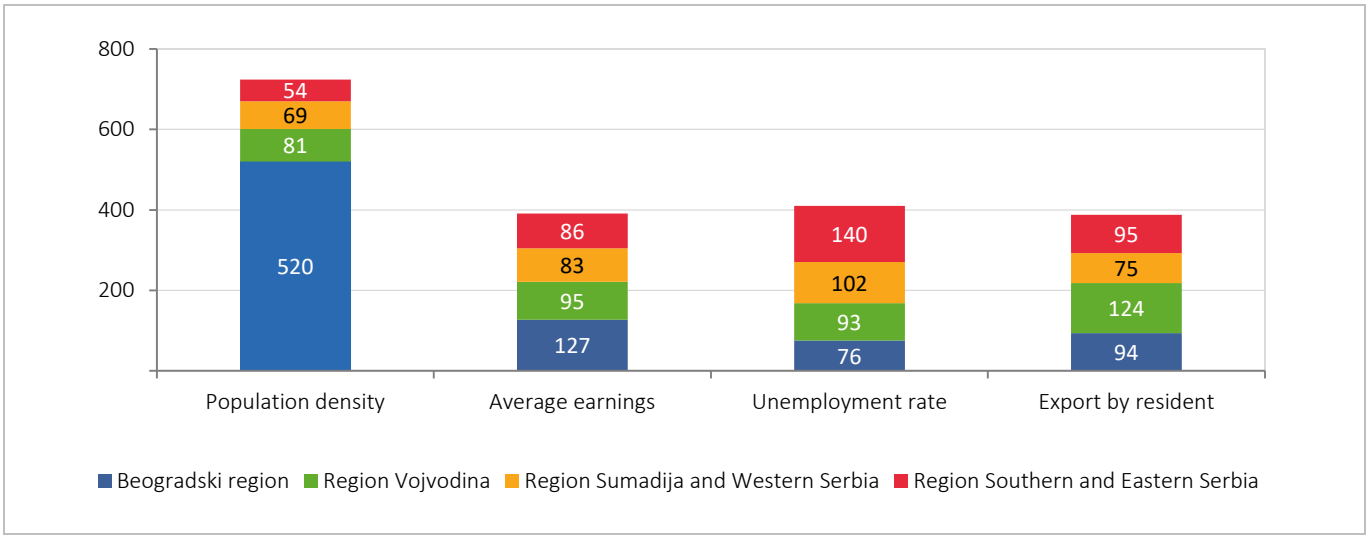
In the Republic of Serbia, there are huge regional and interregional differences regarding infrastructure equipment (transport, telecommunication and water management, i.e., accompanying supra structures). In roads' quality, telecommunication and modern living conditions, differences are, first of all, 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 40 municipalities[27] 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 2022 from 5.7 in Region Southern and Eastern Serbia to 7.8 in Beogradski region, where a fourth part of the vehicles was registered. The number of first-time registered cars compared to the number of inhabitants over January-September 2023 reflects a similar ratio, with Beogradski region leading up to 41% above the average of the Republic of Serbia versus Region Southern and Eastern Serbia, with 27% 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)

Table 12.1. Extreme values and indicators of regional asymmetry, January-September 2023

Indicators	Population density, km^2, 2022	GDP/per capita, 2022	Average net salaries and wages	Unemployment rate	Export per capita	Demographic emptying, 2011–2022 (%)
Extreme Values (the highest : the lowest)	9.7 : 1	2.4 : 1	1.5 : 1	1.9 : 1	1.6 : 1	(-10.5) : (+1.3)
	Beogradski region: Region Southern and Eastern Serbia	Beogradski region: Region Sumadija and Western Serbia	Beogradski region: Region Sumadija and Western Serbia	Region Southern and Eastern Serbia: Beogradski region	Region Vojvodina: Region Sumadija and Western Serbia	Region Sumadija and Western Serbia: Beogradski region

Chart 12.2. Disproportions at the regional level in Serbia (RS level = 100%), January-September 2023



[27] The data is for 2021.

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

	2021[28]				2022[29]				2023		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Beogradski region											
Average salaries and wages in dinars	124.0	123.8	124.6	126.2	125.8	125.8	126.3	128.0	126.6	127.0	127.1
Employment rate	109.5	109.1	107.2	106.2	107.6	108.2	110.6	110.2	110.7	109.9	111.0
Unemployment rate	75.0	81.1	83.8	81.6	75.2	83.1	82.2	83.0	75.2	80.2	71.1
Exports per capita in euros	93.2	94.2	97.4	96.4	88.9	89.2	92.0	98.2	94.1	99.0	93.8
Number of first- time registered passengers' cars per 1000 inhabitants	125.0	136.8	124.3	125.4	123.4	132.6	129.5	131.9	133.8	146.4	140.6
Region Vojvodina											
Average salaries and wages in dinars	95.2	94.8	94.5	95.1	95.1	94.9	94.9	95.4	95.1	94.2	94.4
Employment rate	101.9	99.2	101.6	102.8	98.8	99.4	100.6	99.2	99.8	102.2	97.8
Unemployment rate	85.2	86.5	83.8	89.8	89.9	85.4	76.7	83.0	87.1	82.3	112.2
Exports per capita in euros	136.8	131.8	125.6	123.1	128.2	131.4	127.8	125.5	124.6	125.9	128.3
Number of first- time registered passengers' cars per 1000 inhabitants	94.4	89.7	90.2	94.1	97.2	92.3	90.4	93.4	95.1	88.5	88.3
Region Sumadija and Western Serbia											
Average salaries and wages in dinars	84.9	85.2	85.2	84.2	83.9	83.9	83.9	83.0	83.2	83.4	83.6
Employment rate	98.9	100.0	101.0	100.4	101.2	98.8	97.2	101.0	99.4	98.8	99.6
Unemployment rate	114.8	122.5	110.5	109.2	112.8	122.5	116.7	110.6	101.0	106.3	97.8
Exports per capita in euros	79.6	80.4	79.0	76.9	76.7	77.2	76.8	76.8	74.6	76.4	75.7
Number of first- time registered passengers' cars per 1000 inhabitants	98.9	94.5	101.0	99.7	96.7	94.2	100.0	97.7	95.0	90.8	92.3
Region Southern and Eastern Serbia											
Average salaries and wages in dinars	87.8	88.3	87.9	85.7	86.6	86.9	86.1	83.9	85.9	86.1	85.5
Employment rate	88.3	90.3	88.2	88.4	89.5	93.2	90.2	89.6	88.5	87.3	90.7
Unemployment rate	131.3	109.0	127.6	124.5	126.6	109.0	132.2	130.9	147.5	143.8	126.7
Exports per capita in euros	82.6	88.0	93.1	98.4	101.4	95.4	90.8	89.7	94.1	88.0	95.6
Number of first- time registered passengers' cars per 1000 inhabitants	78.2	76.0	81.7	77.6	79.0	77.1	76.0	72.7	72.1	70.6	75.8

[28] 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/

[29] Data on employment and unemployment rates for 2022 have been revised and are not comparable with data from previous years. Estimates for the first and second quarters of 2023 were calculated based on demographic estimates for 2022, according to 2022 Census of Population, Households and Dwellings. Demographic estimates based on 2011 Census were used to calculate the grades as of the fourth quarter of 2022. In order to ensure the comparability of the data from the first quarter of 2023 with the data from 2022, the ARS data was revised based on the revision of the demographic estimates based on 2022 Census. In the following months, based on the revised population estimate data for the inter-census period, the revision of the ARS data for the relevant period before 2022 will be carried out. The post-census audit is carried out in accordance with the General Audit Policy of the Republic Statistical Office, which is fully aligned with the guidelines from the Manual on Revision Policy in the European Statistical System (ESS Guidelines on Revision Policy), which was adopted by the Committee of the European Statistical System (European Statistical System Committee). The aim of the post-census revision of ARS data is to ensure comparability without breaking the time series.

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: plant 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:

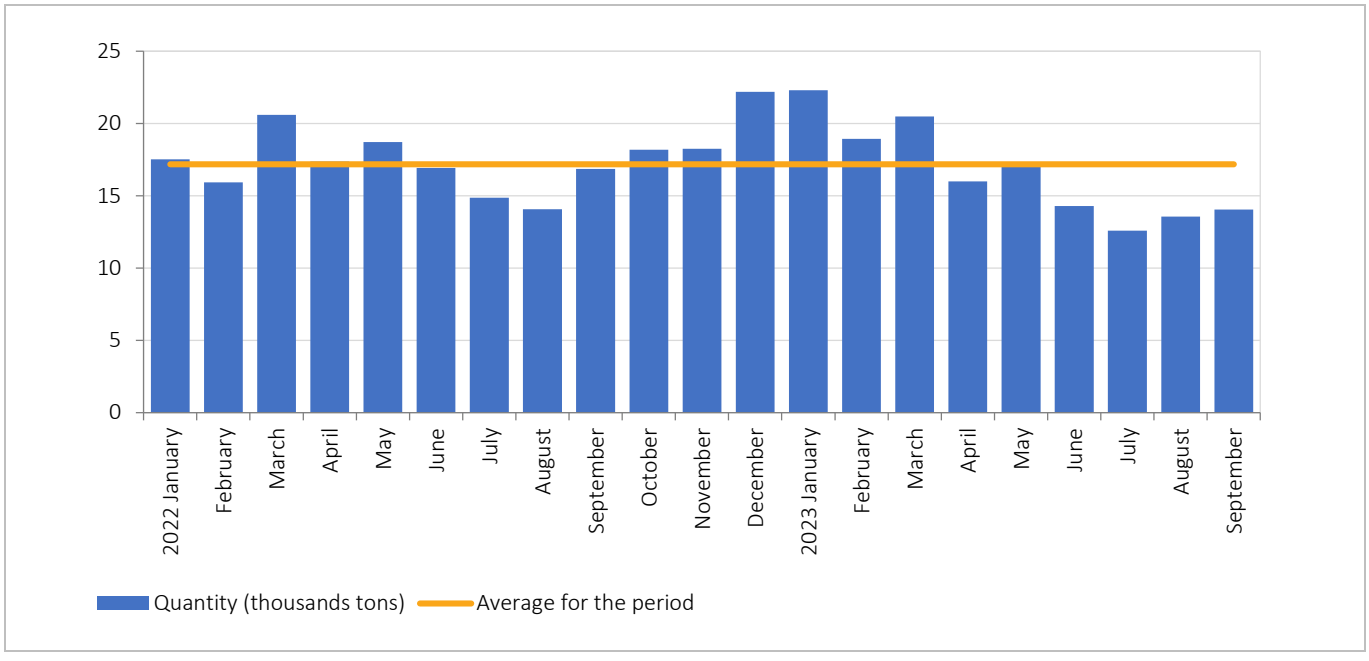
- livestock production (production of consumption milk in dairy factories and livestock slaughtering in slaughter houses),
- prices of agricultural products and intermediate goods,
- external trade in agricultural products, and
- realised and expected production of selected crops and fruits.

13.1. PRODUCTION AND PRICES OF MILK, CEREALS AND LIVESTOCK

Estimates show that agricultural holdings dealing with the production of cow milk distribute to milk collection stations (dairy factories) about 59% of the total production[30]. Of the quantity of milk that stays on the holding (about 41%) about 10% is consumed for feeding household members and livestock on the holding, about 22% are processed into dairy products (mainly cheese and „kajmak"), and the remaining part (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 97% of the total production of milk on holdings, and the remaining milk is of sheep and goats. In the period January-September 2023, the production of consumption cow milk in dairy factories is higher by 2.3% than that in the same period of the previous year. Observed quarterly, in the third quarter of 2023 the production of cow milk saw a fall of 12.2%, compared with the third quarter of 2022.

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



[30] Survey on Agricultural Production – Livestock Production, 2022

Producer prices of cow milk increased by 35.1% over January-September of the current year relative to the same period of the previous year[31]. When compared with the average milk price, the prices in the first three quarters of the current year increased by 18.8%.

Consumer prices of cow milk increased by 64.1% over January-September of the current year relative to the same period of the previous year. When compared with the average price of milk of the previous year, in the first nine months of the current year milk prices increased by 50.9%.

Based on the comparative review and previous analysis, it can be concluded that the producer prices of cow milk had a tendency of slight fall in the first nine months of the current year, with a slight increase in the last two months, while consumer prices in the first nine months of the current year were stable.

As this issue of *Trends* does not analyse only livestock products but also certain crops from the plant production, as well as selected categories of livestock, it is necessary to present also their producer prices.

Over January-September the **index of cereal prices** amounted to 82.0%. In this period, producer prices of wheat decreased by 16.2% and maize by 19.0% relative to the same period of the previous year. In the first nine months of the current year the prices of **industrial plants** saw a fall of 22.5% relative to the same period of the previous year.

Table 13.1. Comparative review of producer prices and consumer prices of cow milk

Mont	Milk price, din./l.	
	Producer price	Consumption price
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	111.30
September	53.13	117.40
October	63.87	133.60
November	65.88	141.80
December	67.06	143.40
January 2023	65.04	170.25
February	63.05	169.92
March	60.53	170.40
April	57.65	169.70
May	54.80	169.80
June	53.49	169.90
July	53.28	169.75
August	53.57	168.08
September	54.11	168.22

Observed **by categories of livestock**, over January-September of the current year the producer price of bovine animals increased by 6.4% and of pigs by 15.2%, compared with the same period of the previous year.

Table 13.2. Indices of producers prices of agricultural and fishing products

	IX 2023 / IX 2022	I–IX 2023 / I–IX 2022	I–IX 2023 / Ø 2022
Cereals	51.1	82.0	80.6
Wheat	54.2	73.8	72.6
Maize	49.6	81.0	79.3
Industrial crops	69.0	77.5	77.2
Livestock and poultry	108.8	111.2	110.0
Bovine animals	106.8	106.4	105.7
Pigs	112.9	115.2	114.3

[31] Those are producers' prices of agricultural and fishing products – prices at which producer is done from family holdings and prices at which legal persons in the field of agriculture sell their products.

13.2. INTERMEDIATE GOODS

A stable and successful production in agriculture depends on many factors. As far as plant 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 shown 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 2023 decreased by 5.3% compared with the same quarter of the previous year. Observed by groups of products, the largest price decrease in the third quarter of 2023, relative to the same quarter of the previous year, was recorded in: Mineral fertilizers (fall of 37.1%) and Animal feed (fall of 10.0%).

The prices of intermediate goods, capital goods and services in agriculture in the third quarter of 2023 relative to the second quarter of 2023 decreased, on average, by 6.4%.

Table 13.3. Indices of the prices of material goods, capital goods and services in agriculture

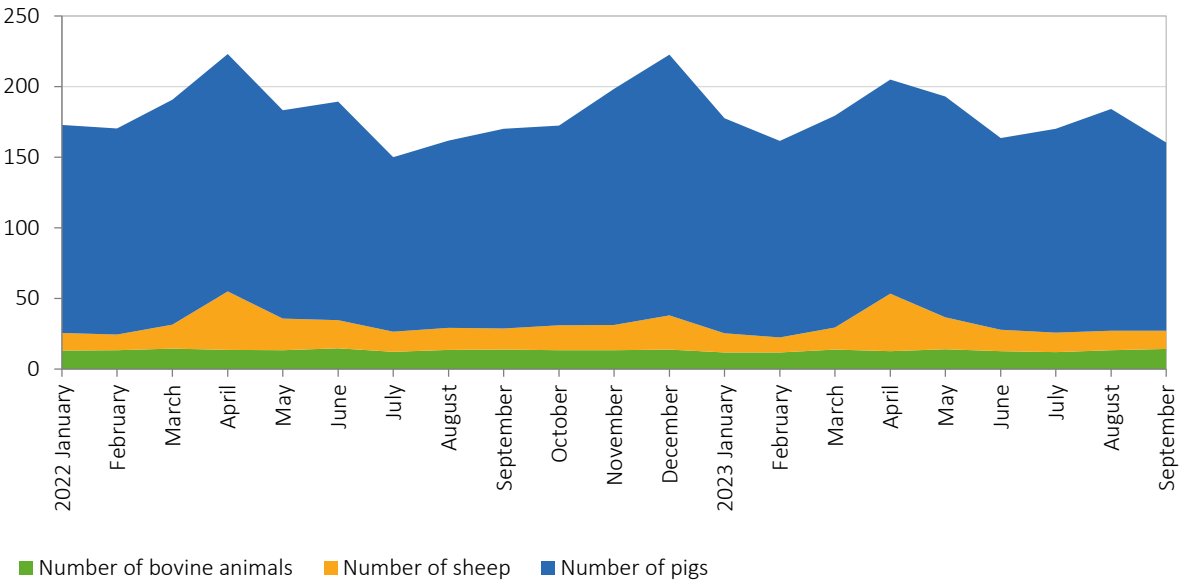
	Q3 2023 / Q3 2022	Q3 2023 / Q2 2023	Q3 2023 / Ø 2023
Total	**94.7**	**93.6**	**95.4**
Products and services for current use in agriculture	**94.1**	**93.0**	**94.7**
Seed	96.3	75.7	101.3
Energy commodities	106.9	103.8	110.4
Mineral fertilizers	62.9	82.8	63.7
Plant protection preparations	95.6	93.5	96.6
Animal feed	90.0	95.1	89.2
Equipment maintenance	107.1	100.6	108.0
Facilities maintenance	116.3	101.5	118.5
Other products and services	114.8	100.1	115.6
Products and services for investments in agriculture	**101.6**	**100.5**	**104.0**
Machinery in agriculture	101.6	100.5	104.0

13.3. LIVESTOCK SLAUGHTER

In the Republic of Serbia, livestock slaughter is performed in registered slaughtering houses and outside them, i.e. on agricultural holdings. As far as bovine animals are concerned, slaughter in slaughtering houses accounted for about 57% of total slaughter of this livestock species, while with pigs and sheep slaughter is mostly done outside slaughtering houses, about 60% and 83%, respectively. Data on livestock slaughter in slaughtering houses on the territory of the Republic of Serbia, totaling on 30 September 2023 to 352. In this issue of Trends, the analysis is focused on livestock slaughter in slaughtering houses.

In the first nine months of 2023, relative to the same period of the previous year, the total number of bovine animals slaughtered in slaughtering houses (116.9 thousand), by 5% less than in the same period of the previous year. Observed by quarters, in the third quarter the number of bovine animals slaughtered in slaughtering houses fell slightly by 0.1%. The category of slaughtered bovine animals in the third quarter of the current year recorded the largest fall in total slaughtering is that of bovine animals up to two years of age (fall of 24.6% relative to the same quarter of the previous year). The largest share in total slaughter in the third quarter of this year was that of bovine animals aged 1–2, amounting to 78%.

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



The number of pigs slaughtered in slaughtering houses (1.3 million) in the first nine months of 2023 was slightly lower by 0.01% than in the same period of the previous year. Observed quarterly, in both quarters the number of pigs slaughtered in slaughtering houses was lower than in the same period of the previous year: in the first by 2.4%, and in the second by 5.6%. The category of slaughtered pigs, which in the second quarter of the current year noted the largest fall was that of piglets up to 25 kg (fall of 29.1% relative to the same quarter of the previous year). Of totally slaughtered pigs in slaughtering houses the largest share in total slaughter of this livestock species was that of pigs up to 50 kg, 90.5%.

Observed quarterly, in the third quarter the number of slaughtered pigs in slaughtering houses (434.4 thous.) was higher by 9.4% than in the same period of the previous year. The category of slaughtered pigs that recorded in the third quarter the largest increase was that of pig weighting from 25 kg to 50 kg (increase of 173.2% relative to the same quarter of the previous year). Of the total number of slaughtered pigs in slaughtering houses the largest share in the total slaughter of this species of livestock was that of the category of pigs over 50 kg, even by 88.7%.

Of the total number of slaughtered sheep on the territory of the Republic of Serbia only about 17% were slaughtered in slaughtering houses. In the third quarter of 2023, the number of sheep slaughtered in slaughtering houses was about 40.4 thousand, by 9.8% less than in the same quarter of the previous year. Of totally slaughtered sheep in slaughtering houses the largest share (92.9%) in the total slaughter of this species of livestock was that of lambs up to six months

13.4. EXTERNAL TRADE IN AGRICULTURAL PRODUCTS

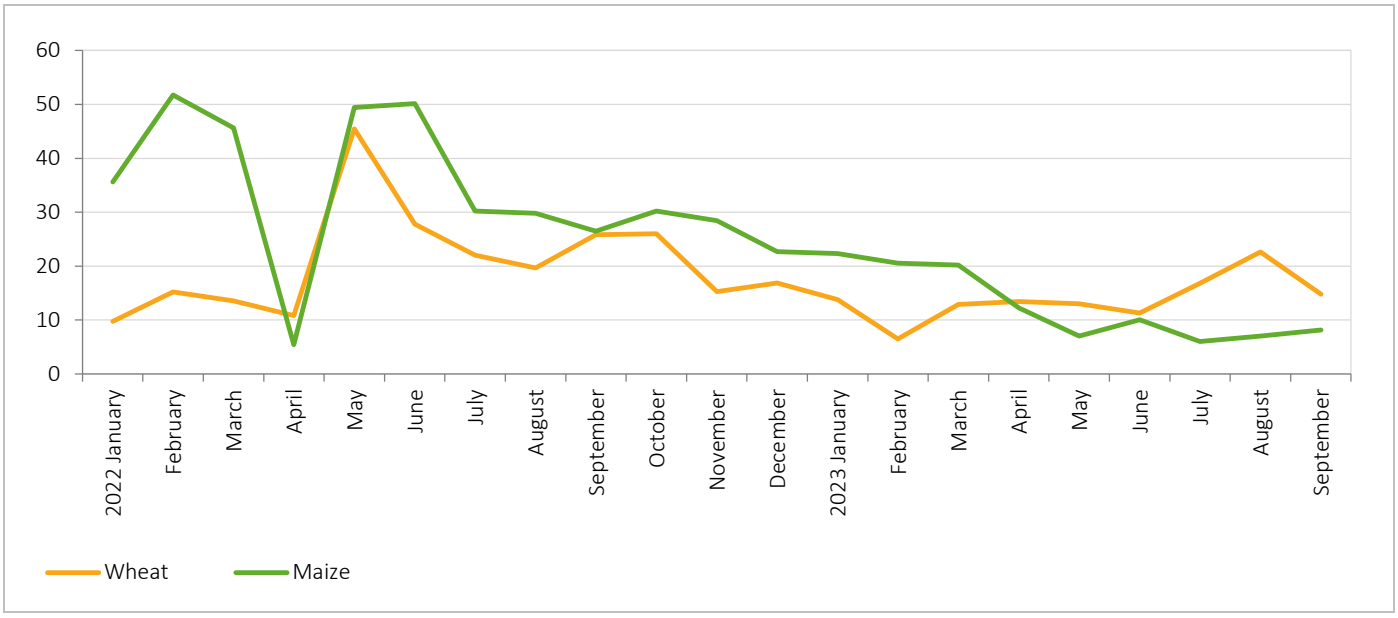
In the first nine months of 2023, the section Agriculture, forestry and fishing[32] realised a negative external trade balance of EUR -38.1 million. Exports of this section amounted to EUR 672.3 million, by 33.1% less than in the same period of 2022, and the share in total exports in the observed period fell from 4.9% to 3.1%, amount reached in the first three quarters of the current year. Imports of this section in the first nine months of the current year amounted to EUR 710.4 million, by 12.9% more than in the same period of the previous year, and the share in total imports grew from 2.2% to 2.9%.

Exports fall in the first nine months of the current year is mostly a result of a cumulative fall of 45.2% in exports of wheat (except for rice), leguminous and oil seed, the most representative groups in this section (share of 52.8%). In contrast to exports, the most representative groups of products on import side in the section of Agriculture, forestry and fishing was Growing vegetables, root and tuber vegetables (share of 20.2%), which generated a cumulative growth of 29.6% in the first nine months of the current year.

Export of maize over January-September of the current year amounted to EUR 113.4 million, a fall of 65.5% relative to the same period of the previous year. Most of maize, when looking a the value, was exported to Bosnia and Herzegovina (31.1% of total exports of this crop). To Italy 10% were exported, then to Romania, Albania and North Macedonia, accounting respectively for 9.6%, 7.9% and 5.7% of total export of this crop.

Export of wheat in the first nine months of 2023 amounted to EUR 125.1 million, a fall of 34.2% relative to the same period of the previous year. Looking at values, in the first nine months of the current year most of the wheat was exported to Italy (43.7% of total exports of wheat), then to Romania (22.2%) followed by Bosnia and Herzegovina, North Macedonia and Albania with 12.5%, 8.9% and 7.7%, respectively.

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



[32] According to CA (2010).

13.5. EXPECTED PRODUCTION OF WHEAT, MAIZE AND SUNFLOWER

The very beginning of the year, i.e. the initial period of providing the first estimates of average yields in May was optimistic regarding the yield of winter wheat. However, the weather in June and July, marked by sudden changes in temperature, from heavy rainfalls to very high temperatures, affected also the quality of grains, thus smaller estimated yield, but still higher than last year. On the other hand, the yield of maize and sunflower has been relatively stable since the first estimates, and, as in wheat, the average yields are expected to be by far higher than last year.

According to the available data and estimates provided by experts of SORS and other institutions, it is expected that almost all crops will record increase in their average yield, as well in the production in the current year relative to the previous year.

In the current 2023, the realised production of wheat amounts to 3 448 thous. tons, by 10.9% more than the production realised in the previous year. In contrast to crops, the situation was not favourable for fruit production. The realised production of raspberries amounted to about 98.7 thous. tons (15% less than in the previous year), and of sour cherries to about 144.8 thous. tons (11.9% less than the previous year).

On the other hand, the expected production of maize is 6 630 thous. tons, by 54.8% more than the production realised in the previous year. Compared with last year, higher production is expected for other crops: sugar beet by 22.4%, sunflower by 6.7% and soya beans by 50.5%.

Table 13.4. Realised and expected production of selected crops in plant production[33]

	Realised production			Expected production			
	Wheat	Raspeber-ries	Sour cherries	Maize	Sugar beet	Sunflower	Soya beans
Area	682 246	19 016	19 614	922 980	41 673	240 305	211 020
Yield per ha t	5.1	5.2	7.4	7.2	49	2.9	2.8
Production, t	3 448 700	98 674	144 849	6 630 984	2 040 624	686 268	599 878
Index, 2022=100	110.9	85.0	88.1	154.8	122.4	106.7	150.5

[33] Source: Realised production of wheat and early fruits and expected yields of late crops, fruits and grapes, as at 05/09/2023 – https://publikacije.stat.gov.rs/G2023/HtmlL/G20231263.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 eEuropean 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

- **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)

Indicators of internal imbalance

- **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-consolidted** – % change (1 year)

Employment indicators

- **Activity rate % of total popuation 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 used[34]. Since it is an annual data, the last available data refers to 2022.

Table 14.1. Serbia's achievements according to the basic indicators of macroeconomic imbalances, 2015–2022

	Definition	Referent value	2015	2016	2017	2018	2019	2020	2021	2022
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	-5.08	-5.09
Net international investment position	Current year, % of GDP	-35% of GDP	-94.79	-94.27	-90.68	-87.56	-87.99	-90.30	-83.03	-81.58
Share in world export of goods and services	5-year change, %	-6%	22.45	36.93	46.28	25.77	31.16	37.99	31.62	34.73
Gross general government debt	Current year, % of GDP	60% of GDP	69.18	67.18	57.07	53.11	51.90	56.65	56.09	54.69
Unemployment rate	3-year average, %	10%	21.16	18.62	16.60	14.85	13.12	11.53	10.72	10.19
Activity rate of population aged 15-64	3-year change in p.p.	-0.2 p. p.	0.03	0.04	0.05	0.06	0.03	0.01	0.05	0.07
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	-0.15

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.

[34] 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 10.19% in 2022, 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.

14.3. 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)

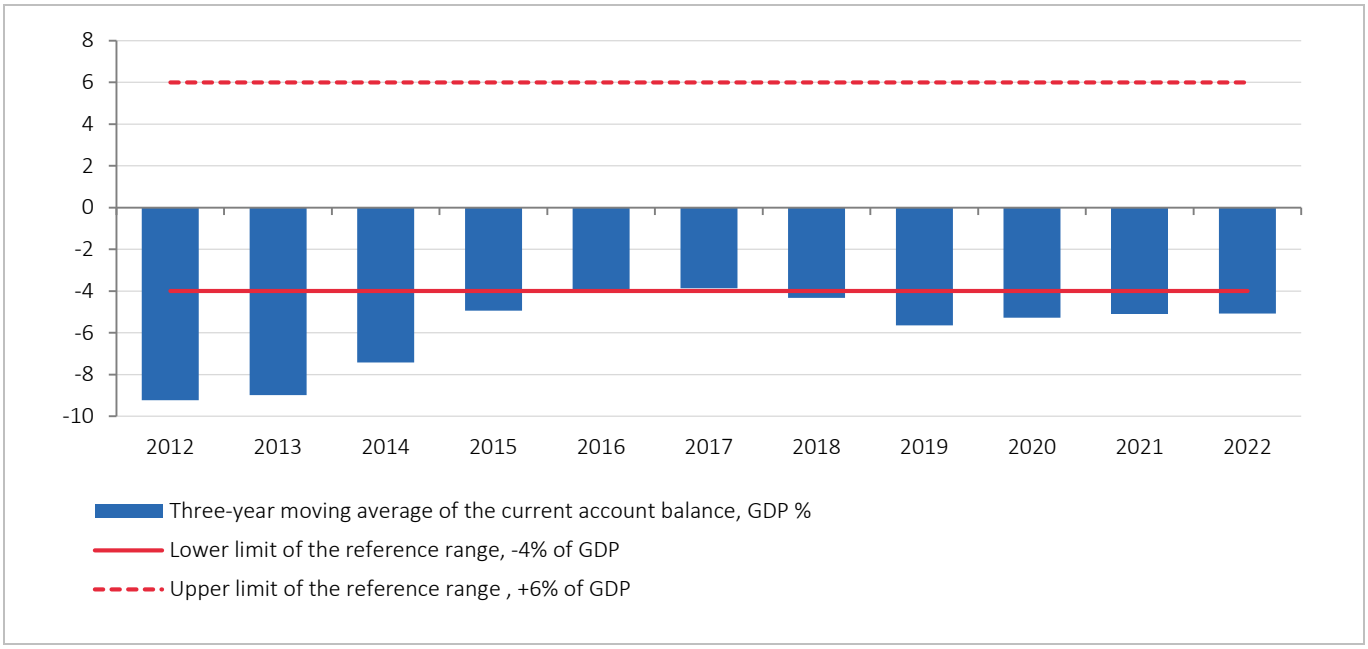
The current account balance of the balance of payments represents one of the most important and most frequently used indicators of the country's external macroeconomic position. The existence of imbalances on the current account may indicate increased exposure of the economy to external shocks, but also 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, 2011–2022 (% of GDP)



In 2022, a current account deficit of EUR 4.2 billion (-6.9% of GDP) was recorded, with a record inflow of FDI (EUR 4.4 billion), which fully covered the current deficit starting in 2015, contributing to the long-term sustainability of the external position of the Republic of Serbia.

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 9 364 mill. in 2022, which is 15.5% of GDP. At the same time, the realized surplus in trade in services amounted to EUR 2 314 mill., which represents 3.8% 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 goods deficit was greatly influenced by the increase of imported energy prices (by EUR 3.9 billion compared to 2021), with the increase in imported quantities in order to preserve the security of supply for the domestic economy and population, after the outbreak of the conflict in Ukraine. An increase in the primary income deficit was recorded, in contrast to the increase in the surplus in the exchange of services with foreign countries and secondary income. The surplus of secondary income increased by 33.9%, which moderated the growth of the current account deficit, while the growth was achieved thanks to the inflow of remittances from abroad, which increased by 38.3%.

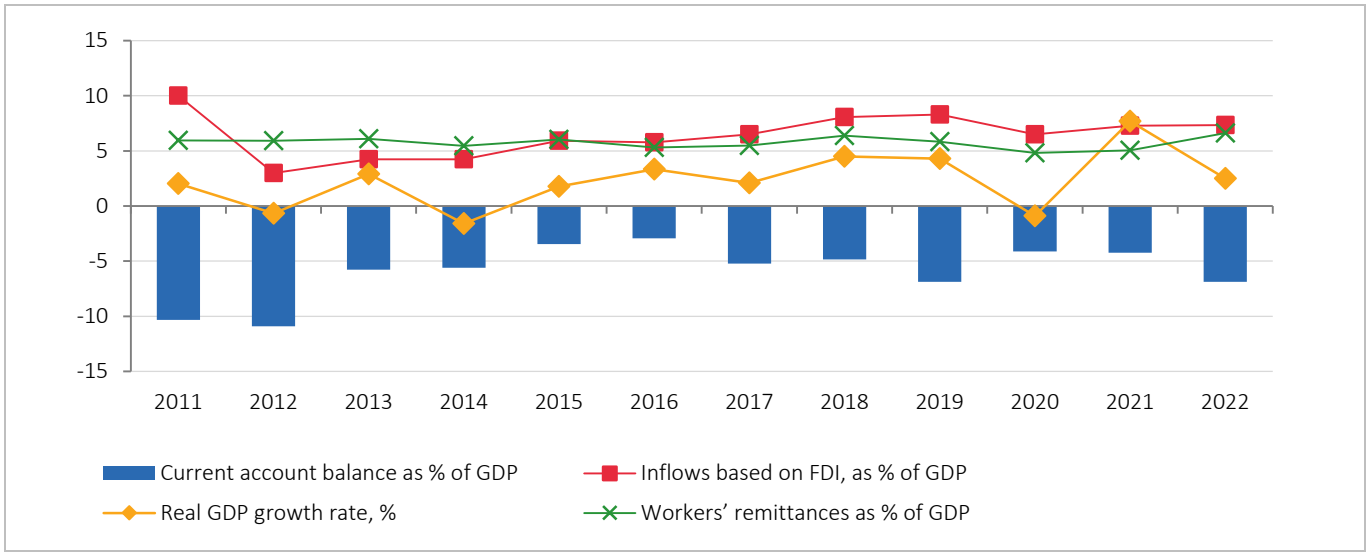
In the conditions of lower external demand, exports continued to grow, primarily thanks to the manufacturing, and to a lesser extent to mining and quarrying and export of electricity, which compensated part of the increase in imports. Exports of manufacturing increased by 22.8%, whereby, thanks to high investments in export sectors, export growth was widespread (in 22 out of 23 divisions), and export of electrical equipment and food products contributed the most.

Also, the exchange of services with foreign countries continued to grow and acted in the direction of reducing the current account deficit. The growth of the export of services (42%, to EUR 11.1 billion) was more pronounced than the growth of imports (37%, to EUR 8.8 billion), which influenced the surplus in the exchange of services to reach EUR 2.3 billion or 65.5% more than in 2021, which is also a record value. The exchange of all types of services increased during 2022, with tourism, ICT and business services taking the lead in export growth, while transport and tourism services contribute the most to import growth.

Table 14.2. Balance of payments of Serbia, 2015–2022

	2015	2016	2017	2018	2019	2020	2021	2022
Current account balance, EUR mill.	-1 233.8	-1 074.9	-2 050.8	-2 076.1	-3 160.9	-1 928.8	-2 265.6	-4 162.2
Current account balance, % of GDP	-3.5	-2.9	-5.2	-4.8	-6.9	-4.1	-4.2	-6.9
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	-4 621.3	-7 049.9
External trade balance, % of GDP	-8.2	-6.0	-7.7	-9.5	-10.0	-8.8	-8.7	-11.7
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	28 818.2	38 003.9
Export of goods and service, indices, previous year=100	108.8	110.5	111.1	109.6	110.3	95.4	129.4	131.9
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	33 439.5	45 053.8
Import of goods and services, indices, previous year=100	103.0	105.1	114.0	113.0	110.7	94.3	126.8	134.7
Export import ratio, %	84.4	88.7	86.4	83.8	83.5	84.5	86.2	84.4

Chart 14.2. Current account balance by selected components, 2011–2022 (% of GDP)



14.4. 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) [35] 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 2013–2022, 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.

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 investments (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 32.1%.

The slight decrease in the negative share of MFA in GDP in 2022 compared to 2021 (from 83.06% to 81.6%) can be attributed to faster growth of nominal GDP.

It can be said that the movement of MIP is completely in line with the deficit of the current account of the balance of payments, which is continuously present in the entire observed period. The immediate cause of Serbia's unfavourable international net asset position is a 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.

[35] 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.

Chart 14.3. Structure of the international investment position by functional categories, 2013–2022 (% of GDP)

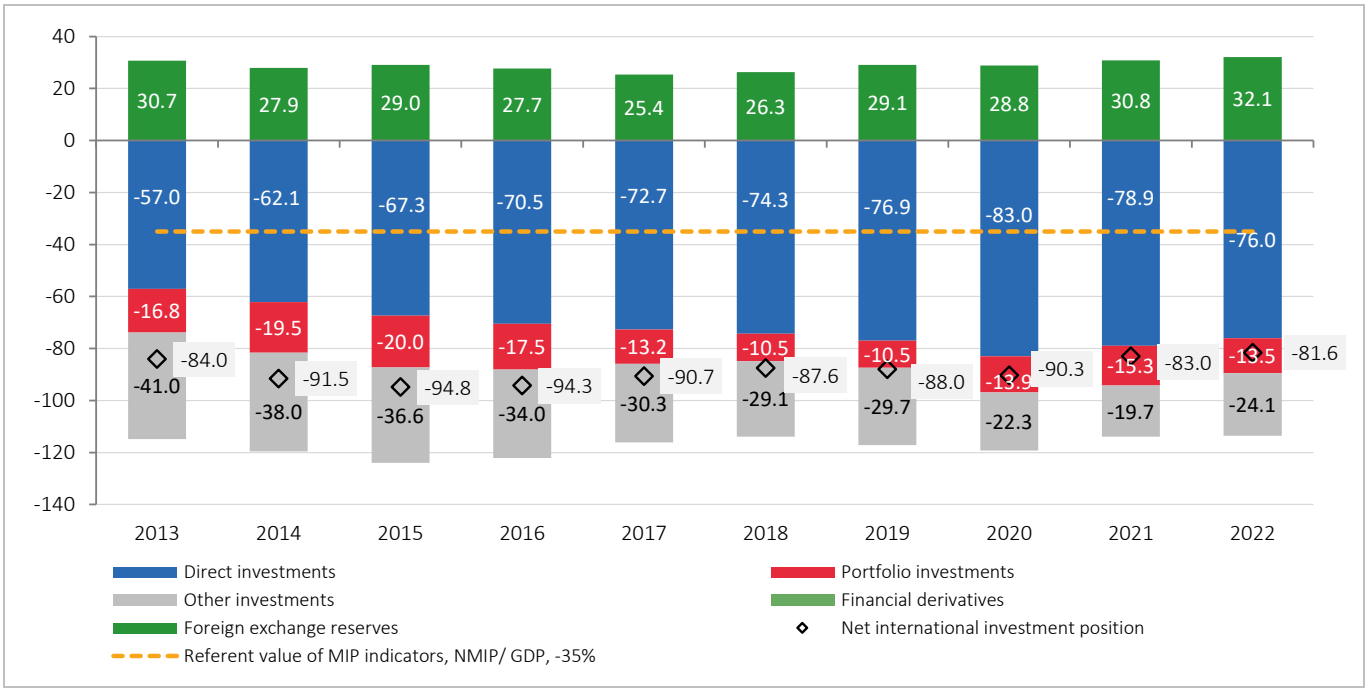


Table 14.3. Net investment position of Serbia, as of the end of the year, 2015–2022

	2015	2016	2017	2018	2019	2020	2021	2022
Direct investments	-24 060	-25 941	-28 510	-31 868	-35 388	-38 849	-42 112	-45 929
Portfolio investments	-7 147	-6 453	-5 184	-4 500	-4 836	-6 517	-8 178	-8 153
Financial derivatives	32	38	28	49	50	53	29	-90
Other investments	-13 081	-12 520	-11 875	-12 497	-13 682	-10 452	-10 489	-14 543
Foreign exchange reserves	10 378	10 205	9 962	11 262	13 378	13 492	16 455	19 416
Net international investment position (MIP), in EUR mill.	**-33 877**	**-34 672**	**-35 579**	**-37 555**	**-40 478**	**-42 274**	**-44 294**	**-49 299**
				% of GDP				
Direct investments	-67.3	-70.5	-72.7	-74.3	-76.9	-83.0	-79.0	-76.0
Portfolio investments	-20.0	-17.5	-13.2	-10.5	-10.5	-13.9	-15.3	-13.5
Financial derivatives	0.1	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	-24.1
Foreign exchange reserves	29.0	27.7	25.4	26.3	29.1	28.8	30.9	32.1
MIP/GDP, % (referent value is -35% of GDP)	**-94.79**	**-94.27**	**-90.68**	**-87.56**	**-87.99**	**-90.30**	**-83.06**	**-81.6**

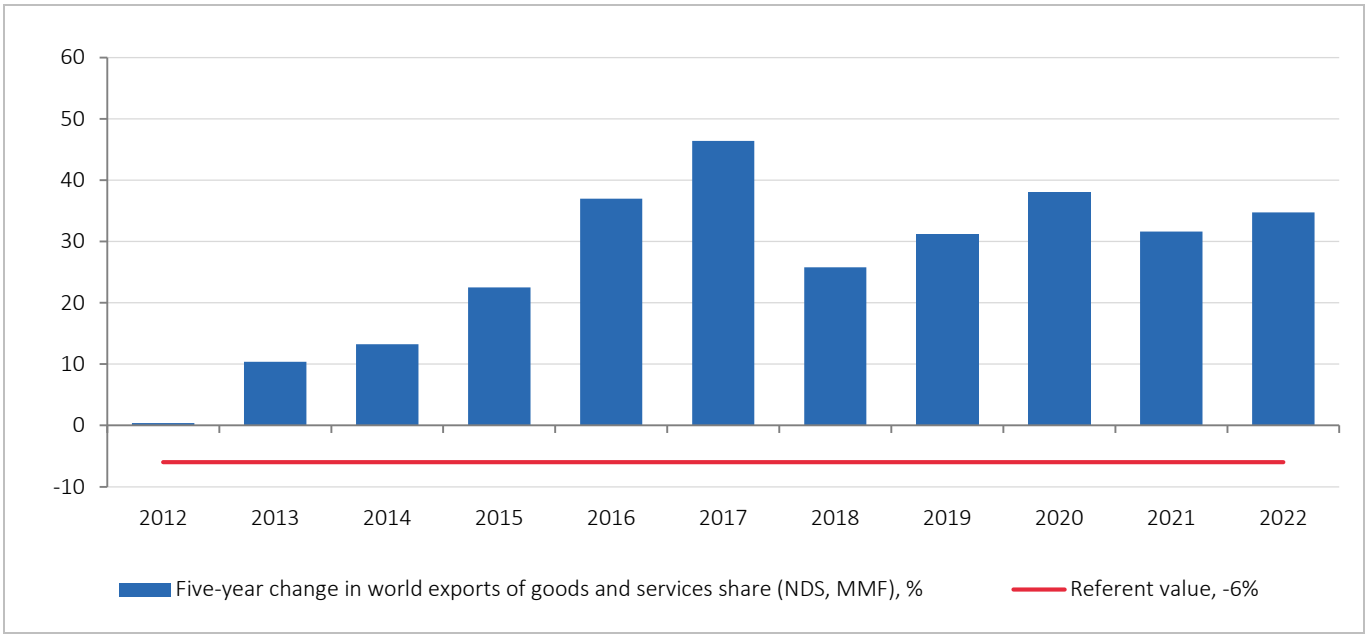
14.5. SHARE IN WORLD EXPORTS OF GOODS AND SERVICES (REFERENCE VALUE OF -6% FOR A FIVE-YEAR PERCENTAGE CHANGE)

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 2012–2022, 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. 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 the next five-year period, there was a slowdown in the growth of the share of Serbian exports in the world export of goods and services, from 46.4% in 2017, when it was the highest, to 34.7% in 2022. In 2022, there was an intense growth in the export of goods of 28.1%, which was driven, above all, by the growth in the export of manufacturing. Exports of the manufacturing in 2022 achieved cumulative growth in 22 out of a total of 23 divisions, which together make up 83.8% of total exports, with the divisions of electrical equipment and food products making the greatest contribution to growth. The growth of the export of services in 2022 was 42% and was driven by the export of ICT services, as well as tourism services, which fully recovered in 2021.

Chart 14.4. Share in world exports of goods and services, 2011–2022 (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 in 2022 was the largest with the countries with which Serbia has signed free trade agreements. European Union member countries account for about 58.7% of total external trade, while the APEC (Asia- Pacific Economic Cooperation) countries, was on the second place, with the share of 19.6%.

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

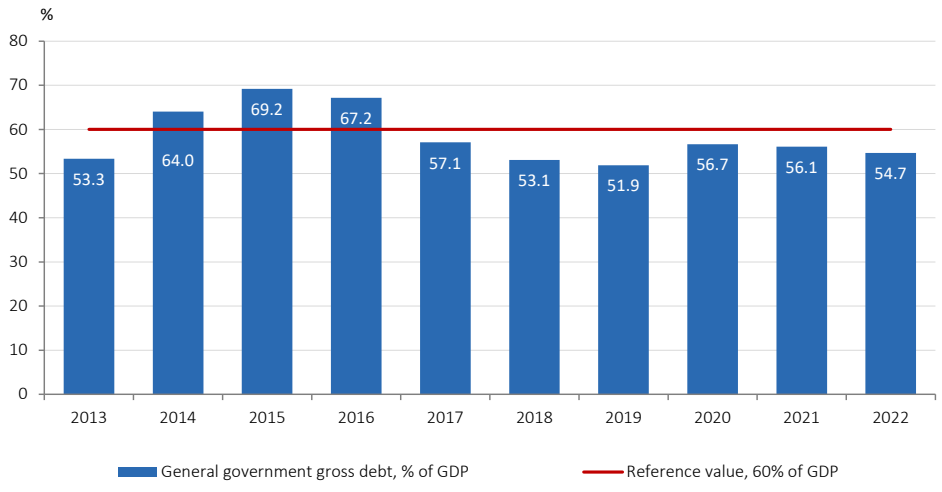
The debt of the general level of the state is defined within the *Excessive Deficit Procedure (EDP)* as the nominally expressed total gross debt at the end of the year. It is about the consolidated amount of debt between and within the general government sector. General government debt is included in the MIP indicators in order to gain insight into the total indebtedness of all sectors of the economy, together with the private sector debt indicator[36].
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 69.2%.

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. In 2022, the general government debt in GDP was 54.7% of nominal GDP (a decrease of 1.4 p.p. compared to 2021).

The share of national debt in GDP decreased in 2021 in almost all EU member states, while it is still significantly above the pre-pandemic level in 2019. Deficits remain high, but strong economic growth has reduced the share of debt. The share of government debt generally declined in 2022 as a result of continued economic growth, despite significant support packages for households and businesses linked to high energy prices.

Chart 14.5. Trends in general government debt, 2013–2022



[36] 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 statistics of annual financial accounts. The collection and publication of this data is the responsibility of the NBS.

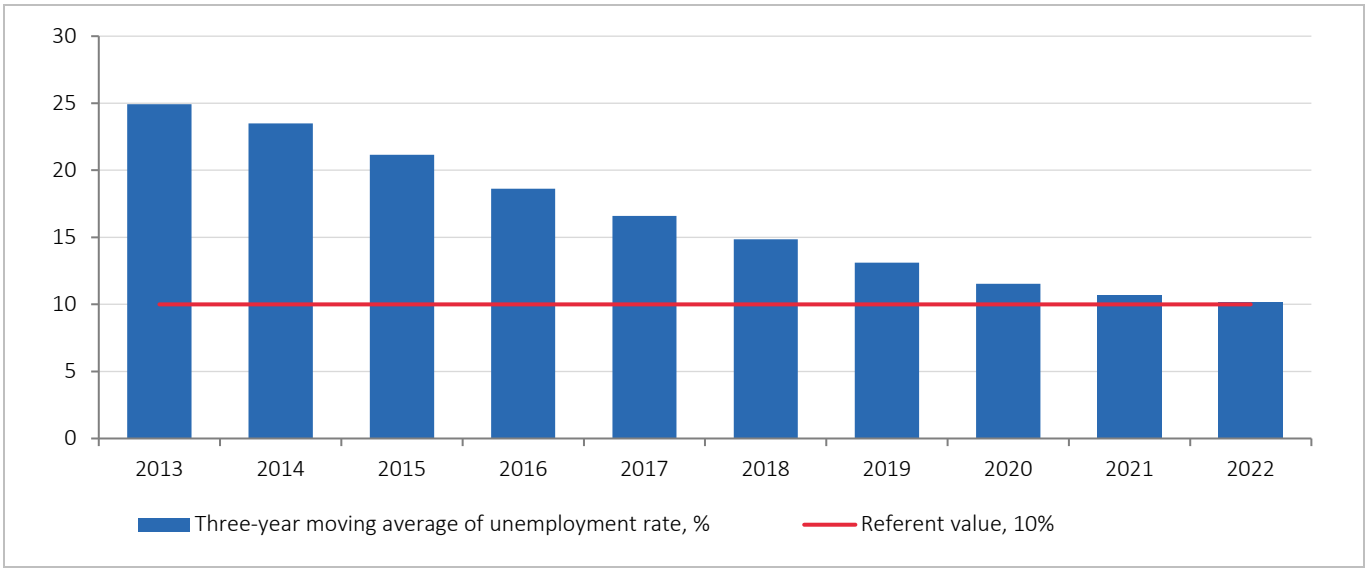
Failure to meet the criteria for the ratio of general government debt and GDP would represent a significant risk for Serbia, because the same reference value for government debt is also prescribed within the criteria of nominal convergence that countries must meet before the introduction of the euro. 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.

14.7. 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 2013-2022, 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 2022, according to this indicator, Serbia would be by 0.2 p. p. above the threshold value within the MIP.

Chart 14.6. Unemployment rate, three-year moving average, 2013–2022



According to the Labour Force Survey, the unemployment rate in 2022 was 9.4%, and the number of unemployed persons was about 302 200. Compared to 2021, the number of unemployed decreased by about 50 300, with the decreased unemployment rate by 1.6 p. p.

The success of the economic package of measures was verified by the absence of major negative effects of the pandemic on the labour market in 2020, 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.

The continuation of positive trends on the labour market is primarily the result of the establishment of macroeconomic stability, despite the slowdown in the dynamics of economic activity.

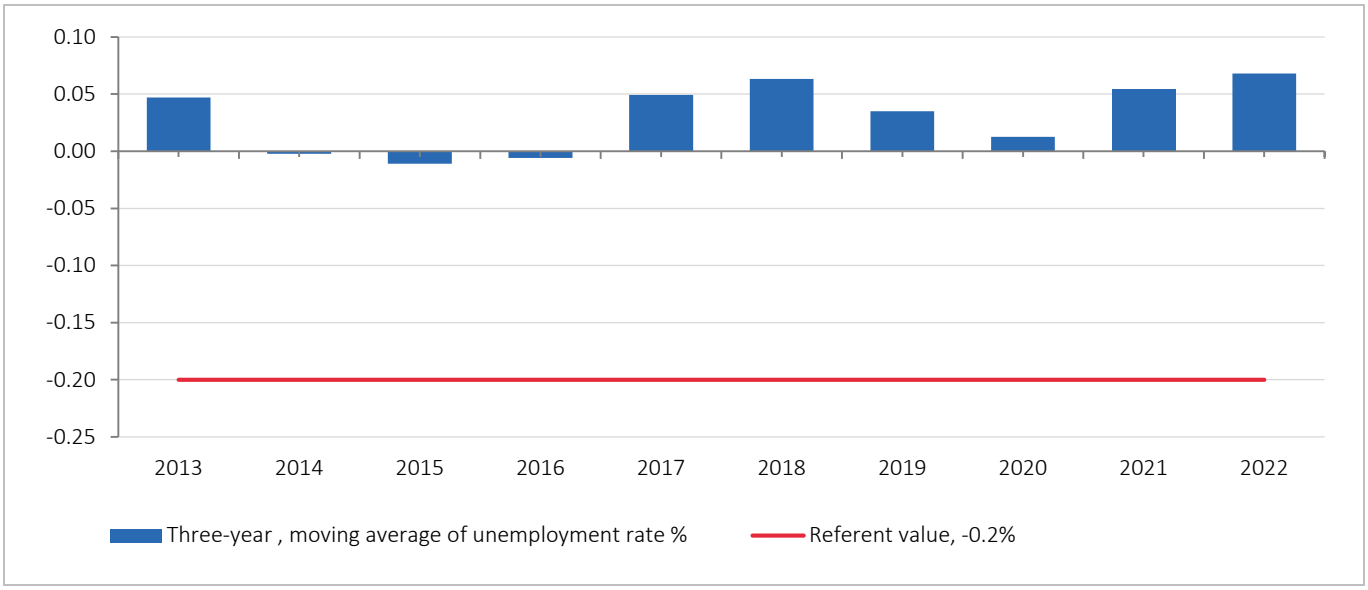
However, despite the improvement of indicators on the labour market, they are still less favourable than in the EU. The unemployment rate in Serbia is higher, while the employment rate is lower than in the EU. There is also a difference in the structure of employed persons by sectors: in Serbia, compared to the EU, there is a far greater share of employees in agriculture, and a smaller share in service activities.

14.8. 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)[37] - 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 2013-2022, Serbia exceeded the reference value for the indicator of the activity rate of the population aged 15-64 within the MIP. In 2022, 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 0.07%. The activity rate has proved quite resilient to the slowdown that began before the pandemic.

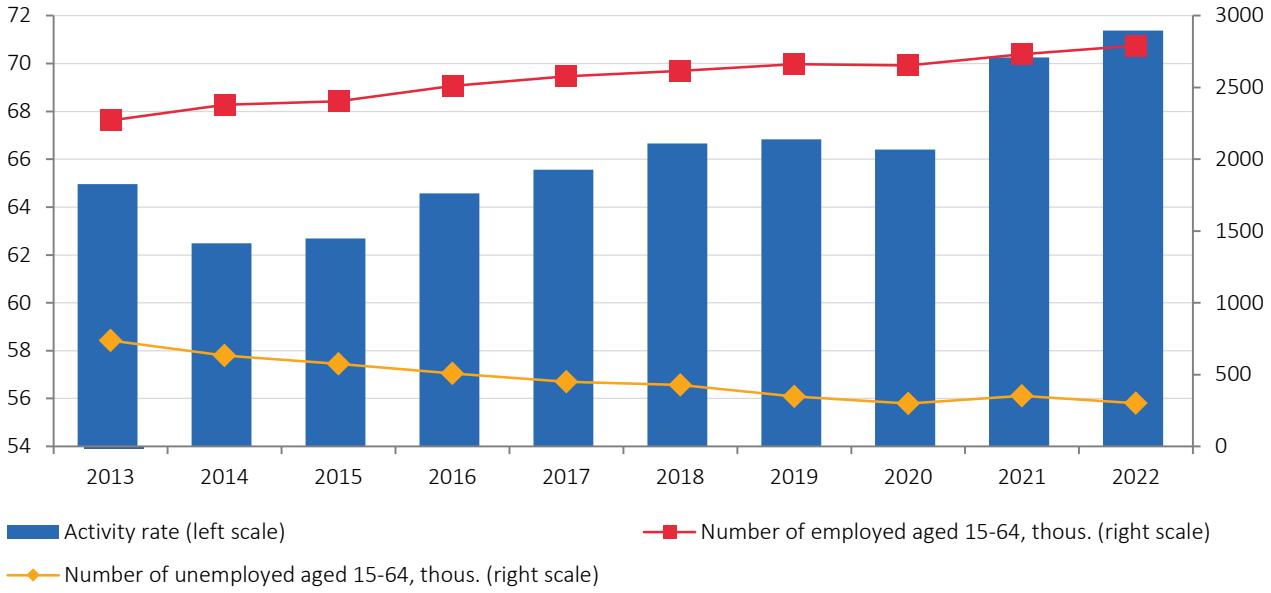
Chart 14.7. Activity rate of the population aged 15-64, three-year moving average, 2013-2022



The activity rate or labour force participation rate shows the degree of labour force activity in the labour market. This means that in 2022, 71.4% of working age population could engage in the production of goods and services.

[37] 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.

Chart 14.8. Activity rate of the population aged 15-64, three-year moving average, 2013-2022

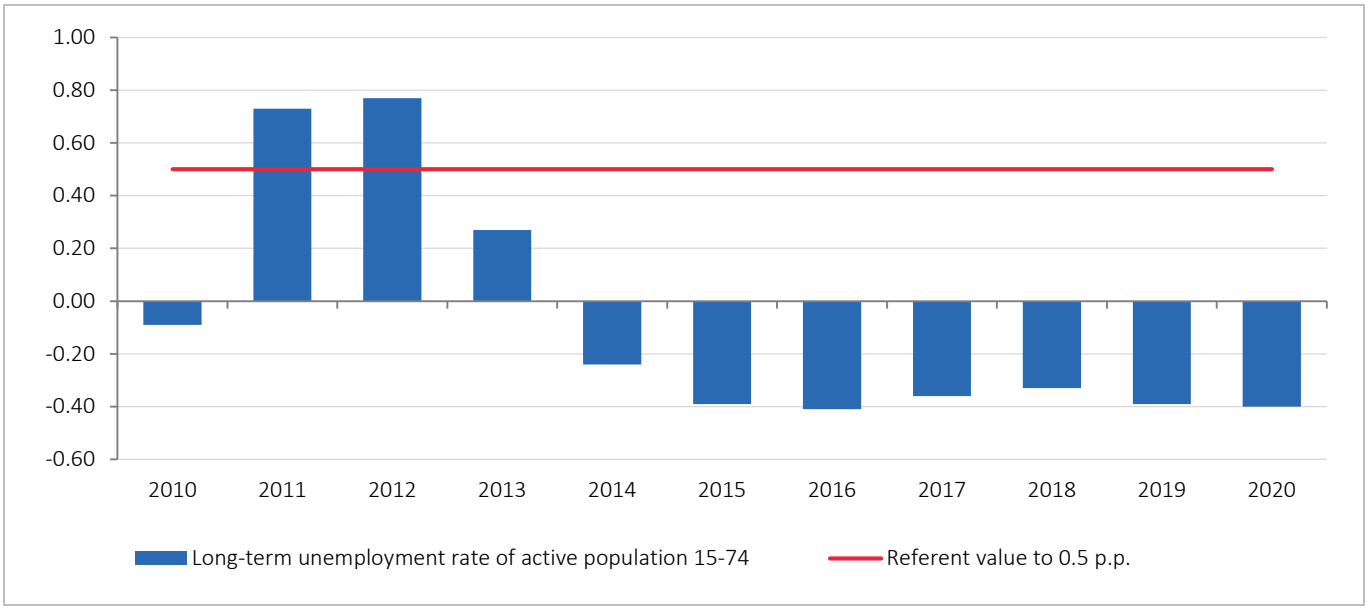


14.9. LONG-TERM UNEMPLOYMENT RATE OF THE ACTIVE POPULATION AGED 15-74 (REFERENCE VALUE OF 0.5 P.P. FOR THE THREE-YEAR CHANGE IN P.P.)

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 14.9. Long-term unemployment rate of the active population aged 15-74, three-year moving average, 2010-2020[38]



14.10. 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.

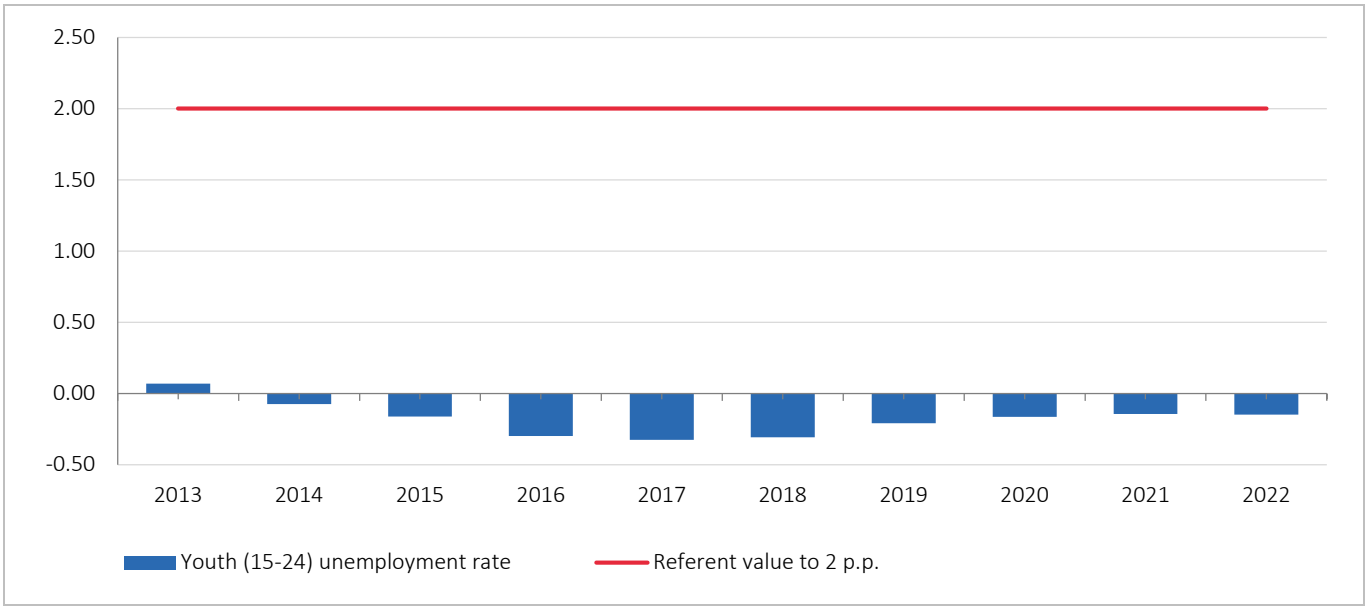
According to this indicator, Serbia was in balance in the entire observed period. After the highest recorded youth unemployment rate of 52% in 2013, followed the period of continuous reduction of this rate, so that in 2022 it fell to 24.4%. However, although the position of young people on the labour 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 2022 is lower by 1 200 (or 0.7%), and the number of unemployed by 6 700 (or 11.0%) compared to 2021. The employment rate of the young population in 2022 was 24.7%, which is by 0.2 p. p. more than in 2021. The youth unemployment rate recorded a value of 24.4% and is lower than in the previous year by 2 p. p.

The youth unemployment rate (15-24), which amounts to 24.4% in 2022, 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, that is, this rate is higher by 8.6 p. p. of the youth unemployment rate in the EU (15.8%).

[38] 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.

Chart 14.10. Unemployment rate of the active population aged 15-24, three-year moving average, 2013-2022



In the period up to 2022, almost all European Union (EU) economies have recovered and recorded growth following the macroeconomic upheavals of 2020 caused by the outbreak of the coronavirus pandemic, despite remaining bottlenecks related to labour shortages. However, after the outbreak of the conflict in Ukraine in February 2022, there was a sudden increase in energy prices, which significantly shook the economy of the European Union.

Despite extensive economic policy measures to limit energy prices, they have become a source of great economic pressure and uncertainty. EU governments tried to limit the burden of higher energy prices on businesses and households by redistributing the load, but they failed to remove the overall economic impact. Measures vary greatly between states, from price freezes and tax cuts to income support programs. Electricity price inflation in the EU varies not only due to government policies but also due to different energy sources and contractual arrangements of individual countries, as well as the reflection of wholesale electricity prices on retail prices.

Serbia, like other countries, evidently faced the negative economic consequences of the conflict in Ukraine. Although macroeconomic trends during 2022 were at the expected level, the tightening of international economic and political relations, followed by a sharp jump in energy prices and consequently reduced global trade and foreign demand, began to spill over into the domestic economy.

The economy of Serbia faced the consequences of the global energy crisis, and above all, the growth of inflationary pressures and the current account deficit due to the energy crisis, all of which necessarily required support for the economy and the population, as well as interventions in energy supply, in order to mitigate the consequences of the influence of the international environment on the economy and population, but also preserved energy stability.

When looking at trends in the labour market in Serbia, activity rates have proven to be quite resistant to the slowdown that began before the coronavirus pandemic, and long-term unemployment and youth unemployment even show better trends compared to other indicators of the labour market.

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