



# TRENDS

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# TRENDS



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## Trends, Quarter IV of 2021

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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.

Knowing that the statistical system is very complex, generalized and designed to meet subsectors specific needs for information, failure to understand statistics in modern society is a frequent phenomenon. Informing users by releasing “dull” statistics is often insufficient because it renders only a partial picture of macro-economy. Actually, it has appeared that the conventional ways of data presentation (tables, releases, etc.) hampers quick understanding of the socio-economic reality and fails to convey the key message, especially when there is a large number of data.

Having in mind all of the above and keeping track of world trends in presenting statistics, as well as the interests of the community of experts, the redesigned “Trends” brings traditionally quarterly and semi-annual data, but through a new concept of presenting major economic signals by means of modern and advanced graphic solutions of presentation and dissemination.

At the very beginning of the issue for the fourth quarter of 2021 is the paper entitled „Influence of the ownership structure of capital on the economic growth in the Republic of Serbia“, authored by Svetlana Jelica, which clarifies numerous dilemmas regarding the share of foreign and domestic capital in the investments of the Republic of Serbia. The second paper published in this issue entitled „Convergence of productivity and living standard of transitional countries towards the EU (N. Cokorilo and E. Jakopin) presents the results of these important trends for the Republic of Serbia, but also for the countries new EU members, with which our country can be compared).

This issue presents the movement of major statistical areas: Gross domestic product, Industrial production, Construction, External trade, Domestic trade, Prices, Labour market, Salaries and Wages, Tourism, Economic Sentiment Indicator and Regional economic asymmetries. This issue presents for the first time an analysis of agricultural production, which will be regular for now on in the current dynamics. Having in mind the increasing trend of food and energy products, disbalance as to the offer and demand of those products, as well as the specificity of the current situation in world markets, their trends will be analysed carefully in the next period.

As usually, presented are the forecasts of trends in selected areas for the next period, obtained with ARIMA forecast models. A set of composite leading indicators, which can predict with high reliability cyclical trends and be used for short-term forecasts is presented in the section Macroeconomic Forecasts.

Coronavirus is still, but less and less, influencing economic trends. The most marked are turbulences in selected labour market segments that can be overviewed through a set of indicators of coronavirus influence on the labour market. This issue has another novelty – the ratio of the consumer basket and salaries and wages, shown in the 9th section (Salaries and wages).

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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Author: Svetlana Jelic

## Influence of the ownership structure of capital on the economic growth in the Republic of Serbia

Dilemmas arising from the use of foreign direct investments (FDI) are often subject to debates among experts, primarily from the aspect of their validity, future risk for the balance of payments of the country, as well as of possible implications due to the modified ownership structure of production capacities. Either the strategic option for attracting foreign direct investments is identified as a development opportunity or negative connotations are attributed to it, it is necessary to examine argumentatively and through the prism of empirical data the hitherto effects of the development of the domestic economy, to a great extent founded on capital investments from abroad.

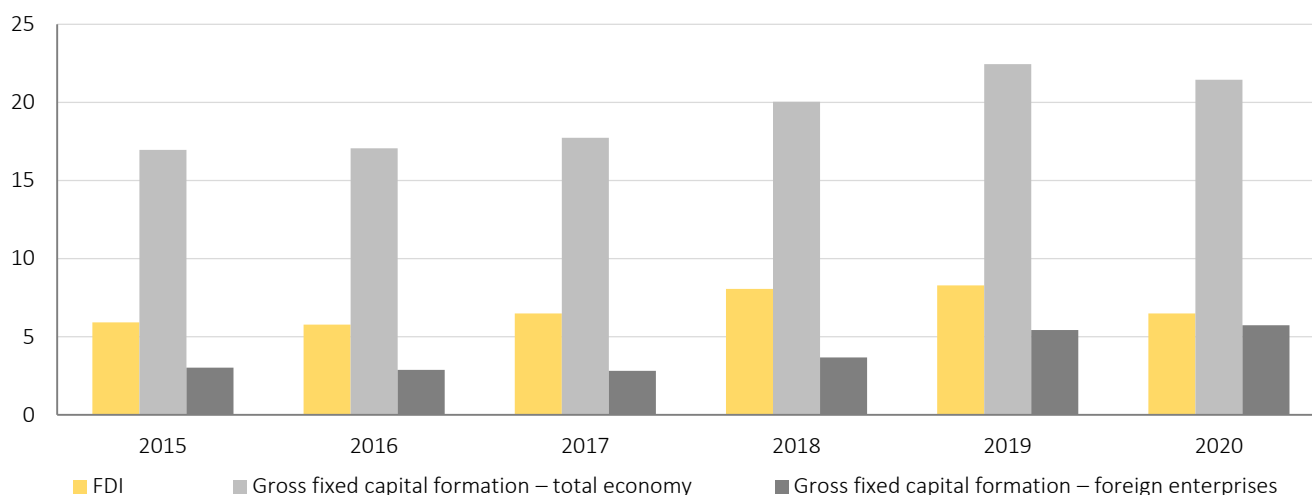
Before bringing up any general qualification of direct investments from abroad (reinvested profit of foreign enterprises is also included), one needs to study the dynamics and relationship of foreign investments and investments of the domestic sector within total gross fixed investments. By definition within the balance of payments methodology, foreign direct investments are not a category that coincides with gross fixed capital formation in the methodological context of national accounts, i.e. in relations regarding GDP use. Namely, a part of FDI, so-called *green field* investment, belongs to the aggregate of gross fixed capital formation.

If we remain only in the sphere of business, without observing any non-economic motives of the analysis, it is a fact that in the scope of the national economy, on the basis of ownership, only two segments are essentially differentiated: the part founded on private ownership – private sector, and the part controlled and/or owned by the State – public sector. The functioning of the public and private sectors is considerably dependent on different interests of the holders of both sectors. While the State, governing the public sector, observes, by its nature, broadly and on the long term the directions of growth and development, and all forms of private initiatives, whether originating from a domestic or foreign investor, are primarily led by market behaviour. Because of clear orientation to profit, it is pointless to put forward ideological and ethical differences in their business conception. For instance, can one certify that in a country only foreign capital tends to reach cheap labour force, while a domestic employer sets aside unreservedly money for the employed? There is no correlation whatsoever between preferences for labour market and capital origin in terms of owner's residency. Moreover, the capital placed by production companies from abroad uses the advantages on domestic market. If there is on the labour market available labour force with lower educational level and with lower professional skills, foreign companies engaged in an activity requiring such labour force will be motivated to build plants in the country. Where there is offer of labour force with upper educational level and qualification, technologically advanced companies will be motivated to come. These are the relationships on the market where it is not possible to create arbitrary preferences. The offer of labour force of any qualification or educational level creates the need for capacities employing such labour force.

In this context, the insistence of giving priority to exclusively domestic capital can be regarded somehow as archaic. From the economic viewpoint, it is always justified to accelerate the development of additional resources outside the secured accumulation, thus there is no sense to determine the lower limits or acceptable measures of FDI presence, particularly because globalization allows qualitatively and quantitatively larger, or even inexhaustible, mobilization of capital for investment projects. Openness to external financing sources does not pretend to threaten domestic investment consumption. On the contrary, the measures taken by fiscal consolidation and mobilization of foreign direct investment enabled in 2015 the economy to enter in the cycle of growth, followed by further expansion of the expansion of the entire investment activity – both domestic and foreign: fixed investments grew annually, on average, by a rate of 8 percent, reaching in 2020, even with the deceleration of the rhythm of economic processes due to the impact of the corona virus pandemic, a cumulative increase of the volume by 60.8 percents (table 1). At the same time, the relative importance of capital investments in GDP structure increased by 5.5 percentage points (realized level of 21.4% of the gross domestic products in 2020), due to the growth of relevant shares, both of foreign enterprises (2 pp.) and domestic sector (3.1 pp.). For comparison, the corresponding FDI share grew in the same time interval by 2.3 pp, reaching a level of 6.5 percents of the gross domestic product in 2020 (Chart 1).

# Professional paper 1

Chart 1. Share of investments in GDP, %



As already mentioned, foreign direct investments are only a part referring to investments in new capacities (predominantly gross fixed capital formation of foreign enterprises, accounting for an average fifth of total investments in the reference period), part which is an integral element of the investment aggregate by the national accounts concept. It is by far the larger part of the investment consumption financed from other sources: own accumulation and depreciation, loans, donations, government and bank borrowings, capital increase, etc.

The main assumption for establishing a long-term path of value added is to base the economic growth on intensifying the investment activity with a structural distribution in favour of boosting areas and parts of the economy. Taking into account that investments are a dominant driving force of economic development, planning the direction of movement implies the management of their economic and technical structure, but also the monitoring and orienting of capital investments in the context of their ownership structure.

A comparative review of the domestic and foreign component of the investment consumption is presented below through corresponding indicators for the period 2015–2020 (table 1).

Table 1. Investment consumption by ownership structure in the Republic of Serbia

	Rate of cumulative growth of investment volume, %	Rate of real investment growth of investments, average of the period, %	Share of investments in GDP, %	Investment structure, %	Rate of real investment growth, %			Contribution to the real investment growth, pp.		
	2015–2020	2015–2020	2020	2020	2018	2019	2020	2018	2019	2020
<b>Total economy</b>	<b>60.8</b>	<b>8.2</b>	<b>21.4</b>	<b>100</b>	<b>17.5</b>	<b>17.2</b>	<b>-1.9</b>	<b>17.5</b>	<b>17.2</b>	<b>-1.9</b>
Sector of foreign enterprises*	103.0	12.5	5.7	26.7	36.3	53.9	8.6	5.8	9.9	2.1
Domestic sector	49.5	6.9	15.7	73.3	14.0	9.0	-5.3	11.8	7.3	-4.0
<i>Of which: domestic private enterprises</i>	22.7	3.5	5.0	23.2	8.3	3.2	-0	2.6	0.9	-2.5
<i>Of which: public enterprises**</i>	27.8	4.2	2.6	12.2	19.9	3.0	-7.6	2.9	0.4	-1.0

\*Enterprises in the Republic of Serbia controlled by non-residents.

\*\*Public enterprises together with the government sector make the public sector.

In the reference period, attracting foreign capital represented a real need and was one of the priorities of the economic policy in order to improve development performances, in circumstances of poor domestic accumulation. The volume of capital investments of foreign enterprises doubled (cumulative increase of 103%) with a year-on-year growth at the rate of 12.5%. At the same time, within the domestic segment, there was an expansion of fixed funds by 49.5%, with an average increase of 6.9%, relying mostly on important infrastructure projects launched in the public sector (rate of cumulative investment growth of 78.2% in the public sector).

As the result of strong orientation towards growth and development in both economic parts, investments, during 2018 and 2019, with more than tripled dynamic growth rates, when compared with GDP trend (17.5% and 17.2% versus 4.5% and 4.3%, respectively), became an important factor of progress with the foreign component as a significant factor. In 2020, investments of foreign enterprises accounted for 26.7% of total investment, which is an increase of 5.6 pp. to the beginning of the reference interval. In fact, disproportionately to its relevant importance in the structure, and owing to intensive investment at a rate of 53.9%, the sector of foreign enterprises, with a contribution of 9.9 pp, determined the rate of total investment in 2019, while in 2020 it alleviated considerably negative tendencies by its positive contribution of 2.1 pp.

It is undeniable that the mentioned investment expansion has, among other things, an important point of support in an increased interest of enterprises under foreign control to invest in the domestic economy, but a key question arises - how rational is it to rely on external inflows of this type in creating socio-economic policy on the long-term. If numerous socio-economic aspects of economic activities of the cited types of investors are abstracted, and focus is put only on those segment liable to valorization through a direct influence on GDP growth, it is possible to set aside and measure the effects of attracting foreign capital, which brings a concrete argument for a relevant analysis. Accordingly, major macroeconomic indicators are presented below, with an emphasis on the performances of the economic activities of enterprises under foreign control over 2015–2020.

**Table 2. Economic performances of the Serbian economy by ownership structure, 2015–2020**

	Rates of cumulative real growth over 2015–2020, %		Average for 2015–2020.				Marginal coefficient of investment efficiency
			Rates of real growth, %		Structure, %		
	БДВ	инвестиције	БДВ	инвестиције	БДВ	инвестиције	
<b>Total economy</b>	<b>16.1</b>	<b>60.8</b>	<b>2.5</b>	<b>8.2</b>	<b>100</b>	<b>100</b>	<b>0.11</b>
Sector of foreign enterprises*	65.3	103.0	8.7	12.5	16.9	20.0	0.32
Domestic sector	8.0	49.5	1.3	6.9	83.1	80.0	0.06
<i>Of which: domestic private enterprises</i>	3.3	22.7	0.6	3.5	29.8	28.8	0.02
<i>Of which: public enterprises**</i>	-7.6	27.8	-1.3	4.2	9.8	14.3	-0.04

\*Enterprises in the Republic of Serbia under the control of non-residents.

\*\*Public enterprises together with the government sector make the public sector.

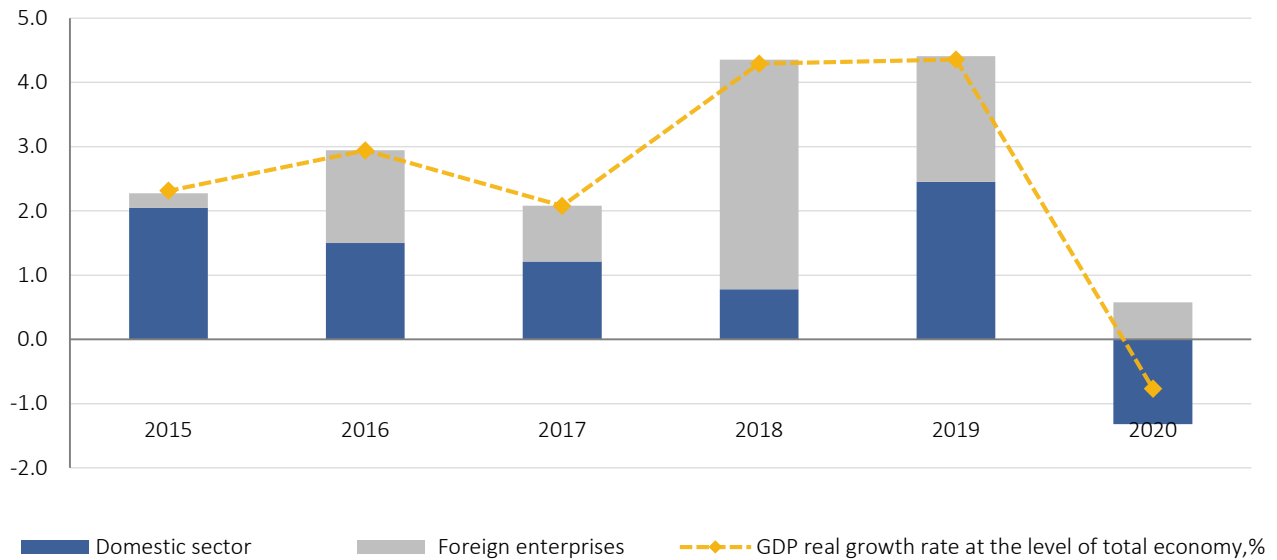
In the reference period one can already notice the positive effects of the measures of the economic policy and implemented fiscal consolidation – gross value added was cumulatively up at a rate of 16.1%, while the equivalent growth of investment amounted to 60.8%. Both domestic sector and sector of foreign enterprises, as integrating components of the total economy, recorded upwards tendencies. Even though the contribution to the growth of both components in years prior to the corona pandemic was positive, foreign enterprises generated a new value at considerably more dynamic rates (year-on-year increase of 8.7% versus 1.3%), exceeding in the average contribution to the growth of the domestic segment, contrary to which they participated four times less in the structure of the value added and investments. One can wonder what would be the growth of domestic enterprises if there was no positive synergy with the increasing foreign sector.

According to all the indicators, foreign enterprises have a potential to be the driving force of development – through continuous increase in the share in GDP, this sector generated in 2020 almost a fifth of the new value at the level of total economy, being

# Professional paper 1

an increase of the relative importance by 40% or 5.5 percentage points. In fact, the output of foreign enterprises determined the total economic growth significantly more than their proportion in the GDP structure (chart 2). The activity of this sector contributed largely to stronger economic dynamics in 2018 and 2019 with 3.5 pp. and 1.9 pp., respectively, but also to partial compensation of negative movements caused by the pandemic in 2020 by its positive contribution to a growth rate of 0.6 pp.

Chart 2. Contribution of the domestic sector and sector of foreign enterprises to GVA real growth, pp.

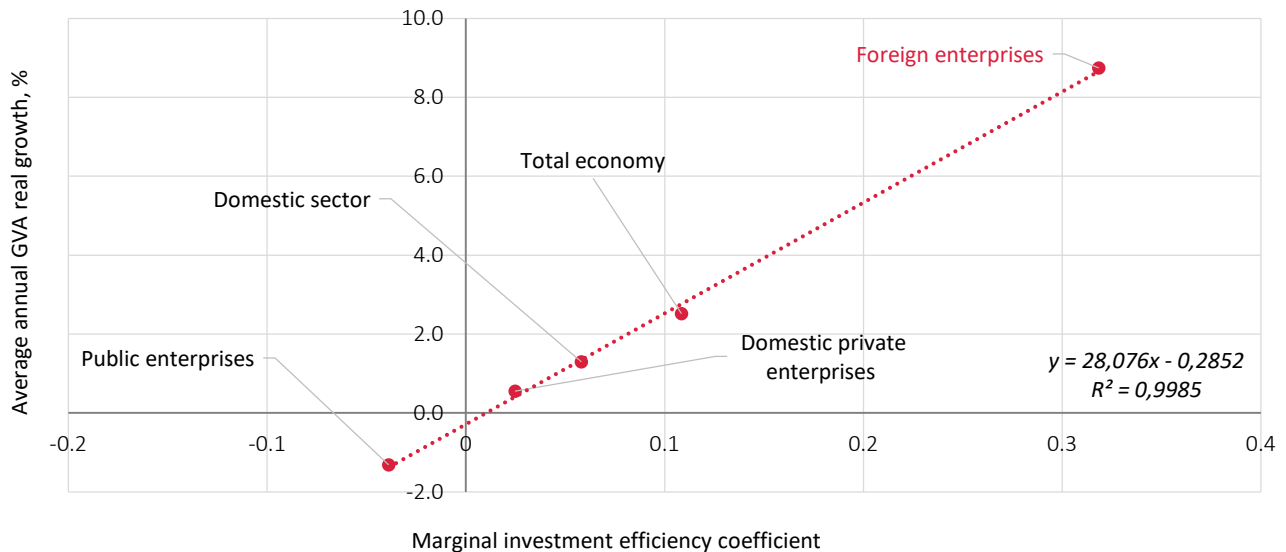


The main assumption for the sustainability of an increasing economic dynamics is certainly in its quality, not quantity. Continuous orienting of an important part of the newly generated value to the increase of capital volume without introducing technological progress can become counterproductive and lead to stagnation due to resource exhaustion by extensive growth. As far as this is concerned, foreign enterprises are however positioned far beyond the domestic ones – the effectiveness with which productive capacities are used, measured by a marginal coefficient of investment efficiency, amounts to 0.32 units in this sector (table 2), which is almost above the average of the total economy, and even five times more when compared with the domestic part.

The interdependence between the quality of the investment activity and real growth of the newly generated value is illustrated with empirical data and explanations via a linear regression model (chart 3) with a very high representativeness (obtained by regression line equation<sup>1</sup> 99.85% of functional link between relevant indicators are described). Even if the characteristic for the observed 'foreign' part of the economy is not part of the others, there is no important deviation of observations from the established regression line.

<sup>1</sup>  $y = 28.076x - 0,2852$  where  $x$  represents the value of the marginal investment efficiency coefficient, and  $y$  the corresponding GVA growth rate. The quantitative dependence between variations of relevant indicators in reality can be presented as follows: if the marginal investment efficiency coefficient increases by one unit, one can expect that the GVA growth rate in the observed activities will go up by 28.076 pp.

Chart 3. Investment efficiency in the Serbian economy by ownership structure, average for the period 2015–2020



Based on the positioning of relevant characteristics of aggregated sectors in domestic and foreign ownership on the presented regression line, one can notice that foreign enterprises are by far above the other segments as far as the achieved level of technological progress is concerned, so that expansion of their fixed capacities and increase of a relative importance would generate, with minimal investment, a considerable value added and raise the effectiveness of investment in the total economy.

On the lower end of the regression line, public enterprises were ranked worst regarding the defined characteristic. While the largest part of the economy is running in the area of positive indicators, public enterprises functions slightly under the limit of zero capital efficiency, i.e. the invested resources in this sector are not returned through the increase of the value added, but influence its decrease. As the movement of qualitative capital indicators points out serious difficulties met by a part of the economy, and which would not be neglected in future development plans, it is vital to launch a corresponding package of measures that would serve to overcome the noticed productive limitations, and to move the values of reference coefficients of this threatened segments on the efficiency scale in the zone of positive business results.

The comparison of business efficiency between different enterprises is not always simple to grasp because of the heterogeneity of their output, which characteristics are primarily subject to qualitatively different standards. While public investments follow planning proposition in infrastructure, private investments, whatever the origin, follow the market incentives and own plans. The role of the market is to recognize the opportunity for capital growing. When ownership parameter is included in the comparison, the question of rentability of resource consumption arises mainly, where the general tendency of the private sector towards a more rational business running is evident. In the same way, in the private sector it is clear that foreign enterprises that are competitive with the private ones dominate regarding the mentioned criterion so that it can be said that the behaviour of foreign enterprises, in many aspects, is more of 'a good host' than the behaviour of a part of the economy in domestic ownership. Just as obeying the laws and regulations that regulate business running in the national economic scope is not put into question, whatever the ownership structure of the capital, the compliance to fundamental economic rules of efficiency and rentability is a necessity if one tends to sustainable and dynamic growth and development. In this respect, it has been proved that resident status is not a corresponding warranty of success in the modern market competition nor the change of the ownership structure and resource sources in favour of the domestic factor cannot be an adequate or crucial measure of the correctness of the implemented development policy.

Therefore, if the use of the external financing component questions the sustainability of the existing investment consumption one should have in mind ultimately that the origin of financial resources (domestic or foreign, own or borrowed) is not crucial for economic growth, but the productive effects and quality of investment itself, i.e. the investment rentability. Of course, one cannot disregard completely the costs of capital for investment or ignore the situation when the borrowed part is constantly exceeding the total accumulative capacity of the economy causing instability in economic and financial flows. However, those moments fall in second plan before the main question of the efficiency of resource placement, in the great extent from failed investments to those that contribute to the acceleration of economic trends. Namely, if the capital is efficiently oriented, positive results are visible a macro level in all the segments, independently of the origin of the money. The same way, at micro level a series of economic stakeholders will see the diversified output of wisely invested resource by an investor (whether foreign or domestic). In contrast, resources spent for a purpose other than foreseen, whether being own or borrowed ones, domestic or foreign ones, led to the collapse of the substrat itself of social wealth, which has directly and indirectly (sooner or later) negative repercussion on all business levels.

Continuous existential valuation of enterprises in a global business atmosphere requires achieving a satisfactory macroeconomic dynamics with as lower as possible privation and investment effort. As FID directly or indirectly generate on the long-term in our economy higher rates of value added, it is logical to conclude (supported by empirical facts) that the domain of current economic flows in Serbia is still a priority one. Therefore it is unfounded to fear that by accepting this financing source 'one will go to a dead end', and that the domestic sector will be disregarded or pushed aside. On the contrary, the economic reality is that strong there is a strong feedback of positive tendencies of technical and technological progress integrated in the foreign capital, which is the most efficient lever for the development of all the segments of the national economy. In fact, this momentum of the investment cycle has launched the acceleration of economic flows, resulting in considerable lifting of the level of the total investment activity for about three fourth and in the increase of the volume of the gross domestic product by almost one fourth in the period after 2015 (in spite difficult conditions of business activities due to the corona virus pandemic in 2020 and 2021).

Despite the initial impulse of progress and the catalyst of socio-economic events, foreign direct investments are an infallible indicator of the tendency of economic growth. Namely, it is known that this type of investment strongly gravitates primarily towards more dynamic economies, so the status of Serbia as a more attractive destination is a clear confirmation of the worthiness of the current strategic orientation. Finally, the last word in appraising the efficiency of the implemented development policy should be that of relevant number, which in an unbiased and meritory way, from the viewpoint of efficiency and rentability, quantify our economic reality.

Authors: Edvard Jakopin and Nataša Čokorilo

## Convergence of productivity and living standards of transition countries to the EU

Convergence of productivity and living standards (GDP / capita) of transition countries to the EU in the period 2014-2020 took place with different dynamics, depending on the achieved level of development. Slovenia and Slovakia have the highest degree of convergence of living standards and productivity, but in the period 2014-2020. Romania and Bulgaria converged the fastest. Productivity convergence is lower and slower than living standard convergence. In terms of living standards, the Republic of Serbia converged towards the EU-27 by 4.4 percentage points on average (from 18.3% to 22.7% of the EU-27 average in 2020), and very slightly in productivity, by 2.2 percentage points (from 21.6% to 23.8% in 2020).

The productivity of the economy in the pre-recession period 2014-2019 was positive (3.3%), GDP growth (17%) was higher than employment growth (13.3%). While in the period of fiscal consolidation 2014-2017, productivity was negative (-1.6%), due to higher employment growth (9.2%) than economic growth (7.4%), after that, in the period of strong economic growth 2017-2019 (9%), which was two and a half times faster than employment growth (3.8%), productivity was 5%. In the recession 2020, productivity slightly decreased (-0.7%), as a result of a larger decline in GDP (-0.9%) than a decline in employment (-0.2%).

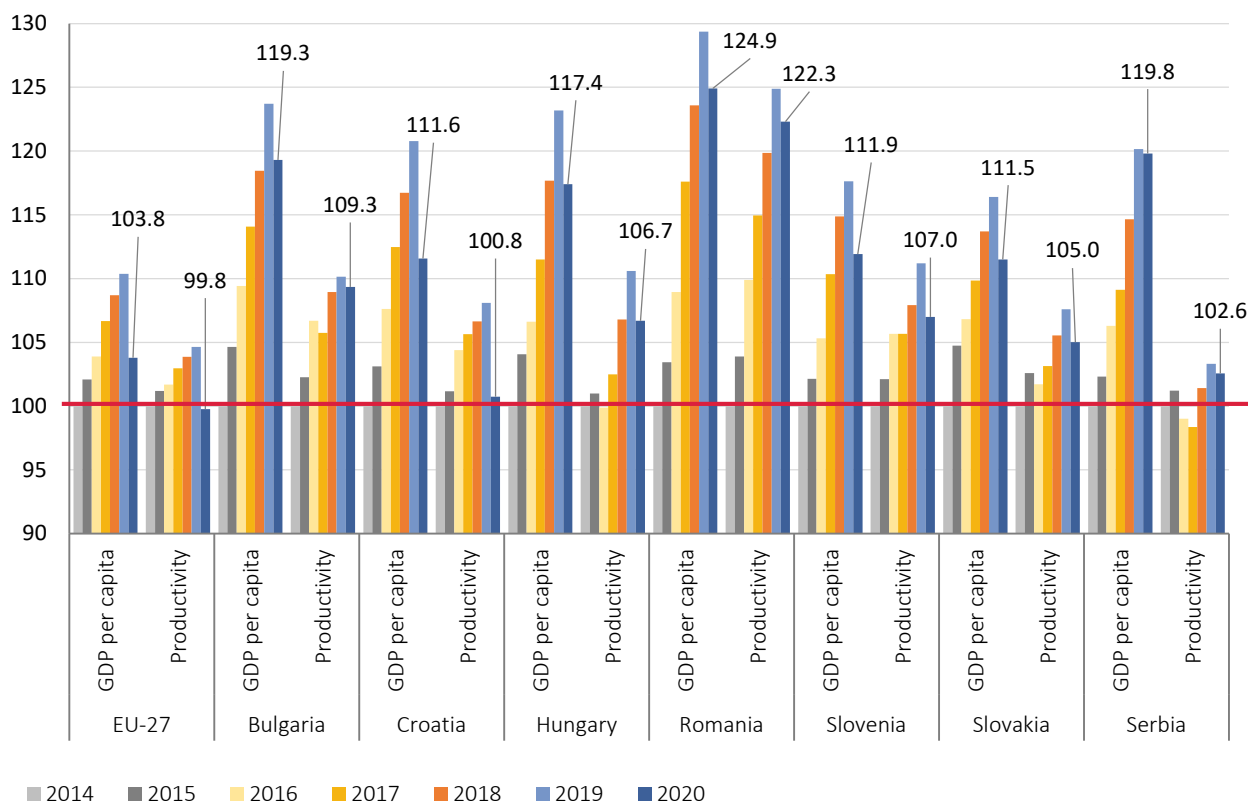
A comparative analysis of the productivity trend in the Republic of Serbia and in the EU-27, by subperiods, shows divergent trends in the period 2014-2017 (productivity growth in the EU-27 of 3% and a decline in the Republic of Serbia of -1.6%), convergence in the period 2017-2019 (5% and 1.6%), as well as the different impact of the recession in 2020 (strong decline in productivity in the EU-27 of -4.6%, as opposed to a slight decline in the Republic of Serbia of -0.7%). The productivity gap between the EU-27 average and transition countries remains large, as does the very slow effect of convergence. The results of the analysis of productivity by purchasing power show that all transition countries (except Slovakia) increased convergence (Romania by as much as 13.4 percentage points), while EU candidate countries deepened the productivity lag behind the EU-27 average.

The competitiveness of transition countries in the medium and long term period mainly depends on the convergence of economic growth and productivity towards developed countries, as well as the factors that affect these two variables. Extensive empirical research on a significant sample of countries has not conclusively confirmed that there is absolute convergence, i.e. that income per capita in underdeveloped countries grows faster than income per capita in more developed ones, but that convergence exists if smaller homogeneous groups of countries are analyzed (say OECD countries, EU developed countries, transition countries, etc.). However, if we include in the survey, in addition to GDP (absolute convergence), other factors, the results show that underdeveloped countries have more dynamic growth than developed ones, that there is a so-called conditional convergence and that the rate of such conditional convergence is constant: 2% annually (in theory of the so-called iron law of convergence)<sup>2</sup>. Survey has shown that there is a high degree of convergence at lower levels of observation (sector, area, branch)<sup>3</sup>. The generator of sustainable growth and living standards (GDP / capita) is productivity, primarily productivity in the manufacturing industry (tradable sector), due to the impact and effects of innovation and technical progress.

The analysis of living standards (GDP / capita) and productivity shows different degrees of convergence of the group of transition countries towards the EU-27 average, depending on the level of development achieved. Slovenia and Slovakia have the highest degree of convergence of living standards and productivity, but in the period 2014-2020. Romania and Bulgaria converged the fastest.

Chart 1. Convergence of living standards and productivity of transition countries towards the EU-27 average, 2014–2020

Real chain indices 2014=100



Source: Eurostat. For the calculation of productivity, the number of employees from the Labour Force Survey (aged 15 and over) was used, for the Republic of Serbia, according to 2014–2020 methodology.

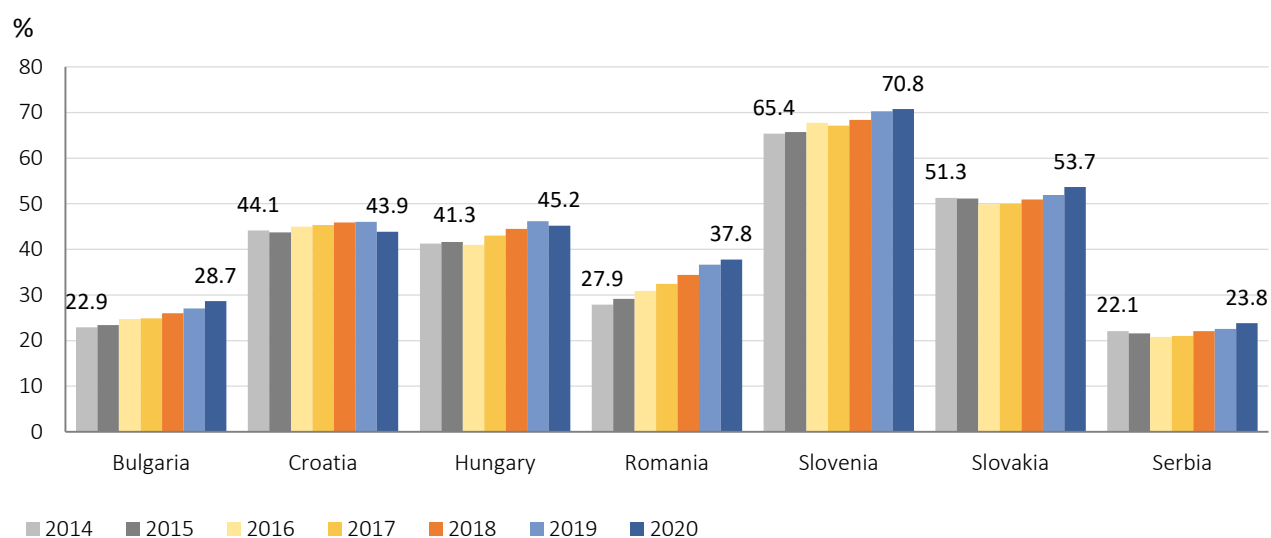
Real productivity in the EU-27 (average) in the period 2014–2020 actually did not change (a slight decrease of 0.2%), but the standard of living increased by 3.8%. All transition countries had a high degree of convergence of living standards compared to the EU-27 average, mostly Romania and Bulgaria, with 6.6 and five times faster GDP/per capita growth. than the EU-27 average (cumulative growth in Romania 25%, in Bulgaria 19%). In the Republic of Serbia, cumulative growth was 20% (5.2 times faster than the EU average), in Hungary 17%, Croatia, Slovakia and Slovenia 12%. Productivity convergence is lower than living standard convergence. The highest convergence of productivity is in Romania (rate of 22%), in Bulgaria 9%, Hungary and Slovenia 7%, Slovakia 5%, in the Republic of Serbia 2.6%, and in Croatia only 0.8%.

The impact of productivity on the growth of living standards is different in transition countries, primarily depending on the structure of their economies. In Romania, in the period 2014–2020, 1% of the average annual productivity growth generated 1.1% growth of living standards, in Hungary, the ratio is 1: 2.6; in Slovakia 1: 2.3; Bulgaria 1: 2.1; Slovenia 1: 1.7 and in the Republic of Serbia 1: 7.6%.

The comparative analysis of the productivity of the EU-27 average and transition countries shows a large productivity gap between the EU-27 average and transition countries, as well as a very slow convergence effect. Slovenia has the highest degree of convergence of real productivity to the EU average (70.8% of the EU average, convergence of 5.4 p.p.) followed by Slovakia (53.7%, convergence of 2.4 p.p.). Romania converges the fastest (by 10 percentage points, from 27.9% to 37.8% of the EU average) and Bulgaria (by 5.8 percentage points, from 22.9% to 28.7% of the EU average). The Republic of Serbia converged by 2.2 percentage points. (from 21.6% to 23.8%), while Croatia slightly diverged (by 0.2 percentage points, from 44.1% to 43.9%).



Chart 2. Productivity convergence of transition countries (EU-27 = 100)



Source: Eurostat.

Productivity of the economy in the pre-recession period 2014–2019 was positive (3.3%), GDP growth (17%) was higher than employment growth (13.3%). Due to the unresolved consequences of the 2009 crisis and unconsolidated public finances, productivity in the period 2014-2017 was negative (-1.6%), employment growth (9.2%) was faster than economic growth (7.4%). After the completion of fiscal consolidation, strong economic growth in 2017-2019 (9%) was two and a half times faster than employment growth (3.8%), which affected high productivity growth rate of 5%. In the recession 2020, the productivity of the economy slightly decreased (-0.7%), as a consequence of a larger GDP decline (-0.9) than employment decline (-0.2%).

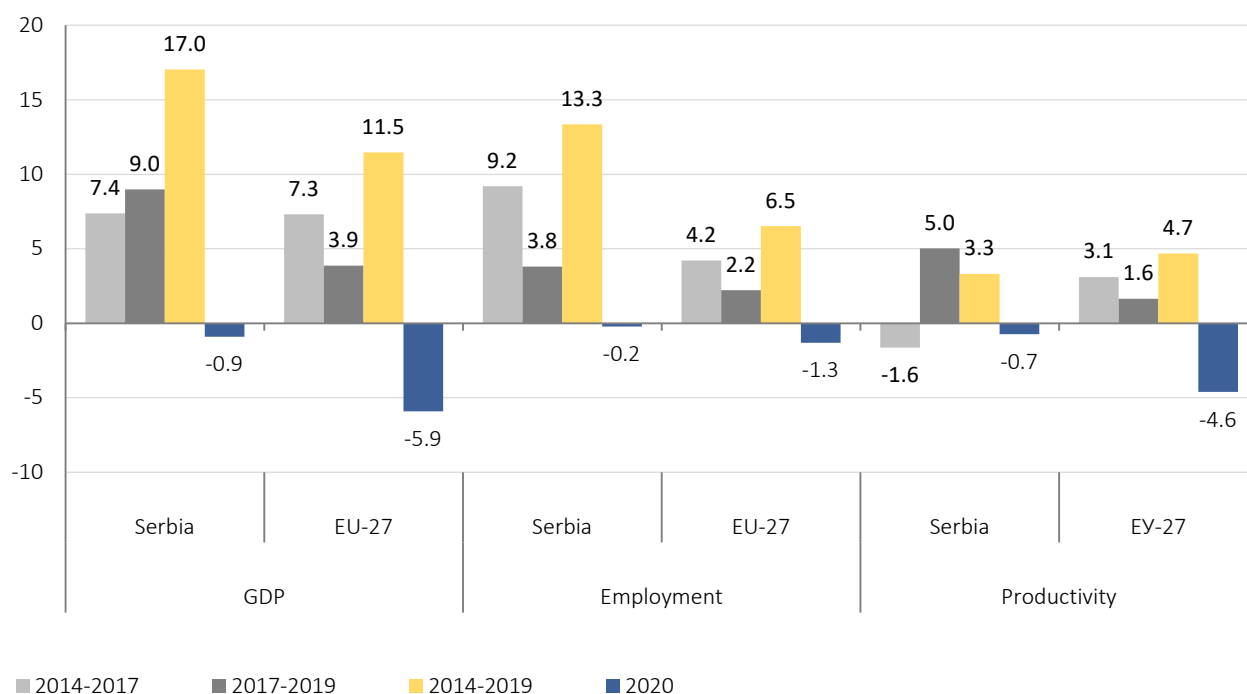
Table 6 GDP, employment and productivity in the Republic of Serbia, by sub periods (growth rates),%

Sub periods	GDP	Employment	Productivity
2014 – 2017	7,4	9,2	-1,6
2017 – 2019	9,0	3,8	5,0
2014 – 2019	17,0	13,3	3,3
2020 – 2019	-0,9	-0,2	-0,7

Source: Authors, based on SORS data. Note: Employment data are from LFS, referring to the contingent of population aged 15 and over.

The comparative analysis of the productivity trend in the Republic of Serbia and in the EU-27, by sub periods, shows divergent trends in the period 2014-2017 (productivity growth in the EU-27 of 3% and a decline in the Republic of Serbia of -1.6%), convergence in the period 2017-2020 (5% and 1.6%), as well as the different impact of the recession in 2020 (strong decline in productivity in the EU-27 of -4.6%, as opposed to a slight decline in the Republic of Serbia of -0.7%). Generally speaking, productivity in the Republic of Serbia has been strongly influenced by employment growth throughout the period.

Chart 3. Productivity trends in the Republic of Serbia and the EU-27 by sub periods, 2014–2020



Source: Authors, based on SORS and Eurostat data. Note: Employment data for Serbia are from LFS referring to the contingent of population aged 15 and over.

The analysis of the competitive position of transition countries through the [decomposition of GDP per capita indicators](#) shows that high productivity, without high employment, does not mean higher, especially not sustainable economic growth.

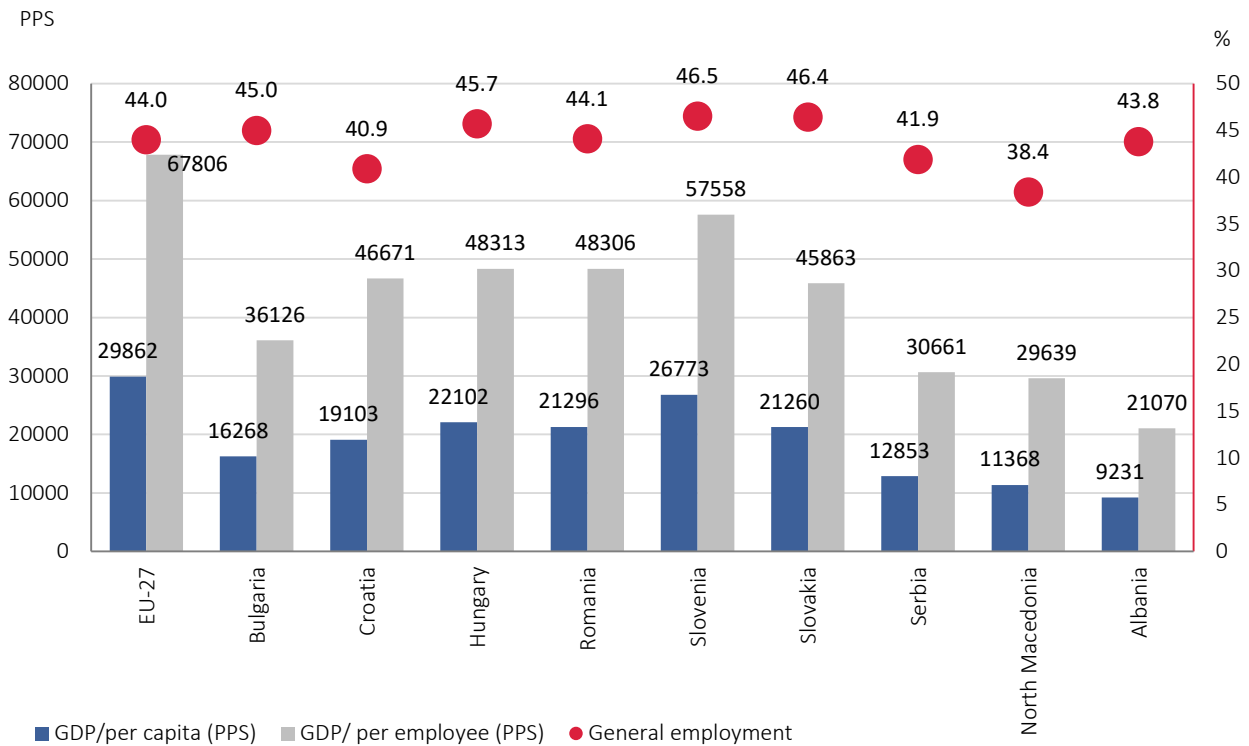
$$\frac{\text{GDP (PPS)}}{\text{Population number}} = \frac{\text{GDP (PPS)}}{\text{Employed}} * \frac{\text{Employed}}{\text{Populationj number}}$$

PRODUCTIVITYGENERAL EMPLOYMENT

Considering that the degree of convergence/ divergence (catching up / lagging behind) the transition countries most illustratively reflects the decomposition of GDP per capita in terms of purchasing power, GDP per capita (PPS<sup>2</sup>) was used in the comparative analysis of the comparison of transition countries with the EU-27 average. Disaggregated GDP per capita (PPS) consists of productivity (GDP / PPS employees) and general employment (employees aged 15 and over / population number). In such a way, it is possible to consider the impact of productivity and employment on living standards.

**In relation to the average productivity in the EU (GDP / employee. PPS), the transition countries in the period 2015-2020 had different dynamics of catching up.** With the exception of Slovakia (productivity decline from the EU-27 average by 10.6 percentage points), EU transition member states have reduced the gap: Romania by 15.2 p.p. (from 56% of the EU-27 average to 71.3%), Slovenia by 5.4 p.p. (from 79.5% to 84.9%), Bulgaria by 4.8 p.p. (from 48.5% to 53.3%), Croatia by 0.7 p.p. (from 68.1% to 68.8%) and Hungary by 1.3 p.p. (from 69.9% to 71.3%). On the other hand, the EU candidate countries deepened the divergence in productivity with the EU-27 average: Albania by -3.5 p.p. (from 34.5% of the average EU productivity in 2015 to 31.1% in 2019), the Republic of Serbia by -0.8 p.p. (from 46% to 45.2%) and the Republic of North Macedonia by -1.8 p.p. (from 45.5% to 43.7%).

Chart 4. Decomposition of GDP / per capita (PPS), 2020



Source: Eurostat.

Although workers in Croatia are by 29% more productive than workers in Bulgaria, due to greater employment in Bulgaria (45% to 41% in Croatia), the lag in Bulgaria's standard of living (GDP per capita, in PPS) behind Croatia is 15% in 2020. From a macroeconomic point of view, high general employment in Bulgaria is not socially justified, as workers' productivity is very low, so a decline in employment can be expected in the future. A similar comparison applies to the Republic of Serbia: the lag in productivity (in terms of purchasing power) behind Croatia by 1/3 is the reason for lagging behind by 1/3 in living standards (general employment is similar). In Slovenia, high percentage of general employment is accompanied by high productivity of the hired worker. For sustainable economic growth, for a longer period, it is necessary that employment growth follows productivity growth.

Analysis of the convergence of productivity and living standards of transition countries to the EU in the period 2014-2020 shows an upward trend, but of varying intensity, the highest degree of convergence of living standards and productivity have Slovenia and Slovakia, but the fastest convergence dynamics had Romania and Bulgaria. The convergence of living standards of transition countries to the EU average is faster than the convergence of productivity. The convergence of the Republic of Serbia towards the EU average is at a slightly lower level in terms of living standards than the convergence of productivity, but in the period 2014-2020, it was twice faster (by 4.4 p.p., from 18.3% in 2014 to 22.7% of the EU average in 2020) than productivity convergence (by 2.2 percentage points, from 21.6% to 23.8% of the EU average in 2020). The recession in 2020 had strong impact on the decline of living standards and productivity in the EU, and most transition countries, due to a smaller decline, increased the degree of convergence of both living standards and productivity. Despite continued productivity growth, the gap between transition countries and the EU still remains large.

# 1. Macroeconomic forecasts

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

## 1.1. Forecast of the construction activity of Serbia<sup>5</sup>

The year-on-year construction GVA in 2021 (14.0%) was determined by the growth of the value of the construction infrastructure and non-residential buildings (particularly from Q2 to the end of the year). The projects that contributed to this growth were: increased construction of residential and business complexes in the territory of the whole Serbia (especially in Belgrade and Novi Sad), the highway Belgrade – South Adriatic (the section Preljina – Požega), Morava corridor, highway Belgrade – Sarajevo (the section Kuzmin – Rača), modernization of the railway Belgrade – Novi Sad, expressway Ruma-Šabac-Loznica, etc.

The largest value of construction works done was realized by: China Civil Engineering Construction Corporation (CCCC), China Railway international CO, Strabag, W.D. Concord WestRZD Internacional Ogranak and Tasyapi Insaat Taahhut Sanayi ve Ticaret A.S.

**Table 1.1. Realized and forecast year-on-year construction GVA growth rates (%)**

	2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Real values	23.6	-0.5	-15.0	-7.8	16.1	14.6	15.7	10.9	-
Forecast values (GRIPAS)	18.0	-9.5	-5.6	-20.7	-2.7	38.0	26.2	16.8	0.1
Relative deviation the real values from the forecast ones,, % (absolute values)	2.4	6.4	13.1	14.6	21.1	14.7	8.2	5.1	

Remark: Relative deviation of the forecast value from the realised one by (+/-) 5% is considered an interval limit of validity of a given forecast (95-percent interval of reliability of the indicator). The forecast values indicated in the table were published in the previous issues of *Trends*. Even though in 2019 the real values were upward up-dated, the deviations of real data to the realised one were kept, which were measured at the moment of the forecasts, knowing that the previous forecasts cannot be revised. Absolute values represent non-negative values.

<sup>5</sup> As already mentioned in the previous issue of *Trends (Q1 Trends 2021)*, starting from the second half of 2020 some irregular factors influenced considerably construction GVA trends, which could not be attributed to seasonal components nor to trend components, nor to the movement of “satellite variables” (variables related to construction). The set aside irregular component (using X-13 ARIMA algorithm) of construction GVA points out the importance of this component also in observations for Q1 2021 and Q2 2021 (when, among other things, the largest deviation to the given forecasts occurred). Such circumstances made construction GVA forecast rather more complex and are mostly a result of the (already mentioned) subsequent methodological coverage of certain realised construction works during the processing of reporting units results, which were not available at the moment of forecasts production. Consequently the results of GRIPAS indicator will not be presented for the moment being, not until its implementation is improved methodologically, while the presented forecasts for construction GVA will be derived using alternative models.

# 1. Macroeconomic forecasts

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

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Construction GVA, annual growth rate, %</b>	<b>11.8</b>	<b>20.4</b>	<b>39.5</b>	<b>52.1</b>	<b>23.6</b>	<b>-0.5</b>	<b>-15.0</b>	<b>-7.8</b>	<b>16.1</b>	<b>14.6</b>	<b>15.7</b>	<b>10.9</b>
<b>Buildings, pp.</b>	<b>6.4</b>	<b>9.1</b>	<b>6.2</b>	<b>15.2</b>	<b>7.6</b>	<b>-1.0</b>	<b>1.7</b>	<b>0.2</b>	<b>7.5</b>	<b>3.5</b>	<b>3.4</b>	<b>4.7</b>
<i>Residential buildings</i>	2.5	5.0	1.9	5.9	0.3	-0.6	3.2	1.5	5.5	0.9	-0.4	0.6
<i>Non-residential buildings</i>	3.9	4.1	4.3	9.3	7.3	-0.4	-1.5	-1.4	1.9	2.6	3.8	4.1
<b>Other buildings, pp.</b>	<b>5.5</b>	<b>11.3</b>	<b>33.3</b>	<b>37.0</b>	<b>15.9</b>	<b>0.5</b>	<b>-16.6</b>	<b>-7.9</b>	<b>8.6</b>	<b>11.1</b>	<b>12.3</b>	<b>6.2</b>
<i>Transport infrastructure, pp.</i>	2.4	-0.2	13.3	17.5	4.0	0.8	-7.5	-3.6	5.4	11.7	12.4	12.1
<i>Pipelines, communication and electricity lines, pp.</i>	2.5	12.5	19.9	18.8	11.2	0.2	-11.2	-7.6	0.9	-2.3	0.6	-4.3
<i>Complex construction on industrial sites, pp.</i>	0.7	-0.7	0.1	0.5	-0.1	0.0	0.2	2.6	1.5	1.1	-0.6	-2.2
<i>Other civil engineering not elsewhere classified, pp.</i>	-0.2	-0.3	0.0	0.1	0.9	-0.5	1.9	0.7	0.8	0.5	0.0	0.6
<b>Contribution of construction GVA to the annual GDP growth rate, pp.</b>	<b>0.4</b>	<b>0.9</b>	<b>1.9</b>	<b>2.6</b>	<b>0.9</b>	<b>0.0</b>	<b>-1.0</b>	<b>-0.6</b>	<b>0.7</b>	<b>0.8</b>	<b>0.9</b>	<b>0.7</b>

# 1. Macroeconomic forecasts

## 1.2. Industry indicator of the economic activity of Serbia – INDIPAS

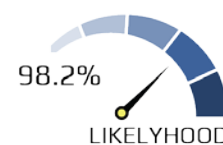
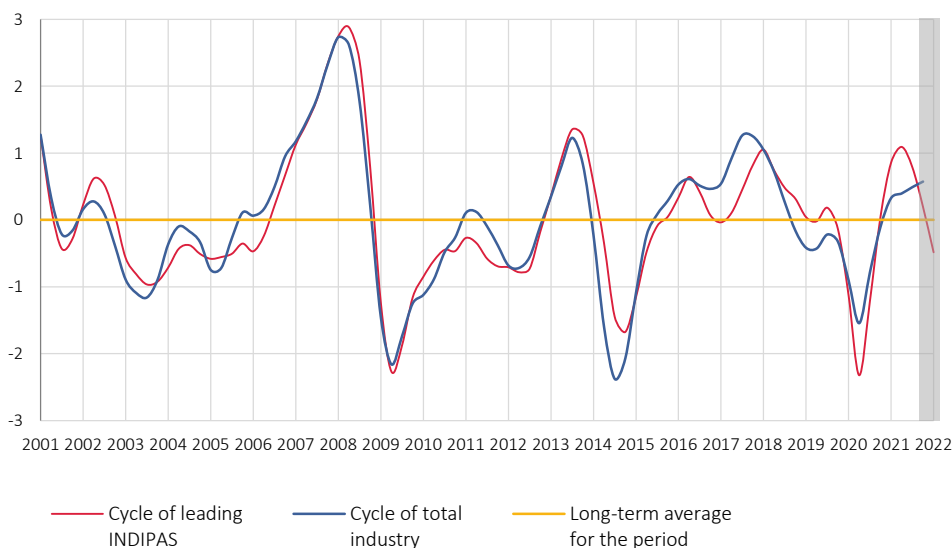


Chart 1.2. Comparison of the cycle of the leading indicator INDIPAS and physical volume of total industry, leveled out and standardized data, deviation from the average for the period (%)



When applying the leading indicator INDIPAS, a year-on-year growth of about -3.0% for industrial production was forecast for Q1 2022. Beside the marked influence of the growth of the division Mining of metal ore, it is estimated that the year-on-year fall of total industry in Q1 2022 will be nonetheless impacted by the fall in the section Electricity, gas, steam and air conditioning supply, and by divisions Manufacture of coke and refined petroleum products, Manufacture of wood of wood products, and Manufacture of furniture.

Table 1.3. Realized and forecast year-on-year industry GVA growth rates (%)

	2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Real values	4.1	-7.8	3.2	1.4	3.9	15.3*	2.3*	4.3	-
Forecast values (INDIPAS)	3.2	-10.0	1.0	2.0	3.6	1.0	0.1	1.0	-3.0
Deviation of the real values from the forecast ones, % (absolute values)	1.1	2.3	2.2	0.5	0.4	4.6	2.5	3.3	-

Remark: Relative deviation of the forecast value from the realized one by (+/-) 5% is considered an interval limit of validity of a given forecast (95-percent interval of reliability of the indicator). The forecast values indicated in the table were published in the previous issues of *Trends*. Absolute values represent non-negative values.

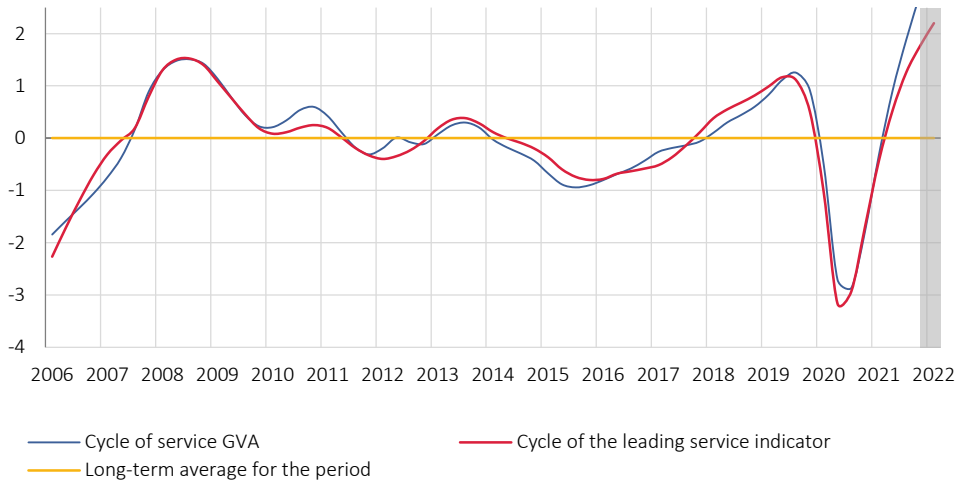
\*Official data for the for the physical volume of total industry from May to September 2021 were up-dated upward at the end of September, which was not done at the moment of producing forecasts. This is a result of methodological corrections due to a subsequent inclusion of new reporting units, primarily from mining and quarrying (exploitation of copper and gold ores in the mine of Čukara Peki of the Chinese enterprise Zijin), manufacture of spare parts for automobiles, due to the correction of the results from the mentioned months of the already included reporting units in the manufacture of textiles and manufacture of other non-metallic mineral ores except machinery. Consequently, as the forecast values cannot be up-dated in the past, one has kept the deviations of the forecast values to the realised ones (based on which forecasts have been produced), and which were valid before the changes in the realised values occurred.

# 1. Macroeconomic forecasts

## 1.3. Service indicator of Serbia



Chart 1.3. Comparison of the cycle of the leading service indicator and service GVA, leveled out and standardized data, deviation from the average for the period (%)



Based on the leading service indicator the year-on-year growth of services is estimated. This growth is expected to be mostly conditioned by the growth of services in the divisions Arts and recreation, Tourism and catering trades, Wholesale trade and Health.

Table 1.4. Realized and forecast year-on-year service GVA growth rates (%)

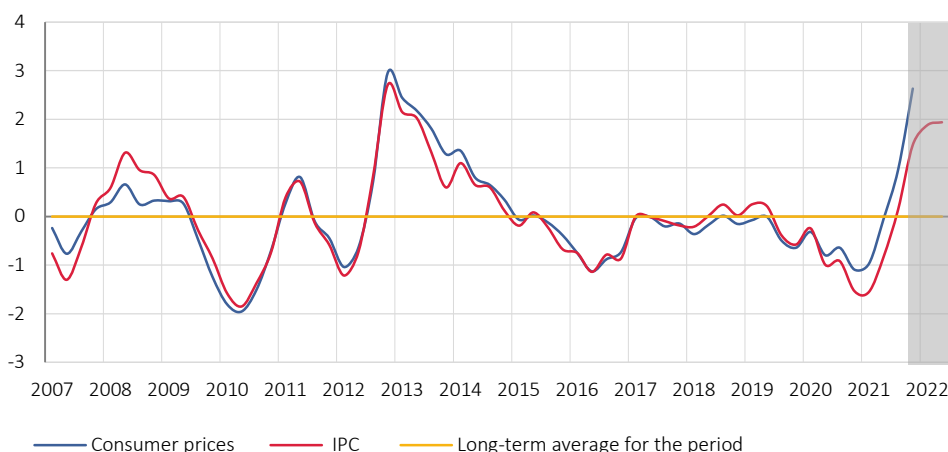
	2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Real values	5.2	-6.8	-1.8	-1.0	1.0	14.4	10.3	9.0	-
Forecast values	4.3	-5.0	-0.5	-2.0	-1.5	14.7	9.5	9.2	7.4
Deviation of the real values from the forecast ones, % (absolute values)	0.6	2.1	1.6	0.7	2.4	0.3	0.7	0.2	-

Remark: Relative deviation of the forecast value from the realized one by (+/-) 5% is considered an interval limit of validity of a given forecast (95-percent interval of reliability of the indicator). The forecast values indicated in the table were published in the previous issues of *Trends*. Absolute values represent non-negative values.

# 1. Macroeconomic forecasts

## 1.4. SORS model of consumer price forecast

Chart 1.4. Comparison of the cycle of the composite leading consumer price indicator (CPI) and total retail consumer prices in Serbia, leveled out and standardized data, deviation from the average for the period



Based on the composite leading consumer price indicator (CPI), a year-on-year growth of about 8.5% is expected in Q1 2022, and in Q2 2022 of about 8.0%. The growth of total consumer prices are expected to be still conditioned in Q1 and Q2 2022 by the increase in the prices of food and non-alcoholic beverages, fuels and by the prices of electricity, gas and other fuels (primarily by solid fuels and electricity for households).

Table 1.5. Leading composite indicators of the forecast of total consumer prices for Q1 2022 and Q2 2022 (%)

Year-on-year growth rate	Indicator of fuel price (CPI-G) <sup>1</sup>	Indicator of the price of food and non-alcoholic beverages (CPI-H) <sup>2</sup>	Indicator of tobacco price (CPI-D) <sup>3</sup>	Total consumer prices (CPI) <sup>4</sup>
Q1 2022	20.5	13.1	6.7	<b>8.5</b>
Q2 2022	18.3	11.4	6.8	<b>8.0</b>

<sup>1</sup> CPI-G is a weighted composite leading indicator that contains information on the movement of the most relevant indicators influencing oil price in Serbia, and that in its movement is ahead of the price of fuels and lubricants in Serbia by about two months. The indicator covers: the world price of *BRENT* crude oil, value of *WTI* crude oil futures (type *Cushing Oklahoma*), average price of American *WTI* crude oil (in first purchase from oil fields) dollar to euro ratio, stocks in the production of crude oil in the territory of Serbia and import of oil, oil refined products in Serbia.

<sup>2</sup> An analysis of food price trends in Serbia has allowed to obtain the composite leading indicator of food price (CPI-H), which main goal is the forecast of food price for the next three months. After having analyzed a large number of variables, several ones with the best leading forecast characteristics for food price in Serbia have been singled out: harmonized food price index in Hungary, average purchase price of products of crop producers, import of the section Manufacture of food products, import of milk, dairy products and eggs, stocks of beef and veal, retail price index of the total basket of vegetables.

<sup>3</sup> The indicator of tobacco price is formed based on the trend of excise on tobacco and producers' tobacco prices for domestic market, which proved to be the best for forecasting the variability of the price of tobacco and tobacco products in Serbia.

<sup>4</sup> The forecast of retail prices trends in the final phase represents the integration of previously obtained results of the leading indicators of retail prices of the analyzed groups of products: fuel (CPI-G), food and non-alcoholic beverages (CPI-H) and tobacco (IPC-D). The second-stage, composite and weighted aggregation of the above described indicators has allowed to derive a new composite leading indicator (abbreviated IPC), which aim is to forecast retail consumer prices for one to two quarters ahead.



# 1. Macroeconomic forecasts

Table 1.6. Deviation of the realized values of total consumer prices from their forecasts

Year-on-year growth, %	2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Consumer prices, realized values</b>	<b>1.8</b>	<b>1.0</b>	<b>2.0</b>	<b>1.6</b>	<b>1.4</b>	<b>3.2</b>	<b>4.4</b>	<b>7.3</b>
<i>Forecast values, one quarter before the realization</i>	1.9	0.7	1.8	1.9	1.3	2.9	3.7	7.3
<i>Forecast values, two quarters before the realization</i>	1.2	1.2	1.0	2.8	2.0	2.1	3.6	4.3
Forecast values, one quarter before the realization, deviation from the realization, absolute values, %	0.1	0.3	0.2	0.3	0.1	0.3	0.7	0.0
Forecast values, two quarters before the realization, absolute values,	0.5	0.2	0.9	1.2	0.6	1.1	0.8	3.0

Remark: Relative deviation of the forecast value from the realized one by (+/-) 5% is considered an interval limit of validity of a given forecast (95-percent interval of reliability of the indicator). The forecast values indicated in the table were published in the previous issues of *Trends*. Absolute values represent non-negative values.

## 1.5. Summary of the obtained results of the forecasts of the leading indicators by GVA section for Q1 2022

Table 1.7. Forecast of the GVA of selected sections and their estimated contributions to the GDP for Q1 2022

Q1 2022	Agriculture	Taxes and contributions	Industry	Construction	Services
Quarterly growth rates, %	0.0	7.1	-3.0	0.1	7.4
Contributions to the GDP growth rate(pp.)	0.0	1.1	-0.6	0.0	3.9

Remark: SORS forecast.

## 2. Gross domestic product

In the fourth quarter of 2021, GDP real increase of 7.0% was recorded relative to the same period last year. The service section, excluding trade was the leading factor of GDP positive trend in this quarter (with 3.4 p.p.), followed by trade and section of industry and water supply, with 1.2 and 0.8 p.p., respectively.

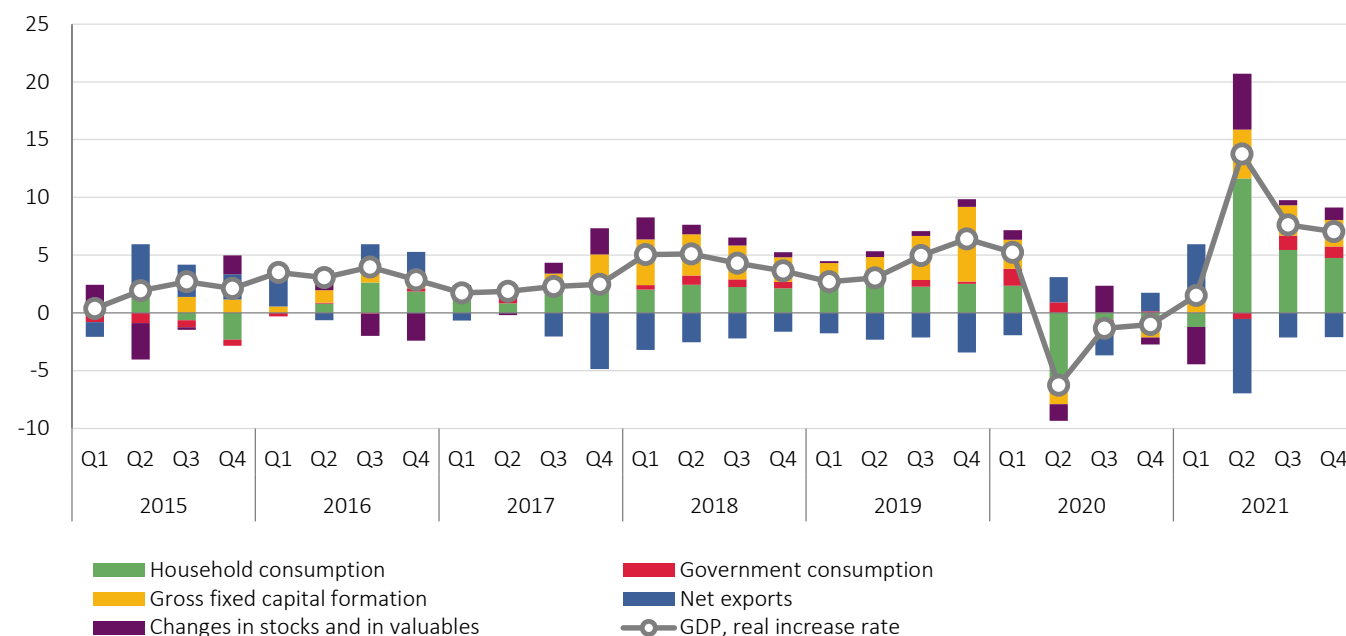
Real growth of gross domestic product in 2021, obtained on the basis of quarterly calculation, amounted to 7.4% compared to the previous year.

Observed by expenditure aggregates, in the fourth quarter of 2021, relative to the same period last year, Household consumption, with realized growth of 7.3%, influenced positive GDP trend with 4.8 p.p. Investment activity was increased by 9.8% relative to the same period last year (contribution to GDP was 2.3 p.p.). Export and import growth rates of 13.9% and 15.5%, respectively, resulted in positive contribution to GDP of 7.1 p.p. and 9.2 p.p., respectively (Table 2.1).

**Table 2.1. GDP – expenditure aggregates, real inter-annual growth rates, Q1 2019 – Q4 2021 (%)**  
(comparison with the same period of the previous year)

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>GDP</b>	<b>2.7</b>	<b>3.0</b>	<b>5.0</b>	<b>6.4</b>	<b>5.2</b>	<b>-6.3</b>	<b>-1.3</b>	<b>-1.0</b>	<b>1.5</b>	<b>13.7</b>	<b>7.6</b>	<b>7.0</b>
Household consumption	3.8	4.0	3.3	3.6	3.5	-7.9	-0.9	-1.9	-1.9	17.1	8.1	7.3
Government consumption	2.0	1.3	3.6	1.0	8.8	5.4	-3.1	0.9	0.2	-2.9	7.8	5.8
Gross fixed capital formation	7.7	9.1	18.7	30.5	13.0	-11.1	-3.4	-3.2	8.0	21.4	12.2	9.8
Exports	7.0	7.3	8.1	8.2	5.3	-18.8	-6.6	3.8	8.2	36.3	22.4	13.9
Imports	9.0	10.2	10.7	12.5	7.6	-19.6	-2.8	0.6	-0.2	44.2	22.8	15.5

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



## 2. Gross domestic product

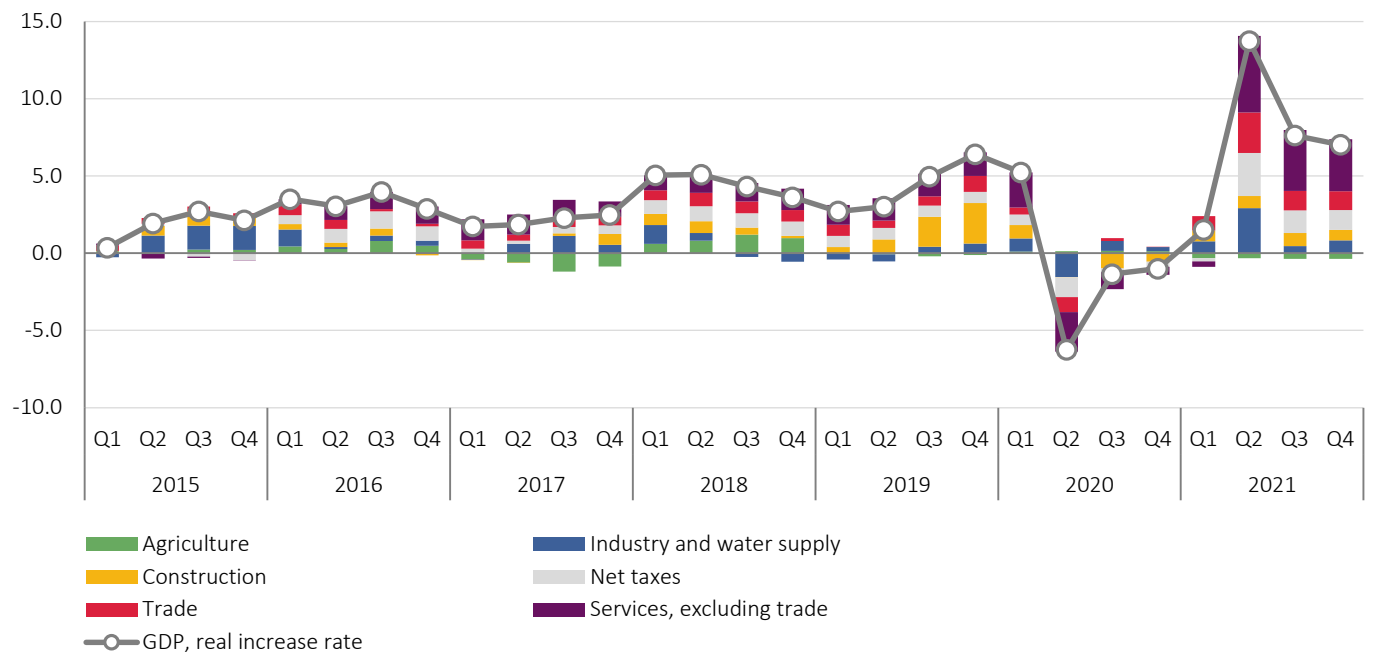
Observed from the **production side**, the positive contribution to GDP increase in Q4 2021 resulted from increased activity in service section, excluding trade, with 3.4 p.p.

Significant positive contribution to GDP trend was provided by trade and section of industry and water supply (with 1.2 p.p. and 0.8 p.p., respectively).

**Table 2.2. GDP – production side, real inter-annual growth rates, Q1 2019 – Q4 2021 (%)**  
(changes to the same period of the previous year)

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>GDP</b>	<b>2.7</b>	<b>3.0</b>	<b>5.0</b>	<b>6.4</b>	<b>5.2</b>	<b>-6.3</b>	<b>-1.3</b>	<b>-1.0</b>	<b>1.5</b>	<b>13.7</b>	<b>7.6</b>	<b>7.0</b>
Agriculture	-1.4	-2.0	-1.8	-1.3	2.1	2.4	2.2	2.0	-5.6	-5.1	-5.3	-5.5
Industry and water supply	-1.6	-2.1	2.1	3.1	4.1	-7.8	3.2	1.4	3.9	15.3	2.3	4.3
Construction	11.8	20.4	39.5	52.1	23.6	-0.5	-15.0	-7.8	16.1	14.6	15.7	10.9
Trade	6.5	4.2	5.2	8.7	4.0	-8.5	1.6	0.1	8.5	23.7	10.9	10.4
Services, excl. trade	3.1	3.6	3.8	4.0	5.4	-6.4	-2.8	-1.3	-0.9	11.9	10.1	8.7
Net taxes	4.3	4.2	4.2	4.2	3.9	-7.2	-1.5	-1.9	-1.2	16.1	8.7	7.7

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

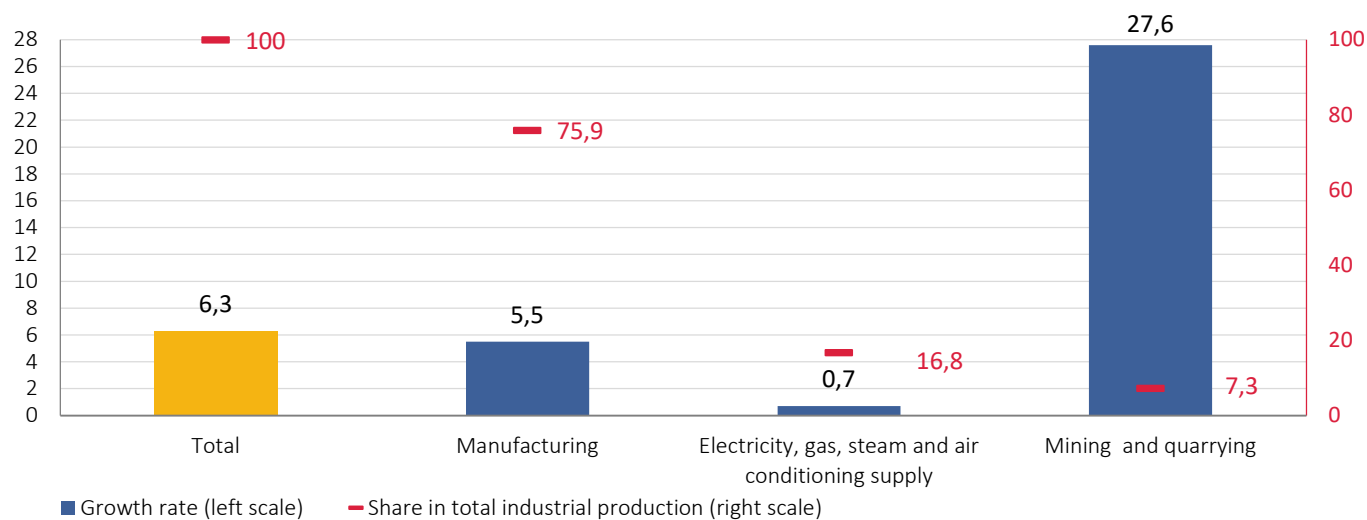


# 3. Industrial production

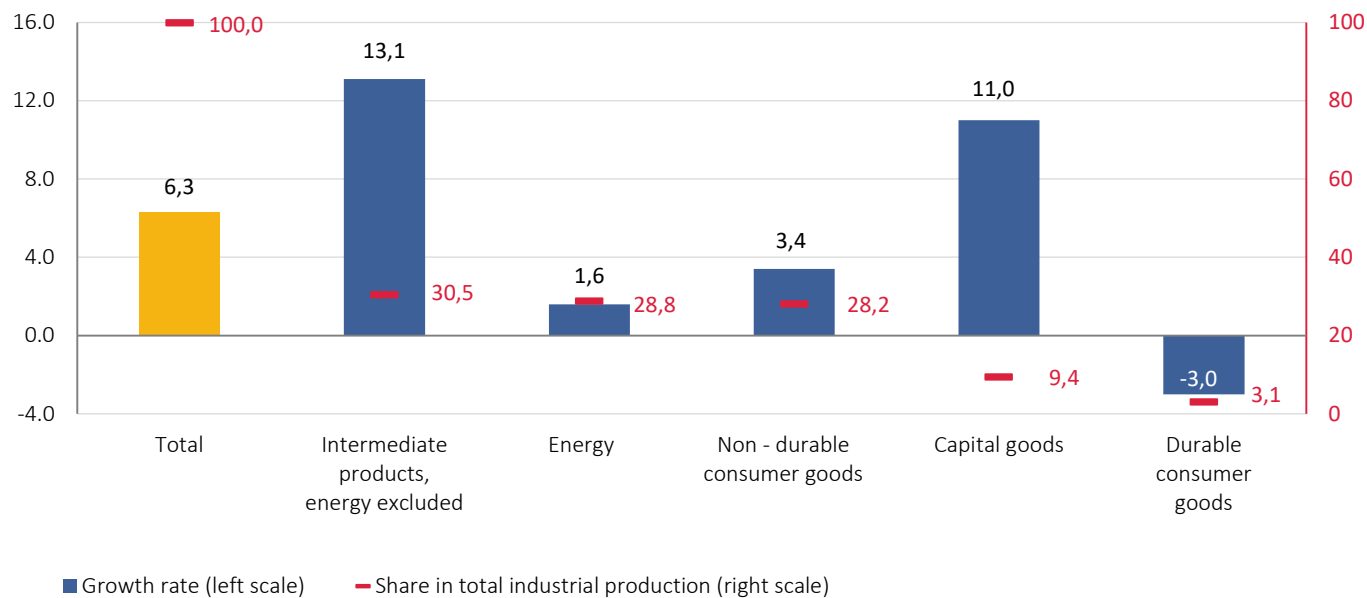
## 3.1. Total industrial production

Total industrial production in Serbia, in 2021 increased by 6.3% relative to 2020. Growth was noted in all sections: Manufacturing (5.5%), Electricity, gas, steam and air conditioning supply (0.7%), and in Mining and quarrying, (27.6%).

**Chart 3.1. Cumulative trends of total industry and its sections, growth rates (%)**  
(2021 relative to 2020)



**Chart 3.2. Industrial production growth rates, by MIGS (%)**  
(2021 relative to 2020)



## 3. Industrial production

In 2021, the greatest contribution to realized industrial growth was provided by the section of Manufacturing (4.2 p.p.). Contribution of Mining and Quarrying was 2.0 p.p.. and of Electricity, gas, steam and air conditioning supply 0.1 p.p.

**Table 3.1. Industrial production, indices (%)**

(comparison relative to the same period of the previous year)

	2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 <sup>1</sup>
Industrial production – total	98.1	97.4	102.2	103.4	104.5	92.4	103.3	101.5	104.2	116.0	102.6	103.7	<b>101.0</b>
Manufacturing	97.7	96.5	102.3	103.9	106.3	92.1	102.4	100.2	103.2	117.0	100.4	102.9	<b>100.5</b>
Electricity, gas, steam and air conditioning supply	100.2	100.0	99.9	101.8	96.9	91.3	109.1	107.9	109.1	107.5	96.0	90.6	...
Mining and quarrying	96.8	101.3	105.2	101.5	108.9	98.5	101.3	102.0	109.0	124.6	140.8	142.9	...

<sup>1</sup> Prognoses (obtained on the basis of time series analysis models).

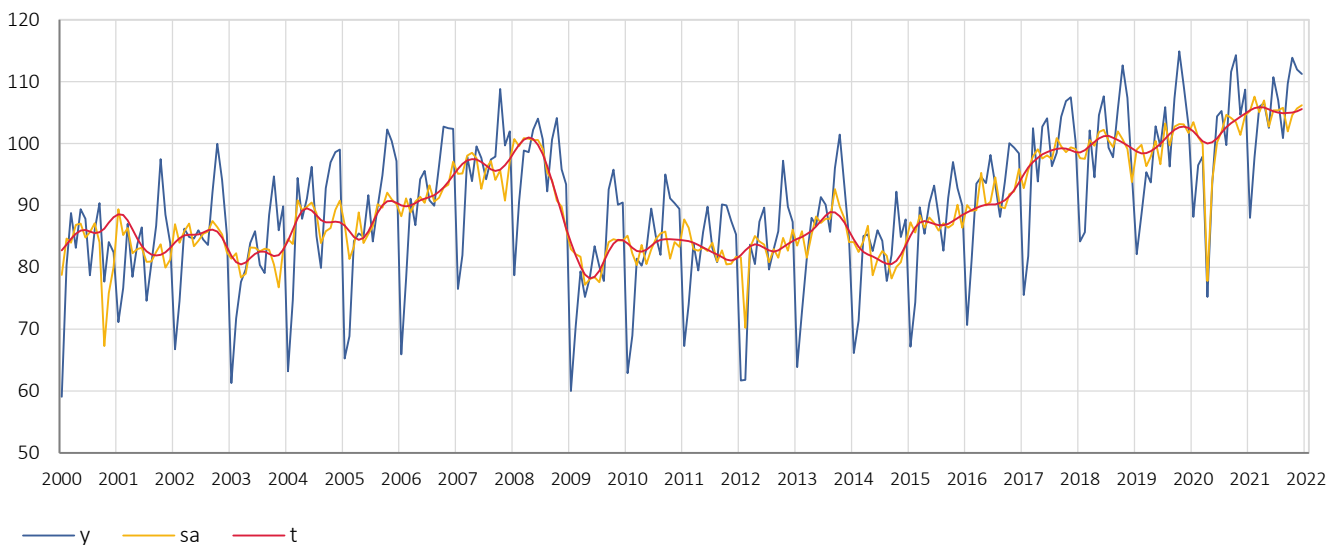
### 3.2. Manufacturing (C)

(share of 75.9% in total Industrial production index)

Manufacturing trend, presented in trend- cycle component in the fourth quarter of 2021, shows the slight increase relative to the previous quarter. Simultaneously, noted is increase of seasonally adjusted index of 1.1% relative to the previous quarter (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 2020 = 100)



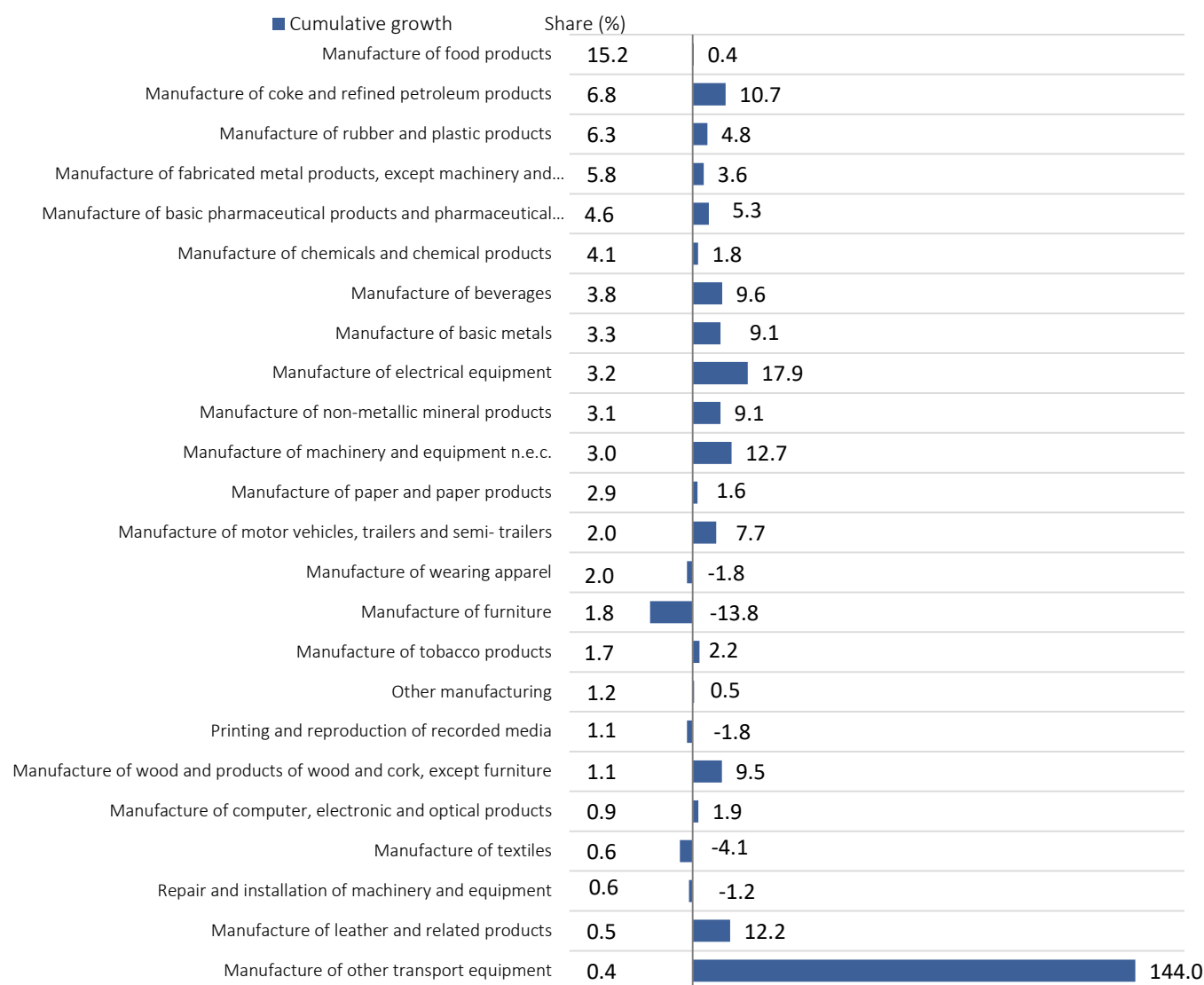
## 3. Industrial production

Observed by divisions, Manufacturing in 2021 **increased** in 19 out of 24 divisions (mutually participating with 69.8% in total industry), if compared with the previous year. The most significant divisions in which positive results were noted were Manufacture of food products (growth of 0.4%), Manufacture of coke and refined petroleum products (growth of 10.7%), Manufacture of rubber and plastic products (growth of 4.8%), Manufacture of metal products, except machinery (growth of 3.6%) and Manufacture of basic pharmaceutical products and pharmaceutical preparations (growth of 5.3%).

Decrease was recorded in five divisions (mutually participating with 6.1% in total industry): Manufacture of wearing apparel (fall of 1.8%), Manufacture of furniture (fall of 13.8%), Printing and reproduction of recorded media (fall of 1.8%), Manufacture of textile (fall of 4.1%) and Repair and Installation of machinery and equipment (fall of 1.2%).

**Chart 3.4. Manufacturing by divisions, cumulative growth rates (%)**

(2021 relative to 2020; divisions presented in descending order according to shares in total industrial production)

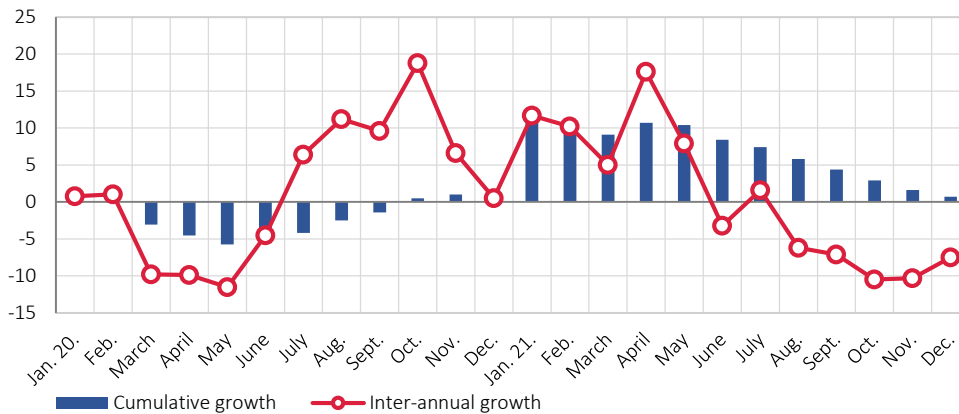


# 3. Industrial production

## 3.3. Electricity, gas, steam and air conditioning supply (D) (share of 16,8% in total Industrial production index)

Chart 3.5. Cumulative and inter – annual growth rates in energy section (%)

(cumulative – period relative to the same period of the previous year; Inter - annual – month relative to the same month of the previous year)



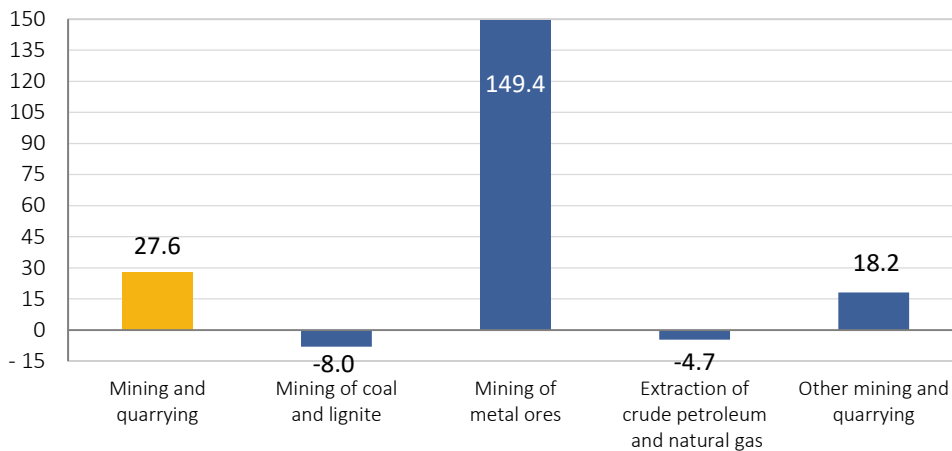
Section of electricity, gas, steam and air conditioning supply in 2021 recorded growth of 0.7% relative to the previous year.

After growth in the first and second quarters of 9.1% and 7.5%, in the third and fourth quarters, there was a decline of -4.0% and -9.4%.

Observed by months, in the fourth quarter 2021, noted was decrease in October (-10.5%), in November (-10.3%), and in December (-7.5%).

## 3.4. Mining and quarrying (B) (share of 7,3% in total Industrial production index)

Graph 3.6. Cumulative growth rates in the section of Mining and quarrying (%)  
(2021 relative to 2020)



Production in the section of Mining and quarrying in 2021 noted growth of 27.6%.

In the first quarter of 2021, noted was growth of 0.9%, in the second 24.6%, in the third and fourth 40.8% and 42.9%, respectively.

Observed by months, in the fourth quarter 2021, noted was increase of 39.5% in October, 48.7% in November and 40.6% in December.

### **i** How to interpret the time 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

The growing trend of construction activity, which began in the second half of 2017, was briefly interrupted in the second half of 2020, due to the stagnation caused by the corona virus pandemic. From the beginning of 2021, the indices of the value of work performed on the territory of the Republic of Serbia are growing again.

In 2021, construction activity on the territory of the Republic of Serbia increased by 25.1% at current prices compared to the previous year, while in constant prices this growth amounts to 15.1%.

### 4.1. Trend in 2021

Construction activity on the territory of the Republic of Serbia in 2021 increased by 15.1% at constant prices compared to the last year.

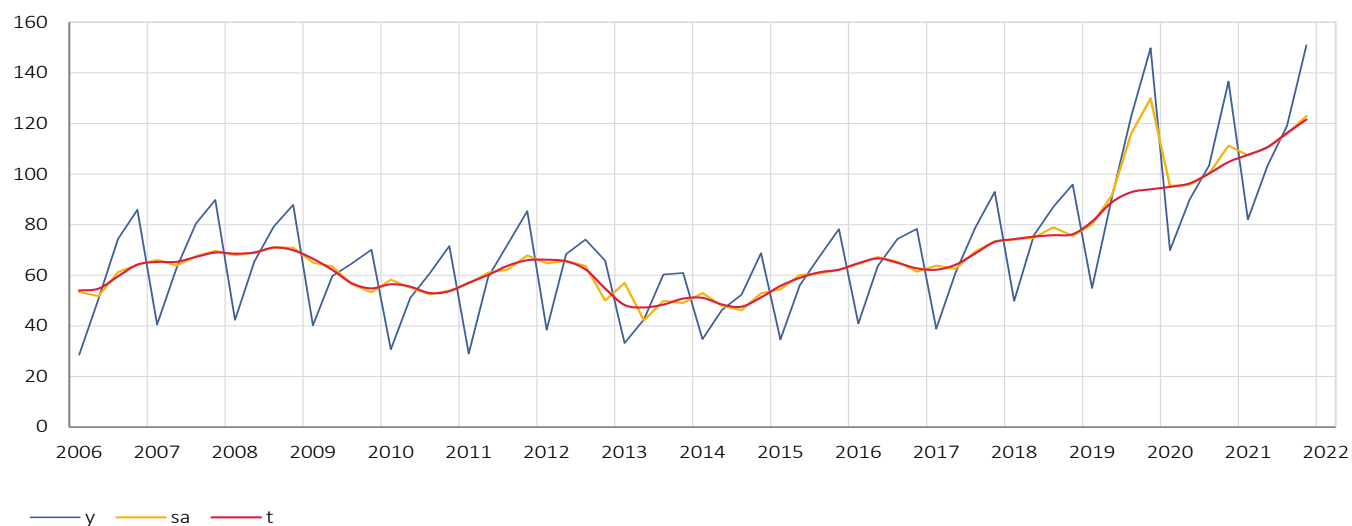
Observed by type of constructions, the value of performed works on buildings increased by 12.4%, and on civil engineering (transport infrastructure, pipelines, complex industrial structures, etc.), by 16.7% at constant prices.

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

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices	117.0	126.5	145.0	159.5	133.7	104.4	86.8	95.0	116.7	124.7	128.8	127.1
Constant prices	110.3	119.6	141.1	156.3	127.2	99.4	84.2	91.2	117.4	114.9	115.0	110.4

**Chart 4.1. Components of time series of Indices of performed construction works on the territory of the Republic of Serbia, at constant prices, indices**

(y – original series, sa – series with excluded seasonal component, t – trend cycle component average 2020 = 100)

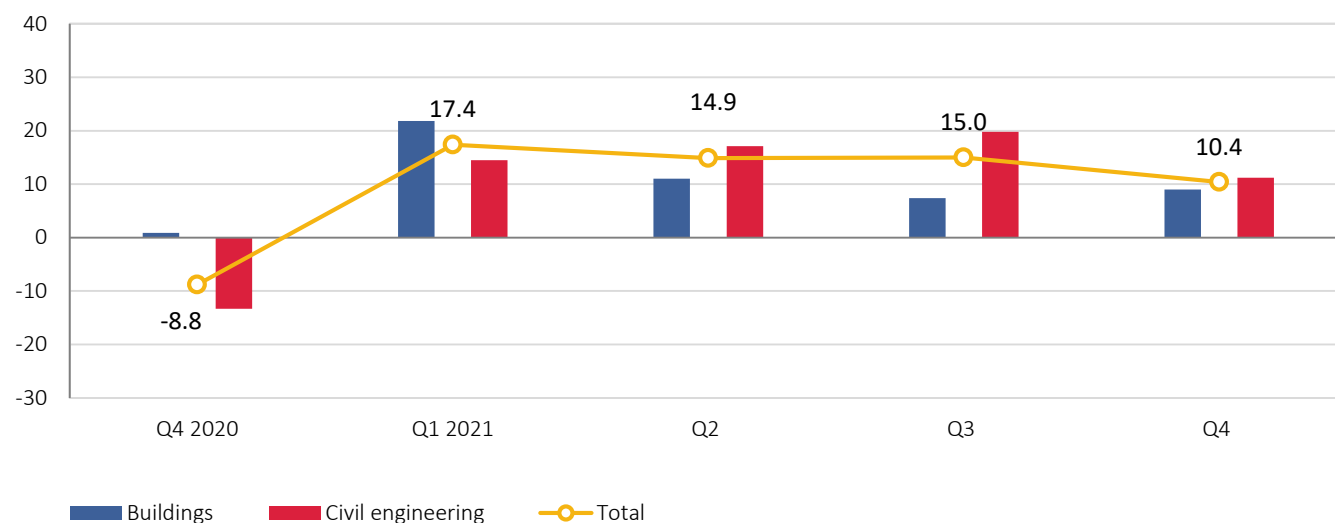




## 4.2. Trend in the fourth quarter 2021

In the fourth quarter of 2021, relative to the same quarter last year, the value of performed works on the territory of the Republic of Serbia increased by 27.1% at current prices, while at constant prices, the increase of 10.4% was recorded. Observed according to the structure of performed works, the value of works on buildings increased by 9.0%, while the value of works on civil engineering increased by 11.2% at constant prices.

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



In the fourth quarter of 2021, compared to the same period in 2020, construction activity recorded the highest growth in **Region Šumadije i Zapadne Srbije**, as it greatly increased – by even 42.5% at constant prices. The increase in the value of the performed works was mostly influenced by the works performed on the construction of roads (sections Pojate-Preljina, Preljina-Požega and Šabac-Loznica), works on residential buildings throughout the region and on pipelines (construction of gas and transmission lines).

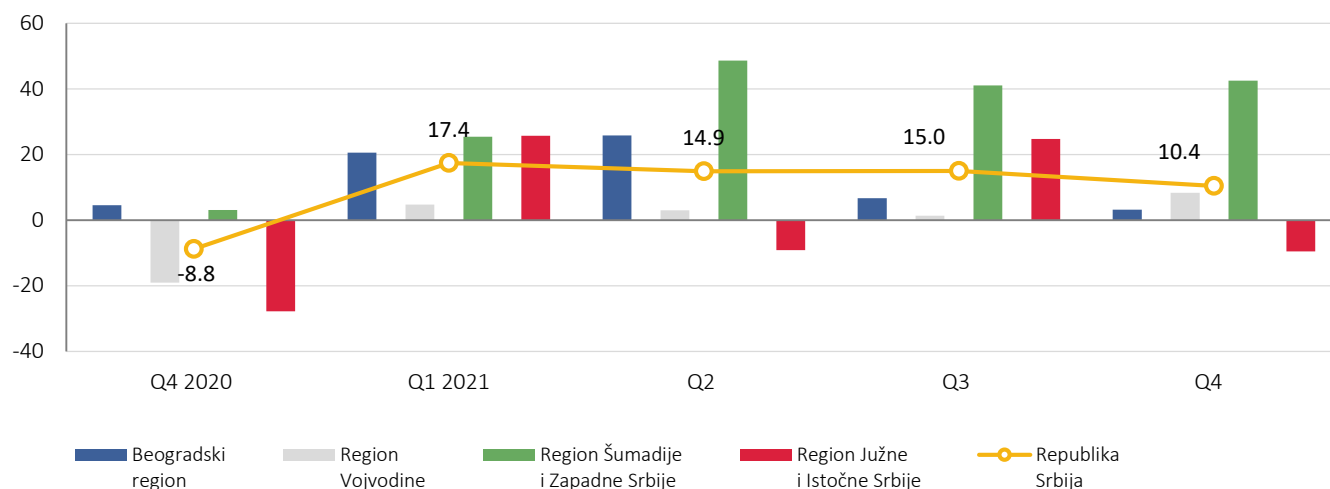
Value of construction activity in **Region Vojvodine** increased by 8.3% at constant prices. The most important works were those on non-residential buildings and two large industrial complexes: "Linglong" in Zrenjanin and "Tojo Tires" in Indjija. There is also a noticeable increase in the value of traffic infrastructure buildings, i.e. works on the construction of the sections Sremska Rača – Kuzmin and expressway Ruma - Šabac. On the other hand, there was a decline in the value of works on pipelines, because the construction of the main gas pipeline on certain sections has been completed.

In **Beogradski region**, activity increased by 3.2%. Growth was performed on the construction of non-residential buildings and those of traffic infrastructure: Belgrade-Stara Pazova railway, bypass around Belgrade, construction of the section Novi Beograd - Surcin.

Construction activity in Q4 2021 decreased only in **Region Juzne i Istocne Srbije**, by 9.6% in constant prices. The decrease was most influenced by completed construction of the main gas pipeline.

## 4. Construction

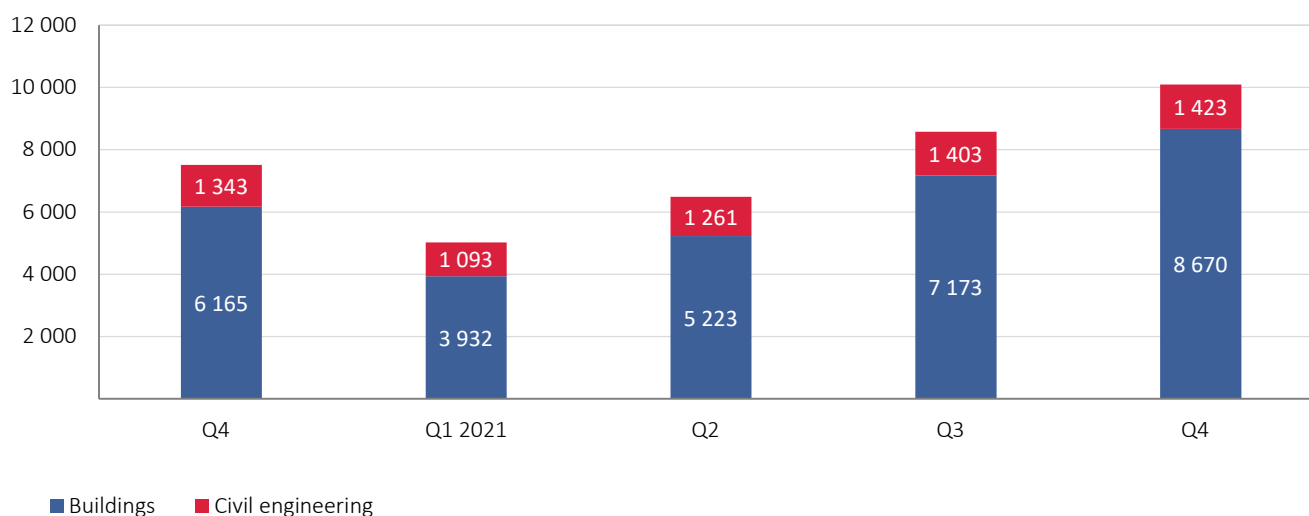
Chart 4.3. Value of performed construction works by regions, at constant prices, growth rates (%)  
(quarter relative to the same quarter of the previous year)



### 4.3. Building permits

In the fourth quarter 2021, 10 093 building permits were issued. The greatest part of permits (8 670) related to construction works on buildings, while the rest related to transport infrastructure works, pipelines, complex industrial structures, etc. Out of total number of issued permits in the fourth quarter 2021, 33.0% related to new construction, while other permits were issued for adaptation, recovery, reconstruction and maintenance works.

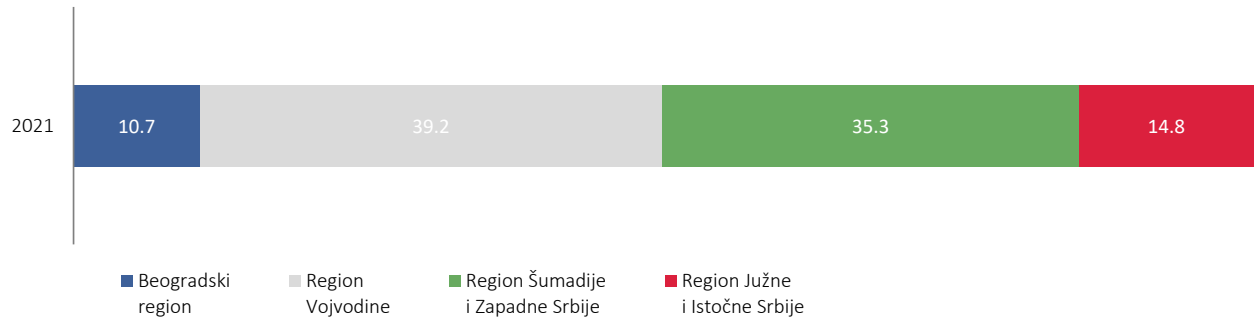
Chart 4.4. Number of issued building permits for buildings and civil engineering



## 4. Construction

Observed by regions, in all four quarters 2021, the greatest number of permits was issued in Region Vojvodine (11 838), followed by Region Šumadije i Zapadne Srbije (10 638), Region Južne i Istočne Srbije (4 463), while the smallest number of issued permits was recorded in Beogradski Region (3 239).

Chart 4.5. Share of issued permits by regions, 2021 (%)



### **i** 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

Total value of goods export from Serbia in 2021 increased by 26.8%, relative to the same period 2020. Total export results were mostly influenced by manufacturing increase of 24.5%, as it presents 88.2% of total export, and increase of 3.5% in export of the section of agriculture, forestry and fishing, which presents 6.2% of total export in 2021.

### 5.1. Export of goods (current exchange rate, in EUR)

Chart 5.1. Components of export's time series, indices

(y – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2020 = 100)

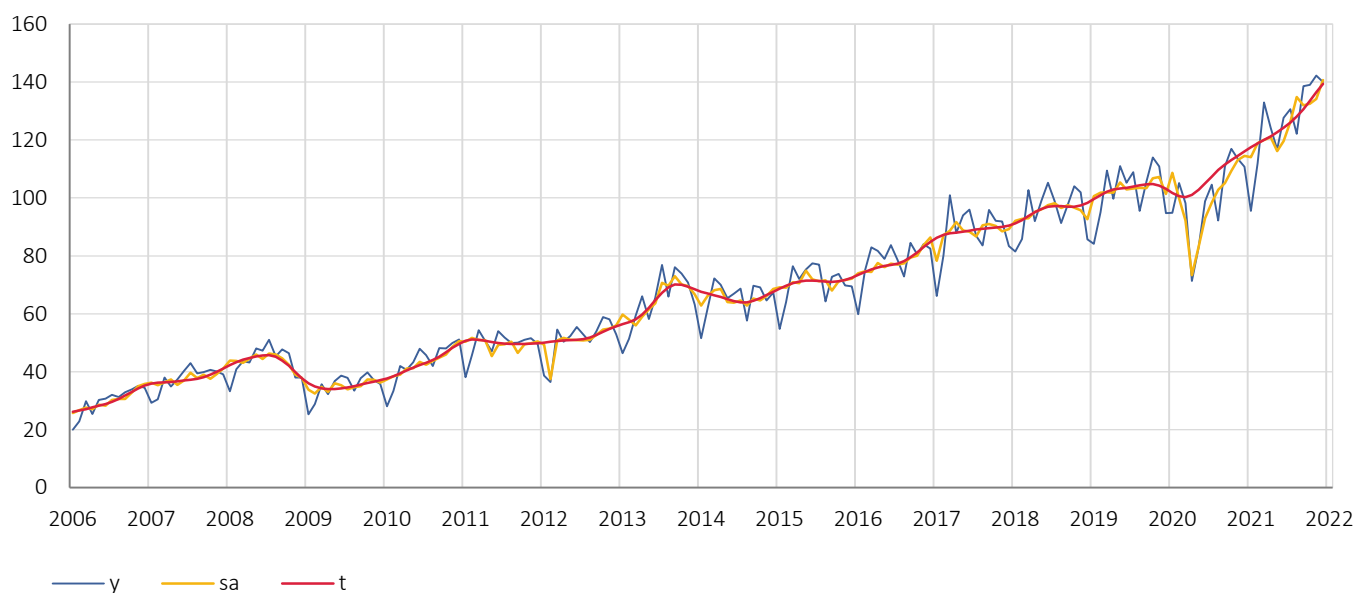


Table 5.1. Export of goods by CA (2010) sections, quarterly indices (%)

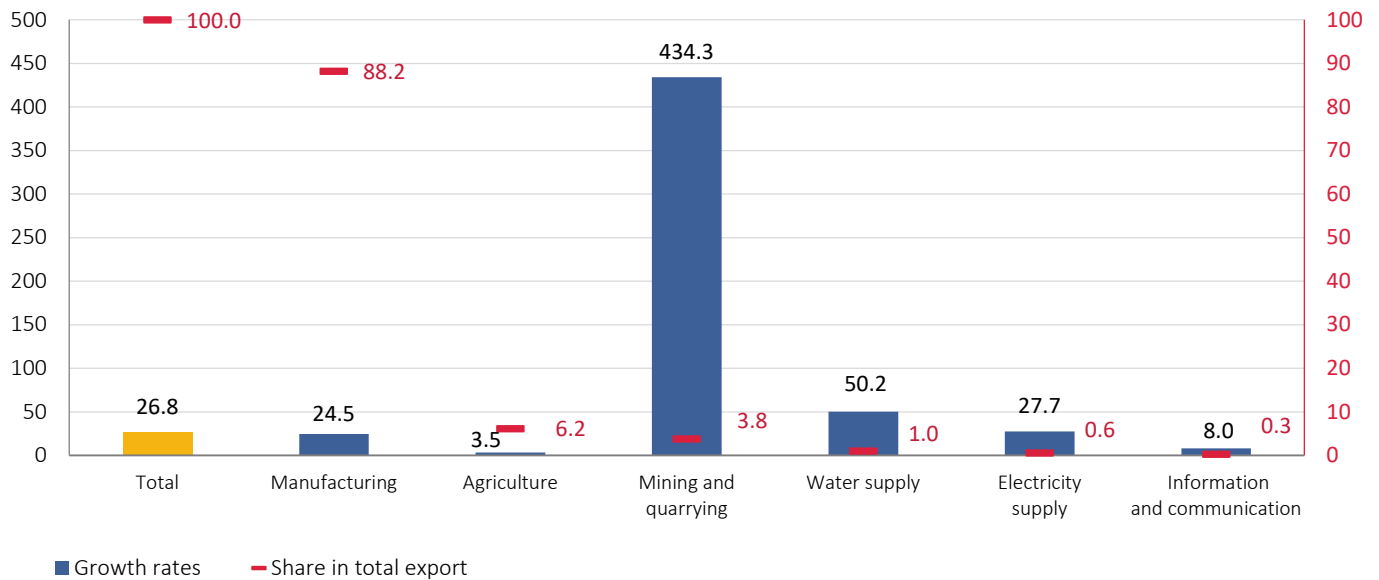
(comparison with the same period of the previous year)

	2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 <sup>1</sup>
Export – total	106.9	106.6	107.7	109.6	103.3	80.1	99.3	106.8	114.2	145.6	127.2	123.4	<b>131.0</b>
Manufacturing	104.5	106.1	108.7	109.4	103.2	78.2	97.4	102.0	111.5	145.4	122.4	122.4	...
Agriculture, forestry and fishing	151.2	117.2	103.4	119.6	109.1	113.0	116.4	141.7	132.7	97.1	119.2	73.5	...
Mining and quarrying	88.3	93.8	100.2	96.4	97.7	90.4	106.8	574.9	202.8	916.1	1369.6	366.8	...

<sup>1</sup> Prognoses (obtained on the basis of time series analysis models).

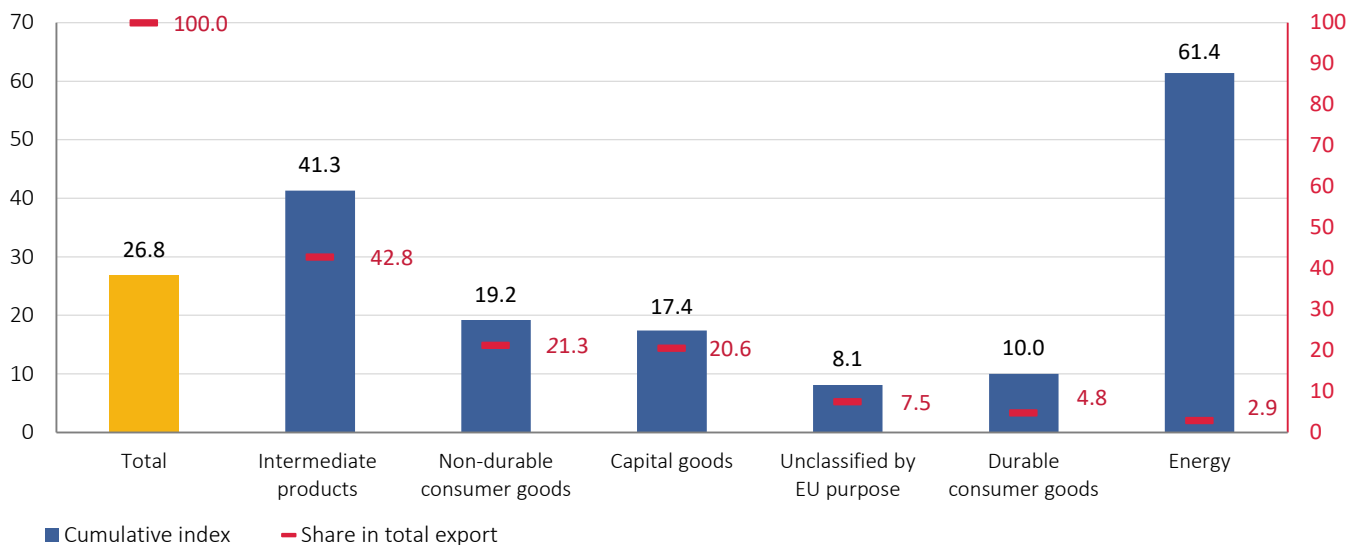
## 5. External trade

Chart 5.2. Cumulative growth rates of export by CA (2010) sections and sections' share in export (%)  
(2021 relative to 2020)



Observed by MIGs, the greatest influence on total export in 2021 related to increased export of intermediate products (share of 42.8%, increase of 41.3%).

Chart 5.3. Cumulative growth rates of exports according to the economic purpose of the European Union (%)  
(2021 relative to 2020)



## 5. External trade

Total value of goods import in Serbia in 2021 increased by 24.6% relative to 2020. Import results were mostly influenced by the section of manufacturing (increase of 23.2%), as it presents 77.6% of total imports, and 27.2% increase in the section of unclassified goods (11.3% of total imports) in 2021.

### 5.2. Import of goods (current exchange rate, in EUR)

Chart 5.4. Components of import's time series, indices

(y – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2020 = 100)

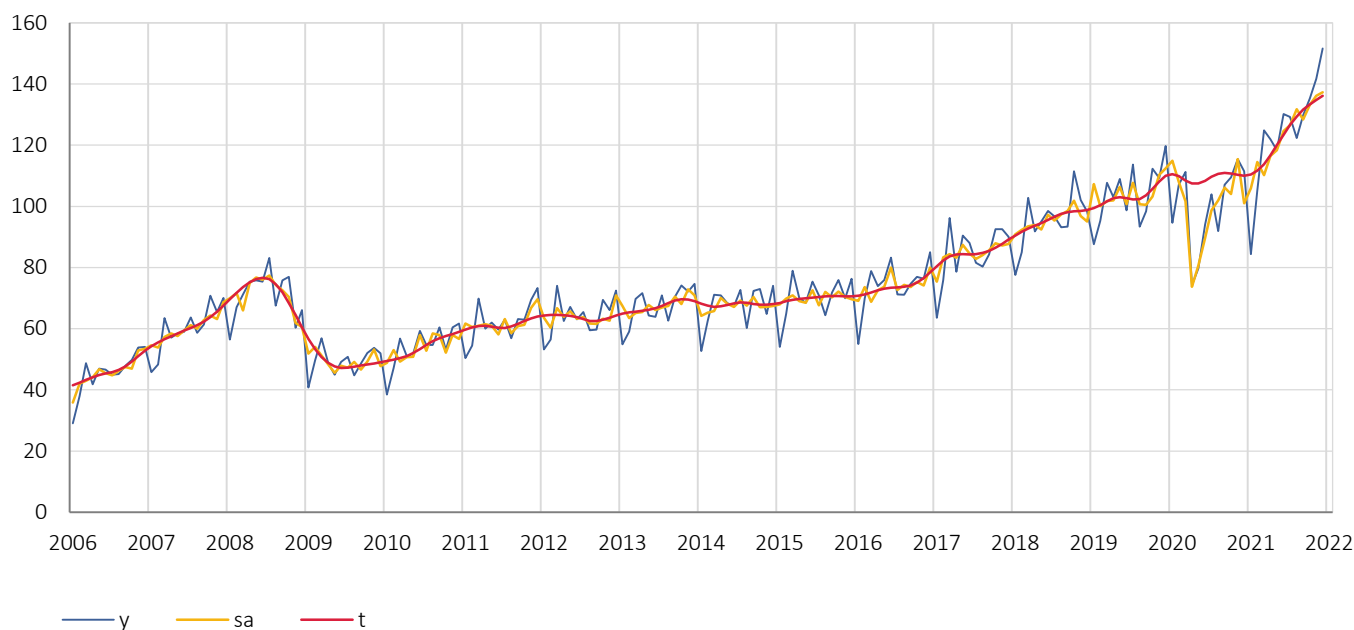


Table 5.2. Import of goods by CA (2010) sections, quarterly indices (%)

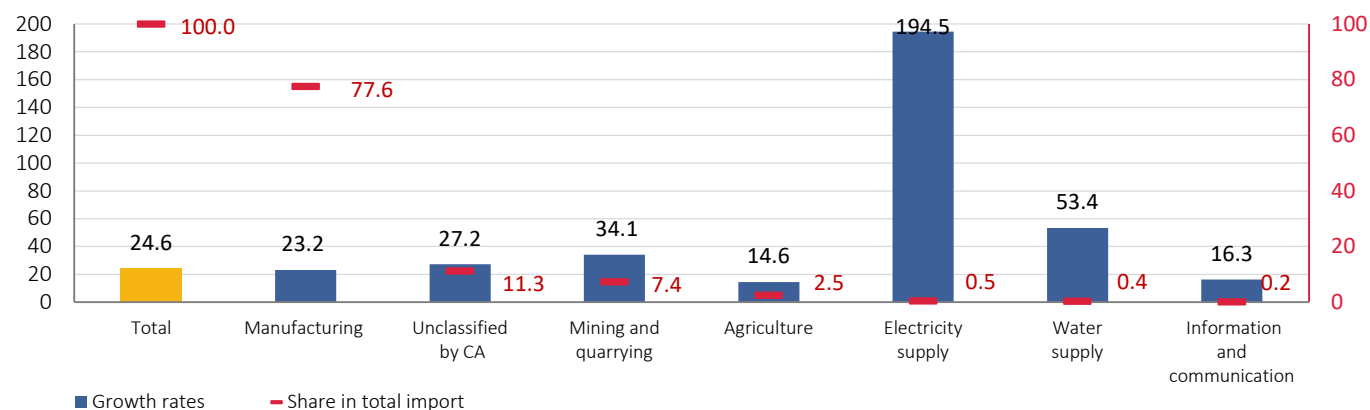
(comparison with the same period of the previous year)

	2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 <sup>1</sup>
Import – total	109.5	108.9	107.8	109.5	107.7	79.8	99.2	98.5	100.5	149.4	125.9	127.5	<b>125.0</b>
Manufacturing	107.4	110.1	112.3	113.3	109.9	81.8	102.5	102.4	104.8	148.9	120.6	123.3	...
Agriculture, forestry and fishing	110.5	121.2	95.8	101.3	103.6	94.7	109.8	105.1	102.3	101.0	113.6	143.8	...
Mining and quarrying	112.8	104.9	98.9	107.0	112.7	52.0	62.0	52.9	58.2	206.4	181.1	158.2	...

<sup>1</sup> Prognoses (obtained on the basis of time series analysis models).

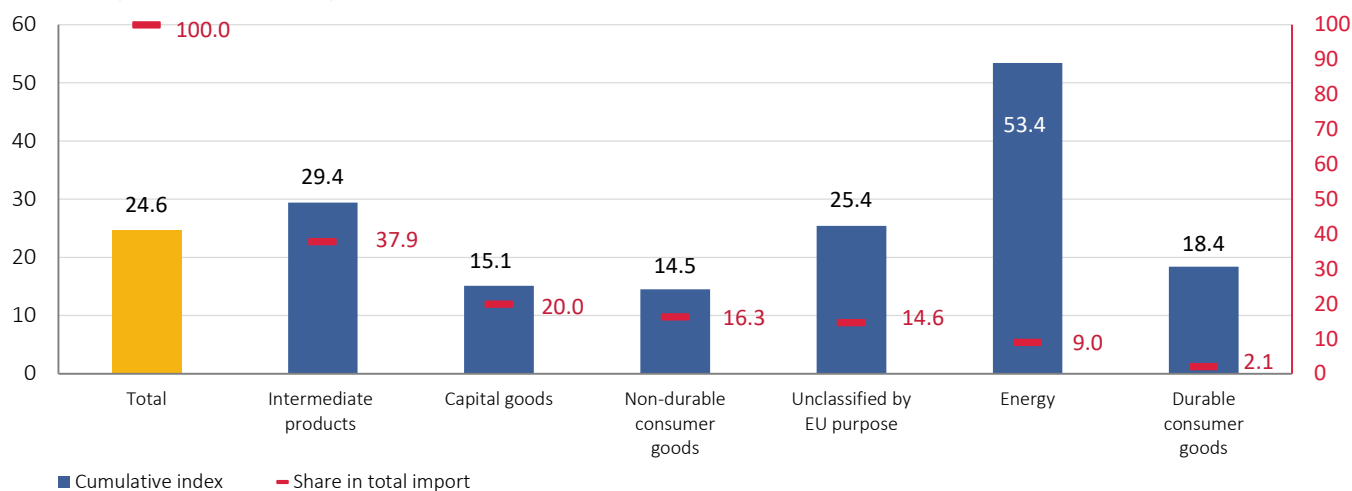
## 5. External trade

Chart 5.5. Cumulative growth rates of import by CA (2010) sections and sections' share in import (%)  
(2021 relative to 2020)



Observed by MIGs, the greatest influence on total import in 2021 related to intermediate products (share of 37.9%, increase of 29.4%) and increased import of capital goods (share of 20.0% and increase of 15.1%).

Chart 5.6. Cumulative growth rates of imports according to the economic purpose of the European Union (%)  
(2021 relative to 2020)



### 5.3. The most significant external trade partners

Table 5.3. The major external trade partners

Export	EUR mill.	Import	EUR mill.
Germany	2 743.3	Germany	3 770.9
Italy	1 839.9	China	3 648.1
Bosnia and Herzegovina	1 562.0	Italy	2 304.4
Romania	1 189.0	Russian Federation	1 534.0
Hungary	1 088.9	Turkey	1 442.1

The most significant external trade partners in 2021 were the countries with which Serbia has signed agreements on free trade. The EU member countries account for 60.3% of total external trade, followed by CEFTA countries. The major external trade partners are separately presented in Table 5.3.

## 5. External trade

### 5.4. Manufacturing (C)

(share of 88.2% in total export and 77.6% in total import)

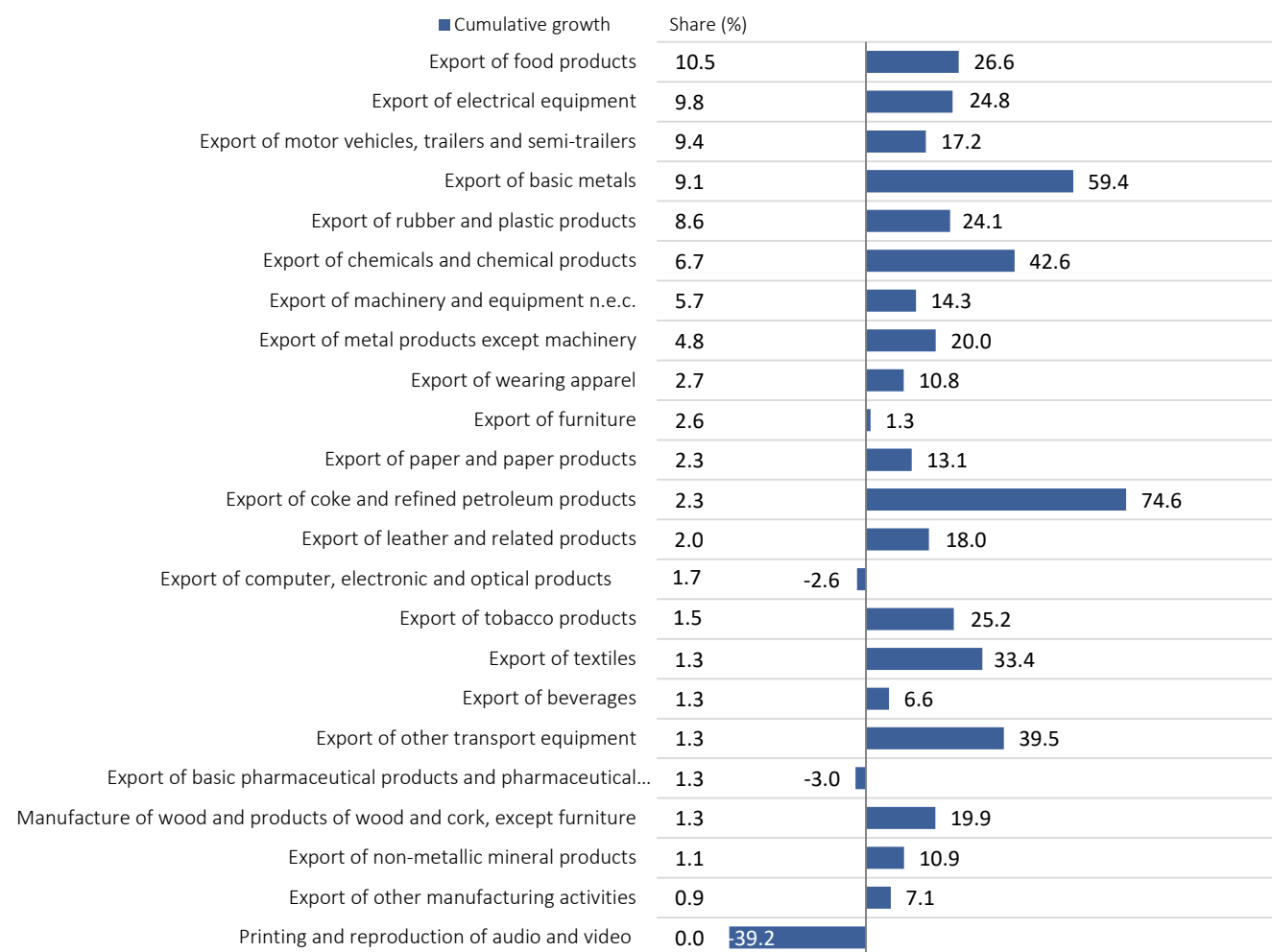
Export of manufacturing in 2021 recorded growth of 24.5%, relative to 2020. Out of 23 divisions, cumulative increase was noted in 20 divisions, mutually participating in total export with 85. 2%.

Export of food products, the division with the highest separate export value (EUR 2 272 mill) recorded cumulative growth of 26.6% and unchanged share in total export of 10.5% relative to the previous year.

Export of electrical equipment recorded cumulative increase of 24.8% and export value of EUR 2 112.2 mill., with slightly decreased share in total exports, from 9.9% in 2020 to 9.8% in 2021.

Export of motor vehicles and trailers and semi-trailers, with decreased share from 10.2% to 9.4% compared to 2020, recorded cumulative growth of 17.2%. The export value in 2021 amounted to EUR 2 1037.3 mill. Export of basic metals, the division with total export value of EUR 1 971.9 mill. and increased share in total export from 7.3% in 2020 to 9.1% also recorded cumulative growth of 59.4%. Export of rubber and plastic products noted cumulative growth of 24.1% and decreased share related to 2020 (from 8.8% to 8.6%).

**Chart 5.7. Export of manufacturing by divisions, cumulative growth (%)**  
(2021 relative to 2020, by descending share in total export)

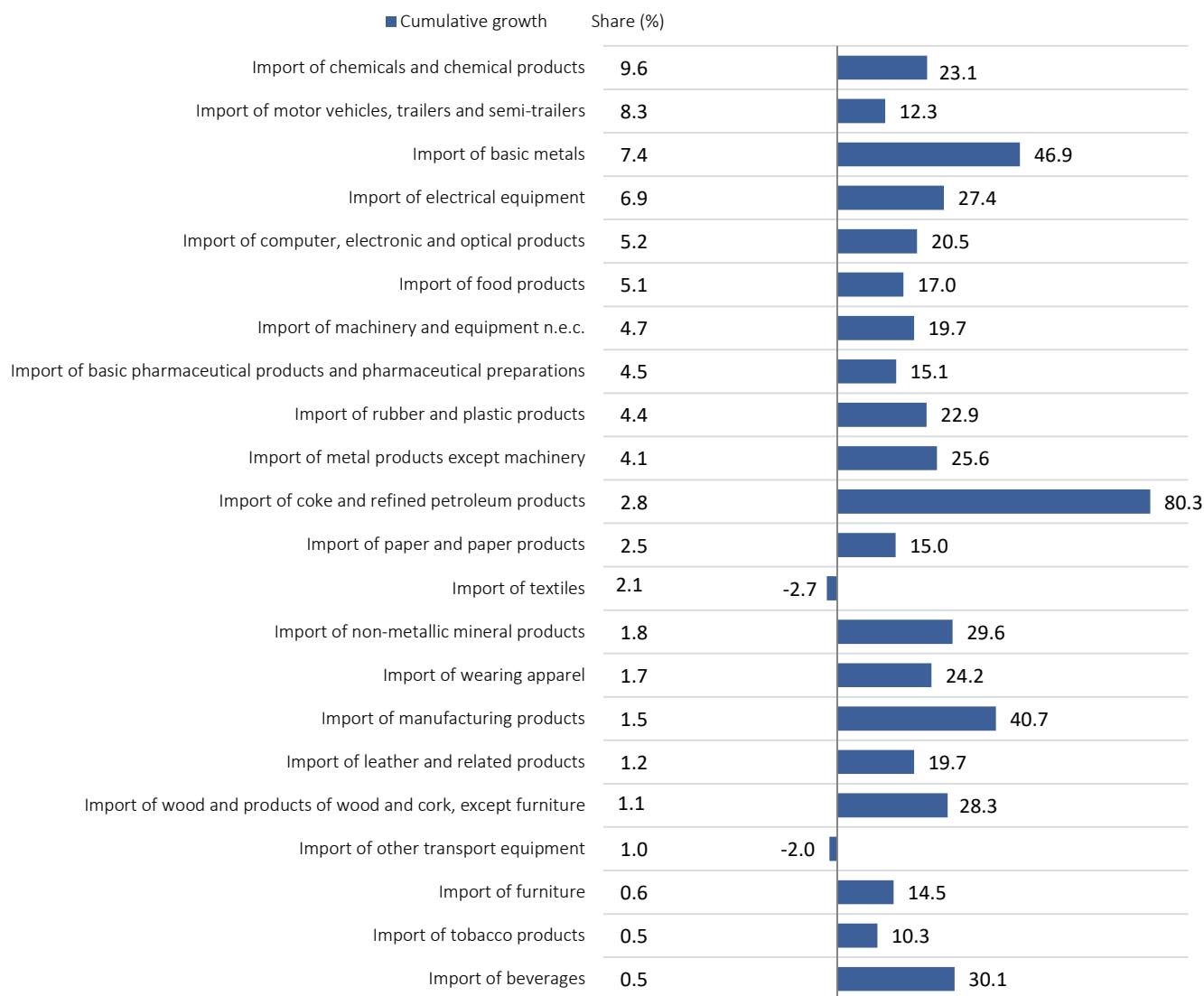




## 5. External trade

Import of manufacturing in 2021 relative to 2020 recorded increase of 23.2%. Such result was mostly influenced by increased import of chemicals and chemical products of 23.1% (slightly decreased share in total import – from 9.7% in 2020 to 9.6%. Import of n.e.c. machinery and equipment (increase of 12.3%, decreased share from 9.2% to 8.3%, import of basic metals (increase of 46.9% and increased share from 6.3% to 7.4%) and import of electrical equipment that realized growth of 27.4% and increased share in total import from 6.7% to 6.9%.

**Chart 5.8. Import of manufacturing by divisions, cumulative growth (%)**  
(2021 relative to 2020, by descending share in total import)



## 5. External trade

### 5.5. Agriculture, forestry and fishing (A)

(share of 6.2% in total export and 2.5% in total import)

Export in this section in 2021 realized increase of 3.5%, as well as decreased share from 7.5% to 6.2% relative to 2020. The most significant division of this sector, Agriculture production, hunting and service related activities, participating with 97.8% in total export of the section, noted increase of 2.5%. This result was also most contributed by cumulative increase of 2.2% in export of cereals (except rice), export of leguminous crops and oil seeds, the group that presents 68.6% of total exports in the observed period, as well as export of other berries and nuts, (34%), with the share of 4% in export of the section. Somewhat worse result related to export of pome and stone fruit, recording cumulative decrease of 5.8% and share of 12.2% in total export of the whole section).

Import recorded increase of 14.6%, while the share in total import decreased (from 2.8% to 2.5%). Registered was increased import of cereals (except rice), leguminous crops and oil seeds by 63.2%, vegetables, root and carotid plants of 21.3% and tropical and subtropical fruits of 6.8%. On the other hand, realized was decreased import of tobacco by 10% and citrus fruits by 6%.

### 5.6. Mining and quarrying (B)

(share of 3.8% in total export and 7.4% in total import)

The section of Mining and quarrying, with the share of 3.8% in total export noticed cumulative export increase of 434.3% relative to 2020. Increased export in this section was registered in metal ores' export as it presents 97.6% of export of the whole section of Mining and quarrying (cumulative growth of 484.8%).

Import of this section in 2021 (share of 7.4% in total import) recorded growth of 34.1% relative to 2020. The greatest import increase was noted in import of crude petroleum and natural gas, amounting to 37.2%, as they account for 74.2% of total section's import.

#### 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.

## 6.1. Retail trade turnover

(Division 47 of the Classification of Activities)

Retail trade turnover in 2021, relative to 2020, increased by 15.9% at current and by 10.3% at constant prices.

**Table 6.1. Retail trade turnover, quarterly indices (%)**

(comparison with the same period of the previous year)

	2019				2020				2021				2022
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 <sup>1</sup>
Current prices	112.4	110.7	109.5	112.9	111.4	97.9	105.8	102.5	104.8	124.2	114.3	118.9	<b>117.0</b>
Constant prices <sup>2</sup>	109.4	108.0	108.5	111.7	110.0	99.8	105.9	103.0	104.7	118.6	107.7	108.4	<b>110.0</b>

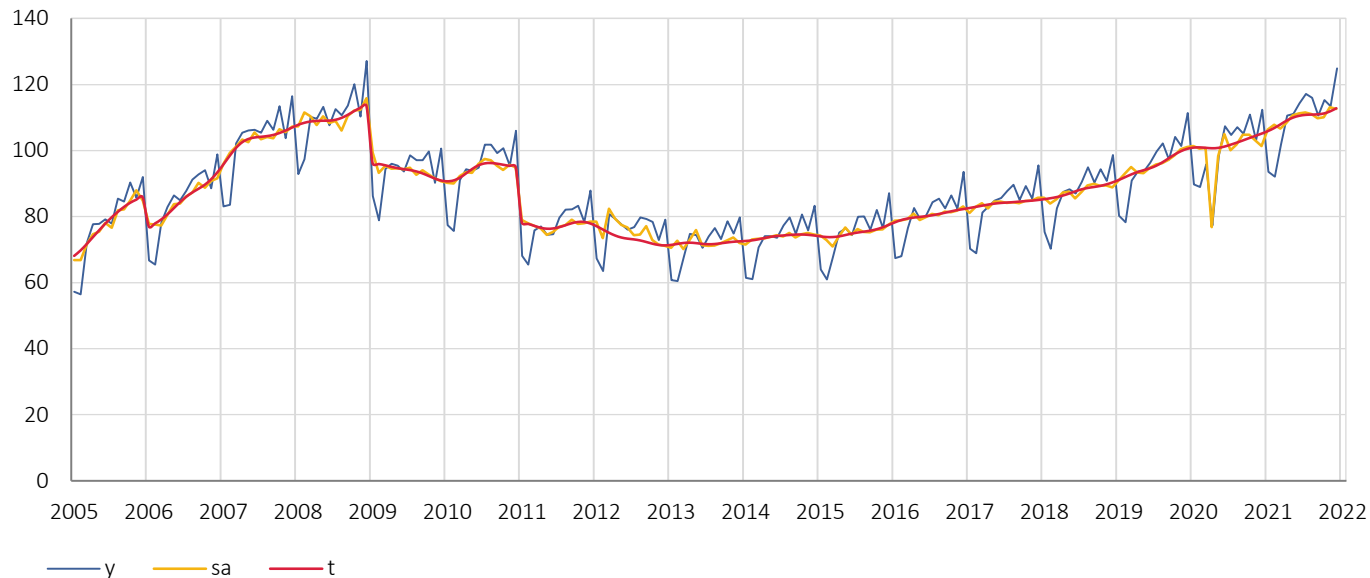
<sup>1</sup> Prognoses (obtained on the basis of time series analysis models).

<sup>2</sup> Indices are recalculated through monthly indices at constant prices.

The long-term trend in retail trade in goods in 2021 was growing. The growing trend has been present for ten years, with a short-term break in the first half of 2020.

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

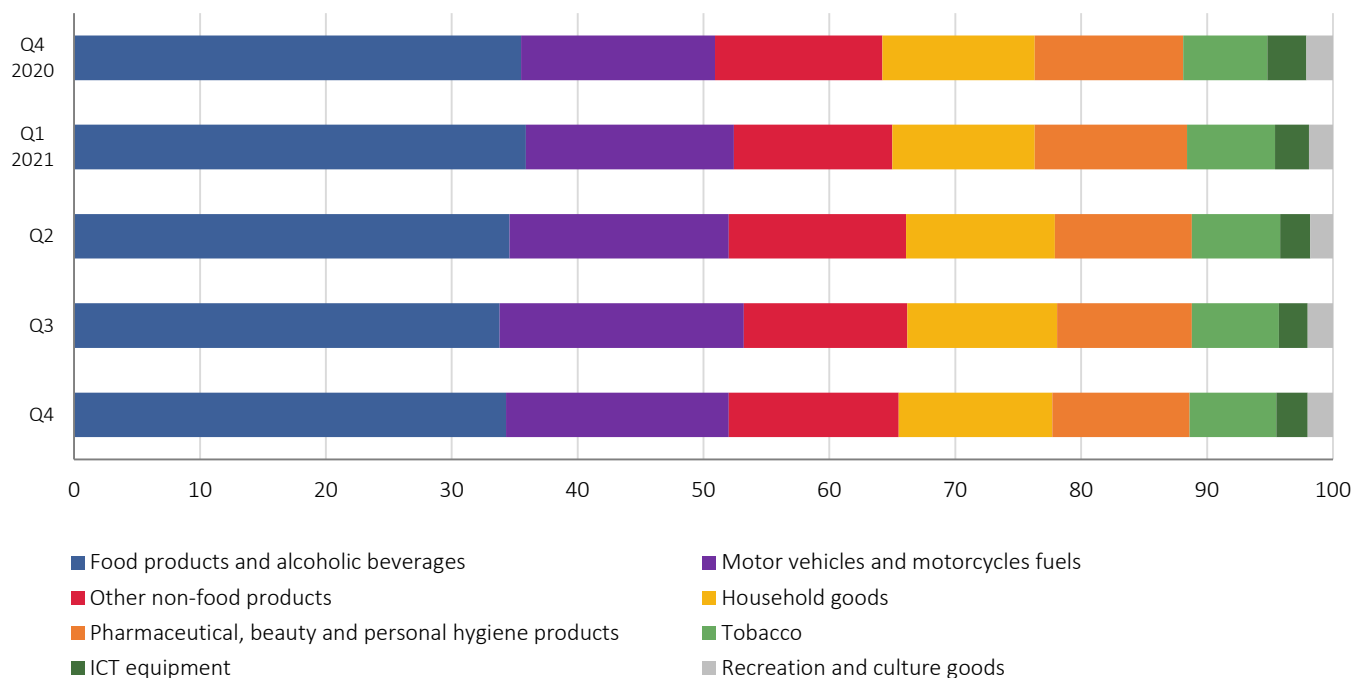
(y – original series, sa – series with excluded seasonal component, t – trend cycle component, average 2020 = 100)



Observed by **trade divisions and commodity groups**, in the fourth quarter 2021, relative to the previous quarter, there were no significant changes in turnover structure in retail trade. The most notable were food products and alcoholic beverages (34.3%), followed by motor vehicles and motorcycles fuels (17.7%) and other non-food products (13.5%).

## 6. Domestic trade

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 2021, compared with 2020 noted increase of 23.5% at current prices.

Table 6.2. Wholesale trade turnover, quarterly indices

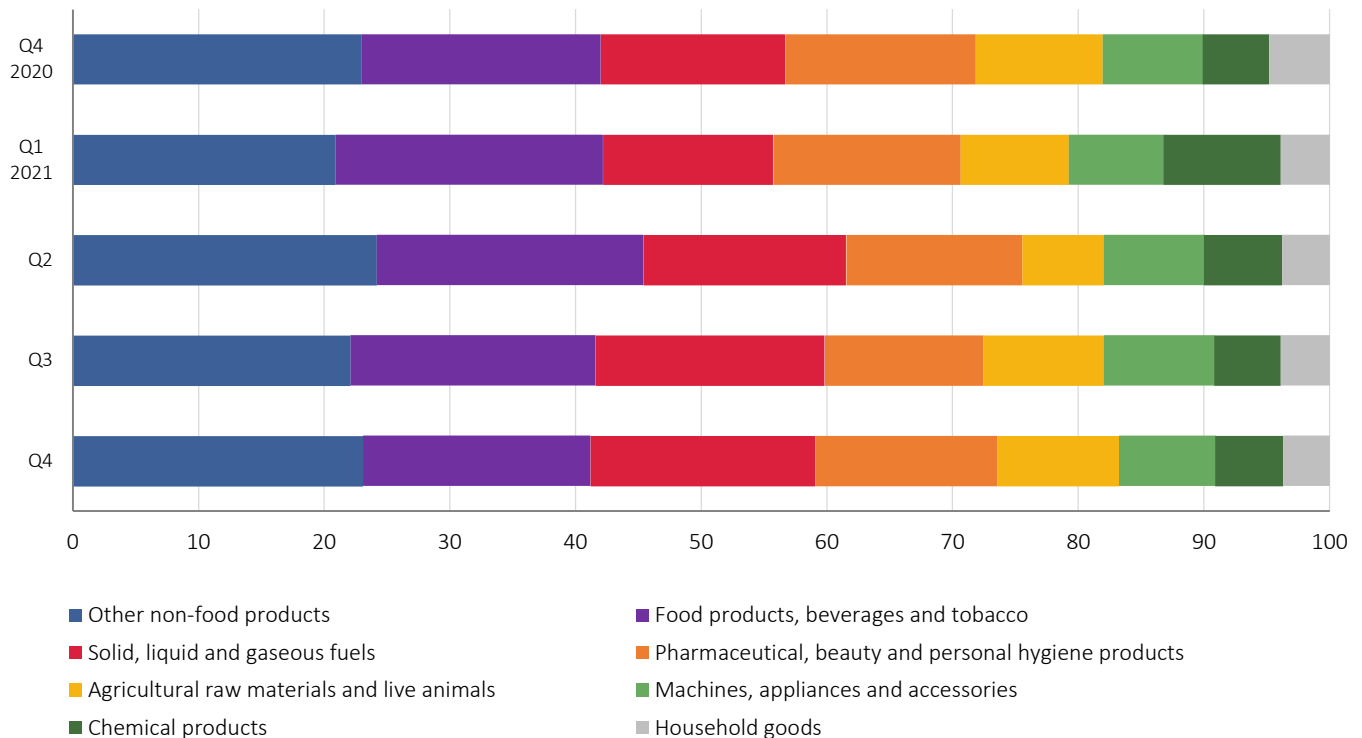
(comparison with the same period of the previous year)

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices	107.8	104.1	103.8	107.1	101.9	86.7	96.1	96.2	110.9	133.5	123.6	126.5

Observed by **trade divisions and commodity groups**, in wholesale trade turnover, in Q4 2021, the most notable were other non - food products (23.1%), followed by food products, beverages and tobacco (18.1%), and solid, liquid and gaseous fuels, (17.9%).

## 6. Domestic trade

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 2021, relative to 2020, recorded increase of 19.4% at current prices.

Table 6.3. Turnover in wholesale and retail trade and motor vehicles repair, indices

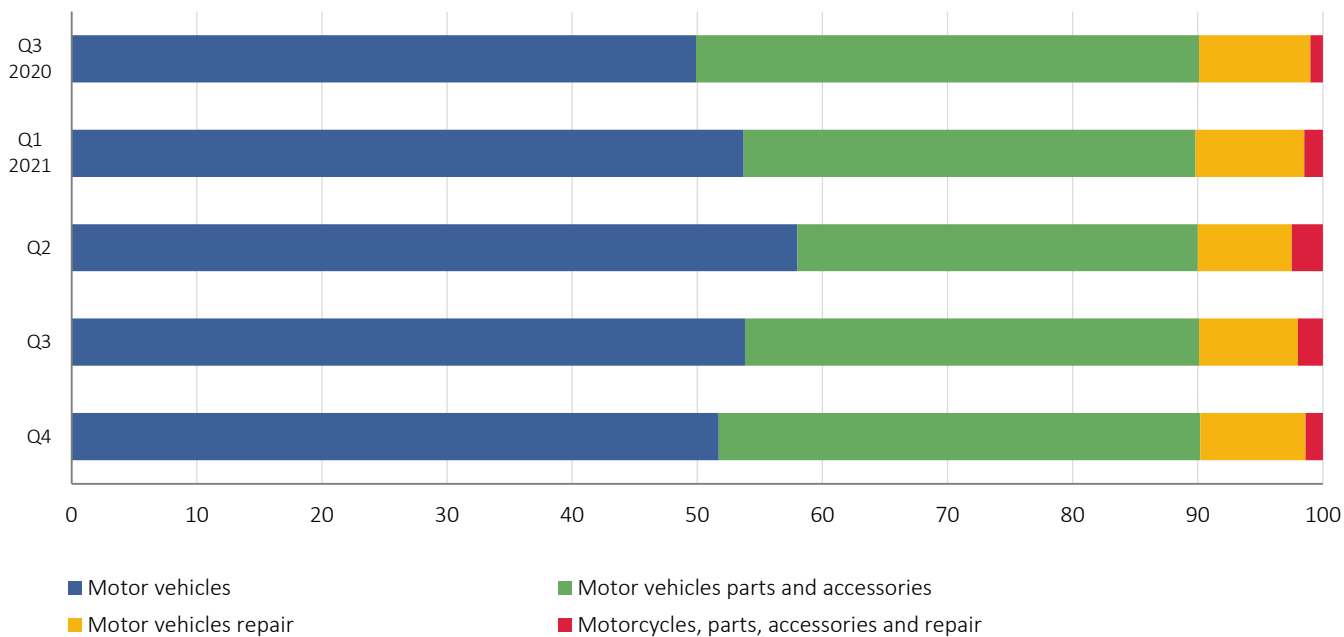
(comparison with the same period of the previous year)

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Current prices	113.3	111.8	108.8	111.0	95.9	77.6	104.1	100.5	111.1	138.4	113.6	116.1

Observed by **trade divisions and commodity groups**, in the fourth quarter 2021, similarly as in the previous quarters, regarding the structure of wholesale and retail trade turnover and motor vehicles repair, the most notable were motor vehicles (51.7%), followed by motor vehicles parts and accessories (38.5%).

## 6. Domestic trade

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



### Note:

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

# 7. Prices

In 2021 total consumer prices saw an average year-on-year growth of 4%. Observed by purpose, consumer price growth was predominantly influenced by the prices of energy and food. Observed by main divisions of consumption, the largest contribution to the growth of total consumer prices was that of the increase in the prices of food and non-alcoholic beverages, prices of housing, water, electricity, gas and other fuels, transport and of the increase in tobacco prices.

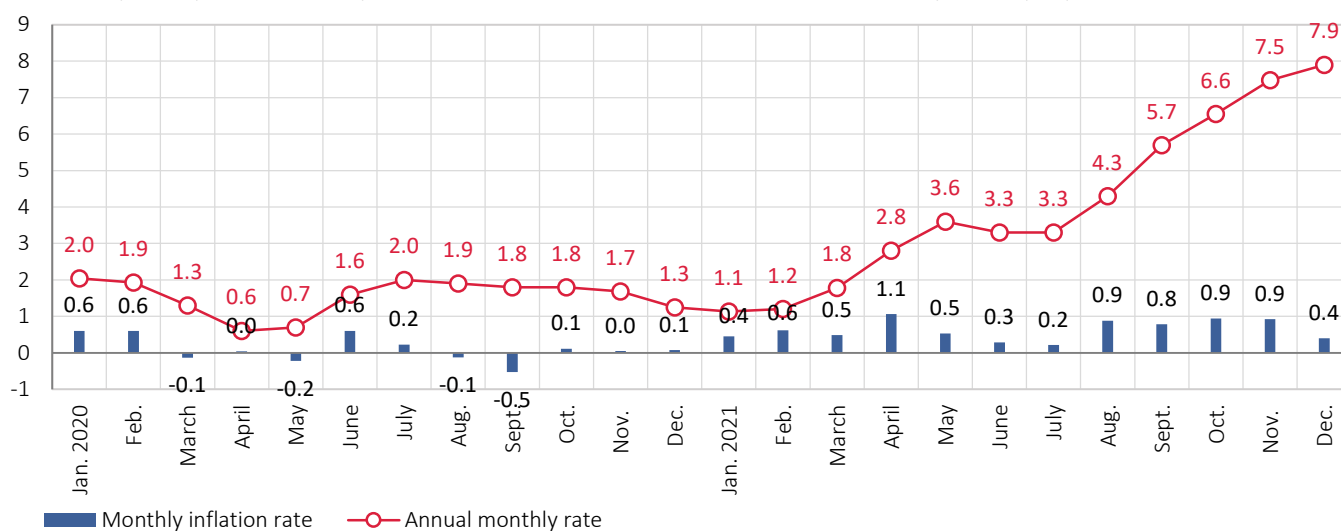
**Table 7.1. Consumer prices, year-on-year inflation rate (%)**  
(quarter to the same quarter of the previous year)

	2020				2021				2022	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 <sup>1</sup>	Q2 <sup>1</sup>
Consumer prices (CPI)	1.8	1.0	1.9	1.6	1.4	3.2	4.4	7.3	8.5	8.0

<sup>1</sup> Forecast based on the leading CPI indicator.

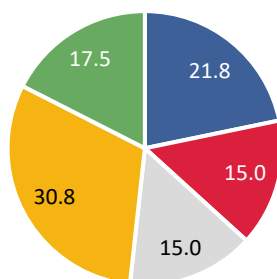
**Chart 7.1. Inflation rate measured by consumer price indices (%)**

(monthly – month to the previous month; annual – month to the same month of the previous year)

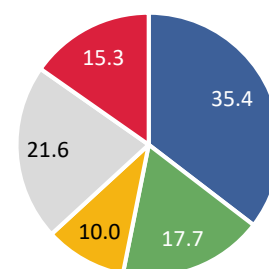


**Chart 7.2. Share in the the structure of the average annual consumer price growth rate for 2021 by purpose and the main divisions of products (%)**

- Unprocessed food
- Processed food
- Industrial products without food and energy
- Energy
- Services



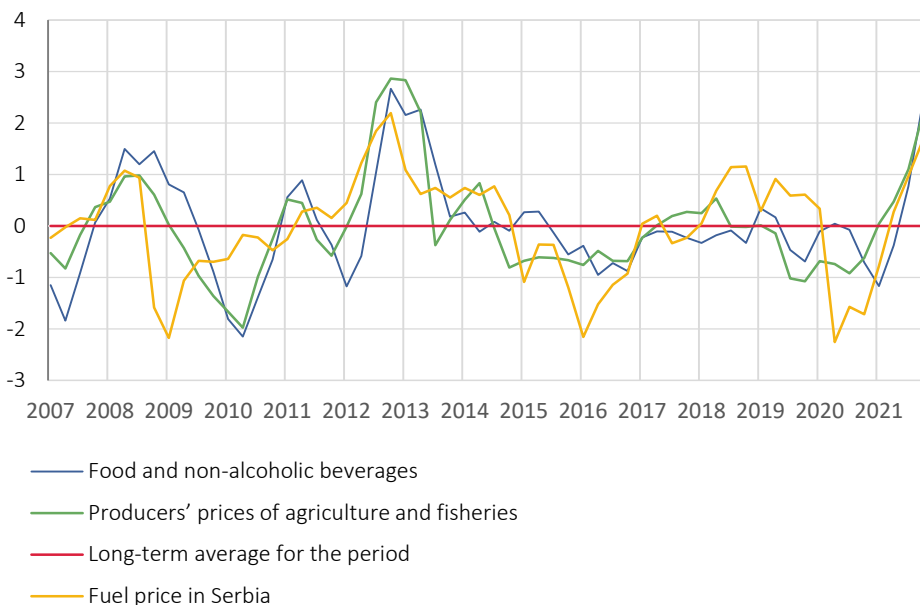
- Food and non-alcoholic beverages
- Housing, water, electricity, gas and other fuels
- Alcoholic beverages and tobacco
- Transport
- Other



# 7. Prices

## 7.1. Food and non-alcoholic beverages (contribution to the average annual growth rate of 1.4 pp.)

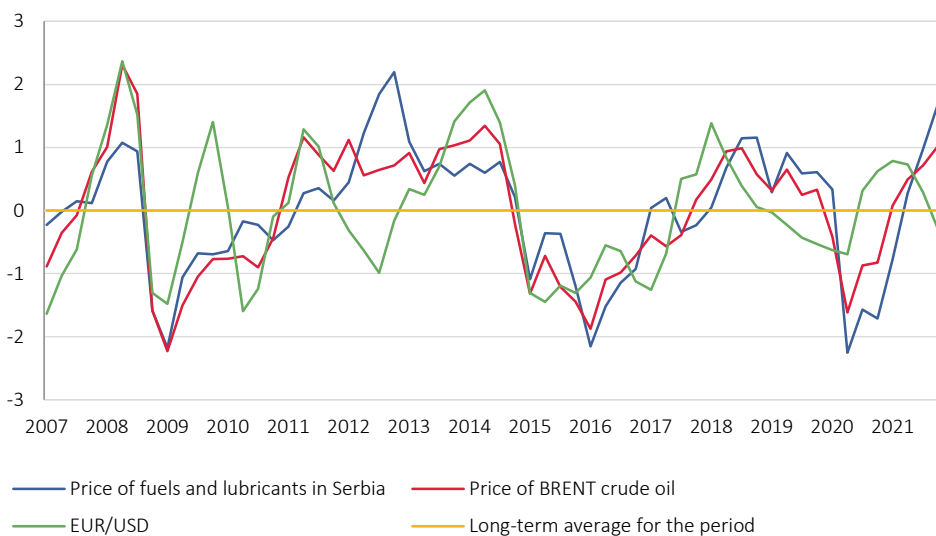
Chart 7.3. Movement of the prices of food and non-alcoholic beverages; seasonally adjusted and standardized quarterly data, deviations from the average for the period(%)



The average increase in the prices of food and non-alcoholic beverages in 2021 amounted to 4.4%, and the share in the average growth rate of total consumer prices was 35.4%. The largest influence on the increase in the prices of food and non-alcoholic beverages was that of the prices of vegetables (participating in the structure of the total growth of the prices of food and non-alcoholic beverages with 27.8%), of meat (with a share of 24.2%) and of bread and cereals (with a share of 13.7%).

## 7.1. Transport (contribution to the year-on-year growth rate of 0.9 pp.)

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



The price of „BRENT“ crude oil at the end of 2021 was 74.2 dollars per barrel and from the beginning of the year it increased by 19.4 dollars per barrel. In 2021 (January-December) the average retail price of Eurodiesel in Serbia amounted to 160.6 dinars per litre and in relation to 2020 it was up by 11.1% (or by 16.0 dinars). On the other hand, the average price of unleaded petrol in Serbia in 2021 to 2020 increased by 19.8 dinars per litre. In 2021 the division Transport had a year-on-year growth of 6.9%.



## 7.2. Alcoholic beverages and tobacco (contribution to the year-on-year growth rate of 0.4 pp.)

The movement of the prices of alcoholic beverages and tobacco was dominantly defined by the price of tobacco<sup>6</sup>.

Government levies from 1<sup>st</sup> July to 31<sup>st</sup> December 2021 in the price of one pack of cigarettes increased by 1.5 dinars and amounted to RSD 78.3. The average annual growth of the prices of tobacco from the beginning of the year to September amounted to 6.7% and accounted for 7.3% of the year-on-year growth rate of total consumer prices.

Table 7.2. Average structure of contributions to the year-on-year tobacco growth rate

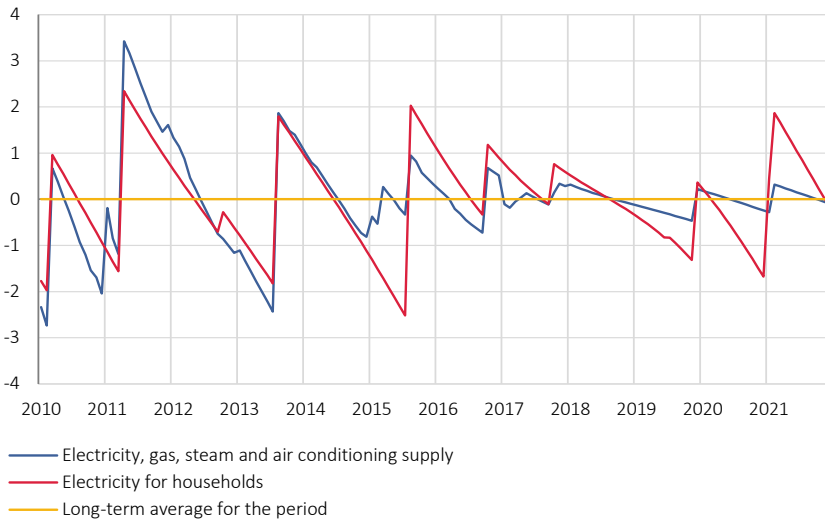
		2019				2020				2021			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Tobacco price, growth rate (%)		8.0	7.9	6.9	7.6	7.4	7.3	7.7	7.0	6.9	6.8	6.6	6.6
Contribution to the annual tobacco growth rate (pp.)	Fiscal levies	5.7	5.4	4.8	5.2	5.0	5.0	5.1	4.8	4.7	4.6	4.5	4.4
	<i>Specific excise</i>	1.4	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	0.9
	<i>Proportional excise (33%)</i>	2.7	2.6	2.3	2.5	2.5	2.4	2.6	2.3	2.3	2.3	2.2	2.2
	<i>VAT (20%)</i>	1.6	1.6	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.3
	Other levies (merchant margins and producers' costs)	2.3	2.5	2.1	2.4	2.3	2.3	2.5	2.2	2.2	2.2	2.1	2.1
Ratio of fiscal levies to other levies		2.4	2.1	2.3	2.1	2.1	2.1	2.0	2.2	2.1	2.1	2.1	2.1
Share in the annual tobacco growth rate	Fiscal levies, %	70.9	68.2	69.6	68.2	68.2	68.2	67.2	68.8	68.2	68.2	67.9	67.5
	Other levies, %	29.1	31.8	30.4	31.8	31.8	31.8	32.8	31.2	31.8	31.8	32.1	32.5

<sup>6</sup> Tobacco price is a result of a harmonized excise policy, according to which, every January and July 2021–2025 a specific excise on cigarettes increases by 1.5 dinars, with the added and proportional excise of 33% on cigarettes and added VAT of 20%, in line with the excise calendar 2021-2025.

# 7. Prices

## 7.3. Housing, water, electricity, gas and other fuels (contribution to the average annual growth rate of 0.7 pp.)

Chart 7.5. Movement of the prices of electricity for households and movement of producers' prices of the section Electricity, gas, steam and air conditioning supply; detrended and standardized data, deviations from the average for the period (%)



The average annual increase in the prices of the division Housing, water, electricity, gas and other fuels in 2021 amounted to 5.2%. The main factor of growth of this division of services was the increase in the price of electricity for households (from January 2021) of 7.9%, which at the end of 2021 accounted for 56.0% of the total growth rate in the structure of the whole division, while in the structure of the average annual consumer price growth rate, the increase in the price electricity participated with 10.0%.

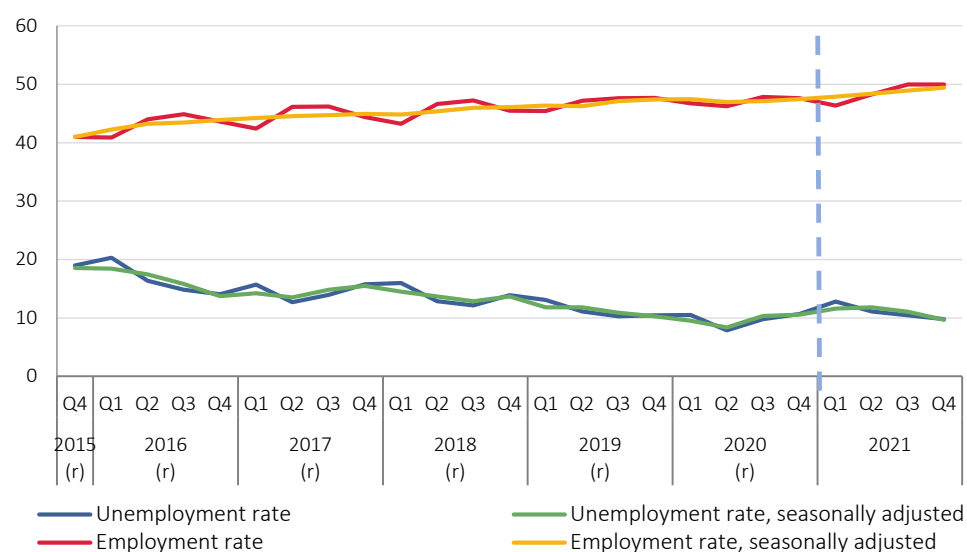
## 8. Labour market

In Serbian in the fourth quarter of 2021 there were 2.9 million persons employed <sup>7</sup>, 317 thousand persons unemployed, and 2.6 million inactive persons age 15 and over.

The unemployment rate was 9.8% and, when compared with the third quarter of 2021, it went down by 0.7 pp, whereas the number of unemployed persons decreased by 24.8 thousand. At the same time the number of inactive persons increased by 19.5 thousand.

Observed by region, the unemployment rate in the fourth quarter of 2021, when compared with the previous quarter, saw a fall in most of the regions: in Beogradski region from 8.8% to 8%, y in Region Šumadije i Zapadne Srbije from 11.6% to 10.7%, in Region Južne i Istočne Srbije from 13.4% to 12.2%, with the exception of Region Vojvodine, where the unemployment rate remained unchanged (8.8%)

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



(r) – revised data

The unemployment rate in the fourth quarter of 2021 amounted to 9.8%, after eliminating the seasonal component to 9.7%.

In this period, the employment rate amounted to 50%, and after eliminating the seasonal component to 49.4%.

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

	2020(r)				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Activity rate (%)</b>	<b>52.2</b>	<b>50.2</b>	<b>53.0</b>	<b>53.3</b>	<b>53.1</b>	<b>54.3</b>	<b>55.8</b>	<b>55.4</b>
Seasonally adjusted values	53.1	49.9	52.4	53.5	54.0	54.0	55.2	55.5
<b>Employment rate (%)</b>	<b>46.7</b>	<b>46.3</b>	<b>47.8</b>	<b>47.6</b>	<b>46.3</b>	<b>48.3</b>	<b>50.0</b>	<b>50.0</b>
Seasonally adjusted values	47.5	47.0	47.1	47.4	47.9	48.4	49.0	49.4
<b>Unemployment rate (%)</b>	<b>10.5</b>	<b>7.9</b>	<b>9.8</b>	<b>10.7</b>	<b>12.8</b>	<b>11.1</b>	<b>10.5</b>	<b>9.8</b>
Seasonally adjusted values	9.5	8.4	10.3	10.6	11.6	11.8	11.0	9.7

<sup>7</sup> Since 2021, the Statistical Office of the Republic of Serbia has been carrying out the Labour Force Survey according to a new, revised Eurostat methodology. The methodology has been changed based on and in line of the Regulation of the European Parliament and Council, which entered into force on 1 January 2021. More information on the methodological changes and their effects on major statistical indicators are available in a special publication on <https://www.stat.gov.rs/vesti/20210628-anketa-o-radnoj-snazi-nova-metodologija/>

## 8. Labour market

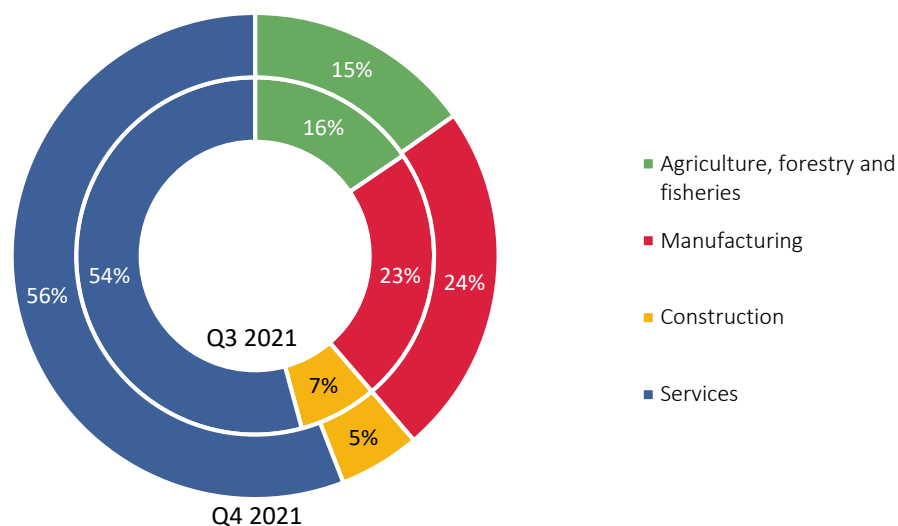
Table 8.2. Labour market – persons age 15 and over <sup>8</sup>

	Current quarter	Previous quarter		The same quarter of the previous year (r)	
	Q4 2021 (in thous.)	Q3 2021 (in thous.)	Change, %	Q4 2021 (in thous.)	Q3 2021 (in thous.)
Unemployment	316.7	341.5	-7.3	335.2	-5.5
Employment	2 917.4	2 924.5	-0.2	2 801.8	4.1
	%	%	Change p.p.	%	Change p.p.
Unemployment rate	9.8	10.5	-0.7	10.7	-0.9
Employment rate	50.0	50.0	0.0	47.6	2.4

(r) – revised data

Observed **by section**, the largest share of the number of employed persons in the fourth quarter of 2021 was recorded in Services (55.9%), the in Manufacturing (23.5%) and Agriculture (15.2%), and the lowest in Construction (5.4%). When compared with the previous quarter, the share of employed persons was in Agriculture, forestry and fisheries (from 15.5% to 15.2%) and Construction (from 7.1% to 5.4%), in contrast with Manufacturing (from 23.2% to 23.5%) and Services (from 54.2% to 55.9%), which saw a growth of the share of employed persons.

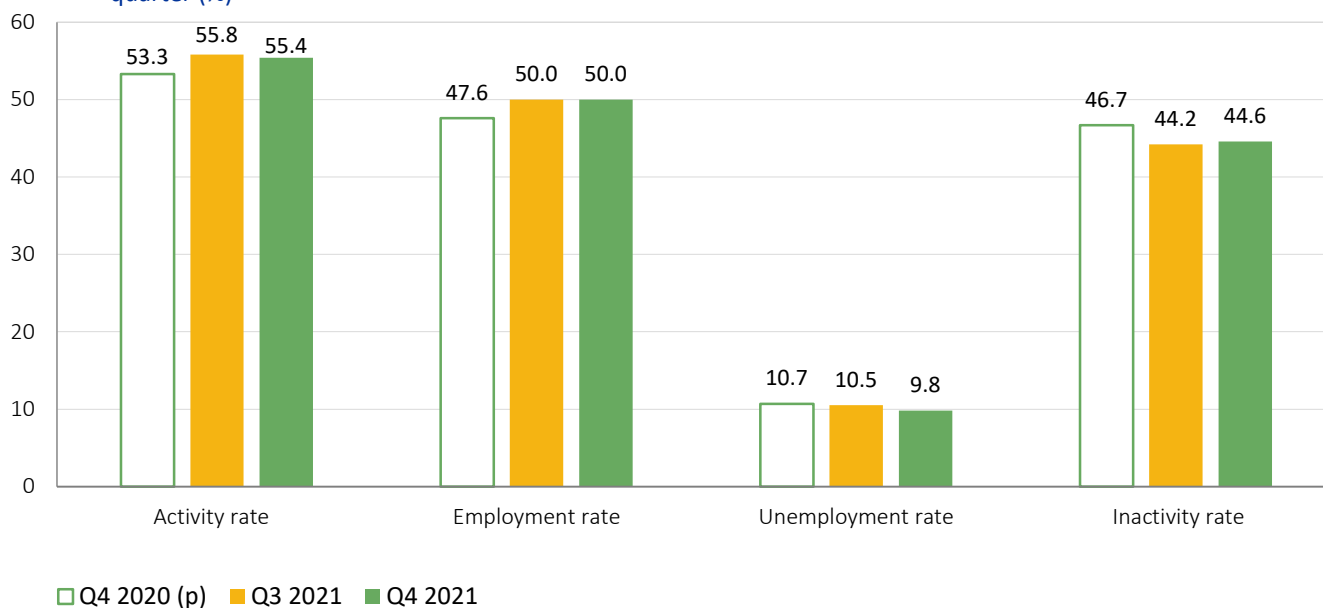
Chart 8.2. Share of employed persons by section (%)



Labour market indicators are expressive of a certain stabilization of the situation on the labour market, the former showing in the current quarter a decreasing tendency of unemployment and inactivity, and at the same time a growth of employment and activity.

<sup>8</sup> Data for the fourth quarter of 2021 are compared with the revised ones for the fourth quarter of 2020. As data revision backwards covers only major indicators and the set of data collected by the pilot survey is limited, it is not possible to make a more in-depth and precise analysis of labour market changes.

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



(r) – revised data

### 8.1. Comparison with the previous quarter

When compared with the third quarter of 2021, in the fourth quarter labour market saw a fall of the number of unemployed persons (-7.3%), of the number of employed persons (-0.2%), and inactive persons (-1%), with a simultaneous growth of the number of inactive persons (0.8%).

The unemployment rate saw a fall in relation to the previous quarter by 0.7 pp, and so did the activity rate by 0.4 pp. (chart 8.3), with a simultaneous growth of inactive persons by 0.4 pp, while the employment rate remained unchanged.

Observed by sex, the employment rate among men decreased by 0.4 pp. in the fourth quarter to the third quarter of 2021, amounting to 58%, while in the same period the growth of the employment rate among women recorded growth (0.4 pp.), whereas the employment rate among women in the fourth quarter was 42.5%.

Employment grew only in Region Vojvodine (by 8.1 thousand), while the largest decrease in employment was recorded in Beogradski region (8.4 thousand).

Unemployment rates among men saw a fall in Beogradski region (from 7.5% to 6,7%) and Region Južne i Istočne Srbije (from 12.1% to 11.5%). A slight growth was recorded in Region Vojvodine (from 7.8% to 8%), while in Region Šumadije i Zapadne Srbije the unemployment rate of 10% remained unchanged, when compared with the previous quarter.

Unemployment rates among women saw a fall in all the regions: in Beogradski region from 10.3% to 9.4%, in Region Vojvodine from 10.1% to 9.9%, in Šumadije i Zapadne Srbije from 13.5% to 11.6% and in Region Južne i Istočne Srbije from 15% to 13.1%.

The youth unemployment rate (aged from 15 to 24) in the fourth quarter amounted to 28.7%, by 5.6 pp. more than in the third quarter of 2021. Observed by sex, the youth unemployment rate among men increased by 4.6 pp, reaching the level of 31.9%.

The share of youth aged from 15 to 24 who are neither in employment or in education (so-called NEET rate), in the total youth population, amounted to 15.6% in the fourth quarter, being a fall of 2.5 pp. compared with the third quarter.

## 8. Labour market

Observed by professional status, to the previous quarter, the number of employed persons decreased in the category of contributing family members (-0.9%), then of employees (-0.3%), while the category of the self-employed saw a growth of 0.2%.

Табела 8.3. Запосленост по професионалном статусу, поређење Q3 2021 – Q4 2021.

	Q3 2021 (in thous.)	Q4 2021 (in thous.)	Промена (%)
<b>Employed persons – total</b>	<b>2 924.5</b>	<b>2 917.4</b>	<b>-0.2</b>
Self-employed	489.0	490.1	0.2
Employed	2 247.3	2 240.7	-0.3
Contributing family members	188.2	186.6	-0.9

Table 8.2. Employment by professional status, comparison Q3 2021 – Q4 2021<sup>9</sup>

When compared with the same quarter of the previous year, the number of employed persons increased by 4.1% (from 2.8 million in the fourth quarter of 2020 to 2.9 million in the fourth quarter of 2021), and so did the number of active persons, by 3.1% (from 3.1 million to 3.2 million), while the number of unemployed persons went down by 5.5% (from 335.2 to 316.7 thousand), and the contingent of inactive persons went down by 5.2% (from 2. to 2.6 million persons). At the same time, the employment rate increased by 2.4 pp, while the unemployment and inactivity rates decreased by 0.9 pp, and the inactivity rate by 2.1 pp.

In the youth population aged from 15 to 24 in the fourth quarter of 2021, when compared with the fourth quarter of 2020, as well as in the total population, an increase of 15.2 thousand in employed persons was recorded, with a simultaneous decrease of inactive persons (of 18.2 thousand) and unemployed persons (of 8 thousand). The youth employment rate in the fourth quarter of 2021 amounted to 23.3%, by 2.5 pp. more than in the fourth quarter of 2020. In the same period, the youth unemployment rate saw a year-on-year fall of 4.6 pp, amounting in the fourth quarter of 2021 to 28.7%, while the youth inactivity rate went down by 1.5 pp, amounting to 67.3%.

### 8.3. Influence of the COVID-19 pandemic on the labour market

The movement of the major contingents of population in the labour market cannot be interpreted outside the context of changes triggered by the coronavirus crisis during 2020.

According to Eurostat recommendation, several indicators are used in order to obtain a more precise picture about the influence of the coronavirus pandemic in the labour market<sup>10</sup>. These indicators comprise:

1. *Labour market slack*, which represents the share of: 1) unemployed persons; 2) employed persons working part-time, and wanting to work more; 3) those who seek employment, but not able work and 4) those who are able to work, but do not seek employment, in the extended labour force, the latter including all the employed, unemployed and potential labour force (those who are able to work, but do not seek employment and those who seek employment, but are unable to start working).

The indicator shows a disproportion between the offer and demand on the labour market, and in circumstances of normal economic development is stable. Usually it grows when the labour market suffers socio-economic shocks. Labour market slack

<sup>9</sup> Due to the changes in the methodology of Labour Force Survey since 2021, the data are compared with the revised data for the fourth quarter of 2020. Knowing that data revision is done only for major indicators and that the set of revised data has a limited volume, in-depth and more precise structural analysis is not possible.

<sup>10</sup> Knowing that data revision due to changes in the methodology of Labour Force Survey 2021 is done only for major indicators of labour market, in-depth and more precise structural analysis is not possible.

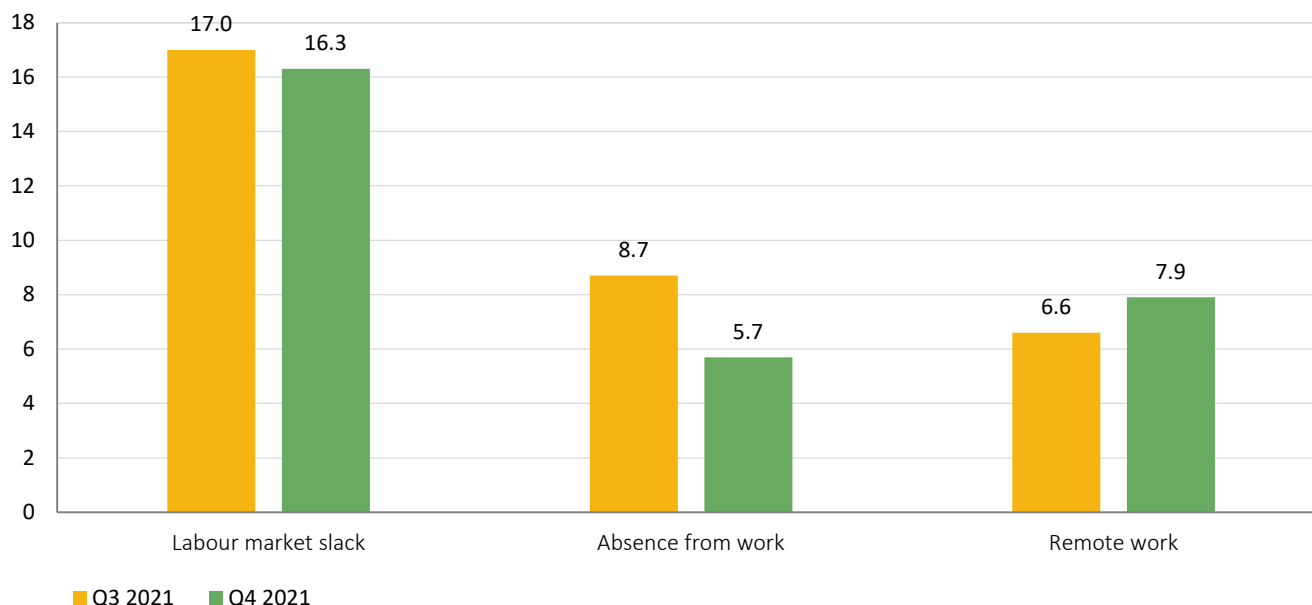
## 8. Labour market

in the fourth quarter of 2021 amounted to 16,3%, by 0.7 pp. less than in the previous quarter, suggesting that the so-called unmet need for employment shows a decreasing tendency.

2. *The absence of work* is measured by the share of the employed who are absent from work in the total number of the employed. In the fourth quarter of 2021, 5.7% of employees were absent from work, which is by 3 p.p. less than in the previous quarter.

3. *Remote work*, measured by the share of the number of remote employees in the total number of employees amounted to 7.9% in the fourth quarter, by 1.3 p.p. more than in the third quarter of 2021.

Chart 8.4. Indicators of the influence of the coronavirus pandemic on the labour market (%)



## 8. Labour market

### Glossary

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

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

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

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

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

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

**Inactive 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.

**Inactivity rate** is the percentage of inactive population in the total population aged 15 and over.



## 9. Salaries and wages

Average net salaries and wages in the Republic of Serbia for the **fourth quarter of 2021** amounted to 69 936 dinars. Compared with the same period of the previous er, they are nominally up by 12.1%, and by 4.5% in real terms.

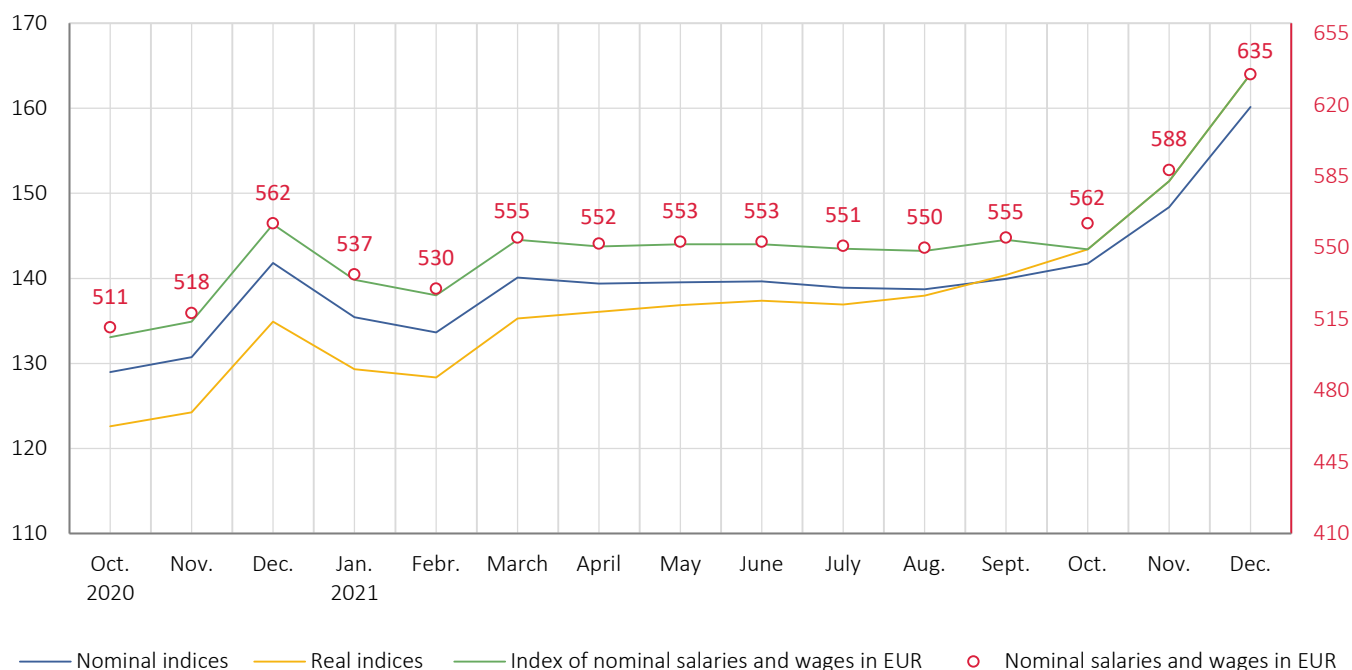
Compared with the previous quarter, i.e. the third quarter of 2021, they were nominally up by 7.8%, and by 5.2% in real terms

Salaries and wages **in 2021** amounted to 65 864 dinars, and in relation to the previous year, they were up nominally by 9.6% and by 5.4% in real terms.

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

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Real indices	106.9	107.6	109.5	100.4	108.3	107.4	107.4	107.6	105.8	106.4	104.5	104.5
Nominal indices	109.5	110.0	110.9	112.0	110.3	108.5	109.4	109.3	107.3	109.8	109.2	112.1

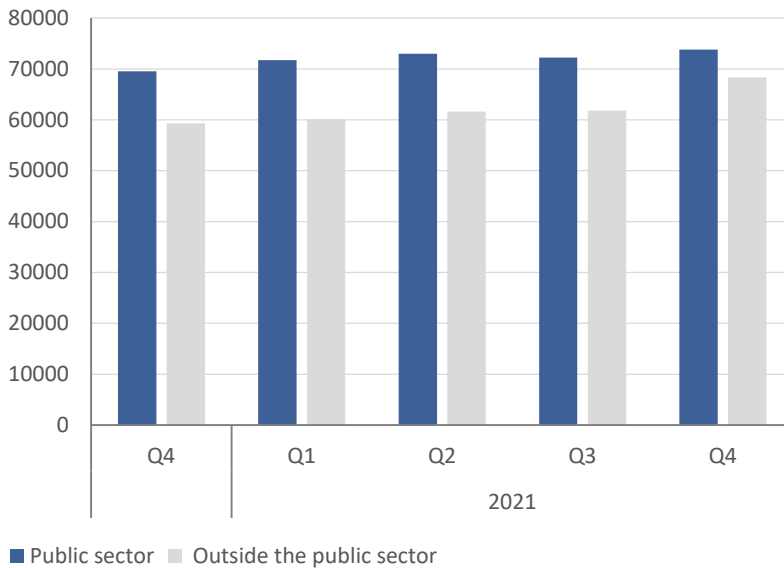
**Chart 9.1. Net salaries and wages, movement of nominal and real indices** *сараде без пореза и допринос*  
(average 2017 = 100)



In the one-year period backwards, nominal salaries and wages followed the real economy and budget, adapting themselves at the same time to trade indicators, i.e. offer and demand for labour force. After having exceeded for the first time EUR 400 in December 2017, average net salaries and wages were during the whole 2020 above EUR 450. In December 2021, they reached EU 635, which was at the same time the highest value recorded in the observed period.

## 9. Salaries and wages

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



Average net salaries and wages amounted to 73 797 dinars in the fourth quarter in the public sector and to 68 320 dinars outside it. The ratio of the movement of salaries and wages in and outside the public sector was for a long period of time unchanged, because a successive growth of salaries and wages in the public sector led to their increase outside it, which resulted in the growth of total salaries and wages. The policy of managing salaries and wages in the public sector proved itself this way to be the trigger of the impulse of internal demand and a regulator of labour market fluctuations. Since the beginning of 2021, salaries and wages in the public sector have been mainly on a higher level than those outside it.

Chart 9.3. Average net salaries and wages in the public sector, per employee, 2021

Public sector – total	RSD 72 674
Public state-owned public enterprises	RSD 82 787
Public local enterprises	RSD 63 183
Administration – all levels	RSD 75 648
Government level	RSD 78 775
Autonomous province level	RSD 80 729
Local authorities level	RSD 60 139
Health and social work	RSD 73 981
Education and culture	RSD 66 323

## 9. Salaries and wages

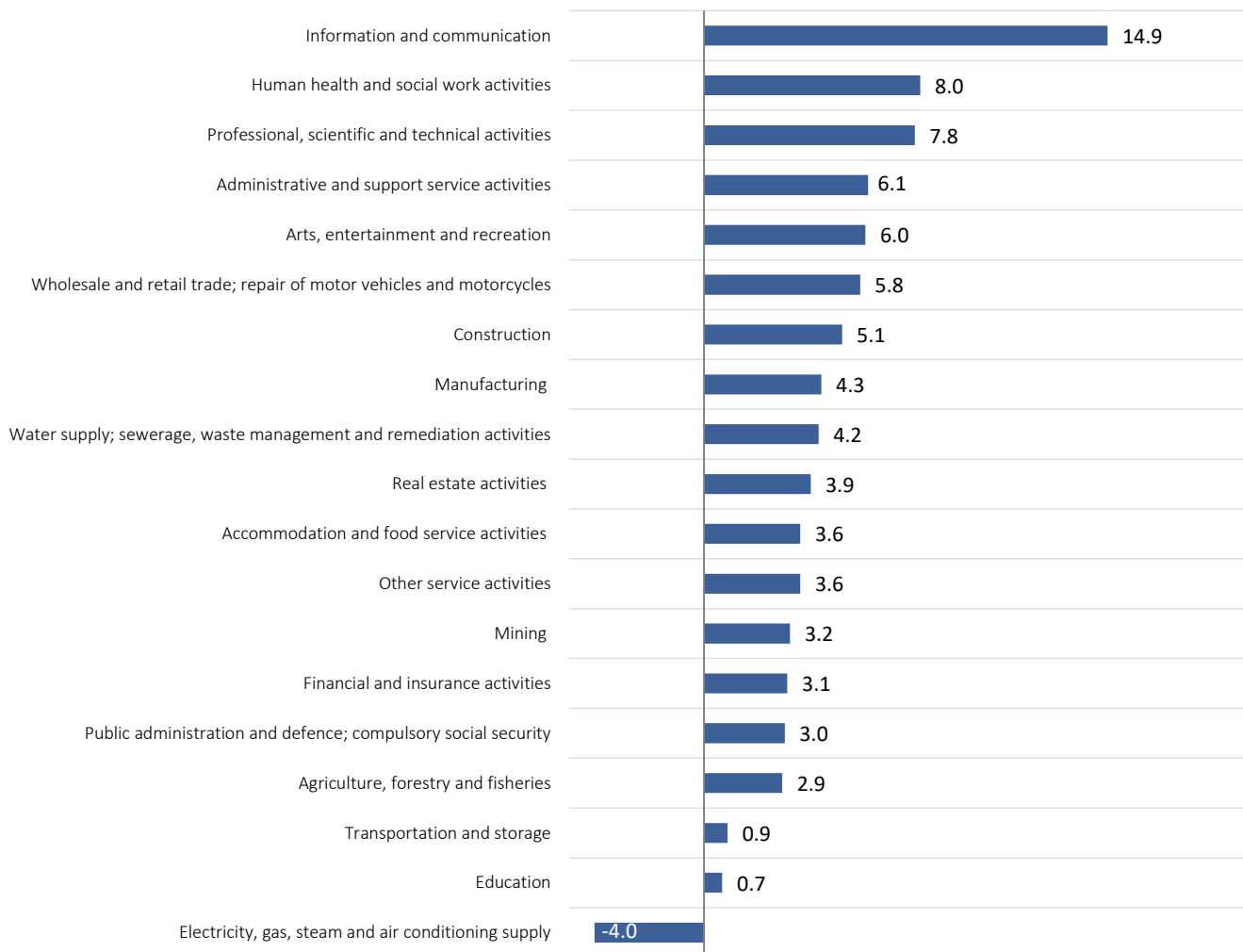
When comparing net salaries and wages by CA (2010), one notices that the largest real growth in 2021, compared with 2020, was realized in the sections Information and communications (14.9%), Human health and social work activities (8%), Professional, scientific and technical activities (7.8%), and Administrative and support service activities (6.1%), while a growth of 4% was only recorded in the section Electricity, gas, steam and air conditioning supply.

The highest net salaries and wages in 2021 was recorded in the following divisions: Computer programming and consultancy activities (189 852), Air transport (151 401 dinars), Scientific research and development activities (136 490), Extraction of crude petroleum and natural gas (122 575) and Financial and insurance activities, except insurance and pension funding (121 490).

In all other divisions salaries and wages ranged from 36 993 dinars (Food and beverages service activities) to 119 653 dinars (Manufacture of tobacco products).

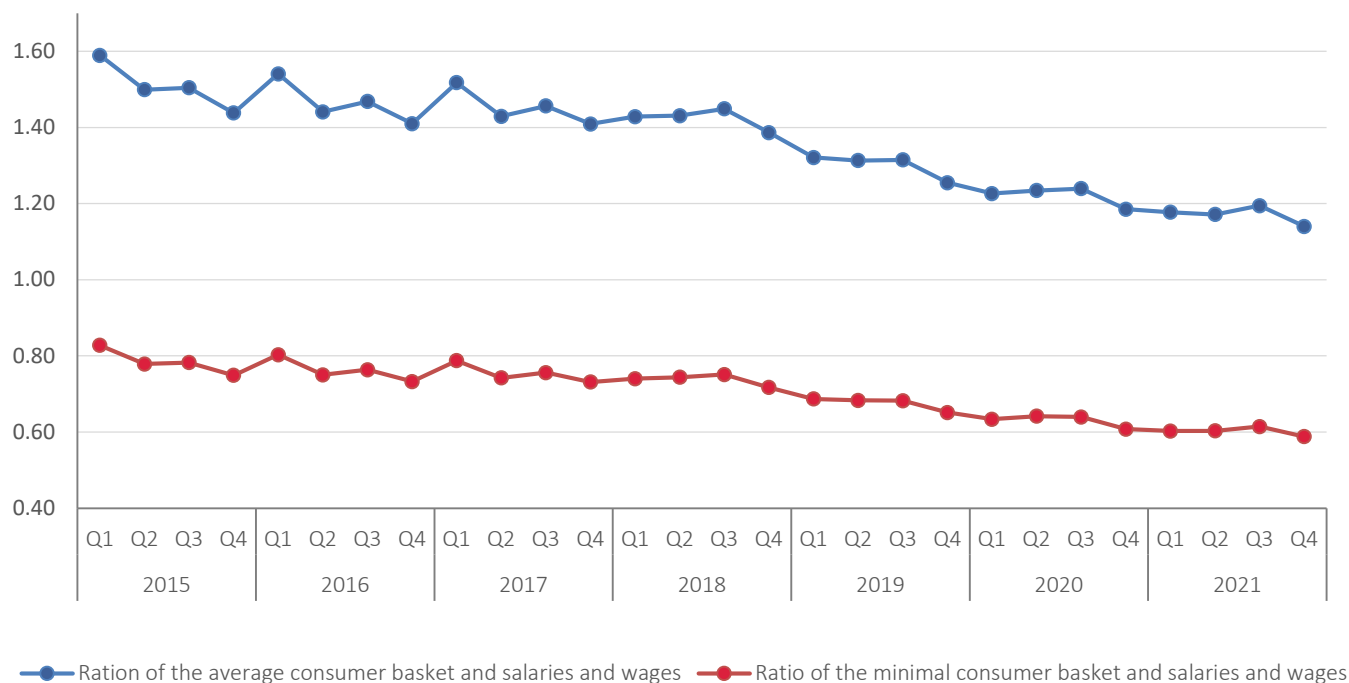
Observed by regions, the highest average net salaries and wages in 2021 were paid in Beogradski region, 82 132 dinars. In Region Vojvodine salaries and wages totaled 62 494 dinars, in Region Južne i Istočne Srbije, 57 551 dinars, and in Region Šumadije i Zapadne Srbije, 55 901 dinars.

**Chart 9.4. Real growth of net salaries and wages by CA sections (2010)**  
(2021 to 2020)



## 9. Salaries and wages

Chart 9.5. Ratio of the consumer basket and net salaries and wages



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

The ratio of net salaries and wages and average consumer basket in the fourth quarter of 2021 indicates that the purchasing power grew, when compared with the previous quarter. To cover the average consumer basket in the fourth quarter of 2021 one needed to set aside 1.14 average salaries and wages (in the third quarter, 1.19), and to cover the minimum consumer basket only 0.59 of salaries and wages sufficed (in the third quarter, 0.61).

The regional analysis of the purchasing power sets aside the City of Belgrade and City of Novi Sad on one side, and on the other one all the other areas. In the fourth quarter of 2021, the purchasing power parity (ratio of the average consumer basket and average salaries and wages) of the City of Belgrade (0.95) was above the average of the Republic of Serbia (1.14) and also that of the City of Novi Sad (1.07), while in the other towns average salaries and wages covered the minimum consumer basket, but not the average household consumer basket.

From the middle of 2014 to 2019 tourist activity in Serbia saw stable growth. This positive trends was interrupted in 2020, when the CORONA pandemic brought the tourist activity to go down. Recovery was recorded primarily in the second quarter, then in the third and fourth quarter of 2021, when it gradually started to recover for reasons of a slightly more favourable epidemiological situation.

### 10.1. Tourist overnight stays

Measured by the number of overnight stays, tourism in Serbia first went through the phase of turnover growth over 2005–2008. The year 2009 brought a phase of contraction, which persisted also in the following year, and from 2011 to 2013 there was a period of stagnation, when the average number of tourist overnight stays was about 6.6 million per year. In 2014, due to natural disasters in May, as the number of overnight stays fell by 7.3%, compared with 2013, tourism turnover experienced another strong contraction. However, in spite of bad meteorological conditions at the very beginning of the season, 2014 was the year when an expansive growth of the tourism activity in Serbia started, which lasted till March 2020. At that time, due to the COVID-19 pandemic flights were forbidden, accommodation booking were canceled and the activity in the tourist sector recorded general fall. The situation has become more favourable since 2021, when tourist activity has started to recover and the number of tourist arrivals and tourist overnight stays to increase (both domestic and foreign).

The time series of tourist overnight stays contains very marked seasonal fluctuations, reaching the highest values in summer and the period of winter holidays.

**Table 10.1. Tourist overnight stays, indices**

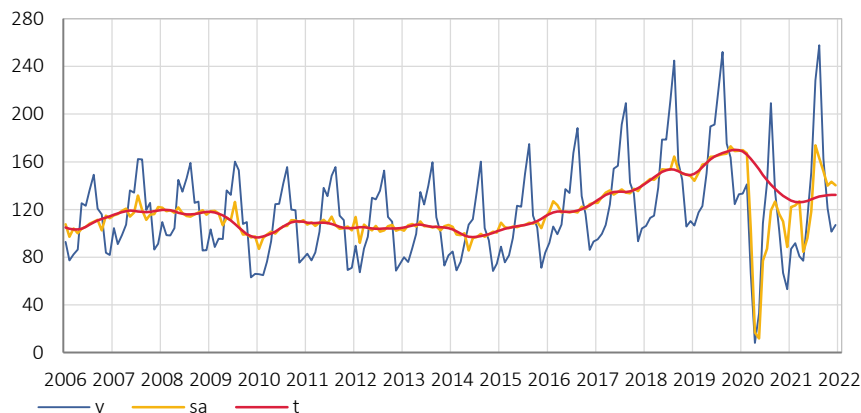
(comparison with the same period of the previous year)

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total	103.9	107/2	105.6	116.6	98.3	28.1	74.9	52.8	76.1	228.4	133.3	148.2
Domestic tourists	101.3	107.6	105.4	113.6	101.5	39.3	113.0	71.1	91.9	188.5	103.6	123.5
Foreign tourists	108.3	106.4	105.8	120.6	93.2	8.9	17.9	30.2	48.3	535.8	412.6	220.0

# 10. Tourism

**Chart 10.1. Component of the time series of total tourist overnight stays, indices**

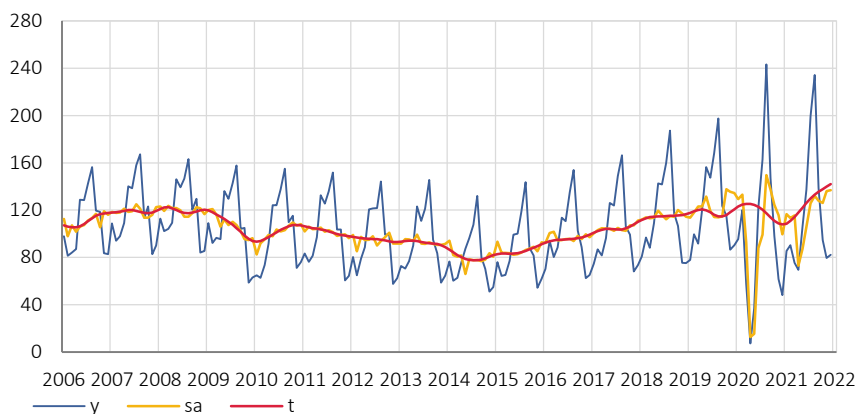
(y – original series, sa – series with seasonal component excluded, t – trend-cycle component, average 2020 = 100)



In 2021 there were 8.2 million overnight stays, by 31.6% more than in 2020. After a fall in January and February, the tourist activity recorded better results from March to the end of 2021. The most significant year-on-year growth of total tourist overnight stays (857,0%) was recorded in April. Observed by month, in the fourth quarter of 2021 a year-on-year growth amounted to 18.3% (October), 51.9% (November) and 101.2% (December).

**Chart 10.2. Components of the time series of domestic tourist overnight stays, indices**

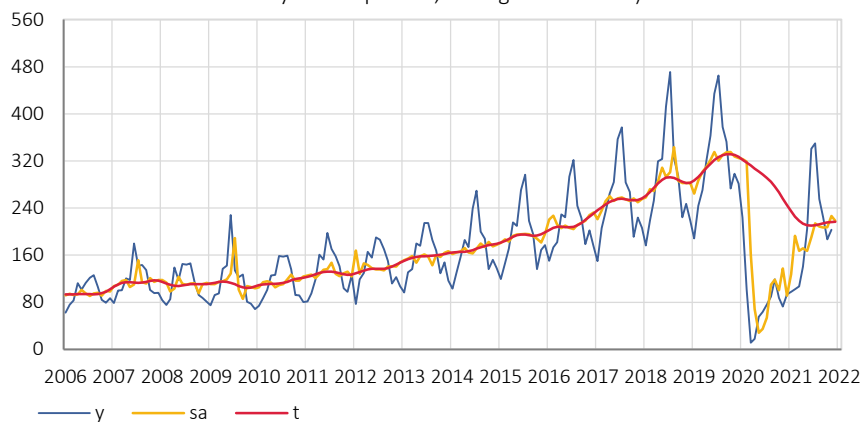
(y – original series, sa – series with seasonal component excluded, t – trend-cycle component, average 2020 = 100)



In 2021 domestic tourists spent 5.7 million nights, by 16.1% more than in 2020. This group of tourists represents the majority of visitors in Serbia, i.e. 70.2% of the total number of overnight stays. In the fourth quarter of 2021 the number of domestic tourist overnight stays was up by 123.5% in relation to the same period of the previous year.

**Chart 10.3. Components of the time series of foreign tourist overnight stays, indices**

(y – original series, sa – series with seasonal component excluded, t – trend-cycle component, average 2020 = 100)



In 2021 foreign tourists spent about 2.4 nights, by 92.1% more than in 2020. The most significant year-on-year growth of foreign tourist overnight stays (846.8%) was recorded in April. Observed by month, in the fourth quarter of 2021 the year-on-year growth was 88.0% (October), 114.2% (November) and 179.4% (December).

## 10.2. Major tourist resorts

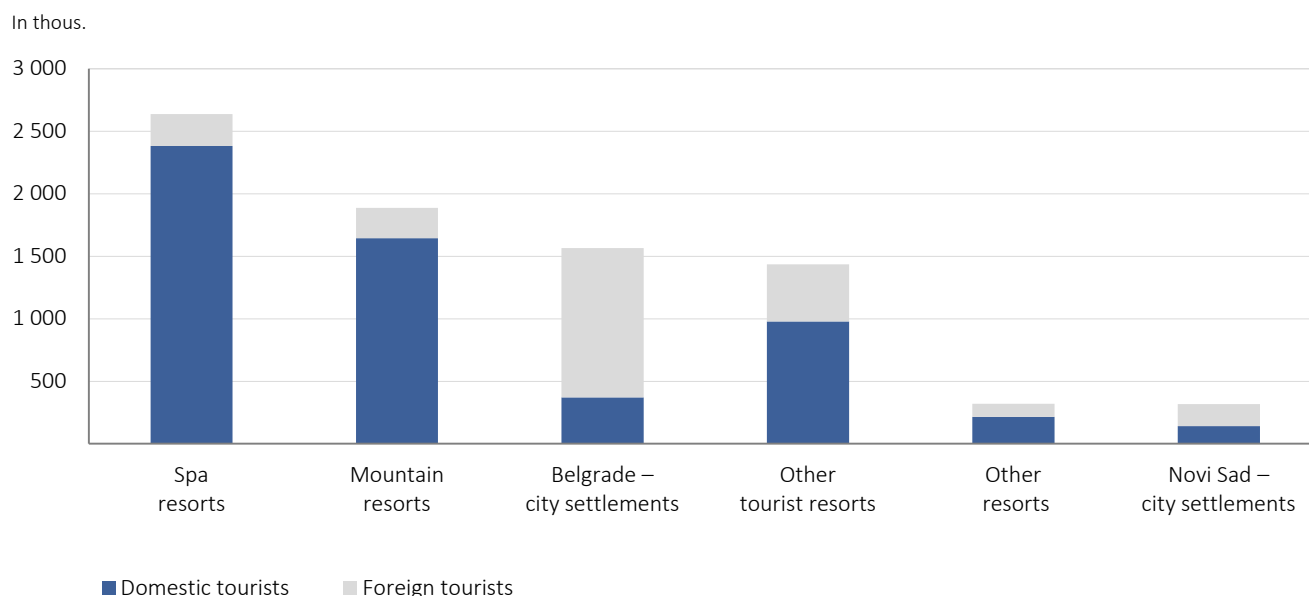
Expressed in number of tourist overnight stays, the most frequently visited tourist resorts in 2021 were spa resorts.

In spa resorts there were about 2.6 million overnight stays, accounting for 32.3% of the total number of tourist overnight stays in the Republic of Serbia. The most frequently visited spa resorts were Vrnjačka Banja and Sokobanja. (about 1.6 million of overnight stays).

In mountain resorts tourists about 1.9 million nights were spent, accounting for 23.1% of the total number of overnight stays. The most visited mountain resorts were Zlatibor (about 661 overnight stays) and Kopaonik (about 426 thousand overnight stays). Spa and mountain resorts were mostly visited by domestic tourists (90.4%, i.e. 87.2% of the total number of overnight stays).

According to the frequency of visits to tourist resorts, Other tourist resorts and Belgrade, with about 1.6, i.e. 1.4 million overnight stays were the next most visited destinations. Belgrade was mostly visited by foreign tourists (76.3% of the total number of overnight stays).

Chart 10.4. Overnight stays by selected tourist resorts, 2021



# 10. Tourism

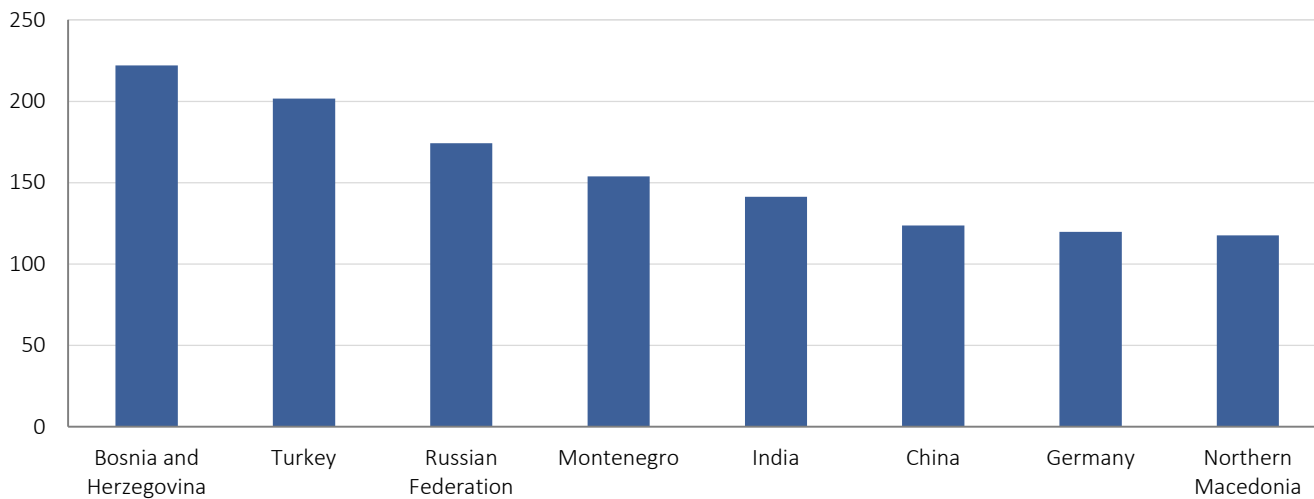
## 10.3. Country of origin of foreign tourists

In 2021, foreign tourists from about fifty different countries visited Serbia.

Most nights were spent by visitors from Bosnia and Herzegovina, Turkey, Russian Federation, Montenegro, India, China, Germany and North Macedonia. The visitors from these countries spent 52% nights of the total number of foreign tourist overnight stays in 2021.

Chart 10.5. Foreign tourist overnight stays by country they came from, 2021

In thous.





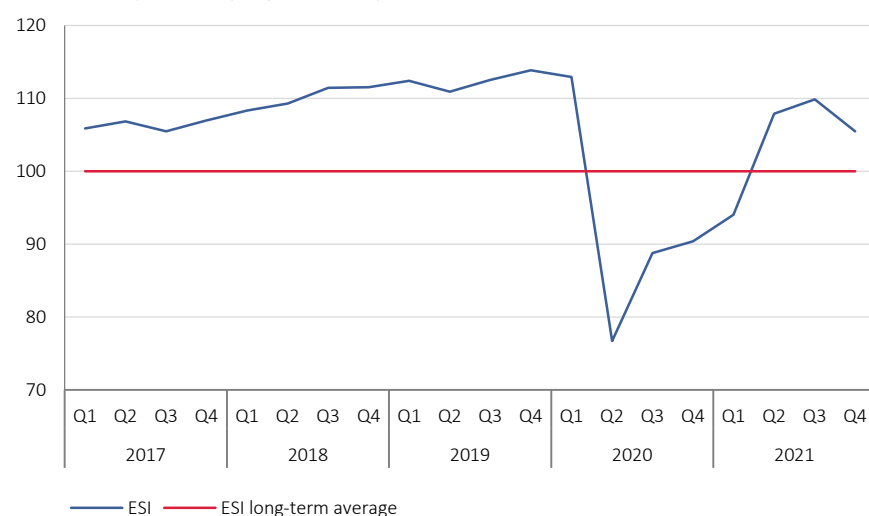
# 11. Economic Sentiment Indicator

## 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 the perception of economic subjects can be a very important signal of the changes in the economic movements, this indicator is often used to assess economic situation, make flash estimates, for scientific and analytical use, for international comparisons and for 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 analyzed sections are weighted in order to reflect the best way 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.<sup>11</sup>

**Chart 11.1. Economic Sentiment Indicator<sup>12</sup> (%)**  
(seasonally adjusted data)



The Economic Sentiment Indicator (ESI) in Serbia in the fourth quarter of 2021, with a value of 105.5, saw a fall of 4.4 pp. Compared with the previous quarter, still being above the average of the previous year which was marked by the corona virus pandemic, by 12.8 pp. (92.7). However, ESI has still not reached the average from the prepandemic year 2019 (111.9). The value of the indicator reflects a decrease in the expectations mostly in Services, which saw a fall of 8.7pp., in Retail trade (fall of 4.9 pp.) and Consumption(-2.8 pp.). Manufacturing recorded growth (0.8 pp.), as well as Construction (0.6 pp.).

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

**Table 11.1. Confidence indicator by section and Economic Sentiment Indicator – growth to the long-term average (%)**

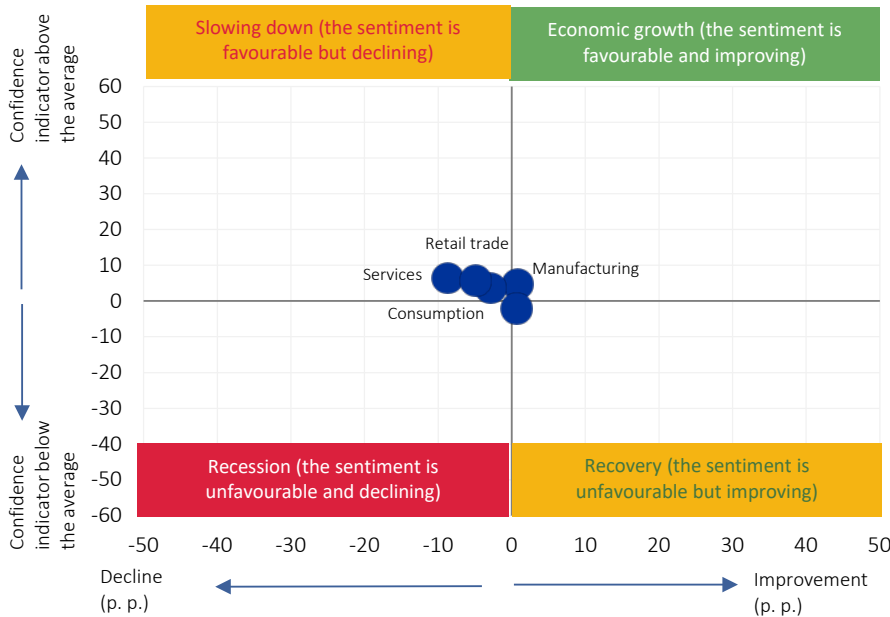
Confidence indicator	Minimum		Average	Maximum		2020				2021			
	Quarter	Value		Quarter	Value	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Manufacturing	Q2 2020	-7.5	4.1	Q1 2015	7.7	5.7	-7.5	-2.3	-1.0	-0.4	3.4	3.9	4.7
Services	Q2 2020	-34.8	6.8	Q2 2016	16.5	13.4	-34.8	-17.1	-14.1	-7.1	12.6	15.2	6.5
Retail trade	Q2 2020	-9.6	8.2	Q4 2019	16.8	15.5	-9.6	-1.3	-6.2	0.2	9.2	10.6	5.7
Construction	Q3 2013	-41.1	-11.4	Q4 2019	6.8	6.4	-7.3	-6.2	-6.2	-6.7	-1.6	-2.7	-2.1
Consumption	Q4 2014	-19.7	-4.4	Q1 2020	9.9	9.9	8.1	5.1	4.7	2.8	4.1	6.5	3.7
Economic Sentiment Indicator	Q2 2020	76.7	100.0	Q4 2019	113.9	112.9	76.7	88.8	90.4	94.0	107.9	109.9	105.5

<sup>11</sup> ESI is calculated as an indicator with a mean value 100 and standard deviation of 10. More information on the methodology: [https://ec.europa.eu/info/sites/default/files/bcs\\_user\\_guide.pdf](https://ec.europa.eu/info/sites/default/files/bcs_user_guide.pdf)

<sup>12</sup> The data for the Economic Sentiment Indicator (ESI) are revised according to regular methodological adjustments.

# 11. Economic Sentiment Indicator

Chart 11.2. Economic Sentiment Tracer

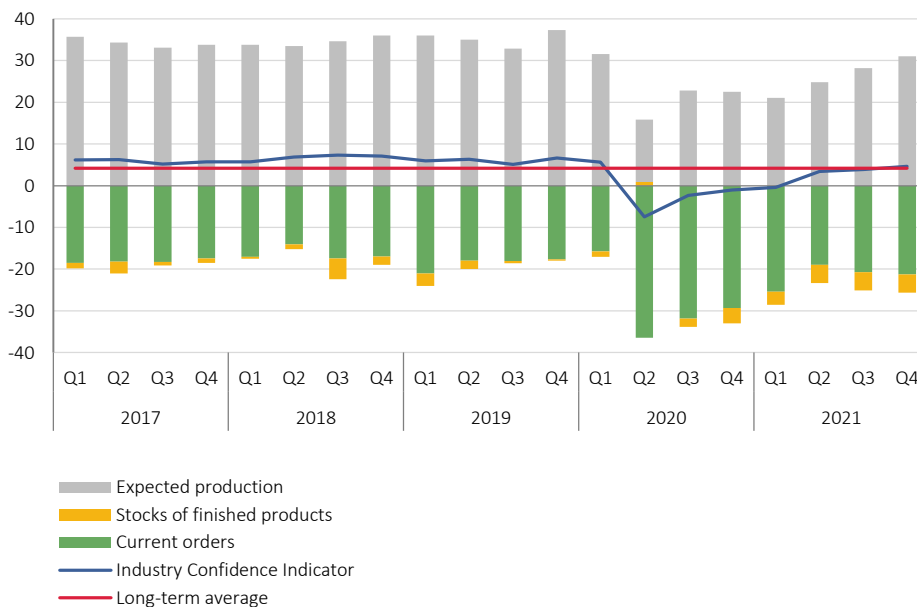


The Economic Sentiment Tracer is created on the basis of seasonally adjusted confidence indicators, shows that most of the section are in the slowing down phase characterized by a favourable climate, but with a declining tendency. Economic growth (expansion), with a climate above the average and improving tendency, is only recorded in Manufacturing, while Construction is in the improving phase and with a improving tendency.

## 1.2. Industry Confidence indicator

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

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



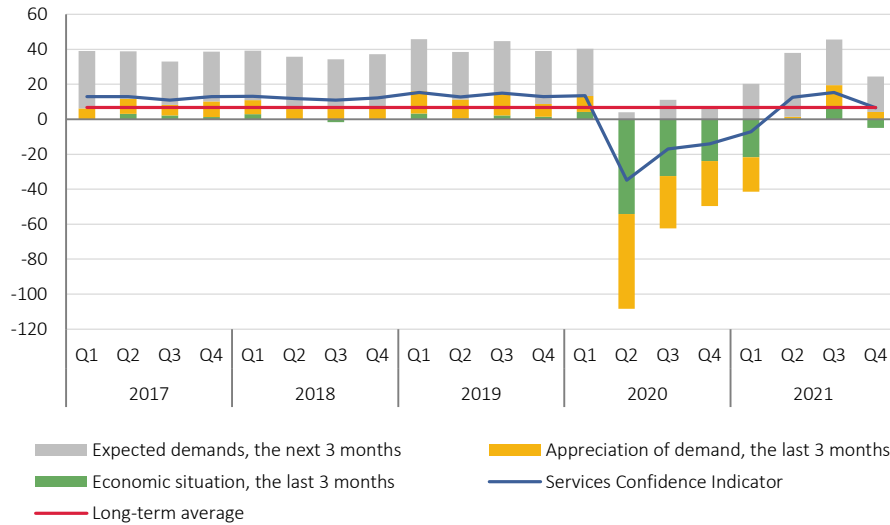
The Industry Confidence Indicator – ICI in the fourth quarter of 2021 amounted to 4.7% or 0.8 pp. More than in the previous quarter, thus exceeding the long-term average by 0.6 pp. The growth of this indicator is the result of positive appraisals of businessmen as to the expected production (+2.9 pp.). In contrast, negative expectations intensified as to current orders (-0.5 pp.), while businessmen’s appraisals as to current stocks of finished products were unchanged in relation to the previous quarter.

# 11. Economic Sentiment Indicator

## 11.3. Service Confidence Indicator

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

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

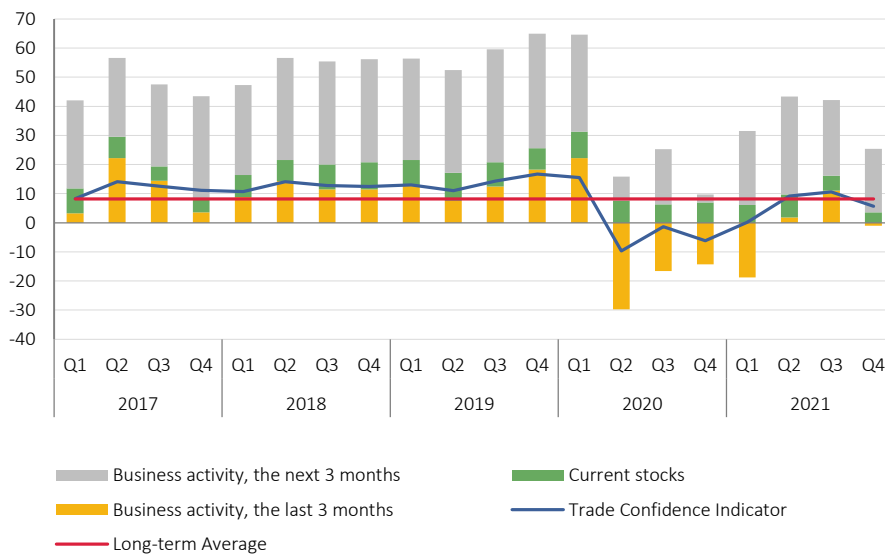


The Service Confidence Indicator - *SCI* in the fourth quarter of 2021, after an increasing trend in the two previous quarters, saw a decreasing trend, and with a value of 6.5% it was lower by 8.7 pp. than the value from the previous quarter. All three components of this indicator went backwards, the largest fall being recorded in the appraisals as to the economic situation (-10.9 pp.) and demands in the previous quarter (-9.3 pp.).

## 11.4. Trade Confidence Indicator

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

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



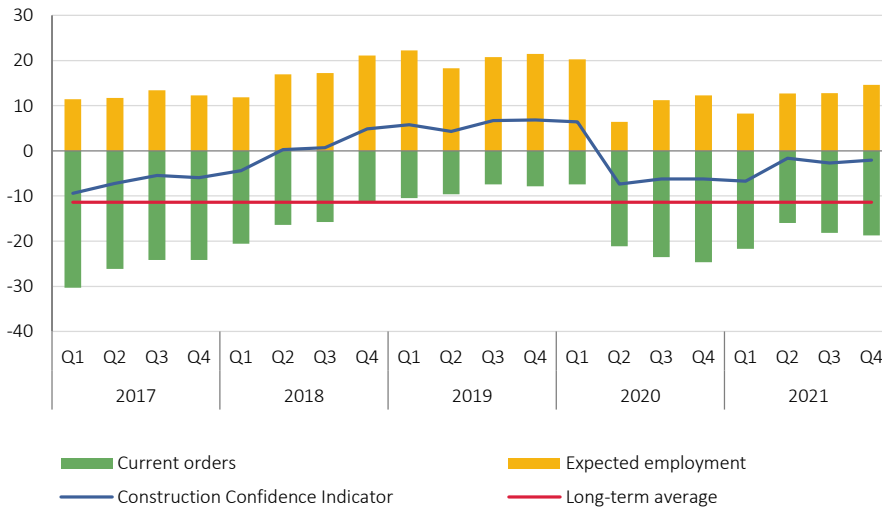
The Trade Confidence Indicator - *TCI* in the fourth quarter of 2021 went down by 4.9 pp. compared with the previous quarter and by 2.5 pp. under the long-term average. The fall of this indicator reflects negative perceptions as to the movement of business activity in the three previous months, and a fall of the appraisal by 12 pp, while, despite the fall in relation to the previous month, there are some more optimistic and still positive expectations as to the balance of stocks (-1.5 pp.) and business activity in the next three months (-4.3 pp.).

# 11. Economic Sentiment Indicator

## 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)

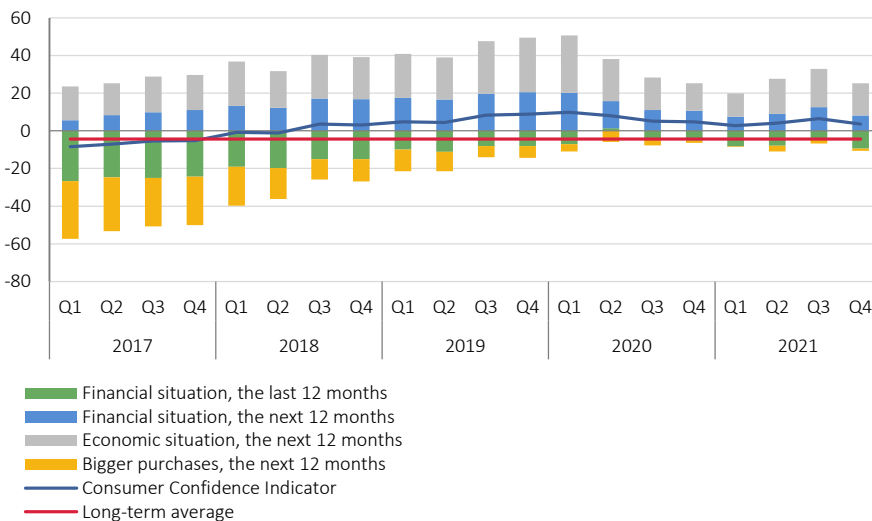


The Construction Confidence Indicator - CCI, with a value of -2.1% in the fourth quarter of 2021 saw a slight growth of 0.7 pp. in relation to the previous quarter and was above the long-term average by 9.4 pp. The value of this indicator reflects the increase of expectations regarding employment (1.9 pp.), and a slight fall of the appraisal of current orders (-0.5 pp.), compared with the previous quarter.

## 11.6. Consumer Confidence Indicator <sup>13</sup>

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 in the fourth quarter of 2021 fell by 2.9 pp. in relation to the previous quarter, even if it exceeded by 8 pp. the long-term average. Fall was noted primarily in the appraisals regarding the financial situation in the last and next twelve months (-4.7 pp. i.e. -4,5 pp.). A moderate optimism was shown by consumers as to planned bigger purchases in the next year (+0.8 pp.).

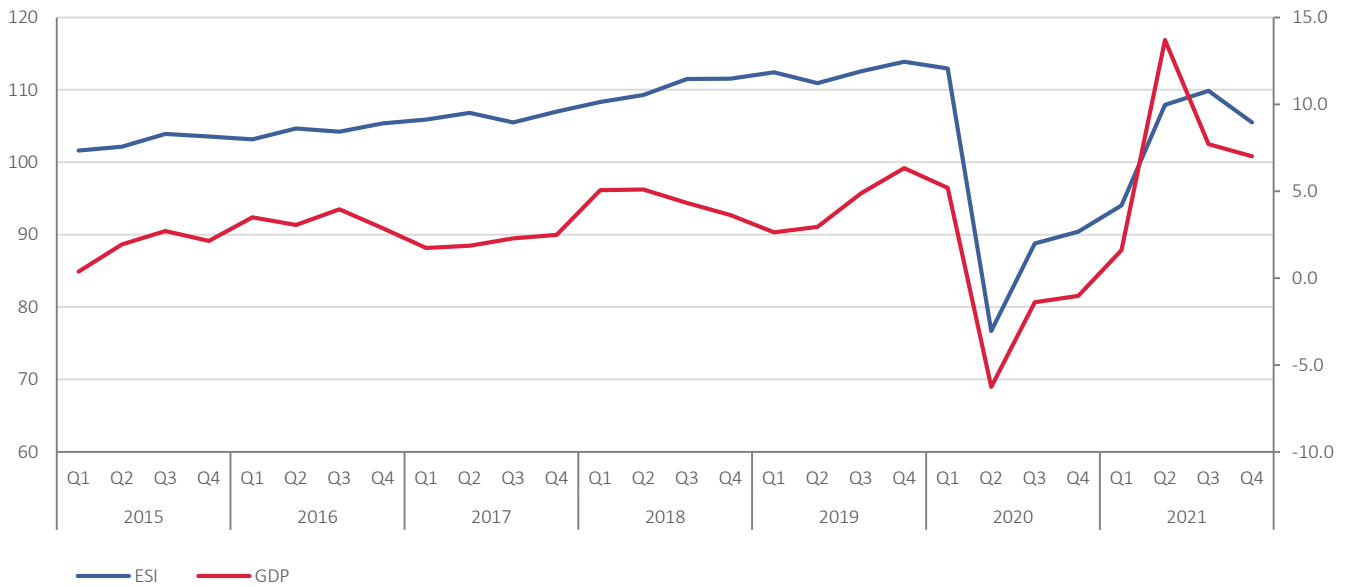
<sup>13</sup> The methodology for calculating the Consumer Confidence Indicator was changed by the European Commission starting from 2018, consequently the data have been revised.

# 11. Economic Sentiment Indicator

## 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 0.74.

Chart 11.8. Correlation of ESI and GDP of Serbia

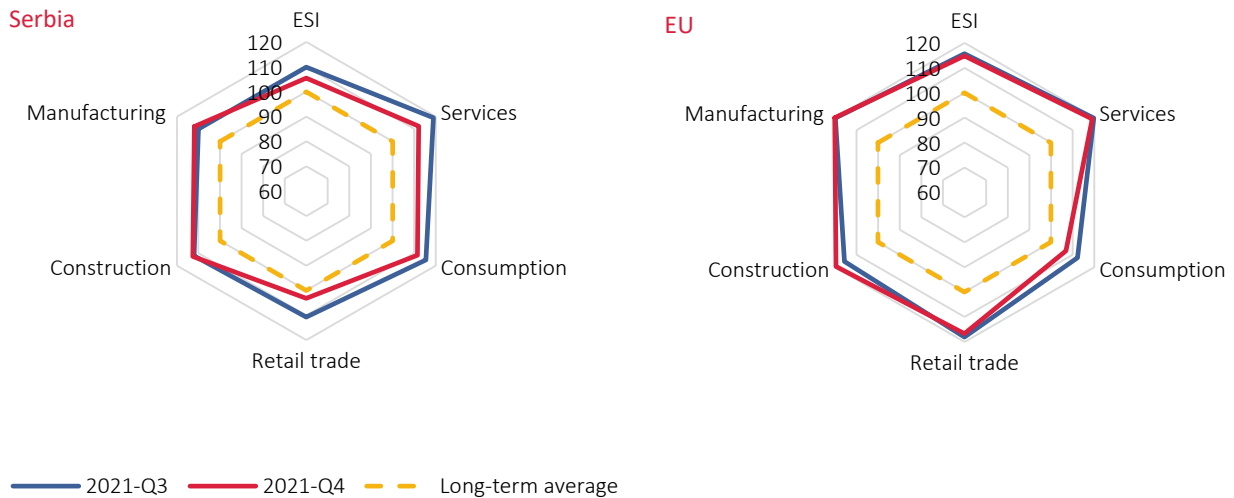


# 11. Economic Sentiment Indicator

## 11.8. Economic Sentiment Indicator in the European Union

Most of EU countries experienced declining economic climate in the fourth quarter of 2021 (compared with the previous quarter), which made *ESI* fall (with a value of 114.8) by 0.9 pp. Similarly to Serbian trends, the largest fall in expectations in the EU was recorded in Consumption (5.5 pp.), Retail trade (1.4 pp.), and it can be said that this partly resulted from concerns arising due to price increase, particularly for energy.

Chart 11.9. Economic Sentiment Indicator



### **i** How to interpret the tracer?

The tracer scale of the chart ranges is defined from 60 to 120 (average = 100). The most recent quarterly outcomes (Q4 2021) are compared with the previous quarterly outcomes (Q3 2021) 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 center 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 Juzne I Istocne Srbije has even 30 (out of total of 53), and in Region Sumadije I Zapadne Srbije, such status is recorded in 13, out of 53 municipalities. On the other hand, there is no municipality in Region Vojvodine with the status of devastated municipality (devastated means that development level is below 50% of the Republic average – see Glossary), while in Region Sumadije I Zapadne Srbije, the mentioned status is recorded in three municipalities, and in Region Juzne I Istocne Srbije, 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.

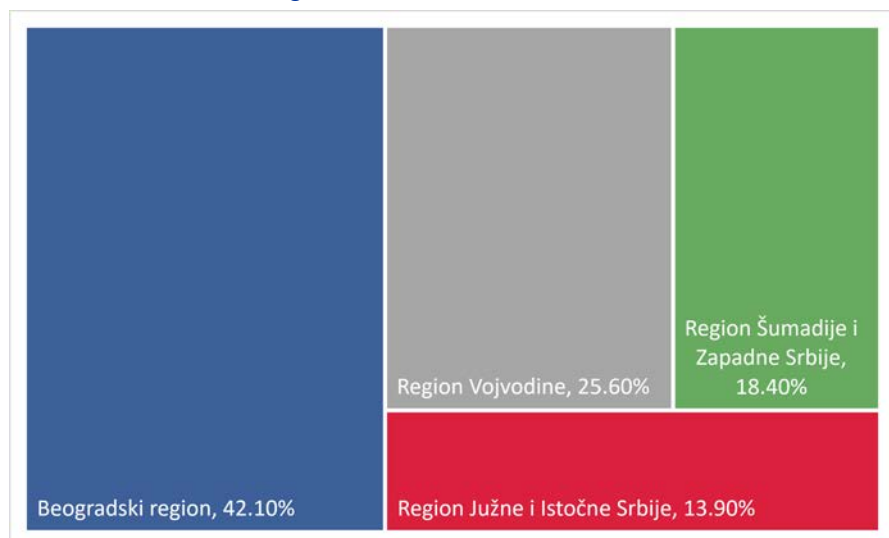
- **Gross domestic product**

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 2020, observed by level of NSTU 2 regions, the greatest realized GDP was in Beogradski region (42.1%), followed by Region Vojvodine (25.6%), Region Sumadije I Zapadne Srbije (18.3%) and Region Juzne I Istocne Srbije (14%).

Knowing that Beogradski region covers 3.7% of the area inhabited by 24% of the population of Serbia, it is clear that it is also the region with the highest GDP per capita (1 368 000 RSD / per capita, i.e. 71.5 % above the republic average or almost three times higher than in Region Juzne I Istocne Srbije). Other regions record GDP per capita under the average, i.e. Region Vojvodine -4.1%, Region Sumadije I Zapadne Srbije -33.3% and Region Juzne I Istocne Srbije -34.6%.

Chart 12.1.Share of the regions in national GDP, 2020



## 12. Регионалне економске асиметричности

### • 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 Sumadije I Zapadne Srbije. Average net salaries and wages in 2021 in Beogradski region amounted to RSD 82 132, or 125% of RS average (RSD 65 864), in Region Vojvodine, they were insignificantly below RS average (RSD 62 494, or 95% of RS average), while in Region Juzne I Istocne Srbije and Region Sumadije I Zapadne Srbije, they were about 86% of the Republic average (RSD 57 551 and RSD 55 901, respectively). In all regions, average salaries and wages recorded growth relative to the previous year, and the greatest absolute and relative increase was noted in Beogradski region (RSD 7 821, or 10.5%).

In 65 municipalities, average net salaries and wages were below 80% of the Republic average, i.e. in particular Belgrade municipalities, average salaries and wages were more than double relative to municipality of Bojnik (with the lowest average salaries and wages of RSD 45 019). Moreover, at the bottom of the list are the municipalities of Vlasotince with an average salary of RSD 45 575, as well as Presevo (46 176) and Razanj (46 718).

### • Labour market

The correlation of unemployment rate and development level of the region is very high, and in accordance with the mentioned, Region Juzne I Istocne Srbije, with unemployment rate of 14% in 2021, by 27% exceeds the average of Serbia (11%). On the other hand, in Beogradski Region, unemployment rate was the lowest, 9.1%, i.e. 17.4% below the national average. Additionally, referring to employment rate, it is the highest in Beogradski region (52.5% or 8% above the average of Serbia), while in Region Juzne I Istocne Srbije, noted was the lowest employment rate of 43.2%, or 11.3% below the Republic average (48.6%).

In 2021, Region Vojvodine and Beogradski Region participated with 27%, each, in total employment and regarding total unemployment, Region Sumadije I Zapadne Srbije is on the first place with 34%, relative to Beogradski region, with 21% share of total unemployment (according to Labour Force Survey). In Region Sumadije I Zapadne Srbije, there was about 27.6% of employed in total number of the employed in Serbia, also almost a third part of total unemployed population. Region Juzne I Istocne Srbije participated with 19% in total employment of Serbia and with 25% in total unemployment.

### • Export activity

In contrast to other indicators, in 2021, Beogradski region was not on the first place regarding total export of Serbia (share of 23.8%). Region Vojvodine is on the first place with the share of 34.8% in export, followed by Region Sumadije I Zapadne Srbije (22%) and region Juzne I Istocne Srbije (20%). Export per capita reflects regional asymmetries – Region Vojvodine records the export of EUR 4 082 per capita and it is by 302% above the Republic average and it is almost double value if compared with the export value per capita in region Sumadije I Zapadne Srbije (EUR 2 491), which is by 21% below the average of the Republic. Region Vojvodine, as the leading exporter in 2021, recorded the greatest share in export<sup>14</sup> of agricultural and food products (24%), primarily cereals (35.9%), whereof the most significant product related to corn (20.8% of total agro-food products export).

### • Demographic structure

According to the last available data for 2020, population density in Beogradski region is by 6.7 times greater than average population density in Serbia, while in Region Juzne I Istocne Srbije, population density was the lowest – 28% below the Republic average. Although all regions participate relatively equally in total population of Serbia, interregional differences are particularly apparent. For example, in eight towns in Region Vojvodine, lives even over a half of total population of Vojvodina (53.6%). However, the most obvious population inequality is in other two regions: Region Sumadije I Zapadne Srbije comprises 10 towns in that 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 Juzne I Istocne Srbije, as 56% of population lives in 9 cities, and only 31% of population lives in even 30 undeveloped municipalities. Additionally, due to economic migrations, number of population in Beogradski region is constantly increasing (by 2.2% between 2011 and 2020), while the number of population in other three regions is constantly decreasing. Simultaneously, it means that differences in population density will be even greater as population in Region Juzne I Istocne Srbije is becoming more and more fragmented, while population density in Beogradski region becomes increasingly denser.



## 12. Regional economic asymmetries

### • Transport infrastructure

In the Republic of Serbia, there are huge regional and interregional differences regarding infrastructure equipment (transport, telecommunication and water management, i.e., accompanying supra structures). In roads' quality, telecommunication and modern living conditions, differences are, first of all, manifested in underdeveloped south area and more developed north area of Serbia. The unsatisfactory condition of the road network is particularly evident in the municipal (local) roads, necessary for the daily functioning, development and activation of municipalities and settlements. This is clearly indicated by the fact that 38 municipalities<sup>2</sup> have an out-of-band participation of local roads with a modern roadway, while four municipalities account for less than 20%, which are actually undeveloped and devastated areas facing the biggest developmental problems. Also, *the car renewal rate* (the number of cars registered for the first time in relation to the total number of registered cars) as an indicator of socio-economic inequalities at the regional level varies in 2021 from 7.2 in Region Juzne i Istocne Srbije to 9 in Beogradski region, where a third part of the vehicles was registered. The number of first-time registered cars compared to the number of inhabitants in 2021 reflects a similar ratio, with Beogradski region leading up to 29% above the average of the Republic of Serbia versus Region Juzne i Istocne Srbije, with 22% 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 Juzne i Istocne Srbije, where it is the lowest (Table 12.1).

**Table 12.1. Extreme values of regional asymmetry indicators, 2021**

Indicators	Population density km <sup>2</sup> , 2020	GDP/per capita 2020	Average net salaries and wages	Unemployment rate	Export per capita	Demographic emptying 2011–2020
	9:1	2,6 : 1	1,5 :1	1,5:1	1,6:1	(-8,6):( +2,2)
Extreme values (the highest : the lowest)	Beogradski region: Region Južne i Istočne Srbije	Beogradski region: Region Južne i Istočne Srbije	Beogradski region : Region Šumadije i Zapadne Srbije	Region Južne i Istočne Srbije : Beogradski region	Region Vojvodine: Region Šumadije i Zapadne Srbije	Region Južne i Istočne Srbije : Beogradski region

## 12. Regionalne ekonomске asimetričnosti

Chart 12.2. Disproportions of the regional development of Serbia, 2021, %

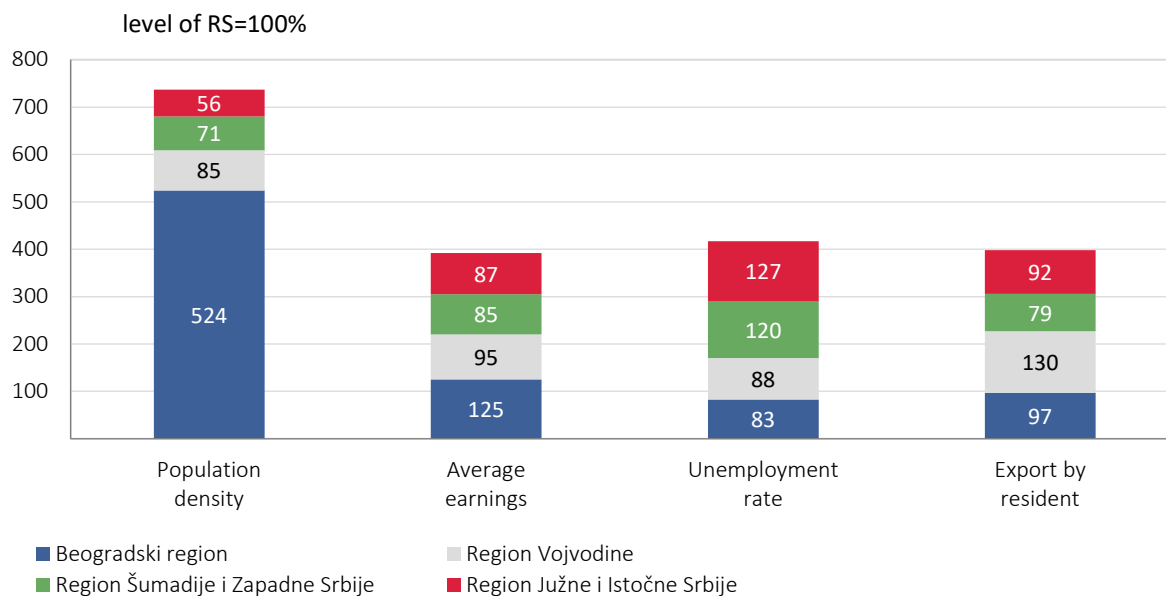


Table 12.2. Indicators of regional development of Serbia (NSTU-2), level of RS=100%

	2019				2020				2021 <sup>14</sup>			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Beogradski region</b>												
Average salaries and wages, RSD	124.5	124.0	123.9	123.9	124.0	123.5	123.3	124.1	124.0	123.8	124.6	126.2
Employment rate	106.1	106.7	102.8	105.2	109.0	104.1	102.0	102.6	109.5	109.1	107.2	106.2
Unemployment rate	82.6	74.8	80.0	78.4	73.2	83.6	86.7	89.9	75.0	81.1	83.8	81.6
Exports per capita, EUR	109.1	109.9	105.5	101.1	99.5	110.4	97.6	98.8	94.9	94.7	99.1	98.6
Number of first time registered passengers cars per 1000 inhabitants	134.5	147.6	134.9	132.1	130.7	137.3	130.0	125.7	125.8	137.6	125.1	126.1
<b>Region Vojvodine</b>												
Average salaries and wages, RSD	94.1	94.5	94.7	95.2	95.2	94.9	95.2	95.5	95.2	94.8	94.5	95.1
Employment rate	100.0	96.7	99.6	99.2	97.7	97.5	100.0	99.2	101.9	99.2	101.6	102.8
Unemployment rate	85.1	95.1	86.3	81.4	86.6	82.2	80.0	87.9	85.2	86.5	83.8	89.8
Exports per capita, EUR	131.3	125.6	131.7	137.0	134.3	134.9	130.8	135.4	138.3	133.2	126.6	124.6
Number of first time registered passengers cars per 1000 inhabitants	97.6	88.9	89.9	94.4	95.1	91.7	91.1	94.7	94.5	89.8	90.3	94.2

<sup>14</sup> 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/>

## 12. Regional economic asymmetries

Table 12.2. Indicators of regional development of Serbia (NSTU-2), level of RS=100% (continued)

	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Region Šumadije i Zapadne Srbije</b>												
Average salaries and wages, RSD	85.0	85.2	85.5	85.3	84.8	85.1	85.5	84.7	84.9	85.2	85.2	84.2
Employment rate	99.4	101.6	102.2	101.0	101.4	102.3	102.6	103.6	98.9	100.0	101.0	100.4
Unemployment rate	114.0	107.8	111.6	111.3	118.6	106.8	107.8	104.0	114.8	122.5	110.5	109.2
Exports per capita, EUR	78.0	81.5	77.4	78.5	81.3	74.5	84.2	83.1	80.2	80.9	79.5	77.6
Number of first time registered passengers cars per 1000 inhabitants	91.99	88.6	95.0	93.6	95.2	94.2	97.0	97.5	98.6	94.3	100.7	99.4
<b>Region Južne i Istočne Srbije</b>												
Average salaries and wages, RSD	87.9	88.2	88.0	87.3	87.6	88.4	88.2	87.8	87.8	88.3	87.9	85.7
Employment rate	93.5	94.3	94.8	93.8	90.8	95.6	93.6	92.6	88.3	90.3	88.2	88.4
Unemployment rate	122.3	123.3	126.3	132.0	126.8	131.5	133.3	123.2	131.3	109.0	127.6	124.5
Exports per capita, EUR	78.7	80.2	83.2	80.0	81.4	76.8	84.2	78.5	82.9	88.7	93.7	99.3
Number of first time registered passengers cars per 1000 inhabitants	72.6	73.1	77.8	77.5	75.8	74.1	79.5	79.1	77.8	75.6	81.3	77.2

### 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 Vojvodine). Insufficiently developed regions are the ones in which GDP value is below the Republic average, (Region Sumadije I Zapadne Srbije and Region Juzne I Istocne Srbije). 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 determined by the production of *agricultural goods and agricultural services*. Their average individual share in a ten-year period from 2010 to 2020 amounted to 97.6% and 2.4%, respectively. As the production of agricultural goods – which is made of *crop and livestock production* with an average share of 67.9% and 29.7% in the reference period – has a prevailing share in the agricultural production, the analysis of this area allows to see agricultural production movement.

The physical volume of the agricultural production in 2021 was by -5.6% lower than in 2020.

### 13.1. Crop production in 2021

Crop production in 2021 was by 10.1% lower than in the previous year. Owing to favourable weather during their vegetation a record production of wheat and other winter crops was realized. However, weather conditions during the vegetation of summer crops were not favourable, thus the production of maize and summer crops was below the average. Observed by groups of products, within the crop production the indices (2021/2020) are as follows:

Cereals : 89.8 (wheat 119.8; maize 76.6)

Industrial crops: 85.8 (sunflower 95.4; soya 71.9)

Vegetables: 107.8 (potatoes 92.3; tomatoes 130.8; peppers 138.6)

Fodder crops: 67.5

Fruit: 89.6 (apples 14.9, plums 70.9, raspberries 93.2)

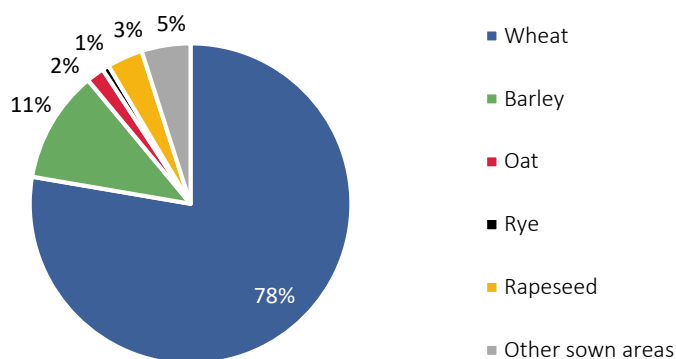
Viticulture: 97.1

The high growth of the production of **vegetables** (7.8%) is the result of a low base from 2020, when the production of vegetables was below the multiannual average. Also, in 2021 areas where vegetables were grown under protective cover (plastic greenhouses, etc.) increased so that the negative weather influence in those cases was reduced to minimum. The largest fall was recorded in the production of plums (29.1%) and early fruit (cherries, apricots, peaches...).

**In autumn sowing in 2021** total sown areas saw a year-on-year growth of 3.5%. Observed by sown crops, 627.2 hectares were covered with wheat, by 5.8% more than in the previous year. Increased autumn harvesting is the result of a favourable purchase price of wheat, and beyond that the practice showed that crops sown in autumn sowing season are less exposed to the negative influence of weather conditions on the realized production. As larger areas were covered with wheat, it is expected that smaller areas are sown with summer crops, primarily maize.

# 13. Agriculture

Chart 13.1. Structure of sown areas, 2021 (%)

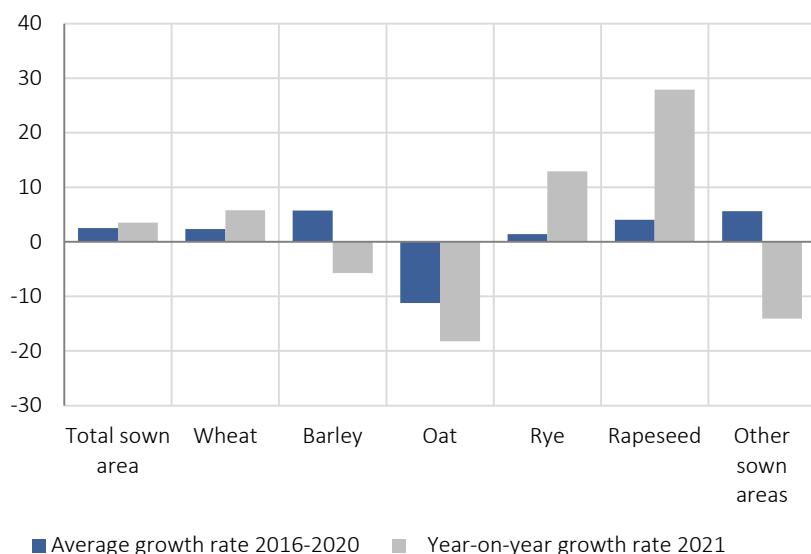


The largest share in the structure of areas sown in autumn sowing season in 2021 was recorded in wheat, with 78% (627.2 thousand hectares), and barley, with 11% (91.2 thousand hectares). Other sown areas, as well as rapeseed, oat and rye, accounted for 5%, 4%, 2% and 1%, respectively.

Table 13.1. Year-on-year growth rate of areas sown in autumn sowing season (%)

	2021						
	Total sown areas	Wheat	Barley	Oat	Rye	Rapeseed	Other sown areas
Year-on-year growth rate	3.5	5.8	-5.7	-1.2	12.9	27.9	-14.1

Chart 13.2. Average growth rate of areas sown over 2016–2020 and year-on-year growth rate (2021/2020), %



The average growth rate over 2016–2020 for total sown areas amounted to 2.5% and was lower by 1 pp. than the year-on-year growth rate in 2021. The largest positive difference between these two growth rates was realized in rapeseed with 23.9 pp. (in favour of areas sown in 2021), and the most negative difference was in other sown areas, where the year-on-year growth rate was by -19.7 pp. bigger than the average five-year growth rate.

## 13. Agriculture

In 2021, *exports* of agricultural products amounted to 4.2 billion euros, accounting for 19.4% of total exports of the Republic of Serbia in 2021. As far as the structure of exports of agricultural products is concerned, fruit, maize, tobacco, fodder, oils and fats, and wheat accounted for more than a half (58.6%). As there is an increasing economic situation of agricultural products that has been lasting for several years, the prices are expected to rise, which would boost the export of agricultural products.

*Imports of agricultural products* in 2021 amounted to about 2.4 billion euros. Fruit had the largest share in imports (9.1%), then edible products and preparations (8.4%), tobacco (5.9%) and products based on cereals, flour, starch (5.4%).

**Table 13.3. Exports of agricultural products according to SITC, 2021, in millions of euros**

	Exports	Shares in total imports of agricultural products	Growth/ rate, 2021/2020, %
<i>Total</i>	4,199.7	100	15.5
Fruit (prepared, products, fresh and dried)	866.1	20.6	28.5
Maize grains	509.1	12.1	-12.6
Tobacco, processed	365.4	8.7	-2.6
Fodder	246	5.9	11.8
Hard vegetable oils and soft oils	245.6	5.8	32.9
Wheat and meslin in grains	228.2	5.4	143.2
Other	1,739.3	41.4	15.6

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MACROECONOMIC FORECASTS  
GROSS DOMESTIC PRODUCT  
INDUSTRIAL PRODUCTION  
CONSTRUCTION  
EXTERNAL TRADE  
DOMESTIC TRADE  
PRICES  
LABOUR MARKET  
SALARIES AND WAGES  
TOURISM  
ECONOMIC SENTIMENT INDICATOR  
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