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REPUBLIC OF SERBIA'S ECONOMY AFTER THE GLOBAL RECESSION OF 2020: STRUCTURAL PROBLEMS IN THE SHADOW OF GROWTH

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After the COVID-19 pandemic-induced global recession of 2020, the Republic of Serbia achieved one of its highest growth rates in 2021 in the past two decades of transition, that rate being 7.5% (only in 2004 was a higher 9% growth rate achieved). At the beginning of 2022, however, Europe was faced with a new global upheaval caused by war in Ukraine with unpredictable economic consequences. Inflationary pressures have been increasing, primarily due to the strong growth of energy and food prices. The effects of global recessions reflect in the slowdown in structural reforms in all transition economies. The paper investigates the structural performance of the growth of the Serbian economy between the global recession and the slowdown in growth. A special accent is placed on the analysis of structural problems, the solution of which was in the shadow of economic growth.

Keywords: economic growth, global recession, structural changes of the economy, structural economic problems

JEL Classification: O11, O47, E6, F6

INTRODUCTION

After the COVID-19 pandemic-induced global recession of 2020, a new global growth contraction caused by war in Ukraine followed in early 2022. Economies are being faced with an accelerated rise of energy and food

prices, disrupted supply chains (Allenbach-Ammann, 2023), and company debts growing at record levels. The effects of global recessions are slowing down structural reforms in transition economies, and it is increasingly difficult to respond to the challenge of the "structural transformation", i.e. direct resources to modern highly-productive activities (McMillan, Rodrik & Sepúlveda, 2017).

The problem analyzed in this paper pertains to the slowness in the implementation of structural

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reforms, especially taking into consideration the fact that the research shows that the cumulative impact of structural reforms on growth in a period of 5 years ranges from 2.5 to 6.5 percentage points (p.p.) depending on the structural area (Ari, Pula & Sun, 2023).

The analysis of the structural performance of the growth of the economy of the Republic of Serbia (hereinafter referred to as "the RS economy") in the period after the global recession of 2020 and the analysis of the key structural problems in the economy of the RS that continuously burden its economic operations, i.e. the solution of which is constantly prolonged, are the subject matter of the research study presented in this paper.

The research presented in this paper aims to assess the degree of the interdependence of expansionary growth and the implementation of structural reforms in the economy.

The research study carried out in the paper tests the following main hypothesis:

H1: The expansion of the economic growth of the RS has not contributed to the solution of the key multiyear structural problems in the business operations of the RS economy.

In addition to the main hypothesis, the paper also tests the following auxiliary hypotheses:

- H2: A debt crisis, i.e. an increase in the public debt, is a reflection of every recession.
- H3: Transition countries' productivity convergence towards average productivity in the EU is faster in the years of a greater GDP growth than employment growth.
- H4: Investments were the key driver of growth in the period of the economic recovery of the RS economy.
- H5: Foreign companies have significantly changed the structure of the economy and crucially contributed to the growth and strengthening of the qualitative performance of the RS economy.

H6: The sectors of the future, namely information and communications technologies (ICT), and creative industry and cultural industry, demonstrate the fastest sectoral growth in the RS economy.

The methodological instrumentation used in the paper is based on the structural, sectoral, proprietary, synthetic and dynamic analysis of the activities carried out in the Serbian economy in the year of strong growth, presenting the key trends in its economic activities.

The paper is structured into three parts. In the first part (the second and third sections), a comparative analysis of global growth is carried out with an emphasis on growth in transition countries and the consequences of the global recessions of 2020 and 2022. In the second part (the fourth and fifth sections), the macroeconomic performance of growth and structural changes in the Serbian economy are analyzed, while in the third part (the sixth section), the focus is on the key multiyear structural problems in the Serbian economy.

GROWTH EXPANSION IN 2021 – THE GLOBAL AND REGIONAL LEVELS

After the global recession of 2020 caused by the consequences of the COVID-19 pandemic, the economic outlook throughout 2021 was favorable: a prolonged and strong phase of expansion, the situation with the pandemic was improving, most logistic problems and supply bottlenecks were removed, labor markets recorded improvements, and the financing conditions were favorable (European Commission, 2022a) (Table 1).

The strong 6% global growth of 2021 was mainly contributed to by developing countries (6.3% growth), with dominant growth in India (8.3%) and China (8.1%). The expansion of 2021 also affected structural shifts in global growth: the share of the advanced economy in the global GDP decreased (from 46.8% to 45.6%), the share of the US economy decreased (from 15.9% to 15.7%), the share of the economy of

		ation in the DP (PPS)		ar-on-year ra of the GDP (GDP growth forecast	า
	2019	2021	2019	2020	2021	2022	2023	2024
The world	100	100	2.8	-3.2	6	3.1	2.5	3.1
Advanced economy	46.8	45.6	1.8	-4.1	5.6	2.7	0.9	1.8
USA	15.9	15.7	2.3	-2.8	5.9	1.8	0.7	1.7
EU-27	15.4	14.8	1.8	-5.7	5.4	3.3	0.3	1.6
Eurozone	12.5	12	1.6	-6.1	5.3	3.2	0.3	1.5
Japan	4.1	3.8	-0.4	-4.6	1.7	1.7	1.6	1.2
United Kingdom	2.4	2.3	1.6	-11	7.5	4.2	-0.9	0.9
Emerging markets economy	53.2	54.3	3.6	-2.5	6.3	3.4	3.8	4.3
China	17.3	18.6	6	2.2	8.1	3.4	4.5	4.7
India	7.1	7	4.5	-6.6	8.3	6.9	6	6.3
Russian Federation	3.1	3.1	2.2	-2.7	4.7	-5.1	-3.2	0.9
EU candidate countries	2	2.2	1	1.5	10.5	4.8	3.4	3

Table 1 Global growth from 2019 to 2021 and the forecast for the period from 2022 to 2024

Note: *GDP PPS (Purchasing Power Standard) - the GDP as per the purchasing power standard eliminates the differences in the price levels between countries and enables a comparison of their respective GDPs.

Source: European Commission (2022a)

the European Union decreased (from 15.4% to 14.8%), the share of Japan's economy decreased (from 4.1% to 3.8%) and Great Britain's economy share decreased (from 2.4% to 2.3%). On the other hand, the share of China's economy as the world's most developed economy increased (from 17.3% to 18.6%).

The European Union is facing the biggest challenges both because of its energy dependency on fossil fuel imports and because of its increasing involvement in the Ukrainian crisis. All the EU economies are faced with the sharp erosion of the household purchasing power and a decline in confidence in the business sector due to increasing production costs, supply bottlenecks and increasingly strict financing conditions. The fiscal deficit and the public debt increased significantly during the global pandemic of 2020 and 2021 due to continuous support measures (Mihajlović, 2022). In all major EU economies, the budget deficit was around -5% of the GDP in 2022, except for Germany (where it was 2.6% of the GDP).

Strong post-pandemic growth was achieved by all the transition economies in Europe in 2021: average growth was above 7%, except in Slovakia and the Czech Republic (Table 2). In 2022, growth was quite heterogeneous (ranging from 1.9% in Slovakia to over 6% in Slovenia, Croatia and Montenegro). In 2023, no growth is actually expected in the developed transition countries, whereas around 2.5% growth is expected in the candidate countries (World Bank, 2023).

THE REFLECTION OF THE CONSEQUENCES OF GLOBAL RECESSIONS AND GROWTH RISKS

The analysis of the consequences of all the wars in the last two centuries shows that the GDP *per capita* decreases by at least 9% and up to 40-70% in the most damaging wars and that the national debt increases

		BDP (PPS)/pc (EU-27=100)			GDP -on-year ra	tes, %)	l .	growth for -on-year ra	
	2019	2020	2021	2019	2020	2021	2022	2023	2024
Czech Republic	93.2	92.8	91.0	3.0	-5.5	3.5	2.5	0.1	1.8
Slovenia	88.6	88.6	90.1	3.5	-4.3	8.2	6.2	0.8	1.7
Hungary	73.0	74.2	75.5	4.0	-4.0	7.6	3.1	1.1	2.4
Romania	69.5	72.1	72.9	4.9	-4.5	7.1	5.5	0.1	2.6
Croatia	66.4	64.3	69.8	3.4	-8.6	13.1	6.0	1.0	1.7
Slovakia	69.8	70.8	69.0	2.5	-3.4	3.0	1.9	0.5	1.9
Bulgaria	53.2	54.9	57.7	4.0	-4.0	7.6	3.1	1.1	2.4
Montenegro	50.1	44.5	47.4	4.1	-15.3	13.0	7.0	2.9	3.2
Serbia	40.9	42.5	44.2	4.3	-0.9	7.5	2.7	2.4	3.0
N. Macedonia	38.1	37.2	42.0	3.9	-6.1	4.0	2.3	2.5	2.8
Albania	30.4	30.3	32.2	2.1	-3.5	8.5	3.2	2.6	3.4

Table 2 The EU transition economies: Growth, purchasing power and growth forecast

Source: European Comission (2022a)

by an average of 47 p.p. of the GDP (EBRD, 2022). Even more worrying, however, is the fact that the variations of recovery from wars are even greater: in 29% of war conflicts, the GDP per capita returns to the pre-war level in five years, whereas in almost 50% of all war conflicts, the GDP per capita remains below the prewar level even after 25 years. The most severe lasting consequence of wars is the loss of human capital: even 25 years after the war, the population of the countries affected by the war is significantly smaller than the population of the comparative countries that did not experience war conflicts (the number of casualties, the refugee outflow and the declining birth rate). Relevant demographic estimates show that, by the end of 2022, the number of forcibly displaced people in the world will have exceeded 100 million people, with two-thirds being from Syria, Ukraine, the West Bank and Gaza, Venezuela and Afghanistan, of which almost half are children. It is interesting that onethird of refugees are located in 35 transition countries. Currently, refugees from Ukraine have increased the EU labor force by 0.5%, and 30% of the total number of the refugees are already employed in European countries, which has significantly alleviated the chronic labor shortage in EU countries.

The two biggest economic consequences of the global recession of 2020 and the global slowdown of 2022 are increasingly frequent disruptions to global supply chains and the rising debt. Given the fact that trade in intermediate goods accounts for about half of total global trade, transition economies are on average more entangled in global supply chains than typical middle-income countries. The corporate debt is at the record level in all transition economies, as a result of which there is the growth of the so-called "zombie" firms - these are the indebted companies that are in financial problems but avoid fulfilling their obligations thanks to their continuous access to cheap financing (subsidized loans, usually through stateowned banks), which directly spills over to healthy companies. The negative spillovers of "zombie" firms are particularly pronounced along the value chain, as they lead to the global supply chain disruption (EBRD, 2022).

Unlike the global recession of 2020, the economic consequences of the slowdown in growth in 2022 are difficult to predict and estimate in time. Inflationary pressures have been the highest since the inflationary shocks of the 1970s (Binici, Centorrino, Cevik & Gwon, 2022) and they are under strong pressures,

primarily energy and food prices. The EU is facing the biggest challenges both because of its energy dependency on fossil fuel imports and because of its increasing involvement in the Ukrainian crisis, which on its part will make it difficult to accomplish the EU's proclaimed goal to become a climate-neutral economy by 2050 and increase the gap in achieving a compromise between a country's individual welfare goals and the common goals of the EU (Rapsikevicius, Bruneckiene, Krušinskas & Lukauskas, 2022).

The key macroeconomic reflection of global recessions is the growth of the public debt, the consequences of which all developing countries will be faced with in the next decade (Table 3). Given the fact that a lot has changed since the Maastricht Treaty sound finance principles (increasing a debt and a deficit, new challenges of energy and digital transition), the European Commission adopted a new "fiscal adjustment reference path" (November 2022) which would cover the period of four years based on its debt sustainability analysis methodology. The goal is to strengthen the debt sustainability and promote sustainable and inclusive growth through investments and reforms in order to reduce the debt in highly- and medium-indebted countries and bring the deficit below the reference value of 3% of the GDP. The cornerstone of the "new reference path of fiscal adjustment" is the national medium-term fiscal-structural plans of the member states that are anchored in this concept and would integrate fiscal, reform and investment goals and priorities, including those for solving macroeconomic imbalances. Member states would have a greater freedom in determining their path of fiscal adjustment, on the one hand, whereas on the other, the Commission would continuously and transparently monitor the implementation of plans and use stricter monitoring instruments to indicate and financially sanction excessive deficits (a debt above 60% of the GDP) of the member states (European Commission, 2022c).

Table 3 The trend of the share of the public debt in the GDP in Europe's transition countries

	2019	2020	2021	(forecast)
Hungary	65.3	79.3	76.8	76.4
Montenegro	76.5	105.3	82.5	75.5
Croatia	71.0	87.0	78.4	70.0
Slovenia	65.4	79.6	74.5	69.9
Albania	65.8	74.5	73.2	69.4
Republic of Slovakia	48.0	58.9	62.2	59.6
Serbia	52.8	58.6	57.1	55.2
N. Macedonia	40.5	51.9	51.8	51.4
Romania	35.1	46.9	48.9	47.9
Czech Republic	30.0	37.7	42.9	42.9
Bulgaria	22.5	23.6	25.6	25.1

Source: European Comission (2022a)

The key external risks to growth in 2023 are a high degree of uncertainty over the end of the war in Ukraine, the unpredictability of energy input prices and the risks of major shortages. A big risk is the formation of a wage and price spiral that would strengthen high inflation (Kammer, 2022) and a potential disorderly adjustment of financial markets to the new environment of high interest rates. Also, a significant risk originates from the negative impact of climate change. In Serbia, the five biggest risks in the next two years refer to (World Economic Forum, 2022):

- ecological damage caused by man (the deterioration of protected areas, industrial accidents, oil spills, contamination with radioactive material, trade in wild and protected animals);
- debt crises in major economies, Serbia's largest foreign trade partners;
- an employment crisis and a lack of livelihood;
- · digital inequality; and
- the geo-politicization of strategic resources (the concentration, exploitation or restriction of the mobility of the goods, knowledge, services or

technologies crucial for human development, all this in order to gain a certain geopolitical advantage).

THE MACROECONOMIC GROWTH PERFORMANCE OF THE SERBIAN ECONOMY IN THE PERIOD FROM 2021 TO 2022

After the year of the highest transitional growth of 7.5%, Serbia's economy faced the consequences of the global energy crisis, primarily with the growth of inflationary pressures and the current account deficits due to the energy crisis, all of which necessarily required support for the economy and the population, as well as interventions in energy supply (Table 4). A 2.3% growth was expected in 2022, and an around 2.5% growth in 2023, which will largely depend on the consequences of the Ukrainian crisis. The dynamics of the expected slowdown in the growth of Eurozone's export markets will directly affect the production sector in Serbia, primarily big export companies, while an increase in food and energy prices on the world markets will burden the budgets of households, utility companies and the state itself.

The key macroeconomic growth performances in the period from 2021 to 2022 are as follows:

- The standard of living (the GDP per capita) reached EUR 9,000 in 2022 (based on the first results of the population census).
- Growth in 2021 was mainly contributed to by growth in personal consumption and investments, personal consumption having contributed the most to growth in 2022 (2.3%).
- The service sector contributed the most to growth, which is expected for transition economies at this stage of development (Bhorat, Asmal & Allen, 2020). In addition, a significant contribution was made by the tradable sectors of industry and construction in 2021, and the industry sector (a big decline simultaneously being registered in the construction sector) in 2022.
- Registered employment increased by 2.6% in 2021 and by 1.6% in 2022 (from 2.21 million to 2.31 million in 2022). In the period from 2015 to 2022, growth amounted to 320,000 workers. Compared to the year 2015, the employment rate increased by 10 p.p., amounting to 50.3% in 2022 (I-IX). After a short-term increase in 2021 (11%), the unemployment rate continued its downward trend in 2022, only to be, as in 2019, again at a record transitional minimum of 9.5% (I-IX).
- Net earnings increased by 5.4% in 2021 and 2% in 2022, having reached an average amount of EUR 630 (I-XI average). In 2021, average pensions grew

Table 4 The macroeconomic indicators of the vulnerability of RS in the period from 2015 to 2022

2015	2016	2017	2018	2019	2020	2021	2022	Indicator	Reference value
20.4	20.4	18.0	17.5	15.7	13.1	18.9	24.6	Okun's Index*	<12%
2.01	1.98	1.94	1.90	1.86	1.83	1.81	-	Dependency ratio**	>2
44.6	36.2	33.1	30.9	28.6	27.7	26.4	24.4	Youth unemployment rate	<20%
40.0	39.8	37.8	35.6	33.3	33.3	33.3	-	GINI coefficient	<30%
1.5	1.6	3.0	2.0	1.9	1.3	7.9	15.1	Inflation	<3%
17.0	17.1	17.7	20.0	22.5	21.4	22.4	22.9	Gross investments (% GDP)	>25%
-3.5	-1.2	1.1	0.6	-0.2	-8.0	-4.1	-3.1	Fiscal deficit (% GDP)	<3%
71.2	68.7	58.6	54.4	52.8	57.8	57.1	55.7	Public debt (% GDP)	<45%

Notes: * The sum of the unemployment and inflation rates; ** The ratio of the sum of the young (0-14) and the old (65+) in the working-age population (15-64).

Source: Authors

at a rate three times lower than the growth of net earnings (1.8% versus 5.4%). Due to the growth of inflationary pressures in 2022, the real growth of net earnings was 2% (in the first 11 months), while pensions fell in real terms by 4.4% in 2022.

- The higher rate of the import of goods and services (33.1%) than the rate of export (28.6%) in 2021 caused the growth of the foreign trade deficit (EUR 4.5 billion). The deficit growth trend (the export growth rate of 18.9% and the import growth rate of 20.3%) continued in 2022 (EUR 5.8 billion), so the growth of the current account deficit of the balance of payments was estimated at 4.3% of the GDP in 2021 to 6.6% in 2022.
- FDI inflows were making a constant significant contribution to macroeconomic stability. The net inflow of FDI in 2021 amounted to EUR 3.7 billion (6.9% of the GDP), which ensured the coverage of the current account deficit of the balance of payments. In 2022, the FDI growth of more than EUR 4 billion was expected. The average net FDI inflow was EUR 2.8 billion in the period from 2015 to 2021.
- The COVID-19 pandemic-induced high fiscal deficit of 2020 was halved in 2021 (falling from 8% of the GDP in 2020 to 4.1% of the GDP in 2021). The downward trend continued in 2022 (3.1% of the GDP).
- Certain indicators of Serbia's external position worsened during the period from 2021 to 2022. The external debt increased by EUR 9.2 billion (having risen from EUR 30.8 billion in 2020 to EUR 40 billion at the end of September 2022). The share of the public debt in the GDP was reduced from 57.1% in 2021 to 55.7%% of the GDP in 2022 (I-XI).
- The rise of inflation was one of the biggest economic risks in 2022 (Scott & Miles, 2020). While the year 2021 ended with the inflation growth of 7.9%, the year-on-year price growth at the end of 2022 doubled (15.1%).

In the group of the macroeconomic indicators with a high degree of risk, inflationary pressures are highlighted (The Economist, 2023), which affects all macroeconomic stabilizers, from the standard of living of the most vulnerable social groups (pensioners) to attracting investments, young people employment, social cohesion and inequality reduction. In the group of the macroeconomic indicators of the vulnerability of the Serbian economy, the dependency index deterioration trend (due to the working-age population decreasing number trend) and a high degree of inequality in income distribution (a high GINI coefficient) stand out in addition to inflation.

STRUCTURAL CHANGES IN THE ECONOMY

Productivity convergence

The competitiveness of transition countries in the medium run and long run mainly depends on the convergence of economic growth and productivity towards developed countries, as well as the factors affecting these two variables (Table 5). Extensive empirical research carried out on a significant sample of countries did not decisively confirm the fact that there was absolute convergence in place, i.e. the fact that income per capita in underdeveloped countries grew faster than income per capita in more developed countries, but it did confirm the fact that there was convergence in place if less homogeneous groups of countries were analyzed (the OECD countries, developed EU countries, transition countries, etc.) (Mathur, 2005, Barro, 2015). If the other growth factor, however, are included in the research study in addition to the GDP (absolute convergence), the results show that underdeveloped countries have more dynamic growth than the developed ones, there is the so-called conditional convergence (catchup) and the speed of such conditional convergence is constant, being 2% per annum, the so-called iron law of convergence in theory (Barro, 2015). The research study has shown that there is a greater degree of convergence at the lower levels of observation (the sector, the area, the branch). Productivity primarily in the processing industry (the tradable sector) is the

		2015-201	9		2020-201	9		2021-202	0		2015-202	1
	GDP	Empl.	Producti- vity									
EU 27	11.5	6.6	4.6	-5.7	-1.4	-4.3	5.4	1.4	3.9	10.8	6.5	4.0
Bulgaria	16.9	2.9	13,8	-4.0	-2.3	-1.7	7.6	0.2	7.4	20.8	0.8	20.1
Croatia	16.7	9.9	6.0	-8.6	-1.2	-7.5	13.1	1.2	11.7	20.6	9.9	9.5
Hungary	22.2	11.7	9.1	-4.5	-1.1	-3.5	7.1	1.0	6.0	25.0	11.6	11.6
Romania	26.5	0.2	26.2	-3.7	-2.1	-1.7	5.1	1.8	3.2	28.1	-0.2	28.0
Slovenia	19.5	12.2	6.5	-4.3	-0.7	-3.7	8.2	1.3	6.8	23.8	12.9	9.5
Slovakia	17.6	10.0	7.1	-3.4	-1.9	-1.5	3.0	-0.6	3.6	17.0	7.2	9.2
Serbia	17.0	13.3	3.3	-0.9	-0.2	-0.7	7.5	2.6	4.9	24.7	16.1	7.6

Table 5 Productivity in the transition states 2015–2021 (the rate, %)

Source: Authors, based on the Eurostat data.

generator of sustainable growth and the standard of living due to the influence and effects of innovation and technical progress (Petrović & Gligorić Matić, 2021).

The productivity growth of the Serbian economy was 4.9% in 2021 as a result of the strong economic growth of 7.5% and the employment growth of 2.6%. In 2021, Serbia's productivity converged towards the EU average by 1.1 p.p. (from 25.9% in 2020 to 27% of the EU average in 2021), whereas it converged by 3.5 p.p. in the period from 2015 to 2021 (Figure 1).

The convergence of the productivity (the catch-up effect) of the transition states to the EU average is slow. There is constantly a big gap in the productivity of the transition states to the EU average. Due to the effects of the global pandemic in 2020, real productivity in the EU-27 (the average) increased by only 4% in the period from 2014 to 2021 but the standard of living increased by 10%. The transitional states had a high degree of the convergence of the standard of living compared to the EU-27 average in the period from 2014 to 2021. According to the EU average, Romania, Serbia and Croatia converged the most, having achieved the GDP growth per cent which was three times as fast as that of the EU-27 average (cumulative growth in Romania, Serbia and Croatia was 33%, 30%, and 32%, respectively).

Productivity convergence is lower than the standard of living convergence. The greatest productivity convergence was achieved by Romania (the cumulative growth of 28%) and Bulgaria (20%). The impact of productivity on the growth of the standard of living is different in different transition countries, primarily depending on the structure of their economies. In 2021, Romania's average annual productivity growth of 1% generated a 1.2% increase in the standard of living; in Serbia, the ratio was 1:4, in Hungary 1:2.32; in Slovakia, it was 1:1.81; in Bulgaria it was 1:1.34 and Slovenia's ratio was 1:2.21.

The dynamic comparative analysis of productivity in the transition states as per subperiods shows that the highest productivity rates of the transition states were in the subperiods in which employment growth was overshadowed by strong economic growth. In the period from 2015 to 2019, almost all the transition states achieved high growth rates with the significantly lower employment growth rates, so that the productivity rates were consequently positive and relatively high. Although Serbia's productivity of that period was positive (3.3%) because the GDP growth (17%) was higher than employment growth (13.3%), it was slightly lower than in the transition countries for the following two reasons: the implementation of fiscal consolidation until 2017 and the solving of the high unemployment rate. In the period from 2015 to 2019, the double-digit productivity growth rates of 26% and 14% in Romania and Bulgaria, respectively, were almost exclusively the result of economic growth. In the recession of 2020, Serbia managed to preserve employment (-0.2%) and slightly reduce productivity

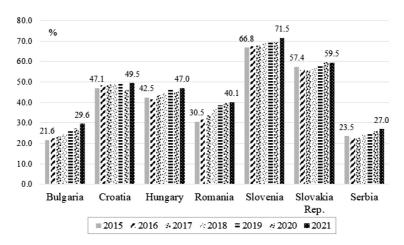


Figure 1 The trend of the productivity convergence of the transition countries (EU-27=100)

Source: Authors

(-0.7%) in the conditions of a slight contraction of growth (-0.9%) unlike the other transition countries, in which the strong recession had affected the decline in employment and productivity. Because of the structure of their economies, the biggest drop in productivity was recorded, in addition to the EU developed countries, namely -7.5%, -3.7%, -3.5% in Croatia, Slovenia, and Hungary, respectively. Strong post-recession growth in 2021 in all the transition states, especially in those that had experienced major declines in 2020, contributed to the high productivity growth rates.

The volume and efficiency of investments

The investments made in the period from 2015 to 2021 were the key driver of economic growth in Serbia (Table 6). The record growth of 7.5% of the gross investments in 2021 contributed as much as 3.4 p.p. The share of total investments in the GDP was 25% in 2021. Although the amount of the investments in the GDP affects economic growth, dynamic economic growth mostly depends on the efficiency of investments: in the period from 2001 to 2021, the incremental capital coefficient (ICC) was 6.1, i.e. the average efficiency of the investments in Serbia was 16.3% (in the period from 2001 to 2021, the GDP growth by 1 p.p. required a 6.1% share of investments

in the GDP). In the growth period between 2016 and 2021, despite the recession of 2020, the efficiency of investments increased three times and amounted to 15.3% compared to the growth period between 2011 and 2015 (Jakopin & Čokorilo, 2023).

Changes in the key performance of the economy

In 2021, the year of strong growth, the economy improved most of its business performance (Table 7). Out of the EUR 27.4 billion VAT, 52.4% was generated by the sector of micro-, small and medium-sized enterprises (MSMEs), and 47.6% was generated by the sector of big enterprises. The economy was a net gainer for seven consecutive years (i.e. from 2015 to 2021), which is a curiosity in the transition period. The profit made by the economy increased in real terms by 34% in the period from 2016 to 2021, and the current loss decreased by 11% in the same period.

The analysis of the structural changes in the effects of the operations of the economy shows that significant changes took place in the business balance sheet and the employment structure: the participation of big companies in the structure of the GVA (from 47.3% to 47.6%) and in the employment structure (from 42.8% to 43.7% of the total employment in the economy).

Period	GDP (the growth rate %)	Total investments* (a share in the GDP, %)	Incremental Capital Coefficient – ICC	Investment Efficiency Coefficient (%) – IEC
2001-2005	6.4	21.0	3.26	30.61
2006-2010	3.0	21.9	7.34	13.62
2011-2015	0.9	18.0	20.85	4.80
2016-2021	3.4	22.4	6.50	15.30
2001-2021	3.4	20.9	6.13	16.30

Table 6 The efficiency of investments in RS from 2001 to 2021 as per subperiods

Note: * The sum of gross investment in fixed assets and changes in inventories.

Source: Authors

Table 7 The economic balance of the RS in 2021 (in million EUR)

	No. of the companies	No. of the employees	Income	Net profit	Net loss	Net result	GVA	Capital	Cumulative loss	Liabilities
Total	106,219	1,261,765	125,635	8,188	2,348	5,840	27,361	75,142	31,583	100,929
SMEs	105,603	710,202	76,970	4,948	1,685	3,263	14,329	37,965	22,682	66,620
Big	616	551,563	48,665	3,240	663	2,577	13,032	37,177	8,900	34,309
				2	.021/2020 (th	ne rates, %)			
Total	-1.9	2.8	11.6	34.1	-10.6	67.8	14.3	1.9	-9.1	2.1
SMEs	-1.9	1.2	10.4	23.0	-8.5	49.5	13.5	2.5	-9.6	-0.9
Big	3.9	4.9	13.4	55.4	-15.7	98.5	15.2	1.3	-7.9	8.7

Source: Authors

In 2021, the SME sector significantly increased productivity and profitability, and big companies increased liquidity as well (Table 8). The concentration of the GVA (the 10 largest companies) shows the growth (from 13.7% in 2020 to 14.1% in 2021 in the GVA of all the companies).

Changes in the ownership structure of the economy

The structural analysis of the economy as per the ownership structure showed that a total of 2,848 companies with majority foreign capital had changed the structure of the economy and crucially contributed to growth, having strengthened the qualitative performance of the economy and export competitiveness (Table 9). The business they had been doing resulted in high growth rates in all business segments in 2021. The GDP growth rate of the foreign companies was 2.4 times higher than the average in the economy, the number of the employees had

increased by as much as 8.2% in 2021 compared to 2020, income had risen by 24%, the profit was bigger by 58%, the positive result had doubled, the capital growth rate was as much as 30.5%, and the liabilities also increased in real terms by 19%. The GVA of the domestic private companies participated 25% in the GDP in 2021, whereas the GVA of the foreign private companies had an almost 20% share in the GDP, while the GVA of the state enterprises participated 6.7% in the GDP. The increasingly accelerated concentration of the profits and GVA of the foreignowned companies is noticeable. The foreign-owned companies operated more productively, more costeffectively and more profitably than the domestic privately-owned companies. They were more liquid and had a smaller debt. The state-owned enterprises constantly operated unprofitably, they were illiquid and unprofitable.

			2020					2021		
	Economy	Micro-	Small	Medium- sized	Big	Economy	Micro-	Small	Medium- sized	Big
Productivity (in RSD ood)	2,124.6	1,627	1,944	2,175	2,344	2,550	1,976	2,355	2,618	2,778
Economy	1.04	1.02	1.05	1.05	1.04	1.06	1.04	1.06	1.07	1.06
Profitability	4.72	0.16	8.74	8.28	3.54	7.77	3.81	10.83	10.68	6.93
Solvency	1.60	1.01	1.81	1.66	2.11	1.61	1.05	1.78	1.69	2.05
GLR	0.96	0.74	1.35	1.13	0.92	1.02	0.75	1.37	1.20	1.05
RLR	0.64	0.51	0.88	0.78	0.61	0.67	0.50	0.87	0.81	0.69
Net profit rate	3.35	0.12	4.44	4.46	3.27	5.02	2.61	4.95	5.39	5.74
Business profit rate	5.49	4.62	6.06	5.97	5.19	6.63	4.90	6.56	6.24	7.57
Net loss rate	2.33	6.01	1.31	1.67	1.83	1.87	4.76	1.07	1.57	1.36
ROA	2.72	0.49	4.65	4.40	2.39	4.25	1.84	5.82	5.48	4.32
ROE	6.00	1.88	9.75	9.72	3.73	10.07	54.99	12.00	12.43	7.54

Table 8 Qualitative indicators of the economy of the RS in the period 2020-2021.

Notes: Productivity - the ratio of the GVA and the employees; Economy - the ratio of income and expenses; Profitability - the ratio of the net result and capital; Solvency - the ratio of the business assets and the liabilities; General liquidity ratio (GLR) - the ratio of the current assets and the short-term liabilities; Reduced liquidity ratio (RLR) - the ratio of the current assets minus the inventories and the short-term liabilities; Net profit rate - the ratio of the net profit to the sales revenue; Net loss rate - the ratio of the net loss to the total income; Business profit rate - the ratio of the business profit to the sales revenue; ROA (Return on Assets) - the rate of return on business assets; ROE (Return on Equity) - the rate of return on equity.

Source: Authors

Table 9 The property structure of the GVA in RS - the growth rates of the period from 2016 to 2021

	2016	2047	2049	2040	2020	2024	2016 to 20	021 rates
	2016	2017	2018	2019	2020	2021	Cumulative	Average
Economy	13.5	4.4	8.3	5.4	6.3	14.3	64.3	8.6
Privately-owned domestic	13.9	2.5	9.5	10.4	11.9	10.1	73.9	9.7
Privately-owned foreign	5.7	13.7	9.5	14.0	-1.7	32.6	95.4	11.8
State-owned	2.8	-3.3	4.2	-18.7	7.0	-9.4	-1.6	-0.3

Source: Authors

The growth of the sectors of the future

As the sectors of the future, the ICT, creative industry and cultural industry sectors have continuously been recording dynamic growth (Jakopin & Čokorilo, 2023). The ICT sector is the strongest, but the creative industry sector is growing the fastest (Table 10). The cultural industry sector is gradually recovering from the effects of the recession. In 2021,

the companies doing business in the ICT, creative industry and cultural industry sectors had the GDP growth of 16%, 32% and 19%, respectively, and the employment growth of 13%, 16% and 3.5%, respectively. The ICT sector is constantly increasing its share in the GDP (from 4.1% in 2019, 4.8% in 2020, and 5.2% in 2021). Within the ICT sector, computer programming, consulting and related activities and telecommunications generated more than EUR 2.5

		2019			2020		2021		
	No. of BC	No. of the employees	GVA (mill. EUR)	No. of BC	No. of the employees	GVA (mill. EUR)	No. of BC	No. of the employees	GVA (mill. EUR)
ICT	4,601	46,443	1,885	5,363	57,717	2,228	5,803	65,074	2,789
% of the economy	4.4	4.0	9.1	5.1	4.7	10.0	5.5	5.2	10.2
CREATIVE INDUSTRY	6,629	39,908	955	7,510	50,728	1,247	7,944	58,647	1,775
% of the economy	6.3	3.4	4.6	7.1	4.2	5.6	7.5	4.6	6.5
CULTURAL INDUSTRY	3,750	22,313	345	3,796	23,271	359	3,719	24,079	460
% of the economy	3.6	1.9	1.7	3.6	1.9	1.6	3.5	1.9	1.7

Table 10 The performance of the ICT, creative industry and cultural industry sectors in RS in the period from 2019 to 2021

Note: BC - business companies (enterprises).

Source: Authors

billion GVA in 2021. In 2021, the creative industry sector participated 3.3% in the GDP, and the cultural industry sector had a 0.9% share in the same. Unlike the previous two sectors dominated by a few strong activities, the activities carried out in the cultural industry sector are diverse.

STRUCTURAL PROBLEMS OF THE ECONOMY

The negative effects of the operations carried out by active companies with no employees at all

Bankruptcy procedures are still time consuming, the number of active companies with no employees at all are decreasing very slowly (constantly being around 20% of the total number of companies in the economy), current losses are slightly reduced, but they still have a big share in the economy, while their accumulated losses of 2021 accounted for 37.6% of the cumulative losses of the economy.

The number of active companies without employees at all (21,051) accounts for 20% of all the companies in 2021. This group of companies generate a loss ranging

from 400 to 500 million euros every year (Table 11). In 2021, they made a loss of EUR 413 million, i.e. 17.6% of all the losses in the economy. Their cumulative loss of close to EUR 12 billion accounts for 38% of all the accumulated losses of the economy. It is also important to note that there is an increasing concentration of accumulated losses in once big systems currently undergoing bankruptcy.

Illiquid operations of micro-enterprises

The qualitative business performance of more than 80,000 micro-enterprises (counting up to nine employees) speaks of the depth of the problems faced by this extremely important segment of the entrepreneurial sector (Table 12). Year after year, their business is constantly illiquid, they are faced with low profitability and burdened with losses and indebtedness. The primary reasons lie in the slow implementation of structural reforms (the application of new digital technologies, the digitization of business processes, and so on, in order to increase efficiency and reduce costs), the need for a greater availability of the favorable sources of financing (Culkin & Simmons, 2018) and the introduction of the infrastructure for microfinancing, a lack of appropriate personnel, and the need to improve tax regulations.

2019 2020 2021 % of the % of the % of the mill. EUR mill. EUR mill. EUR economy economy economy No. of the companies 21,787 20.5 20.6 19.8 22,290 21,051 Net profit 218 208 4.0 3.7 329 4.0 Net loss 17.6 511 21.0 413 477 19.7 Cumulative loss 11,886 12,671 37.6 9,971 33.3 39.4

Table 11 The operations of active companies with no employees at all in RS in the period from 2019 to 2021

Source: Authors

Net result

Table 12 The business effects of active micro-enterprises in RS in the period from 2019 to 2021

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	20	2019		20	20	21
	Economy	Micro-	Economy	Micro-	Economy	Micro-
No. of active companies	106,033	80,461	108,285	82,327	106,219	80,033
General liquidity ratio	0.96	0.75	0.96	0.74	1.02	0.75
Reduced liquidity ratio	0.64	0.52	0.64	0.51	0.67	0.50
Net profit rate	3.2	-0.8	3.3	0.1	5.0	2.6
Business profit rate	5.1	3.8	5.5	4.6	6.6	4.9
ROA	2.9	0.1	2.7	0.5	4.2	1.8
ROE	6.1	-8.4	6.0	8.2	10.1	55.0

Source: Authors

The growth of liabilities and the high indebtedness of the economy

The total liabilities of the economy in 2021 increased by 2% and exceeded EUR 100 billion (Table 13). The one-third of the liabilities were attributed to micro-, and one-third were made by big enterprises. Both indebtedness indicators were at the same level as they had been in 2015, the ratio of the liabilities to the financing sources being 57.3% and the ratio of the liabilities to capital being 134.3%.

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The total liabilities of the economy in 2021 increased by 2.1%, the biggest increase in liabilities being experienced by big companies (8.7%). In the liabilities structure, big companies (34%) and micro-companies (33%) have the biggest and almost the same share, whereas medium-sized enterprises

participate 19% and small enterprises 14%.

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The analysis of the indebtedness of the economy conducted through the ratio of the total liabilities and total sources of financing (Indebtedness 1, Table 14) shows a slight downward trend from 2015 to 2019 (by 1.8 p.p.) thanks to the favorable external situation, primarily due to the falling interest rates and the favorable lending terms and conditions. In 2020, as a result of the recessionary effects, the indebtedness of the economy further worsened, so that it remained at the same level in 2021. The analysis of the debt carried out through the ratio of the total liabilities and capital (Indebtedness 2) had a slight downward trend in the period from 2015 to 2018, and a slight increase in the period from 2019 to 2020. This leverage indicator did not change in 2021.

Table 13 The growth trend of the total liabilities of the RS economy in the period from 2015 to 2021

	2015	2016	2017	2018	2019	2020	2021
Billion EUR	68.3	70.3	74.9	77.8	82.4	91.6	100.9

Source: Authors

Table 14 The trend of the indebtedness of the RS economy in the period from 2015 to 2021

	2015	2016	2017	2018	2019	2020	2021
Indebtedness 1	57.8	56.8	56.5	55.8	56.0	57-3	57-3
Indebtedness 2	136.9	131.7	129.6	126.0	127.0	134.0	134.3

Notes: Indebtedness 1 - the ratio of the total liabilities to the total sources of financing; Indebtedness 2 - the ratio of the total liabilities to capital.

Source: Authors

High cumulative losses of the economy

Although the trend of the growth of accumulated losses was stopped in 2021, they are still high and burden the economy (Table 15). The cumulative losses of the economy in 2021 amounted to EUR 31.6 billion, and their growth trend was interrupted in 2021. In the structure of cumulative losses, more than half (51.1%) were located in micro-enterprises, 9.3% were attributed to small enterprises, 11.5% were found in medium-sized enterprises, and 28.2% were those pertaining to big enterprises. The total rate of the

decline in the accumulated losses of the economy in the period from 2016 to 2021 was -11%. The analysis per economic segments, however, shows that the cumulative losses fell for medium-sized enterprises (-41%), small enterprises (-16.4%) and big enterprises (-34%), but increased for micro-enterprises by even 30%.

The long-term financial balance

The analysis of the net working capital (NWC) shows that the indicator of the long-term financial balance of the economy (the coverage of the current assets from long-term financing sources) was in the positive zone for the first time in the transition in 2021, which implies that the fixed assets were being financed from long-term financing sources (Table 16). The degree of the coverage of the fixed assets by the long-term funding sources is positive for all the groups of companies by the size, except for the group of the micro-enterprises which lack funds from long-term sources for financing fixed assets.

External debt

Serbia's external debt was increased by EUR 10.2 billion in the period from 2015 to 2021 (Table 17). In that period, the debt of the economy increased by EUR 4.6 billion. At the end of September 2022, Serbia's external debt amounted to around EUR 40 billion, which was estimated to be at the two-thirds of the GDP. Structurally, the public sector's debt was 51%, the corporate debt was 38%, and the banks' debt was 11%.

Table 15 The cumulative loss growth/decline rate in RS in the period from 2016 to 2021

	2016	2017	2018	2019	2020	2021	Cumulative rate from 2016 to 2021
Economy	1.4	0.1	-4.5	-5.0	6.1	-9.1	-11.1
Micro-	19.1	4.0	-3.5	6.5	13.5	-10.1	29.9
Small	6.0	13.3	-7.0	-15.5	-6.0	-5.8	-16.4
Medium-sized	-31.9	-12.3	3.7	2.0	3.8	-10.0	-41.1
Big	-1.0	-4.0	-7.2	-18.1	-0.8	-7.9	-33.9

Source: Authors

	2015	2016	2017	2018	2019	2020	2021
Economy	-6,216	-4,424	-3,549	-2,734	-2,363	-2,764	1,136
Micro-	-2,661	-3,726	-4,122	-3,658	-5,042	-5,926	-5,961
Small	726	1,012	1,233	1,541	1,827	3,154	3,699
Medium-sized	-1,477	891	1,161	1,277	1,981	1,528	2,477
Big	-2,804	-2,601	-1,821	-1,894	-1,128	-1,520	921

 Table 16
 The trend of the NWC in the economy (million EUR)

Note: The NWC represents the difference between the long-term sources of financing and the fixed assets. It shows the coverage of the current assets from long-term sources of financing.

Source: Authors

Table 17 The structure of the external debt in the period from 2015 to 2022 (mill. EUR)

	Public Sector	Enter- prises	Banks	Total external debt	GDP	%GDP
2015	15.3	8.7	2.2	26.2	35.7	73.4
2016	15.7	8.8	2	26.5	36.8	72.0
2017	13.9	9.3	2.3	25.5	39.2	65.1
2018	13.4	10.2	3.1	26.7	42.9	62.2
2019	13.9	11	3.4	28.3	46.0	61.5
2020	15	12	3.8	30.8	46.8	65.8
2021	19.1	13.3	4	36.5	53.3	68.4
2022*	20.5	15	4.5	40	60.2**	66.7**

Notes: * On September 30, 2022; ** Assessment.

Source: Authors

CONCLUSION

The year 2021 was one of the most successful transition years in the Serbian economy. After the GDP growth rate in 2004 (9%), the growth rate of 7.5% was the highest in the transition period from 2001 to 2022. As an extremely important factor, however, (Gligoric Matic & Jovanovic Gavrilovic, 2022) growth stability was not retained. The strong expansion of growth in 2021 was short-lived. At the beginning of 2022, all the economies were faced with the new challenges and risks caused by the unpredictable consequences of war in Ukraine (UNCTAD, 2022; UNDP, 2022; UN DESA, 2022). Given the fact that numerous countries are involved in the Ukrainian conflict, the

consequences of that will be global and long-lasting, with a number of well-known "old" risks thought to have become a relic of the past, namely inflation, the cost-of-living crisis, trade wars, capital outflows from emerging markets, the widespread social unrest, the escalation of geopolitical confrontations.

This research study has confirmed the main hypothesis and all the auxiliary hypotheses set in the paper, namely:

- Although macroeconomic and structural business performance improved in the year of strong growth, the solution to the key structural problems in the economy remained in the shadows, their solution being prolonged for the next period (the main hypothesis H1). This particularly applies to the bankruptcy procedures that continue to be time-consuming, to a large number of the active companies with no employees at all (20% of the total number of the companies operating in the economy) that generate a big loss every year. In addition, the business done by micro-enterprises is a systemic problem burdening the business activities the entire economy. The fact that the total liabilities of the economy exceeded EUR 100 billion and that the debt of the economy in the structure of the total external debt of EUR 40 billion is 38% should be added to that.
- Based on the analysis of the business operations carried out in the recession of 2020 and in the year of the slowdown in growth in 2022, the hypothesis that the growth of the public debt is a consequence of every recession (the auxiliary hypothesis H2) has also been confirmed.

- The comparative structural analysis of productivity convergence towards average productivity in the EU in the transition economies has confirmed the hypothesis that convergence is faster in those years when the GDP growth is faster than employment growth (the auxiliary hypothesis H3).
- The analysis of the trend of the efficiency coefficient of investments as per transition subperiods has confirmed that investments in RS played the key role and contributed to growth in the most investment-efficient subperiods, namely from 2001 to 2005 and from 2015 to 2021 (the auxiliary hypothesis H4).
- The structural analysis of the companies' ownership structures in RS has shown that 2,848 foreign-owned companies made the key contribution to the growth and improvement of the qualitative performance of the economy in the economic growth period from 2015 to 2021 (the auxiliary hypothesis H5).
- The sectoral analysis of the RS economy has shown that the companies doing business in the sectors of the future (i.e. in the ICT, creative industry and cultural industry sectors) achieved the double-digit GDP growth rates in 2021 (the auxiliary hypothesis H6).

Sustainable economic growth is not possible without an accelerated implementation of structural reforms. The strong growth of the RS economy in 2021 was short-lived. The period between the global recession in 2020 and the slowdown in growth in 2022 was not used to solve the accumulated structural problems in the economy. Despite the increase in the external growth risks (the high degree of uncertainty about the end of war in Ukraine, the unpredictability of energy input prices), the focus of the economic policymakers should be directed towards the faster resolution of structural problems in the economy, primarily towards the restructuring and consolidation of stateowned enterprises and encouraging entrepreneurship development.

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