

INDICATORS OF ECONOMIC SECURITY IN THE REPUBLIC OF SERBIA

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Purpose

Not so long ago, in the analysis of economic security in the Republic of Serbia, macroeconomic indicators such as GDP, unemployment rate, average salary and others were used as indicators of economic security. Some monetary indicators such as the level of foreign exchange reserves, inflation rate, then, the extent of the gray economy, indicators of the standard of living such as the poverty rate and various indicators of inequality were also used in the analysis of economic security (Mijalković & Milošević, 2011; Milosavljević, 2016; Stajić & Milošević, 2017, 2018). There was a general opinion that these are adequate indicators of economic security, given that the economic situation in the country, as well as monetary, financial and external stability, reflect the security of the national economy and the economic security of citizens (Ljubojević & Petrović, 2019). Economic security is considered a part of national and an element of individual security. It started from the understanding that “Economic security as part of the function of the national security system represents the protection of the economic interest of the national economy from all types and forms of threats, that is, it represents the economic and security protection of the country with the absence of any form of threat to the economic potential of the national economy.”(Stajić, Milošević, 2017: 177-178).

This approach was based on domestic literature, then on some generally accepted opinions in the theory of international economic relations, as well as on the views of international organizations and institutions on the topic of economic security that were formed in recent decades.² In this approach, macroeconomic indicators were used as indicators of national economic security, indicators that reflect not only the economic situation in the country but also the economic security of the national economy and the citizens themselves. For example, gross domestic product (GDP) has traditionally been used to give a general overview of economic and social developments which is a prerequisite of economic security of citizens. The level of public debt is an indicator of the indebtedness of a country, and from the aspect of national security, public debt affects different types of independence in decision-making. It is believed that more indebted countries are more susceptible to pressure from international factors, which reflects on the level of national security. The inflation rate is not only an indicator of the general price level, but also an indicator of the economic and financial stability of a country as the basis of national security and so on.

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² An extensive review of the literature on the evolution of the concept of national security, the understanding of the concept of economic security and the determinants of economic security can be found in (Mijalković, Milošević, 2011).



Although these indicators have not lost their importance, informativeness and security content, in recent times, in the last decade, attention has been more focused on the development and measurement of the concept of individual economic security of citizens, that is, individuals and households. The concept of economic security has been expanded to include not only national but also individual economic security. As the focus in the study of economic security shifted more and more to the micro level, security indicators related to the standard of living and economic well-being of citizens were developed. A new approach to economic security has emerged, and new, more sophisticated indicators have been defined. Today, individual economic security is considered as economic well-being, while indicators of economic security are viewed as indicators of quality of life.

This approach is relatively new. The approach defines economic security as vulnerability to economic loss, and treats “economic” as a description of the consequences (such as income loss) rather than the causes of insecurity (Hacker, 2018). The concept was developed in the last decade by OECD and the European Commission, while they working on defining and collecting indicators.

In this approach, the perception of economic security is subjective. The assessment of the level of economic security by an individual can be based on objective facts and indicators, but in the end, it is still subjective. Measures of perceived security rely on individuals’ own perceptions of their economic situation (Eurostat, 2021). The perception of economic security is people’s assessment of their own ability to cope with unexpected economic shocks and to face unexpected risks (Ljubojević, 2016). Regarding the expectations of individuals about future events, individuals themselves assess the risk of future events, losses, or the risk of present crime that threatens their economic security. The perception of the economic situation depends on the subjective assessment of risk by individuals themselves, therefore indicators of economic security contain an element of subjectivity. The measure of the achieved level of economic security is the risk faced by citizens. This risk-based approach prevails today in defining and measuring the concept of economic security.

Eurostat has adopted this risk-based approach in expressing and measuring economic security, defining economic security as the degree of vulnerability to risk. Economic security is analysed with indicators that measure situations in which people may find themselves, such as being unable to cope with unexpected financial expenses, or being in arrears with a mortgage, rent, utility bills or hire purchase payments. (Eurostat, 2021). One can name many risks that could affect an individual’s or a household’s material security and these risks can be classified in two categories: economic security and physical safety. The analysis of physical security refers to the frequency of certain criminal offences and is based on crime statistics, as well as the assessment or perceptions of individuals and households regarding crime, violence or vandalism that are present in the area where they live.

There is another aspect of economic security, which is not covered by this paper, and which refers to the security of individual participants in economic activity on the production side (enterprises, corporations). This aspect of security is developed and analyzed by the European Commission within the framework of the European Economic Security Strategy (European Commission, 2023). In contrast to the individual economic security of individuals and households, this aspect of security refers to the assessment and measurement of risks in different areas of economic activities of companies (production, trade, technology). Risk in these areas includes: risks to the resilience of supply chains, risks to physical and cyber security of critical infrastructure, risks related to technology security and technology leakage and risks of weaponisation of economic dependencies or economic coercion (Димитријевић, 2023). However, this aspect of economic security will not be considered here in the paper. In this paper, we will focus on indicators of individual economic security that reflect the development of the



concept of economic security by the OECD and Eurostat, and the application of this concept to the analysis of the achieved level of economic security in the Republic of Serbia.

Although the main goal is the analysis of indicators of individual economic security, indicators of economic and social development (GDP per capita, GDP growth rate, number of unemployed, unemployment rate, foreign exchange reserves, inflation rate measured by the Consumer Price Index-CPI, fiscal surplus/deficit as a percent of GDP, share of public debt in GDP and foreign trade deficit as a percent of GDP) will also be presented, which should provide a broader picture of the achieved level of economic security at the national level in the Republic of Serbia. The aim of the paper is to assess the level of economic security of citizens based on the value of the indicators during the observed period. Finally, the goal is to determine the level of economic security of citizens in relation to EU member states through a comparative analysis.

Design/Methods/Approach

In the analysis and the assessment of economic security of citizens in the Republic of Serbia, the level and movement of indicators of economic security and physical safety was analyzed. According to Eurostat's approach, which was adopted here, the concept of economic security is associated with the concept of risk, while risk manifests itself in two categories: economic security and physical safety. In fact, economic security and physical security are, according to Eurostat's approach, dimensions of quality of life. Other dimensions of quality of life or well-being of citizens are: Material living conditions (income, consumption and material conditions), Leisure and social interactions, Governance and basic rights, Natural and living environment, Overall experience of life (Eurostat, 2021).

The analysis of economic security is complemented by the analysis of physical safety because the population's perception of physical safety greatly affects well-being and living standards, decisions about economic activity such as consumption or investment, and ultimately reflects the economic security of citizens. Therefore, in order to obtain a complete picture of the state of economic security, it is necessary to take these indicators into account.

Economic security in Eurostat's approach is measured by the share of the households unable to cope with unexpected financial expenses and by the share of the household with arrears in payments of financial obligations. The corresponding indicators are Inability of households to face unexpected financial expenses and Arrears on mortgage or rent payments. Unexpected financial expenses refer to all those expenses that the household did not expect and must bear, such as medical expenses, repair expenses and similar expenses. Delays in the settlement of obligations can refer to different types of obligations such as rent or mortgage.

The analysis on physical safety is based on data from crime statistics, as well as on the information about the perceptions of the population regarding crime, violence or vandalism in the area where they live. It is based on indicators named Rate of Intentional homicide and Perceived crime, violence or vandalism. In fact, crime rates for various crimes can be indicators of physical security, but Eurostat uses Rate of Intentional homicide as the most representative in this area. By definition, intentional homicide is an unlawful death inflicted upon a person with the intent to cause death or serious injury. Intentional homicide also include murder, honour killing, serious assault leading to death and other.

Crime rates in Eurostat's crime statistics are calculated as the number of criminal offences per 100,000 inhabitants. The source of data collected by Eurostat for crime statistics by country (and which are then used to calculate the EU average, used in the comparisons in this paper) are national statistical



offices, which collect data on crime most often from public prosecutors and the competent basic and higher courts. Data from the field of crime statistics produced by the Republic Statistical Office and submitted to Eurostat are the result of the process of development and harmonization of the methodology with international standards and Eurostat practice, which has been ongoing since 2006 (Radović-Stojanović & Tomić, 2013: 456).

The source of data on the basis of which Eurostat calculates indicators of economic security is the EU-SILC survey (The European Union Statistics on Income and Living Conditions survey). EU-SILC is European statistics on income and living conditions and it is the reference source of data for statistics on income and social inclusion and the main source of information on quality of life at individual and household level in the European Union. EU-SILC was launched in 2003. EU-SILC is based on standardized methodology for all European Countries and is conducted in annual periodicity. In the Republic of Serbia, the Survey was for the first time conducted in 2013. Data from this area as well as from the area of crime statistics are available in the Eurostat database. Also, these data are available in the publications and database of the Statistical Office of the Republic of Serbia. Therefore, the research will cover the period from 2013-2021 and the data for 2021 are the last available data for the Republic of Serbia.

The selected indicators for the Republic of Serbia will be presented, as well as the average value of the indicators for the European Union (for 27 countries). Also, for the sake of comparison, the values of indicators for some European Union member countries are listed. The goal was to compare the level of economic security of citizens in the Republic of Serbia in relation to citizens in EU member countries and in relation to the EU average. For physical safety indicators, the latest available data is for 2020. But first, the values of the macroeconomic indicators of economic and social development will be presented (for which the latest available data is for 2022). Data source for the values of these indicators is the database of the Statistical Office of the Republic of Serbia, Statistical Yearbook of the Republic of Serbia, Ministry of Finance and the National Bank of Serbia.

Findings

Indicators of economic and social development are macroeconomic indicators that describe trends in the real, monetary and financial sectors of the Republic of Serbia. The most important macroeconomic indicators will be presented here: GDP per capita, GDP growth rate, number of unemployed, unemployment rate, average salary, foreign exchange reserves, inflation rate measured by the Consumer Price Index-CPI, fiscal surplus/deficit as a percent of GDP, share of public debt in GDP and foreign trade deficit, also as a percent of GDP.

In 2022, GDP per capita almost doubled compared to 2013. The number of unemployed decreased by 326,000 and the unemployment rate dropped from 24% to 9.6%. Foreign exchange reserves increased by 73.5% compared to 2013. Unemployment decreased and the average salary increased and almost doubled. In 2022, foreign exchange reserves are at a historical maximum of 19,416 million euros. The public debt, which in 2015 amounted to 71.2% of GDP, was reduced to 55.6% in 2022, and before the start of the Covid-19 pandemic it was even lower and amounted to 52.8% of GDP. The rise in inflation in 2022 is a consequence of the rise in energy prices due to the complex international security situation and can be identified as a moderate risk to the economic and above all energy security of the Republic of Serbia. The foreign trade deficit is at a higher level, reflecting the import dependence of the Republic of Serbia on foreign countries. This deficit is primarily a consequence of the increase in the prices of energy products and other products (raw materials, semi-finished products).



Table 1 *Macroeconomic Indicators Indicators of Economic and Social Development, the Republic of Serbia, 2013-2022.*

	GDP per capita (current prices) in euros ¹⁾	GDP real growth, in % ¹⁾	Number of unemployed, in 000 ²⁾	Unemployment rate ²⁾	Net average salary, RSD, ²⁾	For. exch. reserves, mil. eur ²⁾	Inflation CPI ²⁾	Fiscal surplus/deficit, % GDP ²⁾	Public debt, % GDP ²⁾	Foreign trade deficit, % GDP ²⁾
2013	5,081	2.9	775	24.0	43,932	11,189	2.2	-5.1	57.5	-12.3
2014	4,973	-1.6	767	20.6	44,530	9,907	1.7	-6.2	67.5	-11.4
2015	5,037	1.8	743	18.9	44,432	10,378	1.5	-3.5	71.2	-11.3
2016	5,211	3.3	713	16.4	46,097	10,205	1.6	-1.2	68.7	-9.9
2017	5,588	2.1	651	14.5	47,893	9,962	3.0	1.1	58.6	-11.1
2018	6,143	4.5	583	13.7	49,650	11,262	2.0	0.6	54.4	-13.1
2019	6,624	4.3	530	11.2	54,919	13,378	1.9	-0.2	52.8	-13.8
2020	6,786	-0.9	509	9.7	60,073	13,492	1.3	-8.0	57.8	-12.6
2021	7,806	7.7	513	11.0	65,864	16,455	7.9	-4.1	57.1	-13.3
2022	9,067	2,5	449	9,6	74,933	19,416	15.1	-3.2	55.6	-18.9

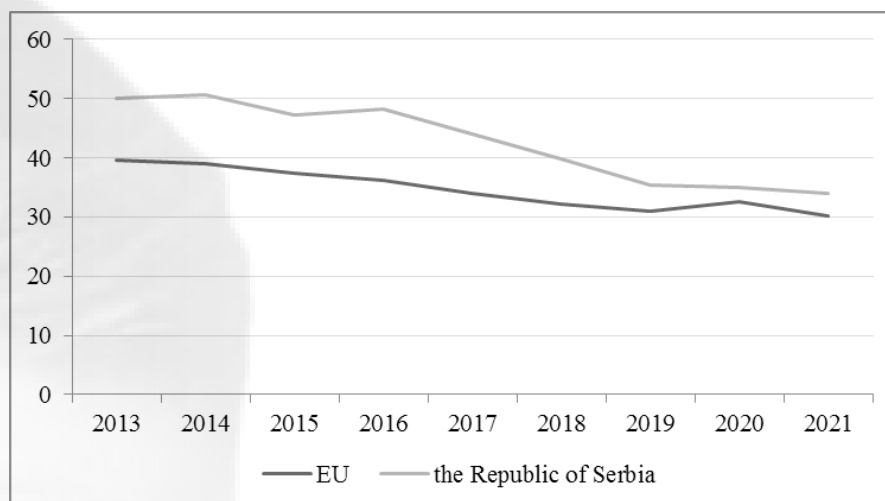
Sources: ¹⁾ Statistical Office of the Republic of Serbia ²⁾ Ministry of Finance

Based on the presented macroeconomic indicators, it can be concluded that the level of national economic security in the Republic of Serbia has significantly increased compared to 2013. Serbia preserved macroeconomic stability and achieved economic growth by recovering very quickly after the 2020 pandemic. As the public debt has been reduced, the level of economic independence has increased and the growth of foreign exchange reserves that has been achieved is a guarantee of preserving monetary stability, the value of the national currency and the ability to react to possible security shocks.

Let us now see how the increase in economic security at the national level in the observed period was accompanied by changes in the level of economic security at the individual level. The first observed indicator, Inability to face unexpected financial expenses, visibly decreased in the period 2013-2021.

In 2021 30.1 % household in the EU reported was unable to cope with unexpected financial expenses, 2.4 pp less than in 2020 and 8.3 pp less than one decade before. In 2021 33.9% household in the Republic of Serbia reported being unable to cope with unexpected financial expenses), which is 1.2 pp less than in 2020 and 16,2 pp less than in 2013. As the Covid-19 pandemic began, the inability of households to face unexpected financial expenses in the European Union increased, while in the Republic of Serbia it continued to decrease, although at a somewhat slower pace compared to the previous period. Among the member states, the share of the population unable to cope with unexpected financial expenses was the highest in Romania (47.3 %), Croatia (46.5 %), Greece (46.3 %), Cyprus (43.4 %) and Latvia (41.7 %). Observing the macroeconomic indicators, it is not difficult to see that in the Republic of Serbia, with the growth of the average salary, the population's ability to cope with unexpected expenses has significantly increased. Based on this indicator, the economic security of citizens has increased. At the same time, this is an illustration of how changes at the macro level (wage growth, employment growth) reflect positively on the growth of individual economic security of citizens. Serbian citizens are now more able to face unexpected expenses and in this respect the difference between them and EU citizens has visibly decreased.

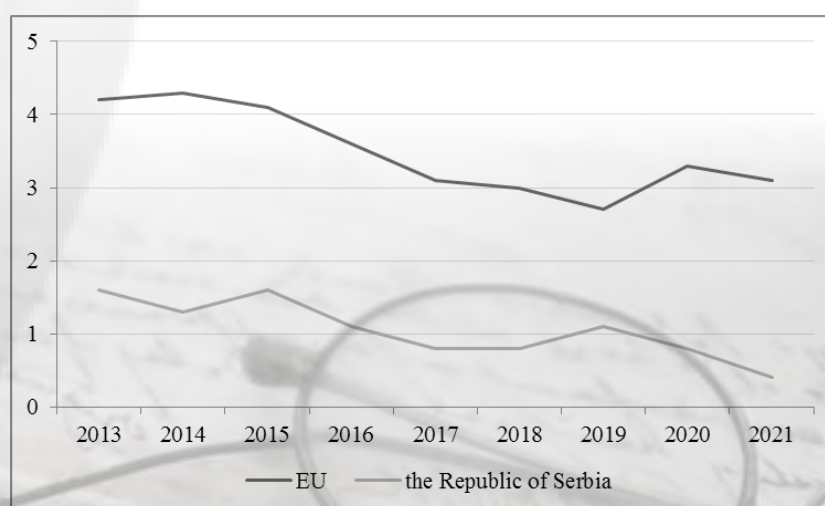




Source: EU-SILC survey

Graph 1 *Inability to Face Unexpected Financial Expenses, % of Households, EU and the Republic of Serbia, 2013-2021*

In terms of arrears on mortgage or rent payments, Serbia is in a more favorable position than the European Union in the entire observed period. In the European Union, after several years of decline, the share of the population in arrears of payment began to increase in 2020, when the Covid-19 pandemic began. What is interesting is that this percentage, which was already low, decreased even more in Serbia after the pandemic, perhaps as a result of a more cautious approach to finances and that greater efforts were made to settle financial obligations. It can be said that this percentage of less than 1% is extremely low and that the economic security of citizens is not to a greater extent threatened due to delays in arrears. The largest share of European Union households in terms of arrears on mortgage or rent payments in 2021 was in Greece, where it was 8.5 %, then Ireland (7.0 %), Spain (6.5 %), France and Cyprus (both at 5.4 %). It is noticeable that some of the more developed EU members are among them.



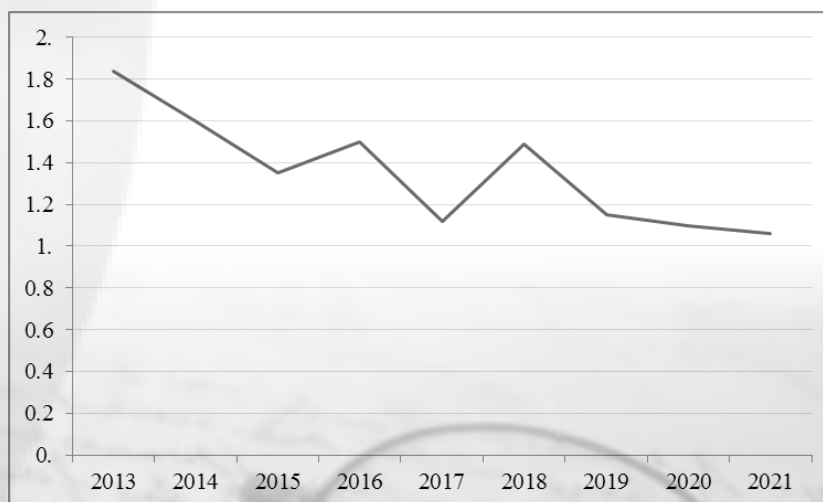
Source: EU-SILC survey

Graph 2 *Arrears on Mortgage or Rent, Utility Bills or Hire Purchase, % of Households, EU and the Republic of Serbia, 2013-2021*

Physical safety determines people's sense of well-being and satisfaction with life. Endangering physical security means exposure to crime and violence. It reduces the level of satisfaction with life, affects the plans of individuals and households, and increases the feeling of economic insecurity. Indicators of physical safety indirectly provide a picture of the level of economic security. Violence and crime affect the standard of living and economic security of citizens. Different theoretical approaches explain the cause-effect relationships between living conditions and crime. In these theories, socio-economic status is always present as a determinant of social relations. It has an indirect effect on crime, and the reverse is also true (Tomić & Radović-Stojanović, 2019: 50). Exposure to the risk of physical attack, theft of property and other forms of threats to physical safety affects the level of economic well-being and decisions of the population regarding various forms of economic activity. For example, if the population lives in areas of the city that have an increased risk of endangering physical security, this indirectly affects the level of economic development of those areas and threatens the economic security of the citizens.

Crime rates for various crimes can serve as indicators of physical safety. A logical choice would be criminal offenses against life and limb such as murders, serious and minor bodily injuries, and Eurostat adopted intentional homicide as an indicator of physical safety.

In 2020 (the year with the latest available data) the rate of intentional homicide per 100 000 inhabitants was the highest in Latvia (4.88), Lithuania (3.54) and Estonia (2.78) and the lowest rates were recorded in Luxembourg (0.32), Italy (0.48) and Slovenia (0.52). In Serbia, already low homicide rate has been decreasing in recent years and in 2020 it is 1.06%. According to this indicator, the safety of citizens of Serbia increases over time. Otherwise, average rate for European union are not published, probably due to differences in national legislation regarding the definition of this criminal offense, which is why it is not possible to calculate average rate of intentional homicide for European union.



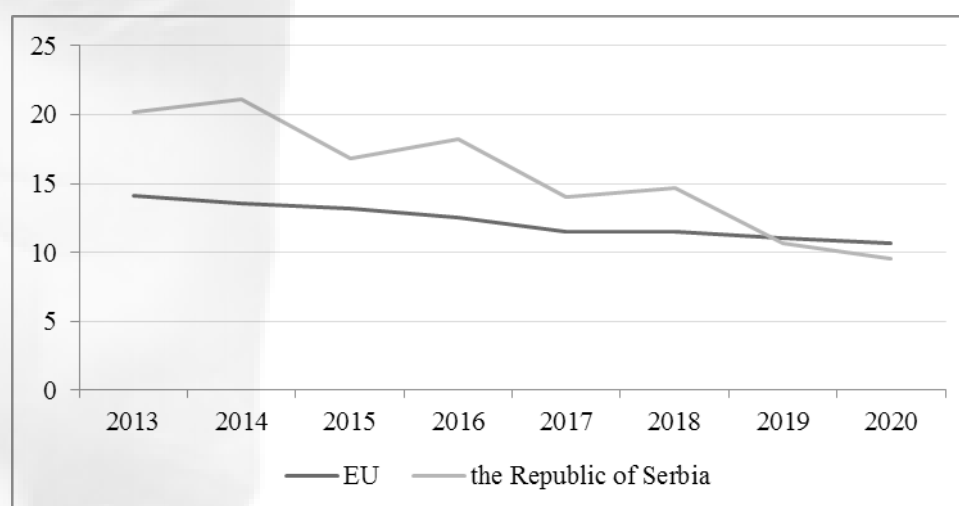
Source: Eurostat, Crime statistics

Graph 3 *Intentional Homicide per 100 000 Inhabitants, the Republic of Serbia, 2013-2021*

What is really important is not the actual level of crime, but the citizens opinion about the level of crime, the so-called perception of crime. As noted (Eurostat, 2020), the perception of crime often differs from the actual level of crime. In EU state members, in 2020 (latest available data) 10.7 % households perceived that there had been crime, violence or vandalism in the area where they lived. The share of household was the highest in Bulgaria, (19.1 %) followed by 18.1 % in Greece and 17.7 %



in France. In almost all of the member states, the highest perception of crime, violence or vandalism was recorded among people living in cities: the perception of crime was the highest for people living in cities (16.3 %) than it was for one living in towns and suburbs (8.4 %) and in rural areas (5.8 %), which is somewhat expected. As for Serbia, the share of households that had a perception of crime, violence or vandalism in 2020 has more than halved since 2013, so based on the value of this indicator, it can be said that there has been an increase in the level of individual safety in the Republic of Serbia.



Source: EU-SILC survey

Graph 4 *Share of the Households who Perceived There Was Crime, Violence or Vandalism in the Area Where They Live, EU and the Republic of Serbia, 2013-2021*

In the Republic of Serbia, in 2020, 9.5 % of households perceived that there had been crime, violence or vandalism in the area where they lived. This percent in European union amounts 10.7%. Over the years, this percentage in the European union was far lower than in Serbia. While the population of Serbia perceived over 20% of crime in the areas where they live, this percentage was below 15% in the European union, but in recent years the situation has changed in favor of Serbia. The indicators we observed here reflect what is already known in crime statistics, namely that crime rates for some major criminal offences in the Republic of Serbia are decreasing (Radović-Stojanović, 2021) and that there was a general decrease in crime in the observed period. This decrease in crime is a continuation of a trend of crime reduction that was manifested until 2014 (Radović-Stojanović, 2016) and which has continued until today.

Originality/Value

The paper provided what was missing in the literature until now, which is an analysis of economic security in the Republic of Serbia at the individual level, i.e. at the level of citizens and households. By using Eurostat economic security and physical safety indicators, this analysis as well as comparison between countries has now become possible.

Based on macroeconomic indicators, economic security and physical safety indicators, the level of economic security at the national level and also at the individual level in the Republic of Serbia in pe-

riod 2013-2021 has increased. Unlike the European Union, the pandemic did not negatively affect the growth of the individual economic security of the citizens of the Republic of Serbia.

Still, there is plenty of room for expanding this analysis and supplementing it primarily with indicators of the standard of living, indicators of the quality of life and other macroeconomic indicators. The second direction of analysis, also at the micro level, should go in the direction of risk analysis in the areas of production, trade, technology, i.e., in the direction of analyzing the economic security of individual participants in economic activity on the production side, which is not covered here in the paper given that the paper includes analysis of risk for individual participants in production on the consumption side (individuals, households). Based on European Economic Security Strategy, such an analysis should include assessment and measurement of risks to the resilience of supply chains, risks to physical and cyber security of critical infrastructure, risks related to technology security and technology leakage and risks of weaponisation of economic dependencies or economic coercion. Such an analysis would be a good complement to the existing results, providing an even clearer picture of the level of economic security in the Republic of Serbia.

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