



# POVERTY PROJECTIONS FOR OLDER PERSONS

The impact of the COVID-19 pandemic and the Ukrainian crisis  
on the poverty of older persons in the Republic of Serbia



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**For Publisher:**

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**Translation:**

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**Design:**

Pozitiv MVP

**Photos:**

Shutterstock

**Print:**

Grafolik, Belgrade

**Print run:**

200 copies

Belgrade, 2022.

*This publication has been produced with the support of the United Nations Population Fund (UNFPA) in Serbia within the framework of the Joint UN Programme "Extending Social Protection to families in Serbia with enhanced shock-responsiveness", implemented by UNICEF, the United Nations Population Fund (UNFPA) with the participation of the United Nations Refugee Agency (UNHCR).*

*The views expressed in this publication are those of the authors, and do not necessarily represent the views of UNFPA, the United Nations or any of its affiliated organizations.*

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# ABBREVIATIONS

CA	Child Allowance
CPI	Consumer Price Index
FSA	Financial Social Assistance
GDP	Gross Domestic Product
HBS	Household Business Survey
IMF	International Monetary Fund
NBS	National Bank of Serbia
PA	Parental Allowance
SDG	Sustainable Development Goals
SILC	Survey on Income and Living Conditions
SORS	Republic Statistical Office
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNU-MERIT	United Nations University - Maastricht Economic and Social Research Institute on Innovation and Technology
WB	World Bank

# ACKNOWLEDGMENTS

Poverty Projections for Older Persons - The impact of the COVID-19 pandemic and the Ukrainian crisis on the poverty of older persons in the Republic of Serbia have been prepared with UNFPA support under the UN Joint Programme "Extending Social Protection to families in Serbia with enhanced shock-responsiveness". The Programme focuses on catalysing the strengthened shock-responsive social protection system to mitigate the socio-economic impacts of the consecutive crisis that hit the country – such as COVID-19 and Ukraine crisis.

The Programme supports the Government of the Republic of Serbia towards introducing shock-sensitive social protection measures in national legislation that will allow for swift transition to a strengthened social protection system in the country capable of responding to the current and in the event of future shocks.

The Programme is implemented by UNICEF, the United Nations Population Fund (UNFPA) with the participation of the United Nations Refugee Agency (UNHCR).

The Author would like to thank the UNU-MERIT team, consisting of Prof. Franziska Gassmann, PhD (team lead), Francesco Iacoella, PhD, Alex Hunns, MSc and Julieta Morais, MSc for leading the process, sharing their knowledge and inputs provided during the poverty projection preparation.

The Author would like to pay special gratitude to Mihajlo Đukić, PhD and Vladimir Andrić, PhD for selfless support and help during the poverty projection preparation process.

# INTRODUCTION

The world's poorest have faced two extraordinarily difficult years. The pandemic has caused unprecedented reversals in poverty reduction that are further exacerbated by rising inflation and the effects of the war in Ukraine. According to certain estimates these combined crises will lead to an additional 75 to 95 million people living in extreme poverty<sup>1</sup> in 2022, compared to pre-pandemic projections.<sup>2</sup> If the more pessimistic scenario plays out, 2022 could be the second-worst year in terms of progress made in reducing extreme poverty this century – behind 2020 only, when there was an actual increase in global poverty from 8.3% (2019) to 9.2% (2022).<sup>3</sup>

Rising inflation, especially rising food prices resulting from the Ukraine crisis mostly affect the poorer strata of the population. According to literature, poorer households tend to spend a larger share of their resources on food relative to non-food. This means that poorer households are likely to be hit harder by current inflationary pressures, resulting in an increase of extreme global poverty.

Most recent data for the Republic of Serbia has shown that the relative poverty rate continued its downward trend during the pandemic years (2020/2021), resulting in the lowest poverty rate (21.2%) since the beginning of its measurement.<sup>4</sup> Poverty rate trends for older persons differed somewhat – rising slowly but constantly over the past five years (even before the pandemic and Ukraine crises). The older persons' poverty rate rose to its maximum height in 2021 (22.7%).<sup>5</sup>

Global inflationary pressures spilled over to affect the Republic of Serbia as well and will likely also have an impact on poverty. This impact could be even larger for older persons, having in mind recent poverty rate trends.

To understand changes in poverty since the beginning of the pandemic and the Ukraine crisis several poverty predictions have been developed. An analysis of 2019 and 2020 data on income has been conducted to identify pandemic impacts on poverty. A comparison between these data and results of the projections has identified the effects of the COVID-19 pandemic.

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1 People living on less than \$1.90 a day.

2 Daniel Gerszon Mahler, Nishant Yonzan, Ruth Hill, Christoph Lakner, Haoyu Wu and Nobuo Yoshida, Pandemic, prices, and poverty, World Bank Blog, April 2022, available at: <https://blogs.worldbank.org/opendata/pandemic-prices-and-poverty>

3 For more details please see: <https://unstats.un.org/sdgs/report/2022/goal-01/>

4 Republic Statistical Office, Poverty and Social Inequality 2021, available at: <https://publikacije.stat.gov.rs/G2022/HtmlE/G20221287.html>

5 For previous years data available at: <https://socijalnoukljucivanje.gov.rs/en/social-inclusion-in-rs/poverty-statistics/relative-poverty/>, for 2021, data available at: <https://publikacije.stat.gov.rs/G2022/HtmlE/G20221287.html>

To capture the effects of the Ukraine crisis on older persons' poverty in the Republic of Serbia in 2022 and in the following years (2023-2024), poverty projections include other factors such as inflationary pressures (especially food and energy prices) and changes in remittances from abroad.

Methods used for poverty projections of older persons have been prepared in accordance with the Inception Report and Methodology for similar research (Poverty Projections based on the potential impact of the conflict in Ukraine on the most vulnerable groups in Serbia, with particular focus on children), prepared by UNU-MERIT. Having in mind that both forms of research are part of the same Project, have the same objectives and will be published in similar time, as well as that the main difference is the age category in focus, two teams worked closely and followed the same approach, whenever possible.





## Older Persons' Poverty in the Republic of Serbia

Although poverty is commonly studied as a multidimensional concept, including dimensions such as material standard, health, education, work, social contacts and connections, etc., the perception of the standard of living of individuals is still mostly focused on the material dimension and its measurement, primarily within the concept of absolute and/or relative poverty.

The at-risk-of-poverty rate represents the share of persons whose income per consumption unit after social transfers is lower than 60% of the median national income per consumption unit.<sup>6</sup> Since 2013, relative poverty has been monitored in the Republic of Serbia based on the Survey on Income and Living Conditions (SILC), conducted by the Republic Statistical Office (SORS).

The Republic of Serbia made positive steps towards reducing poverty with the introduction of the UN 2030 Agenda and its Sustainable Development Goal 1 - End poverty in all its forms everywhere (SDG1) in 2015. Recent results of the Survey on Income and Living Conditions have shown that the at-risk-of-poverty rate in the Republic of Serbia was lowest in 2021 since this indicator began to be monitored (21.2%). There are noticeable differences in at-risk-of-poverty rates among various age categories. The rates are significantly higher for young people between the ages of 18–24 (27.7%) and for older categories of the population (21.8% among those aged 55–64 and 22.7% among those aged 65 and over), and significantly lower than average for the population aged 25–54 (19.1%).

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6 Social Inclusion and Poverty Reduction Unit website: <https://sociojalnoukljucivanje.gov.rs/en/social-inclusion-in-rs/poverty-statistics/relative-poverty/>

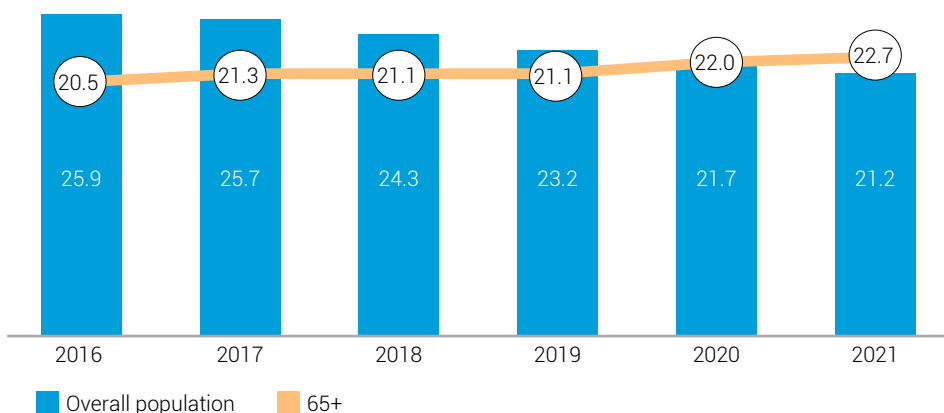
**Table 1** At-Risk-of-Poverty Rate, by Age Categories

	2016	2017	2018	2019	2020	2021
0-17	30.2	30.5	28.8	28.9	24.2	20.8
18-24	32.6	29.7	24.0	25.6	23.6	27.7
18-64	26.0	25.7	24.0	22.3	20.9	20.7
25-54	25.4	24.9	23.1	21.9	19.6	19.1
55-64	25.4	25.8	23.9	21.7	23.0	21.8
65+	19.1	21.3	21.1	21.1	22.0	22.7
OVERALL POPULATION	25.5	25.7	24.3	23.2	21.7	21.2

Source: SORS database

The at-risk-of-poverty rate trends indicate that significant progress may be seen in reducing at-risk-of-poverty rate among all age groups, with the exception of persons aged 65 and over. Although concerning the overall population the Republic of Serbia continued making progress towards achieving the SDG1, in the case of the older persons, there is a significant deviation from this goal i.e., the at-risk-of-poverty rate has increasing in recent years.

**Chart 1** At-Risk-of-Poverty Rate, Older Persons and the Overall Population (in %)



Source: SORS, SILC

In the Republic of Serbia, the pension is a key form of protection against the risk of poverty for those over the age of 65 and the at-risk-of-poverty rate of pensioners was significantly lower in 2021 (19.9%).<sup>7</sup> The importance of pensions and other

<sup>7</sup> SORS, Survey on Income and Living Conditions 2021, available at: <https://publikacije.stat.gov.rs/G2022/HTML/G20221287.html>

social transfers is shown by the fact that the at-risk-of-poverty rate before social transfers and pensions was as high as 78.8% for those over 65.<sup>8</sup>

Given that the concept of relative poverty is not most suitable for monitoring poverty trends over time, continuous monitoring of absolute poverty is also necessary. Monitoring absolute poverty is important not only from the aspect of monitoring the dynamics of the number of poor people, but it is also necessary to formulate public policies to reduce poverty.<sup>9</sup>

The absolute poverty rate shows the share of individuals in society who cannot meet their basic needs and whose income/consumption is below the poverty threshold (line). The absolute poverty line is basically determined on the basis of the nutritional minimum and the consumption structure of the poorest households. Usually, the line is fixed at a certain point in time and indexed with the consumer price index.

Data on absolute poverty trends, prepared by the Social Inclusion and Poverty Reduction Unit and based on data from the Household Budget Survey (HBS) indicated that in 2020 in the Republic of Serbia approximately 446,000 inhabitants could not meet their basic needs i.e., 6.9% of the total population. The absolute poverty rate recorded a constant decline in the period from 2014, although it is still slightly higher than the period from 2008–2012.

**Table 2** Absolute Poverty Rate, by Age Categories

	2016	2017	2018	2019	2020	2021.
0-13	8.4	9.1	7.6	8.2	10.6	20,8
14-18	8.5	10.6	8.2	8.5	7.9	27,7
18-24	8.4	9.0	8.6	8.2	10.3	20,7
25-45	6.4	6.0	5.6	5.7	5.8	19,1
46-64	7.0	6.7	6.8	6.2	5.4	21,8
65+	7.4	7.0	7.9	8.0	6.8	22,7
OVERALL POPULATION	7.3	7.2	7.1	7.0	6.9	21,2

Source: Social Inclusion and Poverty Reduction Unit

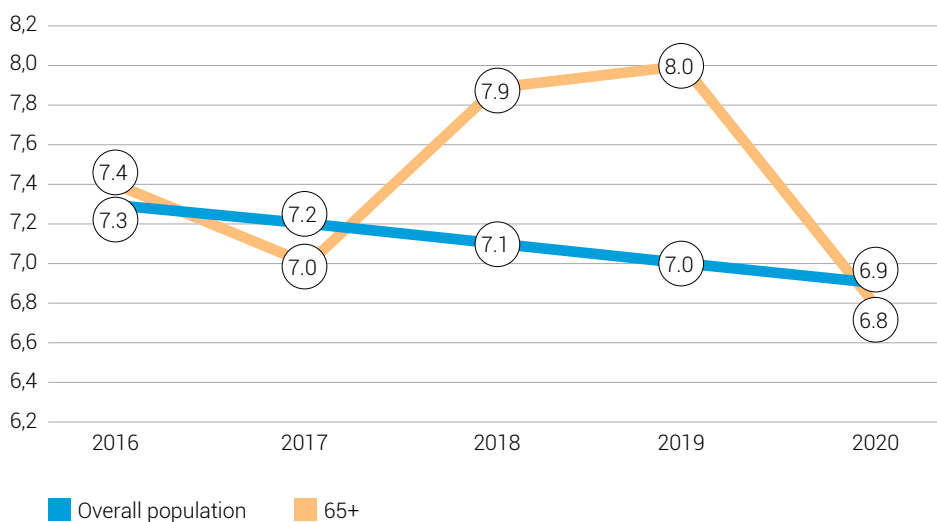
According to the presented data, over the previous decade persons over the age of 65 were poor, to a greater extent, compared to the population average. Only in 2020 did their position significantly improve, when they reached a poverty rate at

<sup>8</sup> Ibid.

<sup>9</sup> Social Inclusion and Poverty Reduction Unit webpage, available at: <https://socijalnoukljucivanje.gov.rs/en/social-inclusion-in-rs/poverty-statistics/absolute-poverty/>

the same level of the population average (poverty rate of older persons was 6.8%, while the average poverty rate was 6.9%). The absolute poverty rate of pensioners was 6.5% in 2020. This leads to the same conclusion derived at by relative poverty indicators, that in the Republic of Serbia, a pension is of key importance for material well-being in old age and a prerequisite for a dignified life, especially for people living without younger, employed household members, who are able to strengthen the household's living standard with their income.

**Chart 2** Absolute Poverty Rate, Older Persons and the Overall Population (in %)



Source: Social Inclusion and Poverty Reduction Unit



## Social Protection System and Its Possibilities to React to External Shocks

The social protection system in the Republic of Serbia consists of social assistance, with social services and social insurance.<sup>10</sup> The first area of the system deals with social assistance programmes: cash and in-kind benefits to support the poor and vulnerable, and social services. Cash and in-kind benefits include both means tested (targeted at the poor) and categorical (targeted to various characteristics). The second area deals with social insurance programmes i.e., pensions (contributory, private contributory and non-contributory).

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<sup>10</sup> World Bank, 2022, Serbia – Social Protection Situational Analysis

**Table 3** Social Protection System in the Republic of Serbia

CATEGORY		BENEFITS AND PROGRAMMES
SOCIAL ASSISTANCE	Benefits to support the poor, the vulnerable, persons with disabilities and families with children	<p>Means tested:</p> <ul style="list-style-type: none"> <li>• Financial Social Assistance (FSA)</li> <li>• Child Allowance (CA)</li> <li>• One-off Assistance (includes in-kind)</li> <li>• Energy Benefit</li> </ul> <p>Categorical:</p> <ul style="list-style-type: none"> <li>• Parental Allowance (PA), which is also known as a birth grant</li> <li>• Wage compensation for maternal leave, childcare and extended childcare leave, and other benefits based on birth, childcare and special childcare</li> <li>• Preschool subsidy</li> <li>• War Veteran Benefit programmes (includes in-kind)</li> <li>• Caregiver Allowance</li> </ul>
	Social services	<ul style="list-style-type: none"> <li>• Accommodation and shelter services: residential, foster care, shelters</li> <li>• Services for independent living of persons with disabilities</li> <li>• Counselling, therapy and socio-educational services</li> <li>• Home care services for persons with disabilities</li> </ul>
SOCIAL ASSISTANCE AND SOCIAL INSURANCE PROGRAMMES	Pensions	<p>Contributory:</p> <ul style="list-style-type: none"> <li>• Contributory pension system</li> <li>• Farmers</li> </ul>
		<p>Private contributory</p> <ul style="list-style-type: none"> <li>• Voluntary private</li> <li>• Occupational pension funds</li> </ul>
		<p>Non-contributory</p> <ul style="list-style-type: none"> <li>• Cash benefits for parents who do not have a pension and who cared for children with disabilities</li> </ul>

**Source:** Adapted from the World Bank, Social Protection Situational Analysis for Serbia, 2022.

Expenditures on social protection are relatively high in the Republic of Serbia but are dominated by high spending on pensions. In 2020, pensions amounted at 10.3% of the GDP, or 71% of total social protection spending, leaving limited resources for social assistance.<sup>11</sup> On the other hand, the Republic of Serbia spends only 5% of social protection expenditures on means-tested (pover-

<sup>11</sup> Ibid.

ty-targeted) programmes, which shows the limited poverty focus of its social assistance programmes. Recent trends have indicated the serious reduction of spending on poverty targeted expenditures, from 0.63% in 2013 to 0.47% of the GDP in 2019.<sup>12</sup>

The most important social programmes aimed at poverty reduction are Financial Social Assistance (FSA) and Child Allowance (CA), both means tested. In accordance with the Law on Social Protection, FSA provides income support to families or households that meet the eligibility criteria related to income, asset ownership and unemployment status of able-bodied members. In accordance with the Law on Financial Assistance for Families with Children, CA supports the income of poor households with children. CA means tests eligibility for poor households with children. If the household receives FSA, the children are required to attend school to obtain their rights to a CA.

For older persons in poverty the FSA is the main social assistance provided by the state. In December 2021, 85,330 families i.e., 204,286 persons exercised their right to FSA. Of that, 8% were over the age of 65 which is by far the smallest share in the age structure (47.4% are adults aged 18-64 and 35.8% are children).<sup>13</sup> Such a small share of older persons in the structure of FSA users is not solely a consequence of their better financial situation (both absolute and relative poverty rates are not significantly lower than the average), but is also partly a consequence of the conditions and rules for obtaining the right to FSA. Namely, among the rules for obtaining the right to FSA are conditions related to not owning real estate of a certain value and/or land in a certain area. Older people are often the owners of such real estate and land, which cannot be used or cultivated, yet is still an obstacle for them in attaining the needed FSA.<sup>14</sup>

The other social assistance category important to older persons' quality of life are social services. The social services system in the Republic of Serbia is being expanded to include a broad system of programmes and benefits and an increasingly diversified set of providers, including the central government, local self-governments, non-governmental organisations and the private sector. Expenditures for social services are relatively high, led by expenditures relative to accommodation services.

Public care for older persons remains very limited despite an aging population. Most older persons who need assistance rely on personal networks. Although this is the most common social service provided, 2016 data showed that only 1.5% of older persons are covered by public institutional care, day care or home care ser-

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12 Ibid.

13 Social Protection Institute, 2022, Report on the work of centers for social work for the year 2021, Belgrade

14 Lidija Kuzmanov, 2022, Elderly Poverty and the 2030 Agenda, SDGs for All, Center for Democracy Foundation, Belgrade

vices and that waiting lists are long in larger towns/cities. Private institutions are more common but are unaffordable for the majority of the population.<sup>15</sup>

The social protection system does not have the legal basis or capacity to expand horizontally or vertically to respond to external shocks. The social protection system of the Republic of Serbia is set up for idiosyncratic shocks and lacks a policy for systemic emergencies. Whereas there are legal provisions for expanding the FSA in times of need, programme eligibility is based on identifying people in chronic, long-term poverty (that is, highly restrictive) and it remains a paper-based application process (that is, unsuitable for a shock).<sup>16</sup>

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<sup>15</sup> World Bank, 2022, Serbia – Social Protection Situational Analysis

<sup>16</sup> Ibid.





# Poverty Projections for Older Persons

## Methodology

To prepare Poverty Projections of Older Persons according to different scenarios we have followed the methodological approach developed by the United Nations University (UNU-MERIT). UNU-MERIT developed this approach for Poverty Projections based on the potential impact of the conflict in Ukraine on the most vulnerable groups in Serbia, with particular focus on children.<sup>17</sup> Given that the task of this analysis was to make poverty projections for older persons (65+ years old) in the same context of the post COVID-19 period and the crisis in Ukraine, and in order to make comparable projections, the methodology used in this analysis has been adapted to the one mentioned above.

This analysis provides an aggregate analysis of changes in poverty of older persons in Republic of Serbia between 2019 and 2021, as well as older persons' poverty prediction for 2022, 2023 and 2024 using commonly employed poverty indicators (i.e., poverty headcount, poverty gap, poverty severity). Absolute poverty has been estimated in accordance with the UNU-MERIT methodological approach. This decision was made due to the changing characteristics of relative poverty (according to median income trends).

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17 UNU-MERIT, Development of Poverty Projections based on the potential impact of conflict in Ukraine on the most vulnerable groups in Serbia, with a particular focus on children - Inception Report, October 2022.

To estimate the impacts of COVID-19 pandemic and the Ukraine crisis we applied nowcasting. Nowcasting as a technique is used to estimate the current or near future mean income and thus poverty by applying predicted growth rates provided by official institutions or credible international organizations (Government of the Republic of Serbia, World Bank and IMF) to all households in the last observed distribution.<sup>18</sup>

The method works by taking the last observed distribution of income, collected at time  $t$  ( $W_t$ ), and to scale the income from employment, by the estimated real GDP growth per sector (of employment) between time  $t$  and time for which we nowcast ( $t+1$ ), income from remittances from abroad ( $R_t$ ) has been inflated by the expected changes in remittances inflow, income from social benefits ( $SB_t$ ) has been adjusted by inflation (Consumer Price Index – CPI)<sup>19</sup>, while for scaling any other income, ( $I_t$ ) the real GDP growth rate has been applied. The adjusted income vector is used to estimate poverty at time  $t+1$ . The poverty line  $z_t$  has been inflated by the Consumer Price Index at the time  $t+1$ . The nowcasted poverty rates are given by:

$$\text{Poverty\_rate}_{t+1} = F [W_t * \text{growth\_GDP}_{t+1} + R_t * \text{remit\_growth}_{t+1} + SB_t * \text{CPI}_{t+1}/\text{CPI}_t + I_t * \text{growth\_GDP}_{t+1} < z_t * \text{CPI}_{t+1}/\text{CPI}_t]$$

To make different projections for different assumptions (related to the Covid -19 pandemic and Ukraine crisis) several scenarios have been developed. Thorough desk research has been conducted to collect all necessary inputs and data from various existing sources all in order to make reliable assumptions and scenarios.

To estimate the COVID-19 impact on older persons' poverty in the Republic of Serbia two scenarios were developed. One assuming that COVID-19 did not happen (*No COVID-19 scenario*)<sup>20</sup> and the other, realistic with actual parameters. A comparison of the results obtained from these scenarios has provided us with insight on the COVID-19 impact on older persons' poverty. For No COVID-19 Scenario, assumed parameters for 2020 are applied to data from 2019 to estimate poverty in 2020. Next, parameters for 2021 and 2022 are applied to the results for 2020 (and 2021) to estimate poverty in these years. For the COVID-19 Scenario, we apply parameters for estimating poverty in 2020 (based on 2019 data), and parameters for 2022 (on 2021 data), while 2021 poverty is calculated based on actual data.

18 R. Andres Castaneda Aguilar, Daniel Gerszon Mahler and David Newhouse, Nowcasting Global Poverty, WB, 2019. Available at: <https://unctad.org/system/files/official-document/NowcastingGlobalPoverty.pdf>

19 This approach is in line with the Law on Social Protection and the Law on Financial Assistance for the Families with Children, which prescribe the model of adjustment of Financial Social Assistance and Child Allowance every six months for the previous six months inflation.

20 To prepare this scenario, we used growth projections prepared in the autumn 2019 or in early 2020, the period when COVID-19 had yet to be registered in the Republic of Serbia.

**Table 4** Assumptions for the *No COVID-19 Scenario*

	2019	2020	2021	2022
REAL GDP GROWTH, AT CONSTANT PRICES, %*		3.9	4.0	4.0
AGRICULTURE		3.0	3.0	3.0
INDUSTRY		3.5	3.5	3.5
SERVICES		4.2	4.4	4.3
PUBLIC SECTOR WAGES, REAL GROWTH, %**		9.5	6.6	7.5
PENSIONS, REAL GROWTH, %**		5.4	5.9	5.5
REMITTANCES, REAL GROWTH, %***		6.7	6.5	10.1
INFLATION (CPI), END OF PERIOD****	195.4	199.7	204.7	210.4

**Source:** \*World Bank, Macro Poverty Outlook fall 2019 (for 2020 and 2021) and spring 2020 (for 2022); \*\*Planned growth rates announced by the Government of Serbia in September 2019; \*\*\*Calculated based on World Bank Remittances inflow data from April 2020 and expectations from Economic Reform Programme for 2020, with the projections for 2021 and 2022; \*\*\*\*IMF, World Economic Outlook, October 2019

**Table 5** Assumptions for the *COVID-19 Scenario*

	2019	2020*	2022**
REAL GDP GROWTH, AT CONSTANT PRICES, %		-0.9	2.5
AGRICULTURE		2.3	-8.0
INDUSTRY		-0.6	1.3
SERVICES		-1.2	4.8
PUBLIC SECTOR WAGES, REAL GROWTH, %		8.9	-2.98
PENSIONS, REAL GROWTH, %		3.7	-3.8
REMITTANCES, REAL GROWTH, %		-10.4	2.7
INFLATION (CPI), END OF PERIOD	197.3	200.9	246.2

**Source:** \*SORS database for GDP, CPI, Public sector wages, Ministry of Finance – Macroeconomic indicators for Pensions growth, NBS – Balance of Payments, detailed scheme for remittances; \*\*Ministry of Finance – Revised Fiscal Strategy for 2023, with projections for 2024 and 2025, Public sector wages growth rate calculated based on data until October 2022, Pensions growth rate calculated based on Ministry of Finance data from October 2022, taking into account the rise from November 2022, SORS database – CPI, October, end of period

For projecting older persons' poverty, UNU-MERIT developed scenario 1 (*Neutral Scenario*), assuming that all households' real incomes have grown in line with the real GDP growth per sectors (agriculture, industry, services), in line with real growth of public sector wages and pensions or in line with inflation and applied these growth rates to HBS income data from 2021. We applied GDP growth estimates for 2022 to grow household incomes from 2021 to 2022, as well as 2023 and 2024 forecasts to incomes from 2022 and 2023, respectively to forecast incomes and thus poverty in 2023 and 2024.

For an estimation of the Ukraine crisis impact on older persons' poverty, we introduced additional unanticipated food and energy price shocks. We looked at what happens to older peoples' poverty if CPI is 5% higher (pessimistic) and 5% lower (optimistic) than currently expected.

**Table 6** Assumptions for *Neutral Scenarios*<sup>21</sup>

	2021	2022	2023	2024
<b>NEUTRAL SCENARIO 1</b>				
REAL GDP GROWTH, AT CONSTANT PRICES, %		3.2	2.7	2.8
AGRICULTURE		-5.5	4.5	3.4
INDUSTRY		1.0	4.5	4.5
SERVICES		5.3	1.6	1.9
PUBLIC SECTOR WAGES, REAL GROWTH, %		7.5	3	8.5
PENSIONS, REAL GROWTH, %		5.5	2.7	8.1
REMITTANCES, REAL GROWTH, %		10.0	4.9	9.2
INFLATION (CPI), END OF PERIOD	214.1	246.2	268.8	278.7
<b>NEUTRAL SCENARIO 2 - OPTIMISTIC</b>				
INFLATION (CPI), END OF PERIOD	214.1	235.5	256.5	265.3
<b>NEUTRAL SCENARIO 3 - PESSIMISTIC</b>				
INFLATION (CPI), END OF PERIOD	214.1	256.8	281.2	292.2

**Source:** UNU-MERIT, Development of Poverty Projections based on the potential impact of conflict in Ukraine on the most vulnerable groups in Serbia, with a particular focus on children - Inception Report, October 2022.

<sup>21</sup> Assumptions for Neutral Scenarios was developed by UNU-MERIT in October 2022 based on data available in August and September, only information on inflation is updated to the October value.

Given that poverty projections for older persons have been made for November and December 2022 and that new data has become available, an additional set of scenarios has been added to the analysis – *Realistic Scenarios*. Realistic Scenario considers all realised developments (GDP, sectoral GDP, CPI, remittances, pensions, etc.) until October or November 2022. For 2023 and 2024 projections, it considers official projections prepared by the Ministry of Finance of the Republic of Serbia published in the Revised Fiscal Strategy for 2023, with projections for 2024 and 2025.<sup>22</sup> Following the logic of the Neutral Scenario, we added optimistic (CPI – 5% lower than expected) and pessimistic (CPI – 5% higher than expected) variations to this scenario as well.

**Table 7 Assumptions for *Realistic Scenarios***

	2021.	2022.*	2023.**	2024.**
<b>REALISTIC SCENARIO 1</b>				
REAL GDP GROWTH, AT CONSTANT PRICES, %		2.5	2.5	3.5
AGRICULTURE		-8.0	6.9	0.9
INDUSTRY		1.3	1.1	3.6
SERVICES		4.8	2.6	3.8
PUBLIC SECTOR WAGES, REAL GROWTH, %		-2.98	1.3	7.1
PENSIONS, REAL GROWTH, %		-3.8	0.9	6.8
REMITTANCES, REAL GROWTH, %		2.7	4.7	10
INFLATION (CPI), END OF PERIOD	214.1	246.2	273.5	287.2
<b>REALISTIC SCENARIO 2 – OPTIMISTIC</b>				
INFLATION (CPI), END OF PERIOD	214.1	235.5	261.2	273.5
<b>REALISTIC SCENARIO 3 – PESSIMISTIC</b>				
INFLATION (CPI), END OF PERIOD	214.1	256.8	285.8	300.8

**Source:** \*Ministry of Finance – Revised Fiscal Strategy for 2023, with projections for 2024 and 2025, Public sector wages growth rate calculated based on data until October 2022, Pensions growth rate calculated based on Ministry of Finance data from October 2022, taking into account the rise from November 2022, remittances – calculated based on NBS data until September 2022, SORS database – CPI, October, end of period; \*\*Ministry of Finance - Revised Fiscal Strategy for 2023, with projections for 2024 and 2025, Public sector wages, Pensions and Remittances projections calculated based on planned and announced development by the Government of Serbia

22 Available at: <https://www.mfin.gov.rs/sr/dokumenti2-1/revidirana-fiskalna-strategija-za-2023-godinu-sa-projekcijama-za-2024-i-2025-godinu-1>

## Data

To nowcast the older persons' absolute poverty, we used microdata from the Household Budget Survey (HBS). HBS is an annual survey, collected throughout the entire year. The aim of the survey is to collect data on household income and consumption, that is, data on the basic elements of personal consumption. Also, the survey collects data on certain important indicators relative to standard of living (housing conditions, supply of households with durable goods, etc.), as well as basic data on the demographic, economic and sociological characteristics of households.<sup>23</sup>

Microdata is prepared by the Republic Statistical Office once headline indicators and results are published. Having in mind that HBS research wasn't fully conducted in 2020<sup>24</sup>, for poverty projections microdata 2019 and 2021, HBS survey waves were applied. From these data, we prepared our dataset related to older persons, i.e., people aged 65 and over and their characteristics (such as gender, age, household income, household size, type of settlement, region, etc.).

To prepare for various scenarios used for projections, additional inputs and data have been used, from various international and domestic sources, such as the World Bank (WB), International Monetary Fund (IMF), Statistical Office of the Republic of Serbia (SORS), Ministry of Finance, National Bank of Serbia (NBS), Social Inclusion and the Poverty Reduction Unit.

In addition to HBS data, the following data have been used:

- real GDP growth rate estimates
- estimates of real GDP growth rate by sectors
- estimates of real public sectors' wages growth
- estimates of real pensions' growth
- annual consumer price indices by COICOP (October 2022 and estimates for 2023 and 2024)
- remittances from abroad, estimated real annual change in %, etc.

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<sup>23</sup> Republic Statistical Office, Household Budget Survey – Methodological note, available at: <https://publikacije.stat.gov.rs/G2017/Pdf/G201720108.pdf>

<sup>24</sup> Due to the COVID-19 virus pandemic, the Statistical Office of the Republic of Serbia (SORS) discontinued the conduction of the 'Household Budget Survey' in the field in mid-March 2020. The fieldwork resumed at the beginning of July. As the survey was not carried out continuously throughout the whole year, the data is not available for 2020.

## Impacts of COVID-19 on Older Persons' Poverty

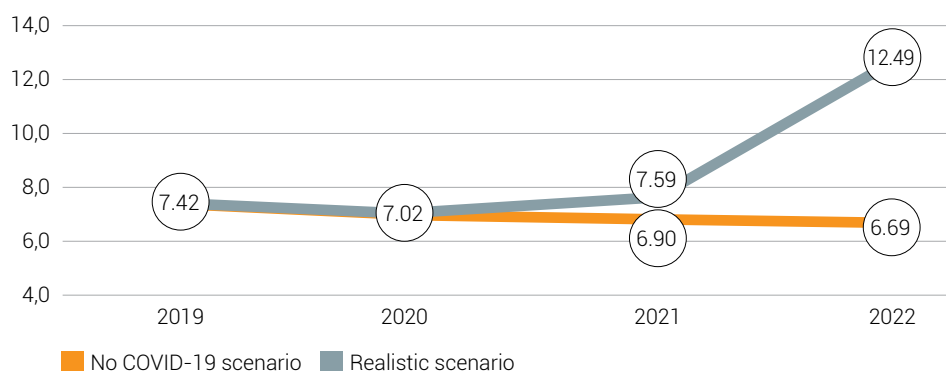
World Bank estimates of the impact of the COVID-19 pandemic suggest that, at least over the shorter term, Serbia has likely seen the smallest impact on consumption poverty among Western Balkan countries, an increase of 0.1 percentage points, compared to 4-5 percentage points for other Western Balkan countries.<sup>25</sup> Our simulation exercise confirms these claims.

As described in the Methodology section, in order to estimate the impact of the COVID-19 pandemic, we have used two scenarios: No COVID-19 and Realistic (Covid-19) Scenarios. The results of both scenarios imply that the absolute poverty rate slightly increased in 2020 (from 8.75% in 2019 to 8.9% in 2020) and remained at this level in 2021 (Annex, Chart A1).<sup>26</sup>

According to both scenarios, older persons' poverty was reduced in 2020. The growing difference between the two scenarios, for older persons' poverty become visible in 2021. While No COVID-19 scenario anticipated the further reduction of poverty, in reality it increased to above the pre-crisis level (7.58%) and continued to rise in 2022. The estimated older persons' poverty rate in 2022 amounted to 12.48%, almost double in comparison to the pre-crisis level.

It is important to stress that rising inflation in 2022 is mainly a consequence of the crisis in Ukraine, which followed the COVID-19 crisis that has yet to finished. Thus, the resulted poverty rate increase in 2022 is a consequence of the combined effects of two crises.

**Chart 3** COVID-19 Impact on Older Persons' Absolute Poverty Rate in the Republic of Serbia



Source: Author's calculations

25 World Bank, 2022, Serbia – Social Protection Situational Analysis

26 Results for the overall population are presented in Annex.

The reduction in GDP growth and in remittances is significant between the two scenarios, pensions and public sector wages have also been reduced, but inflation remained at the expected levels during 2020 and there is no difference in older persons' poverty levels between scenarios. The difference in the assumptions of the two scenarios and the results of simulations lead us to the conclusion that what has made the difference, especially for older persons' poverty, is not the change in income from employment, pensions or remittances, but the unanticipated change in inflation.

These results show that measures taken by the Government of Serbia aimed at reducing the consequences of the COVID-19 pandemic were successful. According to the Fiscal Council, the generous measures of the fiscal policy during the COVID-19 crisis were justified in principle and all European countries followed similar approach. However, policy makers in Serbia were less rational when designing its anti-crisis package. The Government of Serbia provided budget funds not only where it was necessary and economically justified, but to the sectors that were not severely affected by the crisis. The highest amount of irrationality relative to Serbia's anti-crisis measures package was recorded in the framework of financial assistance to the citizens. The Fiscal Council has estimated that a similar economic effect of anti-crisis measures could have been achieved with approximately EUR 2 billion less in funds spent (total anti-crisis spending was EUR 5.4 billion).<sup>27</sup>

## Impacts of Ukraine Crisis on Older Persons' Poverty

The war in Ukraine has enormous consequences not only on the countries directly or indirectly involved, but on the whole world. The geographical position of Ukraine, the amount of food produced in Ukraine and Russia and the dependence of the rest of Europe and the world on food produced in these countries (especially corn and wheat), as well as the European dependence on Russian oil and natural gas have led to rising inflation all across Europe and to the rest of the world. The Republic of Serbia is no exception. The spillover effects have resulted in a huge rise in inflation, unanticipated at the beginning of the year. The annual inflation rate in the Republic of Serbia is 15.1% (price change in November 2022 compared to November 2021), and the monthly inflation rate is 1.0% (consumer prices in November 2022 compared to October 2022).<sup>28</sup>

To estimate the impact of the crisis in Ukraine on poverty in the Republic of Serbia, we used two scenarios: neutral (developed based on data and information available in September 2022) and realistic (developed based on data and information

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27 Republic of Serbia, Fiscal Council, 2022, Anti-crisis budgetary measures during the COVID-19 pandemic: costs, results and lessons, Belgrade

28 Republic Statistical Office database



available in early December 2022).<sup>29</sup> Both scenarios have optimistic (CPI 5% lower than anticipated) and pessimistic (CPI 5% higher than anticipated) variations.

Using the nowcasting method, we have estimated absolute poverty lines based on their value in 2019 (latest official, published data) and the CPI changes. The main difference between the two scenarios resulting in different poverty rates, is the projected CPI in 2023 and 2024. Realistic scenario suggests that the CPI will be 11.1% in 2023 and 5% in 2024.

**Table 8** Poverty Line According to Different Scenarios

	2017	2018	2019	2020	2021E	2022F	2023F	2024F
<b>NEUTRAL SCENARIO</b>								
OPTIMISTIC						14,914	16,247	16,805
NEUTRAL	12,045	12,286	12,495	12,695	13,559	15,592	17,026	17,656
PESSIMISTIC						16,263	17,806	18,507
<b>REALISTIC SCENARIO</b>								
OPTIMISTIC						14,914	16,543	17,322
REALISTIC	12,045	12,286	12,495	12,695	13,559	15,592	17,322	18,188
PESSIMISTIC						16,263	18,102	19,054

**Source:** Author's calculations

**Note:** e – estimates, f – forecasts

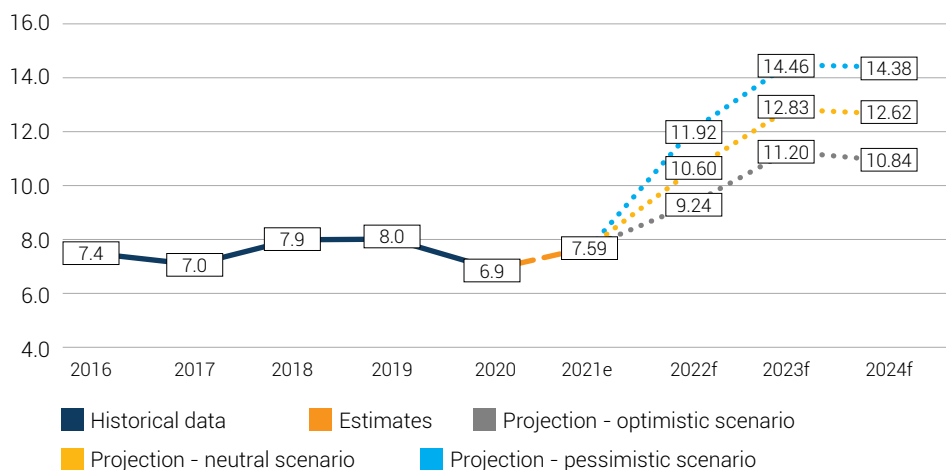
For nowcasting incomes, we applied the household income distribution from 2021 and real sectoral GDP growth rates (agriculture, industry and services), as well as the real growth rates of pensions and public sector wages and have estimated real changes in remittances from abroad.

The Neutral Scenario anticipated higher GDP growth rates in 2022 and 2023 and significantly higher remittances and public sector wages and pensions. Combined with lower inflation in 2023, it resulted in lower poverty estimates compared to the Realistic Scenario, for both overall population (Annex, Chart A2) and older persons.

The rise in older persons' poverty is confirmed in this and over the next few years but the poverty level will remain lower than overall population poverty. According to estimates based on the Neutral Scenario, older persons' poverty will be 10.6% in 2022, rising to 12.83% in 2023 and slightly decreasing in 2024 (12.62%). If the pessimistic scenario comes to pass, poverty of older persons will reach a level almost double what it was in 2016.

<sup>29</sup> For more details on scenarios and their sources, please refer to the Methodology section.

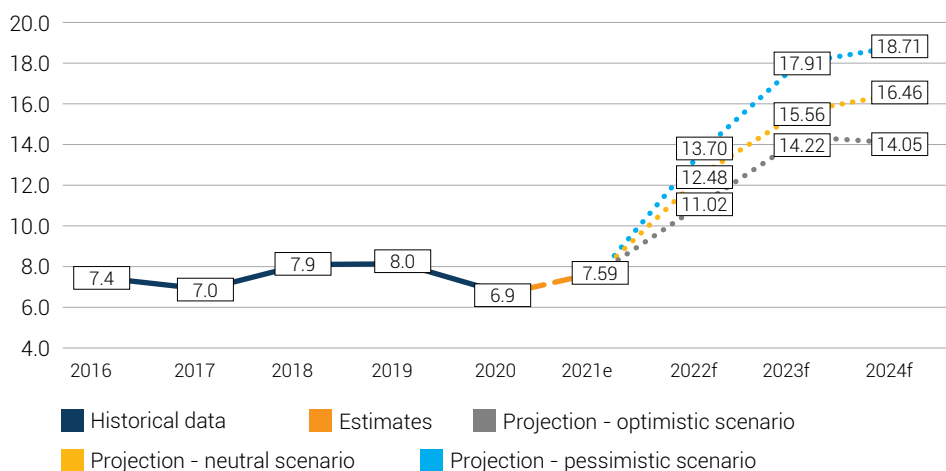
**Chart 4** Absolute Poverty Rate for Older Persons – Neutral Scenario



Source: Author's calculations

According to estimates based on the Realistic Scenario, older persons' poverty will be 12.48% in 2022, rising to 15.56% in 2023 and to 16.46% in 2024. If the optimistic scenario comes to pass, the poverty rate of older persons will be just as high (reaching 14.05% in 2024) and if the CPI follows the pessimistic scenario, the poverty of older persons will reach 18.71%. These are worrying results that must be addressed to urgently by policy makers. According to all scenarios, older persons' poverty levels are below the poverty level of the overall population.

**Chart 5** Absolute Poverty Rate for Older Persons – Realistic Scenario



Source: Author's calculations

Along with the poverty headcount (poverty rate), we have estimated a number of additional poverty indicators to create an older persons' poverty profile for the following years. Results are presented in Table 9 (results for the overall population are presented in Annex, Table A1).

The poverty gap (depth) shows how far off the poor population's consumption/income is from the poverty line. The total deficit (gap) indicates the amount of funds required, assuming perfect targeting, to raise all poor individuals' consumption/income to the level of the poverty line.<sup>30</sup> According to our projections, based on the Realistic Scenario, the older persons' poverty gap will continuously widen from 1.93% in 2021 to 4.17% in 2024. This means that in 2024, the income of poor older persons will be 95.83% of the poverty line, on average.

Poverty severity (poverty gap squared) considers not only the distance from the poverty line, but also inequality among the poor, by placing higher weight on those households that are further away from the poverty line.<sup>31</sup> This indicator will also worsen over the next few years, resulting in greater inequality among poor older persons.

The results of poverty projections for older persons have shown that pensions will remain an important factor in reducing older persons' poverty. Throughout the entire period (2021-2024), the poverty rate of pensioners will remain at a lower level than the overall poverty rate for persons aged 65+.

Regional distribution of older persons' poverty implies that the most vulnerable are older persons from the *Šumadija* and Western Serbia Region, followed by the inhabitants of the Southern and Eastern Region. Older persons in the Belgrade Region are wealthier than the average 65+ population, while older persons in the Vojvodina Region are roughly the average.

As expected, poverty is more widespread among rural populations. By the end of the reference period (2024), almost a quarter of the country's rural older population could experience absolute poverty i.e., may not be able to meet their basic needs.

Throughout the entire period, women will be poorer than men. According to household type, larger households with five, six and more household members will continue to be more vulnerable. It is interesting that households with three members are more exposed to poverty than households with four members.

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30 Social Inclusion and Poverty Reduction Unit website, available at: <https://sociojalnoukljucivanje.gov.rs/en/social-inclusion-in-rs/poverty-statistics/theoretical-concepts-of-measuring-poverty-and-social-exclusion/>

31 Ibid.

**Table 9** Poverty Projections for Older Persons – Main Indicators, Realistic Scenario

	2021	2022E	2023F	2024F
POVERTY LINE, RSD PER MONTH PER EQUIVALENT ADULT	13,559	15,592	17,322	18,189
<b>OVERALL POPULATION</b>				
ABSOLUTE POVERTY RATE, %	8.89	13.65	16.15	17.74
POVERTY DEPTH, %	2.92	4.00	4.96	5.32
POVERTY SEVERITY, %	0.06	0.12	0.19	0.22
<b>OLDER PERSONS – 65+</b>				
ABSOLUTE POVERTY RATE, %	7.58	12.48	15.56	16.46
ABSOLUTE POVERTY RATE OF PENSIONERS, %	5.66	10.44	13.34	13.47
POVERTY DEPTH, %	1.93	3.03	4.02	4.17
POVERTY SEVERITY, %	0.06	0.12	0.19	0.22
<b>PERCENTAGE OF THE POOR, BY REGION</b>				
VOJVODINA	6.81	12.43	16.53	17.45
BELGRADE	1.83	5.61	7.57	7.93
ŠUMADIJA AND WESTERN SERBIA	12.15	17.16	21.02	21.79
SOUTHERN AND EASTERN SERBIA	9.14	14.19	16.13	17.83
<b>PERCENTAGE OF THE POOR, BY SETTLEMENT TYPE</b>				
URBAN AREA	4.42	8.50	11.23	11.77
OTHER AREAS	12.08	18.13	21.69	23.11
<b>PROPORTION OF THE POOR, BY GENDER</b>				
MALE	6.72	11.97	15.17	16.40
FEMALE	8.74	13.17	16.08	16.53
<b>PERCENTAGE OF THE POOR, BY HOUSEHOLD TYPE</b>				
SINGLE PERSON	4.08	8.38	11.21	11.30
TWO-PERSON	4.77	10.24	13.49	13.87
THREE-PERSON	13.34	16.76	19.05	19.60
FOUR-PERSON	7.48	13.51	18.43	21.11
FIVE-PERSON	11.98	18.85	21.19	24.95
SIX-PERSON AND LARGER	16.35	19.60	22.74	24.03

Source: Author's calculations

Note: e – estimates based on estimated growth rates and CPI considering realised growth rates and CPI in the period January – October/November 2022.

f – forecasts based on growth rates and CPI forecasted by the Ministry of Finance, published in the Revised Fiscal Strategy for the 2023, with projections for 2024 and 2025.<sup>32</sup>

32 Available at: <https://www.mfin.gov.rs/sr/dokumenti2-1/revidirana-fiskalna-strategija-za-2023-godinu-sa-projekcijama-za-2024-i-2025-godinu-1>

## Older Persons' Poverty Profile

Poverty projection results show that the most vulnerable older persons include:

- Persons living in multi-person households (five, six or more household members),
- Persons living in non-urban areas,
- Females,
- Persons living in the *Šumadija* and Western Serbia Region and the Region of Southern and Eastern Serbia.

Key poverty risk factors for older persons are:

- Household size (five-person and larger households),
- Place of permanent residence (non-urban areas, *Šumadija* and Western Serbia),
- Gender and
- Pension availability.

## CONCLUSIONS AND RECOMMENDATIONS

Since the beginning of the implementation of the UN 2030 Agenda in the Republic of Serbia, significant progress has been made towards achieving SDG1. The relative poverty rate decreased from 25.9% in 2016 to 21.1% in 2021, while the absolute poverty rate decreased from 7.3% (2016) to 6.9% (2020).

In terms of older persons (65+), the opposite tendency and a partial digression from the goal is noted. Namely, the relative poverty rate of older persons in the observed period increased from 20.5% (2016) to 22.7% (2021).

The results of the poverty projections we have made are in line with the official results and World Bank estimates and indicate that the crisis caused by the COVID-19 pandemic did not result in the increase of poverty in the Republic of Serbia, at least not in the short term (i.e., in 2020).

The results of simulations indicate that the absolute poverty rate of the entire population remained almost unchanged for the duration of the COVID-19 pandemic (2020), while it decreased for older persons (from 7.42% in 2019 to 7.02% in 2020). This is a consequence of timely and widespread anti-Covid measures undertaken by the Government of the Republic of Serbia in 2020, but also due to the fact that inflationary pressures were not high in 2020.

The consequences of COVID-19 become evident in 2021, when measures quiet down and inflationary pressures increase. In 2021, the absolute poverty rate of both the entire population and those over the age of 65 increased. The results of the microsimulations indicate a significant divergence between the two scenarios (the scenario without COVID-19 and the Realistic Scenario, including Covid-19) in 2021 and 2022. While the No COVID-19 Scenario predicts a further reduction in poverty rates, the Realistic Scenario indicates an increase in the absolute poverty rate in 2021 and especially in 2022.

The significantly quicker increase in absolute poverty in 2022 is a direct consequence of the price increase caused by the crisis in Ukraine. The results of simulations indicate that the absolute poverty rate in 2022 increased to 13.65% for the entire population (compared to 6.9% in 2020). At the same time, older persons poverty has also increased to 12.48% in 2022. Projections for the following years, suggest that the increasing trend will be continued. According to the Realistic Scenario, the absolute poverty rate of older persons will reach 16.46% in 2024.

The Government of the Republic of Serbia succeeded in neutralising the impact of the crisis caused by the COVID-19 pandemic in the short term, but the consequences were still visible the next year. The already increased inflationary pressures were only compounded by pressures which spilled over from abroad, caused by the Ukrainian crisis, resulting in a significant increase in poverty in 2022. This

will affect poverty trends over the next couple of years. Bearing in mind that the rise in prices affects the poorest strata, in particular, a growth in the poverty rate was expected.

The older persons' poverty profile suggests that women are more vulnerable, living in multi-persons households and in rural areas in the *Šumadija* and Western Serbia Region.

## Recommendations

The rise in poverty in the coming years is inevitable. It is important to protect the most vulnerable categories of the population in terms of poverty risks. The only way to do so is to increase (in real terms) spending for poverty targeted social assistance. Simulations have shown that the current practice of adjusting this kind of assistance (such as FSA and CA) by the CPI from the previous period is not sufficient to prevent the expected increase in absolute poverty levels.

Lessons learned from the COVID-19 crisis are that the Social Protection System of the Republic of Serbia is incapable of promptly reacting to external shocks. The undertaken measures have given expected results but have not been implemented though the Social Protection System, thus have not been targeted and could be less expensive.

To prepare the Social Protection System for eventual future shocks, it would be good to amend the Law on Social Protection and the Law on Financial Assistance to Families with Children to ensure the expansion of the relevant schemes in times of crisis, namely:

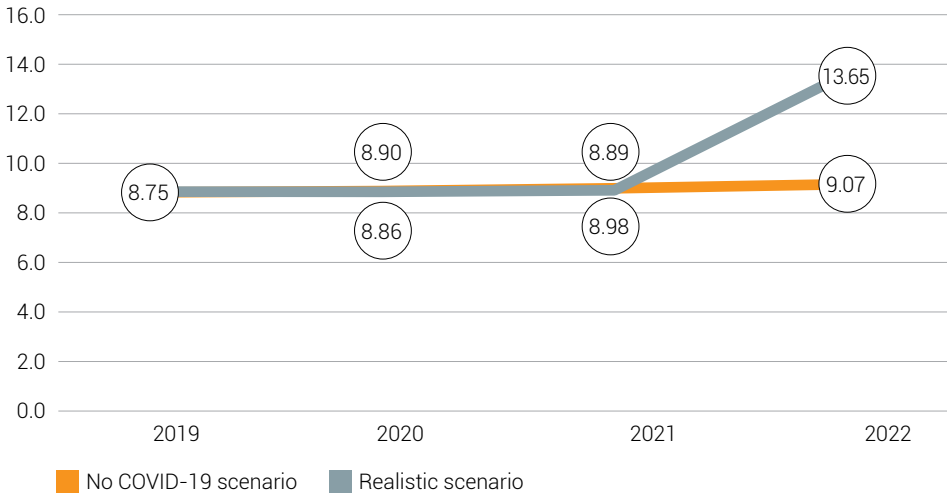
- automatic renewal of entitlements for existing beneficiaries, with accurately defined procedures;
- automatic increase of benefit amounts awarded to existing Financial Social Assistance (FSA) and Child Allowance (CA) recipients;
- extended coverage by FSA and/or CA to include new recipients during crisis periods without an additional means test (households with the following statuses: vulnerable energy customers, FSA or CA applicants, multi-year recipients who became ineligible, families with children living in substandard Roma settlements (area-based targeting) through inclusion in the CA scheme without a means test, etc).<sup>33</sup>

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33 Matković, G. (2020) Social Safety Nets in Times of the COVID-19 Crisis – Serbia. Social Inclusion and Poverty Reduction Unit

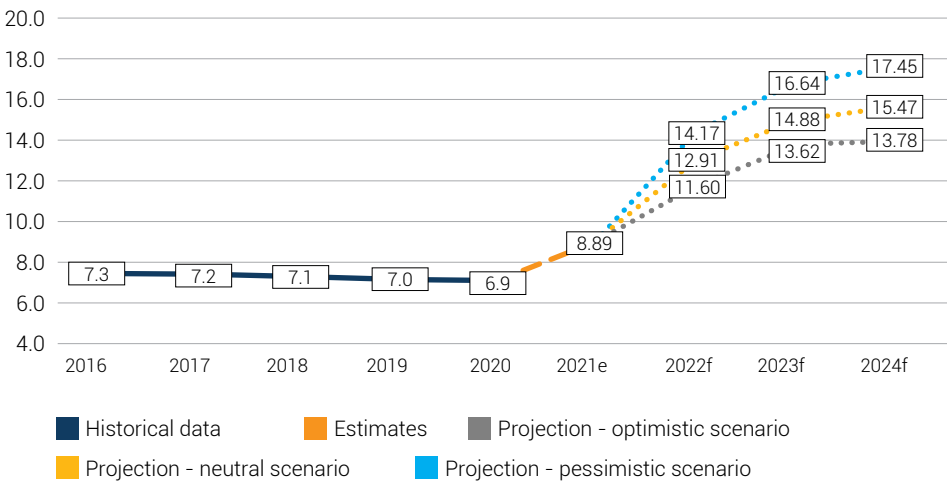
# ANNEX

**Chart A1** Absolute Poverty Rate – No COVID-19 Scenario, Overall Population



Source: Author's calculations

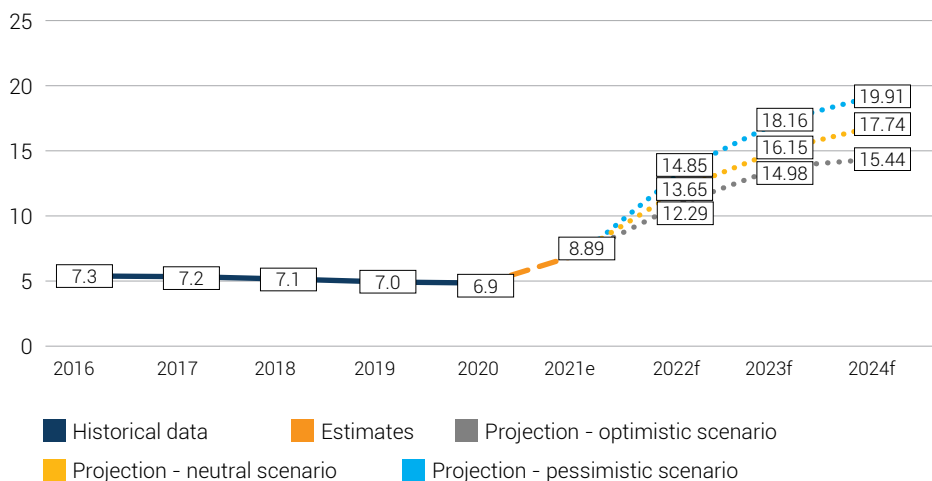
**Chart A2** Absolute Poverty Rate – Neutral Scenario, Overall Population



Source: Author's calculations



**Chart A3** Absolute Poverty Rate – Realistic Scenario, Overall Population



Source: Author's calculation

**Table A1** Poverty Projections for the Overall Population (Main Indicators)  
– Realistic Scenario

	2021	2022E	2023F	2024F
POVERTY LINE, RSD PER MONTH PER EQUIVALENT ADULT	13,559	15,592	17,322	18,189
ABSOLUTE POVERTY RATE, %	8.89	13.65	16.15	17.74
POVERTY DEPTH, %	2.92	4.00	4.96	5.32
POVERTY SEVERITY, %	0.06	0.12	0.19	0.22
<b>PERCENTAGE OF THE POOR, BY REGIONS</b>				
VOJVODINA	6.83	11.72	14.19	16.27
BELGRADE	3.06	6.03	7.50	8.20
ŠUMADIJA AND WESTERN SERBIA	15.02	21.43	25.13	26.52
SOUTHERN AND EASTERN SERBIA	9.56	13.96	16.05	18.23
<b>PERCENTAGE OF THE POOR, BY SETTLEMENT TYPE</b>				
URBAN AREA	5.98	9.73	11.99	13.53
OTHER AREAS	13.11	19.33	22.20	23.85

	2021	2022E	2023F	2024F
<b>PROPORTION OF THE POOR, BY GENDER</b>				
MALE	8.50	13.22	15.88	17.64
FEMALE	9.30	14.10	16.44	17.83
<b>PERCENTAGE OF THE POOR, BY HOUSEHOLD TYPE</b>				
SINGLE PERSON	5.14	8.56	11.01	11.07
TWO-PERSON	6.27	10.98	13.62	14.47
THREE-PERSON	8.65	12.01	14.84	15.57
FOUR-PERSON	6.64	12.59	15.34	17.21
FIVE-PERSON	11.05	16.84	18.43	21.90
SIX-PERSON AND LARGER	15.87	20.49	23.20	25.31

**Source:** Author's calculations

Note: e – estimates based on estimated growth rates and CPI considering realised growth rates and CPI in the period January – October/November 2022.

f – forecasts based on growth rates and CPI forecasted by the Ministry of Finance, published in the Revised Fiscal Strategy for the 2023, with the projections for 2024 and 2025.<sup>34</sup>

<sup>34</sup> Available at: <https://www.mfin.gov.rs/sr/dokumenti2-1/revidirana-fiskalna-strategija-za-2023-godinu-sa-projekcijama-za-2024-i-2025-godinu-1>

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