HUMAN DEVELOPMENT PAPER

HUMAN DEVELOPMENT PAPER ON INCOME INEQUALITY IN THE REPUBLIC OF SERBIA

Reduced inequality as part of the SDG agenda

August 2018

FOREWORD

"People are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives. This may appear to be a simple truth. But it is often forgotten in the immediate concern with the accumulation of commodities and financial wealth." (UNDP, Human Development Report, 1990).

When the first Human Development Report was published in 1990, the UNDP firmly set out the concepts of dignity and a decent life as the essential to a broader meaning of human development. Ever since, the organization has been publishing reports on global, regional and national levels addressing the most pressing development challenges. In recent years, UNDP initiated a new product - Human Development Papers – that focus on a selected development issue with the aim to contribute to policy dialogue and policy-making processes.

It is my pleasure to introduce the first Human Development Paper for Serbia, focusing on inequality. The Agenda 2030 for Sustainable Development places a special emphasis on eradicating poverty worldwide while reducing inequality and exclusion, promoting peaceful, just and inclusive societies and leaving no one behind. The achievement of Sustainable Development Goals requires new approaches to how we understand and address inter-related challenges of poverty, inequality and exclusion. The paper analyses and sets a national baseline for SDG10 leading indicator 10.1.1 - Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population and the related target 10.1. – By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average.

Apart from analyzing the position of the bottom 40% of the population, as particularly relevant for sustainable development and the underlying principle of the Agenda 2030 to "leave no one behind", the Paper also focuses on the bottom 20%, which is of significant policy relevance in Serbia, given that they are usually the target group of the welfare state measures. We hope that the findings and recommendations presented in this paper will support the Government of the Republic of Serbia in advancing the efforts to reduce inequalities and maximize the economic growth potential of the country.

Karla Hershey
UNDP Resident Representative

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ACRONYMS

COICOP	The Classification of Individual Consumption by Purpose
CPI	Consumer Price Index
CSP	Center for Social Policy
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ERP	Economic Reform Program
ESRP	Employment and Social Reform Program
EU	European Union
Eurostat	The Statistical Office of the European Union
FSA	Financial Social Assistance
GDP	Gross Domestic Product
GES	Gender Equality Strategy
GII	Gender Inequality Index
GNI	Gross National Income
HBS	Household Budget Survey
HDI	Human Development Index
HDP	Human Development Paper
IHDI	Inequality-adjusted Human Development Index
ILO	International Labour Organization
IMF	International Monetary Fund
IT	Information Technology
LFS	Labour force Survey
MICS	Multiple Indicator Cluster Survey
MoLEVSA	Ministry of Labour, Employment, Veteran and Social Affairs of the Republic of Serbia
OECD	The Organization for Economic Co-operation and Development
PPS	Purchasing Power Standard
RSD	Republic of Serbia Dinar
RSO	Republic Statistical Office
RZS	Republički zavod za statistiku / Statistical Office of the Republic of Serbia
SDG	Sustainable Development Goal
SEDS	Strategy for Education development in Serbia
SILC	Survey on Income and Living Conditions
SORS	Statistical Office of the Republic of Serbia
SSIR	Strategy for the Social Inclusion of Roma
TDHI	Total Disposable Household Income
TDI	Total Disposable Income
UBI	Universal Basic Income
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNICEF	United Nations International Children's Emergency Fund
USD	United States Dollar
WB	World Bank

CONTENTS

EXECUTIVE SUMMARY

Rising and persistent inequality in a time of plenty is the defining paradox of our times. Diverging incomes, social status and political power are leaving humanity divided and undermining the sustainable and human development of nations. In rich and poor countries alike, discontent is increasingly defining political contests, driving protests and polarizing societies and political systems. As a result, social cohesion and legitimacy of governments are being undermined, making it harder to agree on solutions, fix problems, maintain peaceful communities and generate sustainable human development.

The most recent UNDP Human Development Report (HDR, 2016) found that inequalities had reduced global human development progress by 22 percent in 2015. Thus, without inequalities in health, education and income, the world would have achieved 22 percent more progress along these dimensions. Low human development countries, on average, have the highest levels of loss in HDI due to inequality (32 percent) followed by medium human development countries (26 percent). This trend and the global percentage loss due to inequalities remained more or less steady from 2010 to 2015. Serbia loses more than 10 percent in human development due to inequality, according to HDR (2016).

This Human Development Paper (HDP) deals with inequalities in income and income growth in the Republic of Serbia as a part of the SDG agenda. A special focus is on the SDG 10.1.1 income growth indicator "Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population".

Introductory Chapter 1 of HDP presents concepts and definitions of human development, inequality and SDGs as well as measurement of these concepts. Selected measures of inequality are among the most commonly used measures in the EU—particularly the Gini coefficient and the S80/S20 share ratio, in addition to the SDG 10.1.1 indicator.

Chapter 2 presents an overview of Global HDR (2016) findings on human developement for **Serbia belonging to the group of countries with high human development.** The human development index (HDI) rank of Serbia in 2015 was 66 out of 188 countries, with the HDI value of 0.776. The average HDI value of all 28 European Union (EU) countries was 0.874 in 2015, which was nearly 0.1 point higher than Serbia's HD Index. **The inequality-adjusted HDI value in Serbia** was 0.689 in 2015, ranking Serbia three places under its overall HDI rank. The coefficient of human inequality amounted to 11.1% with inequality being highest along the HDI's income dimension (17.4%) and lowest in terms of life expectancy (7.9%).

The average IHDI within the EU28 is almost 0.8, which is more than 0.1 point higher than Serbia's IHDI. Comparison of values of HDI between Serbia and the Western Balkans region[1] shows that Serbia's both HDI and IHDI almost coincide with average indices of the region (0,779 and 0,685 respectively). The Gender Inequality Index (GII) value in Serbia, in 2015, was 0.185 which ranked Serbia 40th out of 159 countries by GII rank. An analysis of GII values across European Union countries and Serbia show that Serbia's GII is 50% higher than the EU average. Serbia's GII is also higher than the Western Balkans regional average, the second largest after Albanian GII.

[1] Six countries are included: Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro and Serbia.

Chapter 3 explores the status of income inequality in Serbia using and comparing the results from two surveys—SILC (Survey on Income and Living Conditions) and HBS (Household Budget Survey). I**ncome inequality based on the SILC data is very high** judging by European standards. This is unequivocally confirmed by income inequality indicators based on the SILC (2016) data. Serbia's Gini coefficient (38.6) and the ratio between the disposable income of the wealthiest and the poorest quintiles (9.7) are significantly higher than the EU averages (30.8 and 5.2 respectively) and higher than in any EU country, including those in which the highest values of these indicators were recorded. Inequality in Serbia has not changed significantly since 2012, to which the first SILC (2013) survey data in Serbia pertain.

Income inequality in Serbia in 2015 according to the HBS data is not so high. The Gini coefficient amounts to 30.4 and is lower by one fifth than the amount obtained based on the SILC data (by 8 points), and the quintile S80/S20 ratio is half as high (5 compared to 9.7). According to the HBS database, income inequality in Serbia has even fallen slightly compared to the data from ten years ago.

Trends in the SDG indicator 10.1.1 also differ depending on the data source (SILC or HBS) and the measure being used (income or consumption). According to the SILC, living standards in Serbia are falling, especially for the poorest. The SDG 10.1.1 indicator based on the SILC data shows that in the 2012-2015 period the real per capita income of the poorest 40% fell by -2%, while the real income of the overall population fell by -1%. Although this indicator shows slower progress of the poorest in a considerable number of countries, the only EU countries in which the reduction in living standards of the poorest 40% compared to the overall population was greater than in Serbia were Greece and Cyprus. Conversely, living standards based on the HBS income data for the period 2013-2016 grew by virtually the same rate for the poorest 40% as for the overall population (approximately 2.6%). The SDG 10.1.1 trends measured by HBS per-capita consumption data also indicate that the living standard in the observed period grew faster for the poorest 40% (3.7%) than for the overall population (2.9%).

Such differences according to these two data sources are uncommon in EU countries. A closer look shows that trends according to the HBS and SILC data in Serbia do not differ in higher deciles, but only in the first two. The first income decile according to the HBS is as up to 3.3 times higher than in the SILC survey. The higher incomes among the poorest recorded in the HBS are largely due to different treatment of in-kind income and negative values that most commonly appear for income from agriculture and unregistered self-employment, which are in HBS changed to zero. In addition, the HBS gathers income data based on diaries kept by survey respondents during three-month periods, while the SILC survey requires respondents to recall and estimate their income during the previous year. Bearing in mind that the poorest in Serbia often generate intermittent and irregular (and informal) incomes, it is likely that the shorter time horizon increases the reliability of the HBS data.

The SILC data for Serbia first and foremost report very low income of the poorest, due in part to the above mentioned methodological specificities. In 2015 the average income of the first decile (i.e. 700,000 individuals with the lowest income in Serbia), amounted to a total of RSD 2,500 (~USD 23) a month, per adult equivalent. This amount does not cover even the most basic needs and cannot explain the significantly higher consumption by the poorest in Serbia. The first decile's income as a share of total disposable income, lags far behind in comparison to the shares reported in EU countries conducting the SILC survey.

Such high levels of inequality can be explained in part by methodological specificities of the SILC survey in Serbia, particularly in the areas in which, for different reasons, there is no standardised procedure or methodological consistency among the EU countries. These include: i) treatment of negative income and outliers (unlike the EU countries where the practice differs, in Serbia income outliers are not eliminated and there is no intervention in case of negative income, which has a significant impact on the disposable income for the first and other poor deciles; ii) treatment of values of goods produced for own consumption especially with regard to the disposable income of the self-employed in agriculture depending on this component, with this category of the self-employed being found in great numbers among the poorest; and iii) the underestimation of the number of social assistance and child allowance beneficiaries in the SILC, which is not the case in a considerable number of EU countries which obtain these data from administrative sources.

The cause of such high reported SILC income inequality lies within the unfavourable position of the poor population on the labour market. A large share of poor persons lives in households with low work intensity, while a high proportion of those who are working are in non-standard forms of employment (i.e., part-time, temporary, and self-employment arrangements), mostly in the informal sector. In addition, the low coverage of social transfers (particularly financial social assistance and child allowance benefits), and the very low level of progressivity of Serbian personal tax system explain the relatively modest (by international standards) redistributive role of direct taxes and social transfers.

Chapter 4 provides an overview of Serbia's strategic socio-economic policy framework and common measures to reduce inequality. **Challenges related to inequality have not been recognized as major policy issues.** Consequently, the strategic framework has not defined specific policies dealing with income or consumption inequality. However, inequalities that correspond to affiliation with a specific social group and identity are more often recognized in the strategic framework, and policies for these specific groups have been developed. The issue of gender inequality is covered in the most comprehensive way through the strategic framework in Serbia. Government's Employment and Social Reform Programme (ESRP) is the only policy document which explicitly discusses significant differences between income and consumption inequality indicators. The ESRP stresses that this issue has to be additionally addressed through further in-depth research. This HDP provides a contribution to the Government of Serbia's efforts envisaged under the ESRP.

An overview of common inequality reduction measures and policies shows that the most significant redistributive effects are realised through taxes and transfers. It also shows that the usual response to an increase in income inequality in the majority of countries involves increasing coverage of the poor by social welfare schemes, in conjunction with labour market policies and policies in the area of education and healthcare. Inequality reduction is also affected by other segments of the welfare state that support equal opportunities, especially in the long run.

In Serbia, policies affecting employment are of special importance for reducing inequality. Decisive roles are played by policies to accelerate economic development and boost employment and wage growth.

More progressive income taxation is among the standard proposals within the set of inequality reduction measures. In Serbia, the schedular personal income tax system[2] does not ensure any substantial degree of progressivity. In addition to the redistributive effects of the tax system, its impact on economic growth and the labour market is also very important for reducing inequality. Another topical issue is the design of certain taxes that affect the more affluent population to a greater extent, such as capital, inheritance and property taxes. To the extent that increasing tax revenues is important for financing welfare state expenditure, other tax reforms are also important, as is tax administration reform.

In developed countries, social transfers reduce inequality to a considerably greater extent than taxes do. Although many **social transfers** reduce inequality, they are granted with different objectives, with transfers geared towards poverty reduction having the highest redistributive capacity in Serbia as well. In Serbia two transfers are targeted at the poor: financial social assistance (FSA) and child allowance. Total expenditure on these two transfers is about 0.6% of GDP, significantly below the EU (28) average.

Chapter 5 details policy recommendations. The above considerations highlight the need for a comprehensive assessment of possible taxation system reforms. Agrarian policy is also of particular importance in Serbia, specifically where it concerns small, non-commercial family farms, given the share of agricultural income in the total income of the poorest population.

In the context of the research carried out and the findings pointing to the extremely low-income levels of the poorest deciles, **the detailed recommendations below are primarily focused on modifications in the benefits targeting the poor.**

Proposals for improving the Financial Social Assistance (FSA) scheme in the short term entail increasing the weight assigned to children over the age of 14 from 0.3 to 0.5, in accordance with the modified OECD equivalence scale; increasing the weight assigned to children who simultaneously receive FSA and] care allowance to 1 (equal to the head of the household); and introduction of "social pensions" for the elderly in need as a dedicated «module» under the FSA. Regarding gradual withdrawal of social assistance in the short term, continuing beneficiaries' eligibility without a means test for a year after becoming employed should be considered in the form of benefits such as child allowance, the status of an energy-protected buyer, free textbooks, etc.

Furthermore, there is a need to review the treatment of cadastral income data as an eligibility criterion for entitlements, as these data were computed several decades ago and have not been changed or revalued since then. Likewise, birth grants for higher order births should be taken into account when estimating income for determining FSA eligibility. In the medium term, proposals for improving the FSA scheme include gradually raising the FSA amount/threshold to the absolute poverty line in order to increase coverage and adequacy; reviewing the effectiveness of a gradual removal of eligibility for this assistance (upon the securing of employment), if FSA benefits paid out approach the minimum wage; revising asset ownership criteria; and analysing experiences with the activation of social welfare beneficiaries, with an eye towards revisiting the design of this segment of the scheme.

[2] A schedular income tax is one in which separate taxes are imposed on different categories of income. In Serbia, there is a minor component of global annual taxation for those earning above 3 average wage calculation base.

Proposals for improving the child allowance scheme include specifying the threshold, benefit amounts, and their indexation by law rather than by Government decree; raising benefits to a level that would cover at least half of the costs attributed to children in families whose consumption is at the poverty line; taking into account income from birth grants for higher order births when estimating income for determining eligibility for this allowance; exploring the possibility of granting a universal entitlement to the child allowance to primary school-age children living in substandard Roma settlements (area-based targeting); reviewing the asset ownership criteria and the treatment of agricultural income and further increasing the adequacy of the child allowance in the medium term.

In the area of education, increasing the quality of education, consideration of introducing mandatory high-school education, increasing the coverage of young children by preschool education, introducing measures for school dropout prevention, as well as scholarship scheme expansion, are of particular importance not only for higher but also for secondary education.

In the area of healthcare, for the purpose of reducing inequality, first and foremost there is a need to consider introducing universal healthcare, additional benefits in terms of lower co-payment of healthcare costs as well as providing medication for the poorest.

Reducing discrimination in all spheres should also, generally speaking, contribute to a more balanced use of social services and a reduction in inequality.

A specific set of recommendations refers to **better alignment of the national development and strategic policy framework with the SDGs** on inequalities and especially SDG target 10.1, which is in the focus of this document.

A number of outstanding issues also concern statistical surveys. The key ones are the treatment of negative income and data outliers, and the modality of assessing agricultural income and production for own consumption in the SILC. The shift to using registers as income data sources is another possibility to be considered, in addition to other elements important for improving the quality of both the Survey on Income and Living Conditions and the Household Budget Survey.

In the context of localised SDG measures, Serbia's national SDG 10.1 target and SDG indicator 10.1.1 should also enable the monitoring of income and expenditure growth of bottom 20% of the distribution, not only of the bottom 40%.

Finally, although this document is focused on income inequality it has to be acknowledged that inequality is a multidimensional phenomenon interlinked with other dimensions of sustainable human development (social, environmental, human rights, etc.) and that it has to be accessed within the broader "leaving no one behind" theme of the SDGs and the 2030 Agenda for Sustainable Development.

INTRODUCTION

On Human Development Paper for Serbia and keeping the Agenda 2030 promise

The Human Development Paper (HDP) for Serbia in 2018 focuses on the SDG consumption and income inequality targets. Ending extreme poverty by 2030 and boosting the bottom 40 percent of populations in every country have been globally recognized through SDGs. Leaving no one behind is the key feature of the 2030 Agenda. Leaving no one behind means that the goals and targets set out by the 2030 Agenda should be met for everyone, including those who are the poorest, most vulnerable, and furthest behind. The 2030 Agenda's commitment to leave no one behind implies a new approach to how we understand and act to end extreme poverty (in all its forms), reduce inequalities, and address discriminatory behavior (ODI, 2017).

Agenda 2030 considers "rising inequalities within and among countries", "enormous disparities of opportunity, wealth and power" and "gender inequality" to be "immense global challenges"[3] (para 14). It identifies inequality as a factor that can "give rise to violence, insecurity and injustice" (para. 35) and declares "combating inequality within and among countries" necessary to eradicate poverty, preserve the planet, foster economic growth and social inclusion (para. 13).

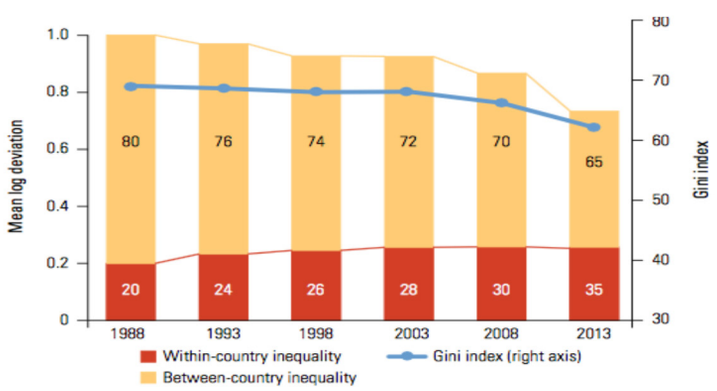

Figure 0-1 Global inequality, 1988-2013[4]
Source: World Bank Group (2016)

Between the early 1990s and the late 2000s, income inequality within countries rose on average in all regions of the developing world (World Bank Group 2016).

This HDP analyses the position of the bottom 40% of the population (poorest population) since SDG 10 recognizes bottom 40% as a target population that is particularly relevant for sustainable development, in keeping with Agenda 2030's "leave no one behind" principle. However, the additional focus of the HDP in Serbia is on the bottom 20% of the population, which can be seen as a national specific indicator and will be covered through the HDP because of its high policy relevance.

[3] Transforming our world: the 2030 Agenda for Sustainable Development, UN Doc A/RES/701/ (21 October 2015)
[2] Note: For each country, income or consumption per capita is obtained from household surveys and expressed in 2011 PPP exchange rates. Each country distribution is represented by 10 decile groups. The blue line shows the level of the global Gini index. The height of the bars indicates the level of global inequality as measured by GE(0) (the mean log deviation). In contrast to the Gini, GE(0) is a bottom-sensitive inequality measure that can be decomposed into within- and between-country components. The red bars indicate the level of population-weighted inequality within countries. The yellow bars show the level of inequality between countries. The numbers in the bars refer to the relative contributions (in %) of these two sources to total global inequality.

Production of the HDP with a focus on the inequality issues is a result of the agreed SDGs in the area on inequality (SDG 10), and more precisely leading Indicator 10.1.1. – Growth rates of household expenditure or income per capita among the bottom 40 percent of the population and the total population and related Target 10.1. – By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average. The HDP for Serbia focuses on the SDG consumption and income inequality targets adopted by the UN and will not necessarily cover other aspects of the SDG 10, such as discrimination issues, global financial markets and institutions, voting rights, migration policies nor tariff lines for the least developed countries.

In addition to that, the HDP also takes into consideration other measurements which might explain specific issues that can relate to the issue of inequality, such as Human Development Index and Gender Inequality Index. Human Development Index shows average human development for the country as a whole and is often used in assessing human development globally. However, HDI does not reflect the well-being of a vast portion of the population, so this HDP assesses the level of inequality – adjusted HDI value in Serbia. Gender inequality remains a major barrier to human development. This HDP assesses the level of the Gender Inequality Index (GII) in order to better expose differences in the distribution of achievements between women and men.

Objectives and Purposes

In the last few years, Serbia has put economic development and growth in the centre of its development agenda. This has been confirmed with the relevant strategic framework, such as **Economic Reform Program (ERP)** and the **Employment and Social Reform Program (ESRP)**. In 2015, the Government undertook significant fiscal consolidation measures aiming to put public finances under control and reach sustainable economic growth. This has led to consolidation of the economic growth and GDP has increased in the last few years, with even more prospects in the years to come, according to the ERP.

However, it is important to ensure that economic growth in Serbia works for the poorest population. This is imperative from the perspective of implementation of the SDGs, but also from the perspective of maximizing growth potential for the society as a whole. Namely, **according to the IMF study** an inverse relationship exists between the income share accruing to the rich (top 20 percent) and economic growth.

High inequalities are associated with high financial cost. They affect economic growth and generate social and political burdens and barriers. Inequality raises inefficiency, because it prevents people from making the best use of their skills or realizing their entrepreneurial ideas. "This may negatively affect economic growth in the long term and trap a country on a path of increasing income and wealth inequality" (EBRD, 2017:45).

The main objective of the HDP is to provide a comprehensive overview of the SDG income and consumption inequality indicators for the Republic of Serbia, as well as to present specific aspects of inequality, enabling more effective implementation of the SDG agenda in the Republic of Serbia. The purpose of the HDP is to support efforts in the Republic of Serbia on effective targeting of state welfare measures towards the greatest needs of the population, focusing on the issues of inequality.

The specific objective is to analyse the position of the bottom 40% of the Serbian population and also compare income and consumption growth of the bottom 40% with the overall income/consumption growth in the Republic of Serbia.

More precisely, the HDP focuses on the structure of the bottom 40% and bottom 20% of the population (age, family structure, residence, education, etc.), using the existing and available national statistics on these issues. More specifically the HDP looks into the bottom 20% of the population. This has significant policy relevance for Serbia, since the bottom 20% of the population is usually targeted with the welfare state measures.

The HDP for Serbia presents the initial efforts in defining national baseline for this key SDG indicator on inequality, which will enable Serbia to monitor the progress in relation to the SDG 10. Focusing the HDP on the inequality issues is closely linked to the UNDP Regional Human Development Paper (2016c) "**Progress at Risk: Inequalities and Human Development in Eastern Europe, Turkey, and Central Asia**".

1. CONCEPTS, DEFINITIONS AND MEASUREMENT

Human Development, Inequality and SDGs

From the advent of the human development paradigm which was first articulated in the 1990 Human Development Report, the language, examples, and policy recommendations have advanced but the focus has remained the same: focusing on **people's lives, freedoms and capabilities**. People are the beneficiaries of development but are also the agents who drive and improve their own lives. Resources, incomes, institutions, and political or social guarantees are all vitally important policy goals; ultimately, success must be framed in terms of the lives people lead, and the capabilities they possess.

The human development paradigm emphasizes two simultaneous processes: the formation of human capabilities and the ways people use them for functioning in society and for realizing choices they have in all aspects of their lives. Therefore, it is not only a destination, a goal for social and political processes, but a road to get there as well. It refers to the processes and the outcomes of development as the expansion of people's choices, capabilities and freedoms.

Sustainable human development is about giving people the capability to plan ahead, determine their own path, avoid risks, influence what is important to them and overcome adversity. People's capabilities depend on how they perceive their status and role in society; their perception of the chances to get ahead; their sense of security and personal safety; access to clean water, nutritious food, decent work; quality of health, education, energy, sanitation and other essential services.

This concept is traditionally measured by Human Development Index (HDI) – a summary measure consisting of three HDI dimensions: long and healthy life, access to knowledge and a decent standard of living. Life expectancy at birth reflects the ability to lead a long and healthy life. The ability to acquire knowledge consists of two indicators – mean years of schooling and expected years of schooling. "Gross national income (GNI) per capita reflects the ability to achieve a decent standard of living" (UNDP, 2016b)[5]. However, although HDI is "readily comprehensible, attractive, and popular" it is completely insensitive to inequality among people. "Ethically, increasing inequality is detrimental to the human development of a region" (Seth, 2009:3).

The Inequality–Adjusted Human Development Index quantifies the effects of inequality on human development, measured in terms of the HDI. The IHDI looks beyond the average achievements of a country in life expectancy at birth, education and income to show how these achievements are distributed among its residents. More precisely, an IHDI value could be interpreted as the achieved level of human development when inequality is taken into account[6].

The relative difference between IHDI and HDI values is the loss due to inequality in distribution of the HDI within the country[7]. Moreover, the IHDI accounts for inequalities in HDI dimensions by "discounting" each dimension's average value according to its level of inequality. From this follows that the IHDI equals the HDI when there is no inequality among the population, but as inequality rises the IHDI falls below the value of HDI[8]. According to the Human Development Report 2016, inequality in education contributes most to overall inequality, followed by inequality in income and inequality in life expectancy.

Gender Inequality Index (GII) presents a composite measure of gender inequality via three dimensions: reproductive health, empowerment and the labour market. All three dimensions have their own indicators measuring the level of achievements in these dimensions. Reproductive health is measured by two indicators: the maternal mortality ratio and the adolescent birth rate. Empowerment is measured by the share of parliamentary seats held by women and the shares of population with at least some secondary education by gender, and labour market is measured by participation in the labour force by gender.

Gender Inequality Index reflects gender-based disadvantages, which are implicitly huge obstacles for progress in human development. It shows the loss in human development due to inequality between female and male achievements in these dimensions. GII value can be minimum 0, which presents a situation of perfect gender equality, and maximum 1, where one gender fares as poorly as possible in all measured dimensions.

The SDGs take aim at deprivations and disparities across the multiple dimensions of people's lives, income and non-income, including health, nutrition, natural resources, education, etc. **Two of seventeen SDG Goals are dedicated to curbing inequalities**. One aims to reduce inequality within and among countries (Goal 10) and the other to achieve gender equality (Goal 5). Gender equality is given particular priority. The Agenda envisages a world in which all forms of discrimination and violence against women and girls are eliminated and where all legal, social and economic empowerment barriers are removed. It calls for the SDGs to be implemented with a "systematic mainstreaming of a gender perspective" and "significant increases in investments to close the gender gap and provide stronger support to institutions in relation to gender equality." Progress and achievements in Human Development and SDGs are intrinsically interconnected and correlate positively.

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[5] The HDI is a tool for mapping shortcomings within these three dimensions The HDI is the geometric mean of normalized indices for each of the three aforementioned dimensions. There are two steps to calculating HDI. The first one includes creating the dimension indices and the second one is aggregating the dimensional indices to produce the Human Development Index. Through the first step, universal minimum and maximum values of the dimensions are present in order to transform the indicators expressed in different units into the same unit – indices on a scale of 0 to 1. Having defined the minimum and maximum values, the dimension indices are calculated as:
Dimension index =actual value – minimum value/maximum value – minimum value
Actual value is a value of certain dimension in the observed country. The HDI value is the geometric mean of the three-dimensional indices (life expectancy, access to knowledge and a decent standard of living), presented as: HDI = 3I· I· I

[6] There are three steps in computing the IHDI. The first step includes a measurement of unequal distribution of each dimension (life expectancy, education and income), taking a vast majority of the population into consideration. The second step uses the value obtained in the first step to calculate the inequality – adjusted value of each HDI dimension, while the third step calculates a geometric mean of the values obtained in the second step to compute the IHDI value. In measuring all three inequalities (inequality in life expectancy, education and income) in the first step, Atkinson inequality index is used to compute the inequalities of distribution of the three dimensions. Atkinson's index is the basis of IHDI. Each HDI dimension index is multiplied by (1-Ax), where Ax is Atkinson inequality measure (Atkinson's index).

[7] Ibid.

[8] UNDP, (2016), Human Development Report 2016, Technical Notes, at http://hdr.undp.org/en/2016-report

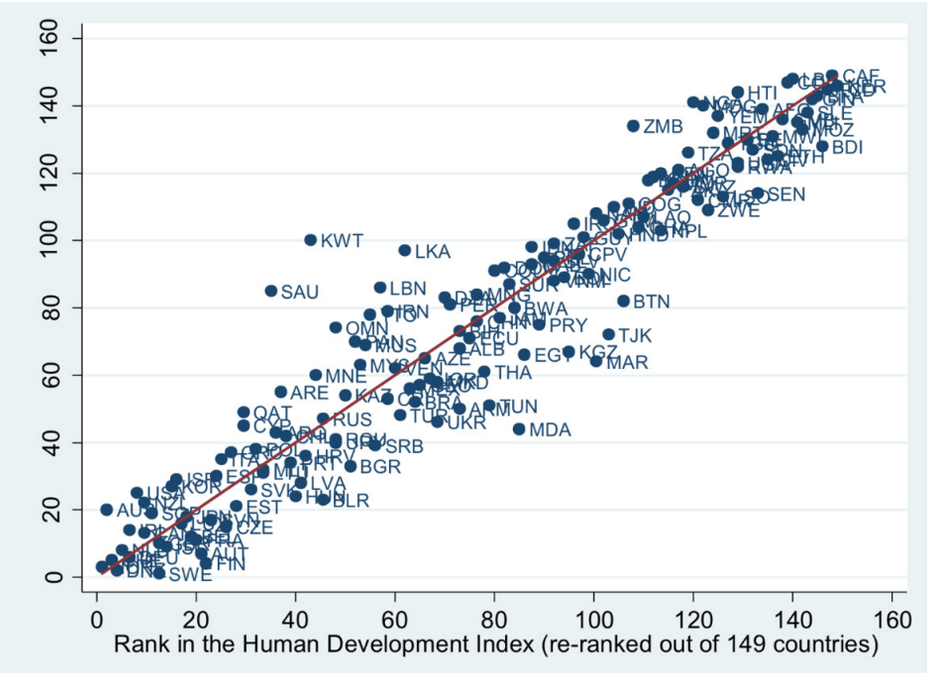


Figure 1-1 Comparison of raking by SDG index and by Human Development Index, 2015
Source: Sachs et al. (2016)

The SDG indicators include income inequality indicator 10.1.1 Growth rates of household expenditure or income per capita among the bottom 40 percent of the population vs. the medium of the total population. This indicator suggests the degree to which a country prioritizes raising the income of the poor. The difficulty ignores the gap between the rich and poor and therefore may not be helpful in identifying the point where inequalities reach high levels. To fill this gap, other measures of income and wealth inequalities should be adopted at country level (e.g. the Gini coefficient before and after social transfers, or the Palma ratio etc. see SDG 1 and 11 below). In all cases it can be difficult to assess the point where wealth or income inequality becomes too high (although some analysts suggest the tipping point is 0.4 measured by the Gini coefficient), and this will depend on the specific context of each country, but the precise number may be less important than the concrete impacts of this inequality identified in other ways (e.g. elite capture, or economic crisis linked to inequalities).

All 17 SDGs aim to make development more equitable. SDG targets seek to eliminate discriminatory laws, policies and practices; promote and enforce non-discrimination; ensure equal access to justice; and social, economic and political inclusion, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. Other targets aim to achieve outcomes (i.e. access to transport) with special attention to the needs of those excluded, marginalized or in vulnerable situations.

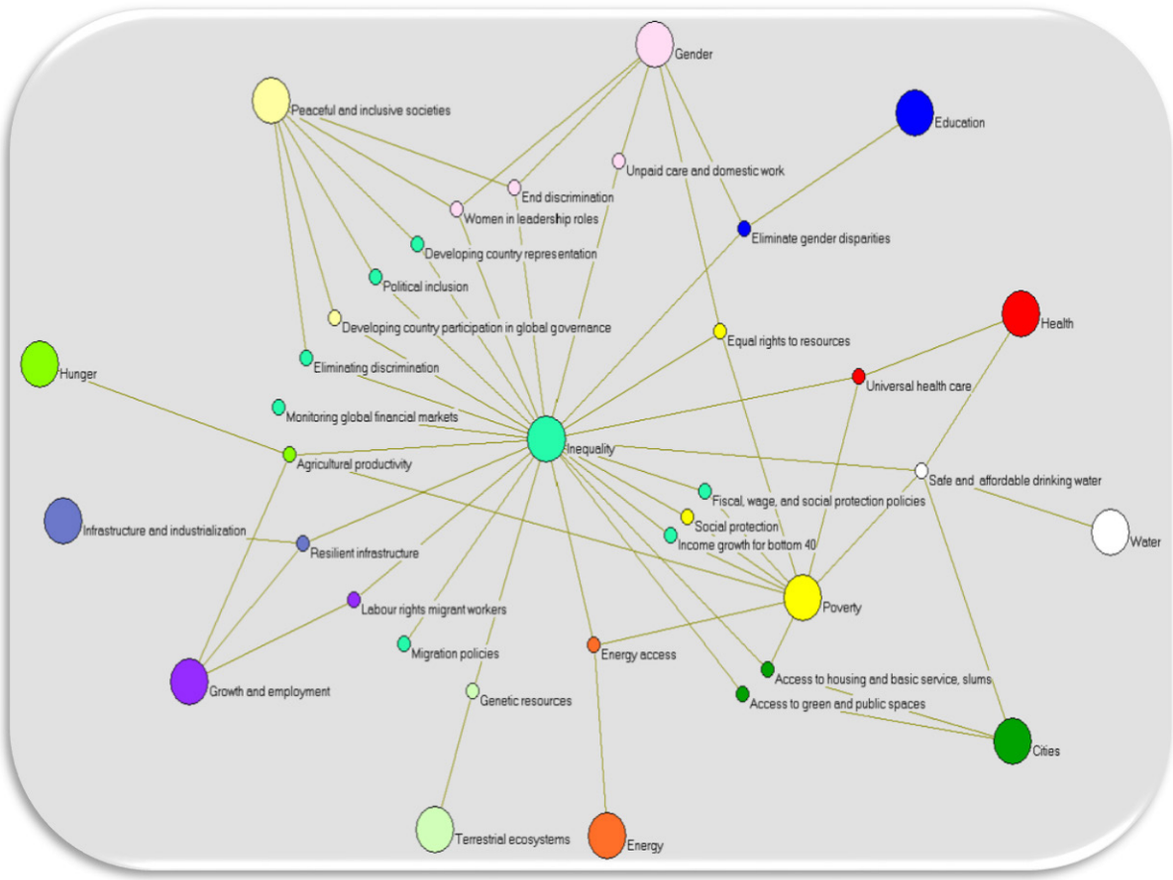


Figure 1-2 Links among SDG Goal 10 (inequality) and other goals
Source: La Blanc, David, UN DESA Working Paper #141 "Towards Integration at Last? SDGs as a Network of Targets", p.8

Poverty, Inequality and Economic Growth Nexus

Despite poverty and inequality being separate concepts, they affect each other directly and indirectly through their link with economic growth. An issue which often reappears in discussions on development is whether the main focus of development strategies should be on prioritizing growth or fighting poverty and inequality (Bourguignon, 2003).

Inequality matters for a variety of reasons. People who experience multiple deprivations across the economic, social, political and all relevant spheres are cut off from opportunities to contribute and benefit from their economy, society, and communities. It is considered that these economies have "less potential to boost productivity and generate revenue; societies are less cohesive; community members are less likely to trust each other; and those who suffer exclusion and endure isolation, indignity and discrimination have little chance to improve their lives" (UNDP, 2016: 21).

Over the last few decades income inequality has been growing on average within and across countries. Rising income inequality is often shaped by the increasing concentration of income at the top end of the income distribution. People with extraordinarily high incomes are able to save a lot of their income, which increases their wealth. According to Oxfam's report from 2018 "Reward Work, Not Wealth", 82% of all wealth created in the last year went to the top 1%, and nothing went to the bottom 50% (Pimentel et al., 2018: 8). Because of the widespread increase of income inequality, one of the main concerns is its impact on societies and economies (OECD, 2014).

Economic growth is essential for poverty reduction. Rapid growth, however, does not necessarily result in lower rates of poverty or inequality. In practice, the speed of economic growth is just as important as its nature and quality (e.g. whether it is sustained, job-rich or if it benefits communities & sectors the poor depend on) and how the benefits are shared.

The results of several researches in the last few decades across the world show that when income inequality rises, economic growth falls (Ibid.). These results are shown to be statistically significant amongst countries with high poverty (Breunig & Majeed, 2016). Although inequality is not a final outcome, it plays a central role in determining the rate and pattern of growth (Bourguignon, 2003). It is important to notice the difference between poverty and inequality because it is not always possible to reduce both at the same time. For instance, if policy design recognizes absolute poverty as a main issue, lowering the tax rates could stimulate economic growth which could be a solution for mitigating poverty (Barr, 2012). On the other hand, if policy design is more concerned with mitigating inequality, the solution could be in higher taxation of the rich.

Rising inequality hampers poverty-reduction efforts. **Speeding up poverty reduction depends on reductions in inequality**. High inequality reduces the impact of growth on poverty reduction, and with the higher level of inequality, it is more difficult to reduce poverty (ILO 2016b; Ravallion 2016). Conversely, if economic growth is accompanied by a reduction in inequality, growth has a stronger effect on poverty reduction (ISSC, IDS and UNESCO 2016; UNDP 2016c). Thus, tackling inequalities in their multiple dimensions is critical for progressing towards the implementation of the SDGs.

When dealing with inequality and poverty, the complexity of phenomena should be taken into account. It is crucial to understand that relative weights given to the different objectives of reducing inequality and poverty depend on the policy outcome society wants to achieve (Ibid.)

Common Income Inequality Measures – Advantages and Disadvantages

Economic inequality can be measured in various ways using different indicators and data sources. There is a range of indicators that might be used such as the Gini coefficient, Theil index, Hoover index, Oxfam's "richest 1%", the s80/s20, etc. The choice among these different indicators is not neutral and may substantially impact the findings (Alvaredo et al., 2017).

This section considers the most commonly used measures in EU – the Gini coefficient and the S80/S20 share ratio (EC, 2017).

Official inequality reports and statisticians most often use synthetic measures of inequality such as the **Gini index** based on the Lorenz Curve. The Gini coefficient considers all the segments of income distribution in the same way. It does not prioritize the bottom part of the income scale where there are poorer individuals. In a word, the Gini coefficient makes no difference between income groups. Additionally, the Gini coefficient is not additive – the sum of Gini coefficients of different income level groups within the population is not equal to the overall coefficient for the entire population. More precisely, the Gini coefficient is not suitable for decomposing the total inequality into subgroups (Matković et al., 2015). Therefore, although the Gini coefficient – presented via Lorenz curve – is a powerful instrument for mapping the inequality and easy to interpret, it should be carefully used, considering all the aforementioned shortcomings.

The quintile dispersion rate, usually abbreviated as **S80/S20 ratio**, represents the ratio between the average or total income (or consumption) of the top and of the bottom quintile (top 20% and bottom 20%), thus directly showing the ultimate dispersion in the distribution (Matković et al, 2015). Shortly, it presents the divergence between income of the wealthiest and the poorest part of the population. Despite the clarity of this measure, it has to contend two weaknesses. First, the major part of the income scale (the second, third and the fourth quintile) is neglected, as well as the information on the inequality within the highest and the lowest quintile. Furthermore, this ratio is strongly affected by the extremely high and low values (ibid.).

Boosting the bottom 40% and the linkage with Sustainable Development Goals

Traditionally, economic development was presented as average growth in gross domestic product (GDP) per capita. However, this concept does not envisage who may be benefiting (or not) from that growth. For instance, despite fast and high growth in one country there is a possibility that all the outcomes of growth are concentrated among the richest members of society (Jolliffe, 2014). In 2013, the World Bank Group[9] committed to harmonize all its activities with two intermediate goals. The first goal is to end extreme poverty. The target for this goal is to reduce the global **extreme poverty** rate to 3% by 2030, which means that less than 3% of the total population has less than 1.9$ PPP a day. The second goal is to **promote shared prosperity**. These goals were designed in order to assure inclusive growth, as main conditions and assumptions for sustained economic development. These goals are symbolically named "the twin goals" (WB, 2015).

World Bank defines shared prosperity as "foster(ing) the income growth of the bottom 40% of the population…" (WB, 2017). This concept can also be defined as seeking to sustainably raise the well-being of the poorer segments of society. "Enhancing shared prosperity is measured by the pace of real income or consumption growth at the household level, on average and over time, for the bottom 40% of the income distribution in each country." (Cruz et al, 2015).

[9] The World Bank Group consists of the International Bank for Reconstruction and Development (IBRD), the International Finance Corporation (IFC), the International Development Association (IDA), the International Centre for Settlement of Investment Disputes (ICSID) and the Multilateral Investment Guarantee Agency (MIGA).

The decision to introduce a shared prosperity goal that focuses on a particular target population required determining the cut-off point for targeting a certain part of the population. If the threshold was placed "too high", e.g. targeting the bottom 50 percent of population, the potential result could show that the mean per capita income of the target population is very close to the national mean per capita income. On the other hand, placing the threshold "too low" (i.e. bottom 20 percent) could result in little information beyond the statistics provided by the extreme poverty goal, since in many low-income countries the extremely poor people are concentrated in the bottom quintile. This arises from the fact that "the very poor often have no steady source of income and the income they do have comes from multiple, informal sources that are not always easy to document, which could contribute to higher measurement error for this part of the population." (WB, 2015: 79). Considering those obstacles, the World Bank Group applied the 40th percentile as the cut-off point to define the "least well-off" part of the population. The progress of the shared prosperity goal is examined on the basis of the latest comparison of (comparable) household data on the bottom 40% income growth.

Achieving the shared prosperity can also increase the chance of achieving the 3% poverty goal. Several simulations show that if the average economic growth rates continue to show the same dynamics as they have since 2000s, the extreme poverty target will not be met unless the growth rate among the bottom 40 is at least 2 percentage points higher than the national average (Cruz et al., 2015). In other words, it means that the poverty target (3%) can be met only if the income growth of the poor or the bottom 40 (including the poor) outpace the mean income growth for the total population.

Aforementioned is in line with numerous World Bank publications which emphasize that although economic growth is the main engine of the poverty alleviation, **growth itself is not enough.** "Growth must be broad-based and labour-intensive, and it must be coupled with efforts to improve the targeting and effectiveness of basic social expenditures." (WB, 2018: 2).

By introducing the shared prosperity goal, the World Bank brought income inequality to the forefront of the policy dialogue. However, it is important to emphasize that the **shared prosperity goal is not an inequality measure in itself**, since it focuses exclusively on income growth of the bottom 40 percent of the population. Focusing on the growth of the bottom 40 percent also results in dissemination of the outcomes of economic growth among the least well-off people in the population, irrespective of what is happening in the country overall. However, s**hared prosperity is strongly linked to inequality.**

Comparison between the bottom 40 and the income or consumption growth of the entire population (growth of the mean) shows insights into how the gains of economic growth are shared across the society more generally. Such a comparison indicates the extent to which distributional changes favour this group relative to the top 60 percent of the population.

This is how the shared prosperity, as a part of a global development agenda, is closely related to **Sustainable Development Goal (SDG) 10**. The United Nations adopted a principle that "no one will be left behind" in its SDGs and the 2030 agenda for sustainable development (UN General Assembly 2015, preamble). By providing a platform for sustained income growth among the poorer segment of society, "Goal 10 aims to reduce inequalities between a country's citizens and to promote shared prosperity and gains in wealth for all." (WB, 2017a: 56).

Target 10.1 of the SDG Goal 10 looks to progressively achieve and sustain income growth of the **bottom 40 percent of the population at a rate higher than the national average** by 2030 (UNDP, 2015: 21). Similarly, **shared prosperity premium** is an indicator, which shows the difference between the growth in income of the bottom 40 and the mean income growth in each country. It considers the share of prosperity going to groups other than the bottom 40. A positive premium indicates that the growth in the income or consumption of the bottom 40 exceeds that of the mean income or consumption growth of the population. "A higher or lower premium indicates the extent to which distributional changes favour the bottom 40 relative to the top 60 percent of the population. " (WB, 2016: 7). The shared prosperity premium does not capture the variation in incomes that affects the earners at the top of the income scale (Ibid.).

In order to take into account such intra group differences, especially among the top earners, **Palma premium** is designed to capture and compare income growth among the bottom 40 and the top 10. Similar to the shared prosperity premium, which compares the relative growth in income or consumption among the bottom 40 and the mean, the Palma premium reports the growth rate in income or consumption among the bottom 40, minus the growth rate in the top 10. Palma premium is the reflection in the mirror of the **Palma ratio**– the ratio of the richest 10 percent of the population's share of gross national income (GNI) divided by the poorest 40 percent's share (Ibid.).

Methodology of measuring income inequality in Serbia

The analysis is based on the two major surveys in Serbia: SILC (Survey on Income and Living Conditions) and HBS (Household Budget Survey). From HBS, both consumption and income variables are analysed, including in-kind income.

Both HBS and SILC surveys are quite large in scale. SILC was initially planned to encompass around 8,000 households (SORS, 2014). In the fourth wave, analysed in this HDP, it included 5,554 households instead of foreseen 6.366 (SORS, 2017a:4). HBS sample was increased from around 4,500 households to just about 6,000 in 2014 and around 6,500 afterwards. This amounts to 2-2,5% of the total number of households in Serbia.

HBS combines the method of diary keeping (a household keeps an individual consumption diary for fifteen, i.e. sixteen days) regarding the items and services of individual consumption and interview method on the basis of questionnaires, where the reference period for durables is twelve months, for semi-durables, agriculture, hunting and fishing - three months, and for earnings – the previous month (SORS, 2017b: 10).

Diary keeping method allows recording consumption of goods/services from own production and those received as a gift. In addition, there is a question of earned in-kind payment and the question of wood used for heating from own production. Accordingly, in-kind income can be easily calculated.

Official HBS data (i.e. data in HBS Bulletin) report only own consumption of 1) food and non-alcoholic beverages and (2) alcoholic beverages and the tobacco of COICOP classification from own production, as well as the usage of wood for heating and earned receipts in-kind (food, clothes, footwear, household expenditures etc.) paid by employer. This is known as HBS in-kind income. Goods received as a gift and goods from other COICOP groups (such as clothing and footwear, transport, restaurants etc.) are not included in this concept. When a broader aggregate is calculated, comprising all COICOP groups as well as gifts, it is simply dubbed in-kind income.

SILC uses the interview method which is conducted on annual basis, during May and June. Interviewing lasts for 6 weeks, the reference period being the previous calendar year for income components and the day of the interview for material deprivation items (SORS, 2014). Therefore, the term SILC 2016 (labelled as such in Eurostat database) actually refers to income from 2015, while only questions on material deprivation refer to 2016. Since we are exclusively looking at income, SILC data will be labelled with the year that refers to the income question. In-kind income is largely left out of account in SILC (Ward, 2009). Goods produced for own consumption in the case of the self-employed should be included as part of income from self-employment (variable PY050) although they are not shown separately. They are based on recall data for the whole previous year, which may induce recall bias, particularly bearing in mind that the value of own consumption has to be transferred to monetary value. By contrast, for those not self-employed, i.e. those who produce goods exclusively for own-consumption, there is a question in the questionnaire for households but this production is not treated as a part of income . In both cases it is important how the value of goods for own consumption is recorded. Petrušević and Vukmirović (2015: 68) show that in Serbia, once the focus has been shifted from more detail (SILC, 2013) to less detail, asking households to estimate by themselves the market value and values of goods for own consummation during the previous year (SILC, 2014), the ratio of value of goods from own consumption to total disposable income falls from 2,9% to 0,9%. This indicates that underreporting is likely for self-employment income as well, especially for those engaged in subsistence farming.

Treatment of negative income is another major difference in the methodology between HBS and SILC. Variable PY050 in SILC may take negative values due to the question "Did you have loss or profit in the previous year as a self-employed?". As a result of these negative values, total disposable income (HY020) may take negative values as well. Indeed, HY020 is taking negative values up to 200,000 RSD (around 2,000 USD) monthly (see Figure 7 8 in the Annex 1).

When it comes to HBS, agriculture income and income from non-registered self-employment is recorded as the difference between revenues and investment, which is in line with the question on profit and losses from SILC. However, if this difference takes a negative value, it is changed to zero.

Comparison of SILC and HBS data. When we directly compared decile data, we used the same year the income referred to – latest available data for both surveys, and that was 2015. When SDG analysis was conducted we used the latest available data, which was 2016 for HBS and the survey from 2016 which refers to income from 2015 for SILC.

All calculations regarding SDG and the poorest population profiles are performed on per capita basis as defined by SDG indicator 10.1.1. When it comes to inequality and decile analysis presented in chapter 5, both SILC and HBS data are equalised based on OECD-modified equivalence scale in order to have comparable data. Equalisation scales are used to adjust household income, taking into account household size and composition. The modified OECD equivalence scale is the standard scale for the Statistical Office of the European Union (Eurostat). To calculate equalised income using the modified OECD equivalence scale, each member of the household is first given an equivalence value while each additional adult is given a smaller value of 0.5 to reflect the economies of scale achieved when people live together.

[10] Agriculture is treated as self-employment in SILC
[11] Variable HY170

Children under the age of 14 are given a value of 0.3 to take account of their lower living costs, children aged 14 and over are given a value of 0.5 because their living costs are assumed to be the same as those for an adult[12]. HBS typically uses OECD equivalence scale (0,7 for each additional adult and 0,5 for children below 14), however, in this study for the sake of data comparability modified OECD equivalence scale is also used for HBS data.

2. OVERVIEW OF HUMAN DEVELOPMENT MEASUREMENTS IN THE REPUBLIC OF SERBIA

According to the Human Development Report 2016, Serbia belongs to the second group of countries – High human development countries. The HDI rank of Serbia in 2015 was 66 out of 188 countries, with the HDI value of 0.776. Considering each dimension separately, life expectancy at birth was 75 years, expected years of schooling were more than 14 and mean years of schooling was almost 11, while the GNI per capita has amounted to 12,202, measured in 2011 PPP $.

However, the high or rising income inequality is an important phenomenon, which continues to characterize many countries, both developed and developing. And due to very unequal concentration of the well-being within the population, the indicators of average human development such as HDI do not reflect the well-being of a vast portion of the population. Income inequality is associated with inequality in education, health, and political voice, participation, access to and the use of natural resources and the decision-making processes governing them (UNDP, 2016a).

Inequality – adjusted HDI value in Serbia was 0.689 in 2015, placing Serbia three places under its HDI rank. Coefficient of human inequality – average inequality in three basic dimensions of human development (inequality in health, education and income) – amounted to 11.1%. It should be noticed that inequality of income was the largest (17.4%) and inequality in life expectancy was the lowest (7.9%).

Considering that women constitute half the world's population and that women are more likely than men to suffer from low human development[13], it is inevitable to highlight the level of deprivations facing women.

According to data from Human Development Report 2016, the Gender Inequality Index (GII) value in Serbia in 2015, was 0.185 which ranked Serbia 40th out of 159 countries by GII rank. Maternal mortality ratio was 17 (number of deaths per 100,000 live births), while the adolescent birth rate (number of births per 1,000 women ages 15 – 19) was 19. Share of seats in parliament held by women was 34%. Considering educational attainment indicator, 82.3% of women older than 25 years completed at least secondary education, compared to 91.6% of men within the same age group. The participation in the labour market of females older than 15 was 43.4% in contrast to 60.1% among men.

[12] https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/compendium/familyspending/2015/chapter3equivalisedincome
[13] UNDP, (2016), Human Development Report 2016, UNDP

The table below presents values of human development indices.

	HDI	IHDI	Coefficient of human inequality (%)	Inequality in life expectancy (%)	Inequality in education (%)	Inequality in income (%)	Gender Inequality Index
Serbia	0.776	0.689	11.1	7.9	8.1	17.4	0.185
High human development group of countries	0.746	0.597	19.6	10.5	18.3	30.0	0.291
Europe and Central Asia	0.756	0.660	12.6	13.2	7.9	16.7	0.279
EU28	0.874	0.798	8.5	4.4	4.9	16.2	0.123
World	0.717	0.557	22.3	17.1	25.9	23.8	0.443

Table 2-1 Human development indices
Source: UNDP, (2016b), Human Development Report 2016

Human Development Index average value of all 28 European Union (EU) countries was 0.874 in 2015, which was nearly 0.1 point higher than Serbia's Index. Considering the thresholds for country groupings, EU would be positioned in the group of "Very high human development" countries. The lowest value of HDI, and the only one below 0.800 among EU countries, was calculated in Bulgaria, while the highest value of HDI was registered in Germany.

The average Coefficient of human inequality within EU countries reaches 8.5, with the lowest coefficient in the Czech Republic. While the Czech Republic registers the lowest inequalities among the EU, Greece and Italy face the highest. Both countries' coefficients exceed the value of Serbia's coefficient of 11.1.

Furthermore, the inequality-adjusted HDI (IHDI) values are in correlation with aforementioned coefficient of human inequality. Even though Greece and Italy deal with inequalities more than any EU country, their inequality-adjusted indices are still higher than Serbia's. Average IHDI within EU28 is almost 0.8, which is more than 0.1 point higher than Serbia's IHDI. Further comparison of values of human development indices between Serbia and the Western Balkans region[14] shows that Serbia's both HDI and IHDI almost coincide with average indices of the region (0,779 and 0,685 respectively). The highest value of indices "belongs" to Croatia, while FYR Macedonia and Bosnia and Herzegovina face the lowest indices.

Highest inequalities according to the value of the coefficient of human inequality are recorded in FYR Macedonia and Albania, while the lowest inequalities were registered in Montenegro. Moreover, inequality in life expectancy in Serbia outpaces the region average, but the values representing inequalities in education and income are both below the regional level.

[14] Six countries are included: Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro and Serbia.

Analysis of Gender Inequality Index (GII) values across European Union countries and Serbia shows that Serbia's GII is 50% higher than the EU average. Still, GII in Romania, Hungary, Bulgaria, Latvia and Malta significantly differ from the EU average as well as from Serbia's GII, and amount up to 0.339, 0.252, 0.223, 0.217 and 0.191, respectively.

Higher GII in Serbia compared to the one of EU can mainly be explained by unfavourable outcomes across labour participation and the share of females in population with at least some secondary education, since the percentage of parliamentary seats held by women in Serbia is higher than EU's. Labour participation of men in Serbia is nearly 40% higher than participation of women in 2015, while the male labour participation in EU is higher than female by one quarter.

Regarding regional comparison, Serbia's GII is higher than the region average, and the second largest after Albanian GII. However, Serbia as well as FYR Macedonia have a higher share of seats held by women in parliament.

The following table presents values of relevant indices and coefficients:

	HDI	IHDI	Coefficient of human inequality (%)	Inequality in life expectancy (%)	Inequality in education (%)	Inequality in income (%)	Gender Inequality Index	Gini index (2010-2015)
Serbia	0.776	0.689	11.1	7.9	8.1	17.4	0.185	29.1
Albania	0.764	0.661	13.4	9.9	11.9	18.3	0.267	29.0
Bosnia& Herzegovina	0.750	0.650	13.1	6.7	12.5	20.2	0.158	33.8
Croatia	0.827	0.752	8.9	4.5	4.4	17.7	0.141	32.5
Montenegro	0.807	0.736	8.7	5.2	7.4	13.6	0.156	31.9
FYR Macedonia	0.748	0.623	16.1	7.6	10.6	30.1	0.160	44.1
Region average	0.779	0.685	11.9	7.0	9.2	19.6	0.178	33.4
EU28	0.874	0.798	8.5	4.4	4.9	16.2	0.123	31.5

Table 2-2 Human development indices, Serbia, EU28 and Western Balkan, 2015
Source: UNDP, (2016b). Human Development Report 2016

3. INCOME INEQUALITY IN SERBIA

Inequality in Serbia is extremely high compared to EU countries based on EU-SILC income data. In particular, with 38.6 Serbia records the highest values compared to all EU member and candidate countries except Turkey. Only Bulgaria and Lithuania among the EU countries have Gini higher than 35, while the EU average is 30.8 (Figure 3 1).

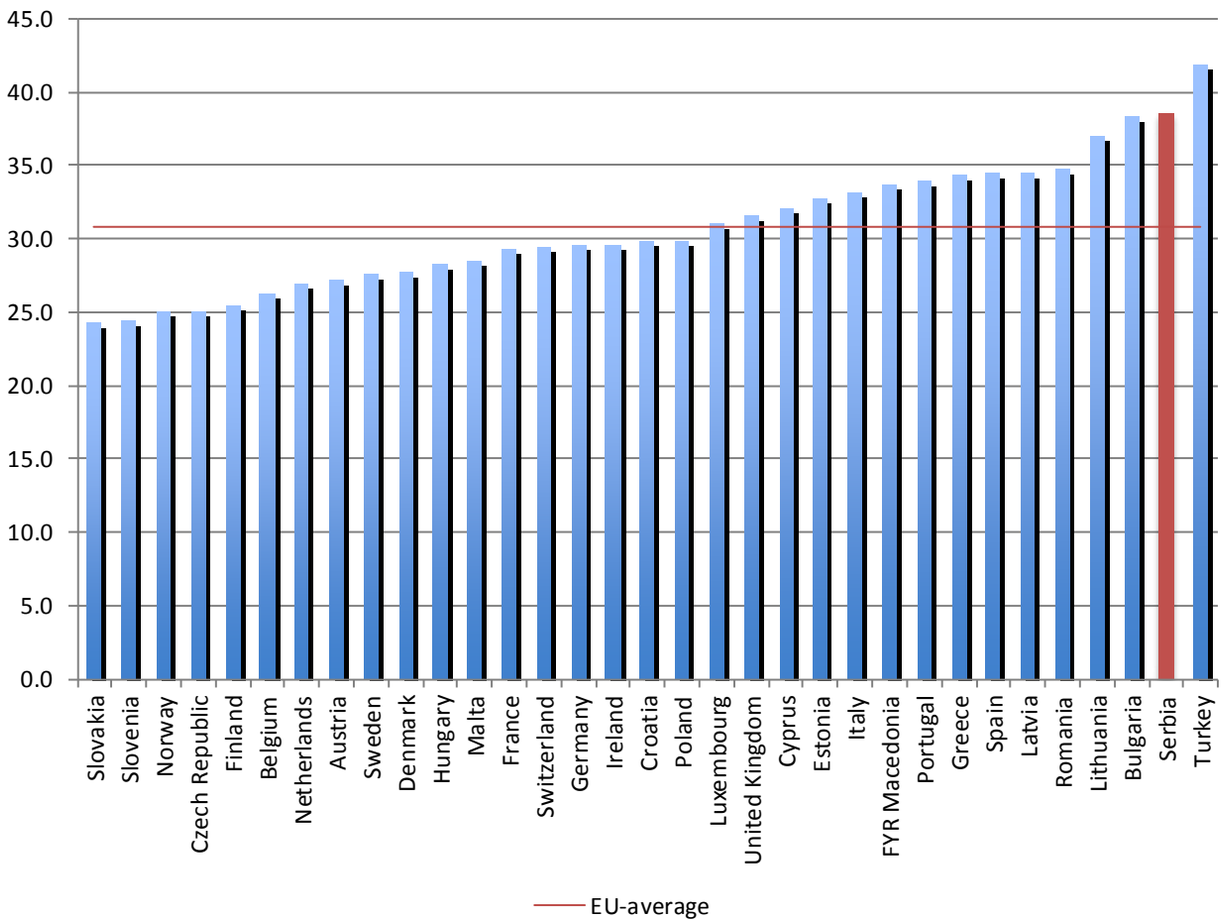


Figure 3-1 Gini coefficient for EU member and candidate countries, EU-SILC income data for 2015[15]
Source: Eurostat (EU-SILC, 2016)

In the worldwide context, the value of Gini in Serbia is taking the medium value. According to WB data[16] for 2015, income-based Gini ranges from as high as over 50 in Latin America countries such as Brazil (51.3), Columbia (51.1) and Panama (50.8) down to the lowest in Slovakia (26.5) and Slovenia (25.4)[17].

Palma ratio – the top 10% of the population's share of national equalised income and the bottom 40%, also shows a gloomy picture of Serbia according to the SILC data. Again, Serbia has the highest value compared to all EU member countries and the Former Yugoslav Republic of Macedonia (Figure 3-2).

[15] Data for Serbia based on income 2015
[16] http://databank.worldbank.org/data/reports.aspx?source=poverty-and-equity (data for 2014/2015)
[17] Data for Slovakia and Slovenia slightly differ than EU-SILC data, probably due to the different survey source

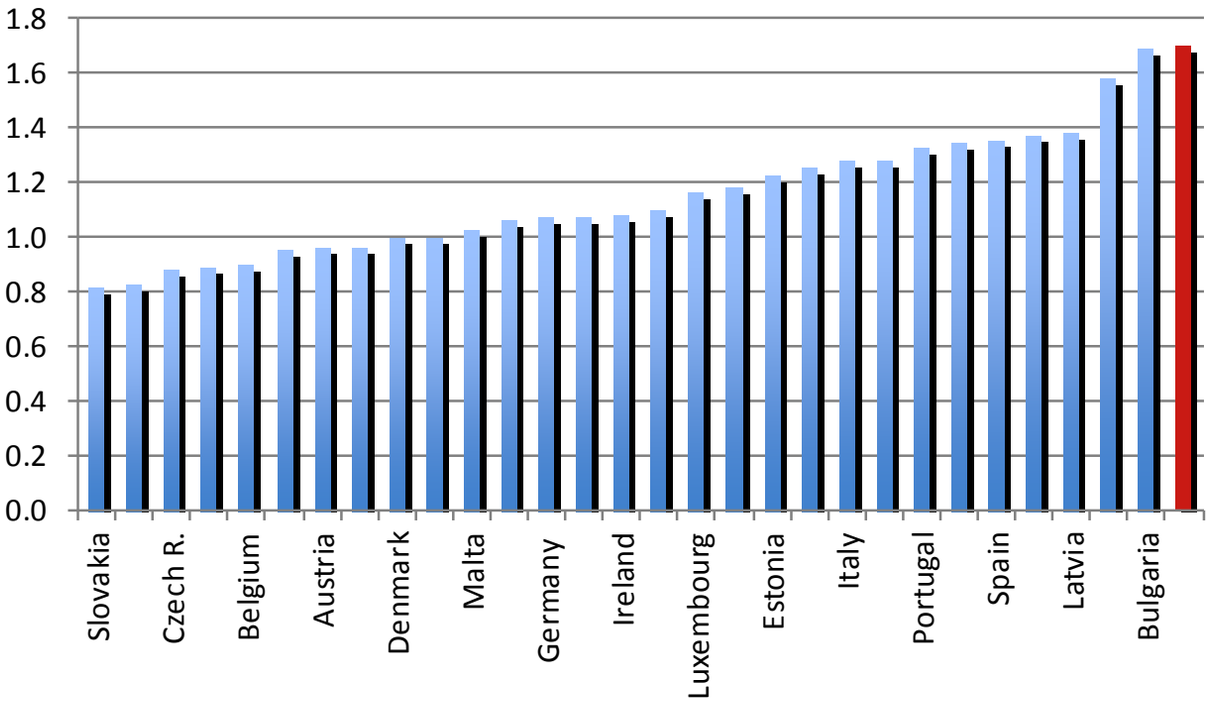


Figure 3-2 Palma ratio, SILC income data for 2015
Source: Authors' calculations based on Eurostat (EU-SILC, 2016)
NOTE: Palma ratio is calculated as the ratio of the richest 10% of the population's share of SILC national equalised income divided by the poorest 40%'s share

Gini is significantly lower when calculated from Household Budget Survey, particularly based on consumption ranging between 25 and 27 in recent years. Gini based on HBS income (including in-kind income) is also significantly lower than Gini based on SILC data – 30.4 compared to 38.6 (Table 3-1).

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EU-SILC income	…	…	…	…	….	…	38.0	38.6	38.2	38.6	…
HBS income	32.9	32.0	30.2	29.5	…	…	…	….	…	30.4	…
HBS consumption	27.9	27.1	26.0	26.2	27.0	25.4	26.8	26.9	26.6	25.5	26.1

Table 3-1 Gini coefficient in Serbia 2006-2016, SILC and HBS
Source: Eurostat for EU-SILC (surveys 2013-2016 for which income data relate to previous year), Mladenović (2017) for HBS consumption Gini and Mijakovac (2017) for HBS income Gini
Note: HBS income includes HBS in-kind income (see methodology)

Income quintile analysis shows a similar picture – extremely high ratio of income quintiles compared to EU countries based on SILC data (Figure 3-3), a significantly lower ratio based on HBS income data and more than double less when the calculation is based on HBS consumption data (Table 3-2).

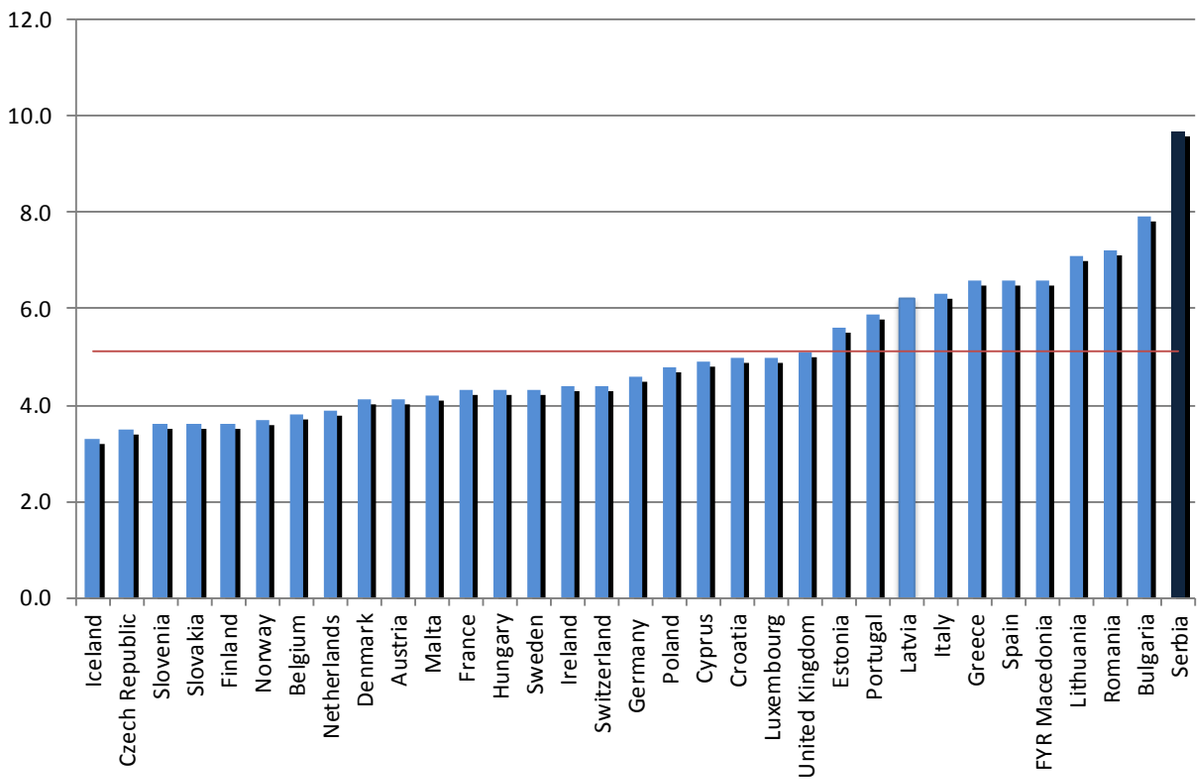


Figure 3 3 The s80/s20 ratio, EU and Serbia, SILC income data for 2015
Source: Eurostat (EU-SILC, 2016)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
EU-SILC income	…	…	…	…	….	…	8.6	9.8	9.0	9.7	…
HBS income	5.8	5.6	4.8	4.7	….	…	…	….	…	5.0	…
HBS consumption	4.2	4.0	3.8	3.7	3.9	3.6	3.9	4.0	3.9	3.7	3.9

Table 3-2 The S80/S20 income quintile share ratio in Serbia 2006-2016, SILC and HBS
Source: Eurostat EU-SILC: Mladenović (2017) for HBS consumption; Government of the Republic of Serbia (2012) for HBS income 2006-2010, authors' calculation for 2015
Note: Data for EU-SILC are labelled the year to which income data refer, not the year survey was conducted
Note: HBS income includes HBS in-kind income (see methodology)

Both Gini coefficient and S80/S20 ratio show quite a stable trend in the last 10 years in Serbia, slightly decreasing compared to baseline in 2006 according to HBS data, which is available for a longer period. SILC data are available only for four years and also suggest stable values, although slightly higher after 2012, most likely due to methodological reasons[18] (Table 3-1 and Table 3-2).

SDG indicator 10.1.1. "Growth rates of household expenditure or income per capita among the bottom 40 percent of the population and the total population" **is quite unfavourable for Serbia when calculation is based on EU-SILC income. According to the SILC survey, the living standard of the population of Serbia measured based on income is falling, with the standard of the poorest falling to an even greater extent.** In nominal terms, income per capita has grown for the total population faster than for the bottom 40%, while income per capita for the bottom 20% has decreased even in nominal terms. Real growth was negative for everyone, being more pronounced among the poorest population compared to overall, particularly for the bottom 20% (Figure 3 4).

This finding is in line with data for Serbia reported in Atlas of Sustainable Development Goals (WB, 2017a) and with data from Global database of shared prosperity also based on EU-SILC income. Serbia ranked in the group of 34 out of the 83 countries where per capita income or consumption of the bottom 40 grew slower than the national average (World Bank (2017a: 56). Although according to this indicator slower progress of the poorest was recorded in a considerable number of countries, the only EU countries in which a reduction of the living standard of the poorest 40% of the overall population is greater than the one recorded in Serbia, are Greece and Cyprus[19].

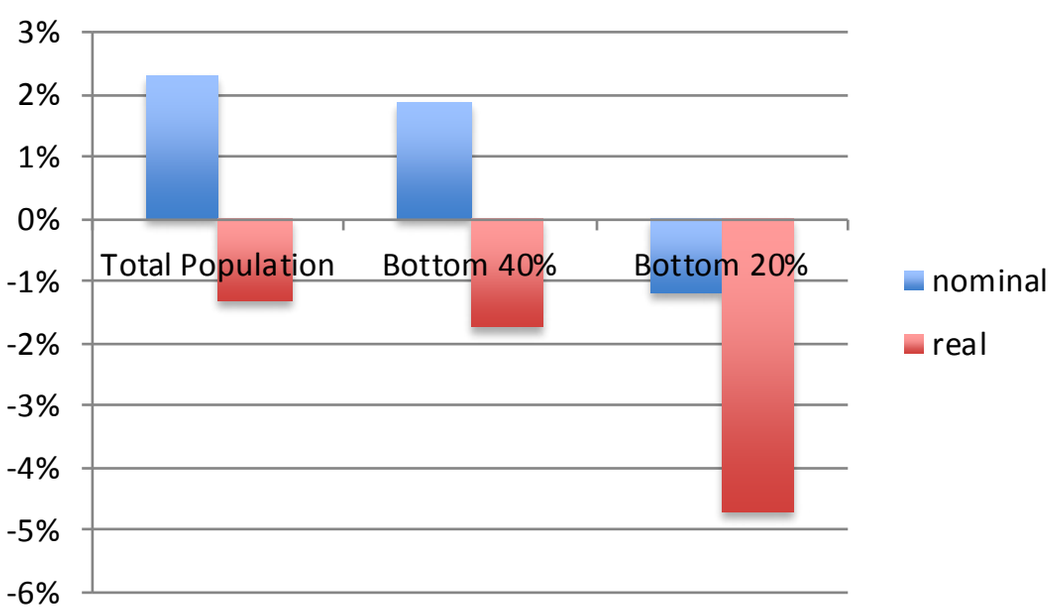


Figure 3-4 Annualized Nominal and Real Income Growth rates for 2012-2015, total population and bottom 20/40% per capita (SILC)
Source: Authors' calculations based on EU-SILC 2016 and EU-SILC 2013

[18] Questionnaire has changed the first year following SILC introduction.
[19] World Bank. Global Database of Shared Prosperity, circa 2010-2015. As of April 12, 2018

However, **when SDG 10.1.1. indicator is calculated using HBS for the period 2013-2016, the situation is completely different.** This stands both for consumption and income. Consumption has grown faster for both 20 and 40% bottom population compared to overall, while income has grown just slightly faster for 40% and more slowly for the bottom 20% of the population (Figure 3 5). It is also important to note that both income and consumption have grown for the total population, according to HBS.

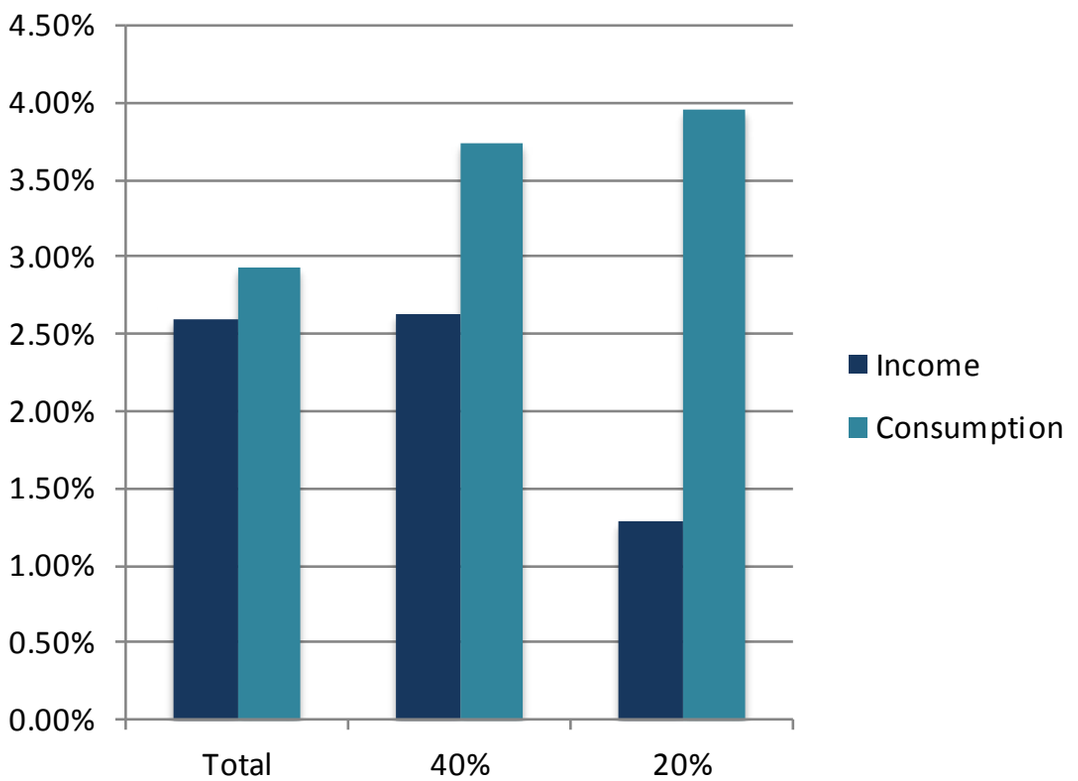


Figure 3-5 Annualized Real Income and Consumption Growth rates for 2013-2016, total population and bottom 20/40% per capita
Source: Authors' calculations based on HBS-2013 and HBS-2016

The discrepancy between income based on SILC and HBS in Serbia have been quite puzzling. The major difference lies in the 1st decile and 10th decile, while the difference is also obvious in other bottom deciles. The discrepancy in the 1st decile is enormous - 70% lower SILC income than income reported in the HBS, while in the 10th decile it is higher than HBS by 10% (Figure 3 6). The first decile income mean according to SILC amounts to only 2,500 RSD (~23 USD) per equivalent adult (Table 3-3).

SILC				HBS		
	cut off	mean	median	cut off	mean	median
	min -193.221			min 0		
1st	7.791	2.556	3.774	12.880	8.687	9.360
2nd	13.131	10.648	10.716	17.000	14.984	15.000
3rd	17.166	15.165	15.213	20.629	18.824	18.801
4th	21.062	19.193	19.214	24.000	22.372	22.360
5th	25.570	23.374	23.369	27.692	25.849	25.774
6th	29.742	27.586	27.639	31.402	29.496	29.562
7th	34.382	31.901	31.897	36.133	33.763	33.653
8th	41.506	37.710	37.534	42.550	39.255	39.200
9th	53.236	46.889	46.798	53.846	47.557	47.340
10th	max 2.708.154	81.226	64.273	max 226.517	72.723	66.037

Table 3-3 Mean, median and cut-off points: SILC and HBS income data for 2015.
Source: Authors' calculation based on SILC 2016 (data for 2015) and HBS 2015 (data for 2015)
Note: OECD-modified equivalence scale applied to both SILC and HBS income data
HBS includes in-kind ("narrow concept"- see methodology for details)

This amount is extremely low and far below basic needs according to the absolute consumption poverty threshold, which was 11.694 RSD (~105 USD) per equivalent adult in 2016[20]. Distribution of income by deciles in Serbia-SILC compared to the EU-average shows the same pattern - largest difference in 10th and 1st deciles, and quite obvious differences in 2nd and 3rd (Figure 7-2 in Annex 1) with the 1st decile cut-off being only 19% of the non-weighted EU average legging substantially behind, more than the income of higher deciles (Figure 7 3 in Annex 1).

[20] Data on absolute poverty line can be found in Mladenović (2017)

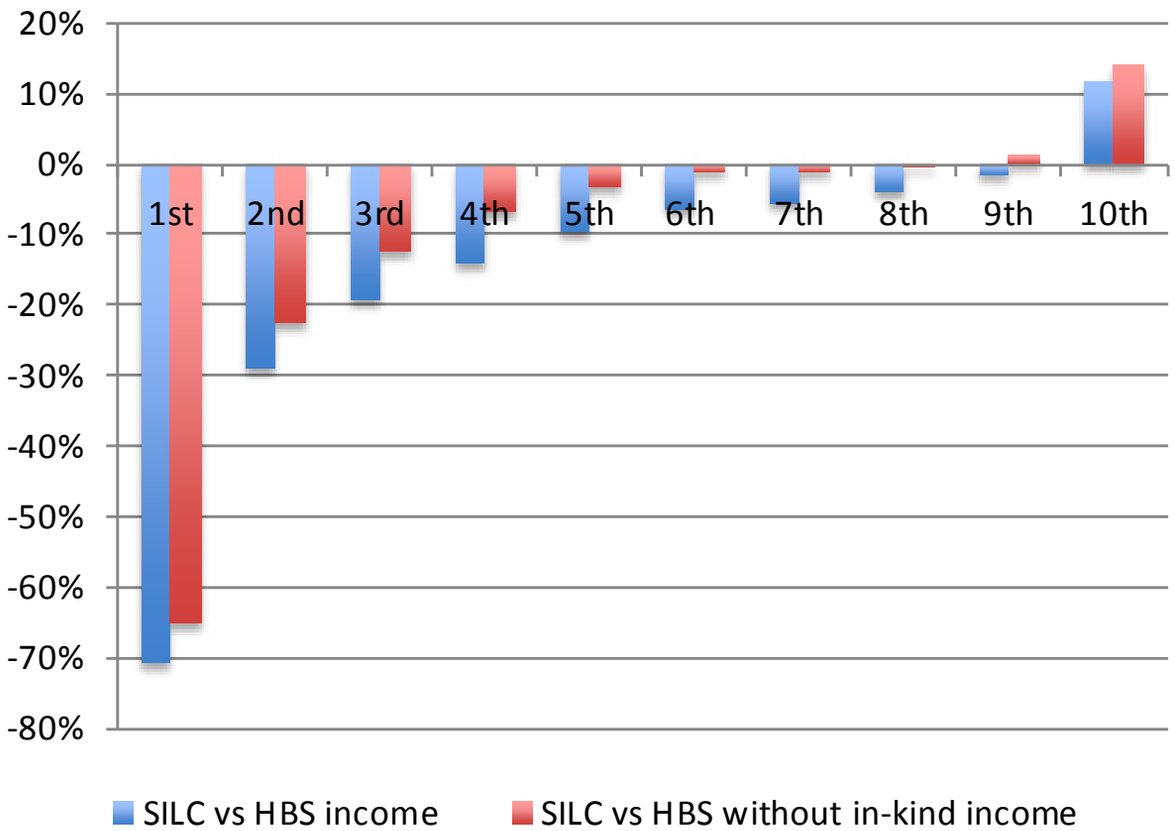


Figure 3-6 Percentage difference between mean by deciles, SILC vs HBS income data for 2015
Source: Authors' calculation based on SILC 2016 (data for 2015) and HBS 2015 (data for 2015)
Note: OECD-modified equivalence scale applied to both SILC and HBS income data;
HBS income includes income in-kind (see methodology for details)

Discrepancy in the 1st and other bottom deciles can be explained by HBS income in kind[21] only to some extent, while the difference in the top deciles actually increases (Figure 3 6). When in-kind income is estimated according to HBS data and added to SILC income, the mean first SILC decile income increases by more than 50% (Figure 7-1 in Annex 1).

T**reatment of negative income values and outliers explains another «portion» of discrepancy both between SILC and HBS data in Serbia as well as SILC Serbia compared to other EU countries[22]**. If we take a closer look at the minimum/maximum values, means and medians, the difference in the 10th decile can easily be explained by extreme values in SILC survey (Table 3-3). Once we remove the outliers, mean values converge and median values of HBS and SILC in 10th decile are almost the same[23].

[21] See methodology for details
[22] See Annex 2 for details.
[23] HBS median income is slightly higher, which is expected due to in-kind income included in HBS data

These two methodological changes together lower the s80/s20 ratio by 3 points, as shown in Table 3 4.

Official SILC data (without in-kind and imputed rent)	In-kind income included	In-kind income included, negative/extreme TDI values excluded
9,7	8,2	6,7

Table 3-4 The S80/S20 income quintile share ratio - SILC income for 2015, with and without in-kind income and negative/extreme total disposable income values
Source: Authors' calculation based on SILC (2016) and HBS (2015) for in-kind income estimation
Note: TDI – total disposable income

Finally, **pro-poor social transfers such as financial social assistance and child allowance is underestimated in the Serbian SILC by 20%-23%** (Krstić, 2016: 30). Accordingly, income inequality would be somewhat lower if social assistance was adequately captured. In addition, inequality in Serbia would have been somewhat lower if imputed rent was taken into account as argued by Milanović (2003: 65). This finding is in line with at-risk of poverty rates by tenure status in Serbia, which shows a higher at-risk of poverty rate for owners (24.9) than for tenants (18.2), contrary to EU countries (Mijatović, 2015: 29). This is due to the socialist heritage, where state-owned housing stock was privatised to tenants, hence poor population also owns apartments, while only wealthier can afford renting[24].

Lack of employment is a key reason of inequality, both according to SILC and HBS self-defined economics status – less than 10% of population from 1st decile is declared as employed worker. Though the data on unemployment significantly differ between two surveys, it is also clear that unemployment is a critical driver of inequality. SILC and HBS show quite different pictures when it comes to self-employment (including farmers), but it is clear that self-employment is more present in the lowest decile. HBS data, which are more detailed when it comes to self-employment, show that the self-employed with employed workers are actually more present in 10th decile (2,8% compared to 0,8% in the 1st) while it is the opposite for those without employed workers (14,8 in the 1st decile compared to 7,5 in 10th) (Table 3-5).

[24] One should keep in mind that imputed rent can also act as pro-poor income in other ex-socialist countries, though this seems to be the case only in Macedonia and Bulgaria. When median equalised net income of owners and tenants are compared, the median income of owners is higher in all countries except in Serbia, Bulgaria and Macedonia where this difference is most pronounced (based on Eurostat, EU-SILC data).

	1st decile		10th decile	
	SILC	HBS	SILC	HBS
Employees	9,5	7,9	51,4	47,3
Self-employed, including family worker	7,9	21,3	4,2	12
Unemployed	54,4	32,3	9,6	3,2
Pupil, student, further training, unpaid work experience	8,3	9,9	5,5	6,6
In retirement or in early retirement	8,4	15,3	27,8	28,5
Permanently disabled or, and unfit to work	0,9	0,9	0,3	0,2
Fulfilling domestic tasks and care responsibilities	7,9	9,6	0,9	2,1
Another inactive person	2,6	2,7	0,2	0,1

Table 3-5 Self-defined economic status of 1st and 10th decile (15+), SILC and HBS
Source: Authors' calculation based on SILC (2016) and HBS (2015)
Note: According to HBS data self-employed with workers are more present in 10th decile (2,8% compared to 0,8 in the 1st) while it is the opposite for self-employed without workers (14,8 in the 1st decile compared to 7,5 in 10th)

Income from employment is a dominant source of income in higher deciles, while typical pro poor-income are social transfers[25] and income in kind[26] (Figure 3-7 and Figure 3-8). Pensions are the most important income for lower and middle deciles, but not for the 1st decile. SILC data allows us to analyse pension income by pension type and as expected, dominant pensions in lower deciles are survivors and farmers pensions (Figure 7-9 in Annex 2).

[25] Social transfers are most likely an even more important source of income for 1st decile, but are not adequately captured in both surveys.
[26] According to HBS which allows measurement of in-kind income.

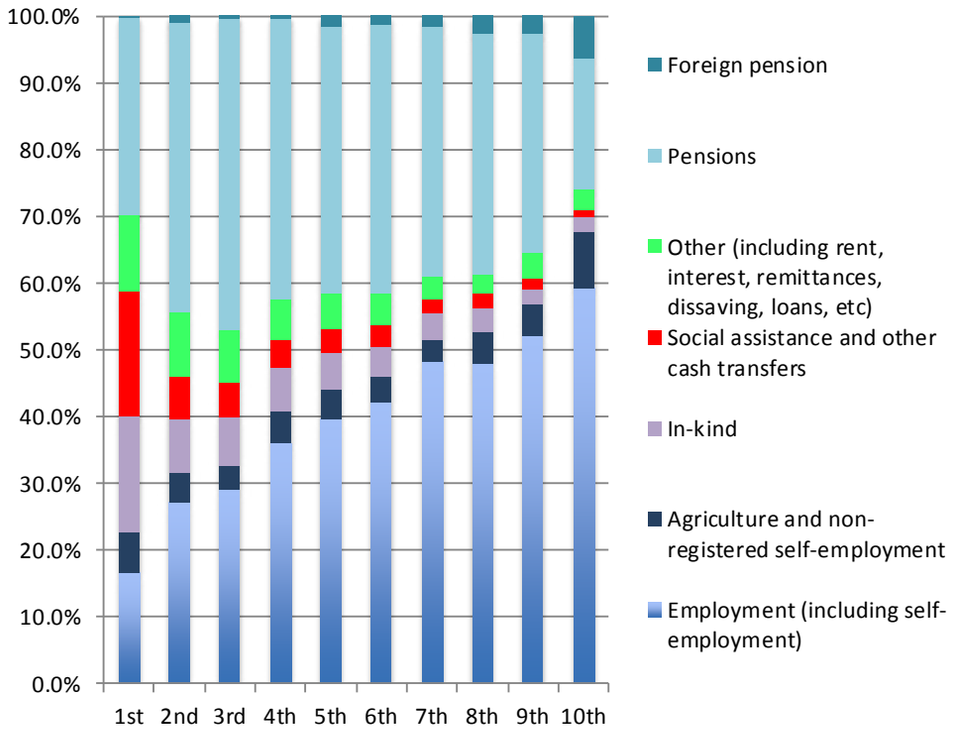
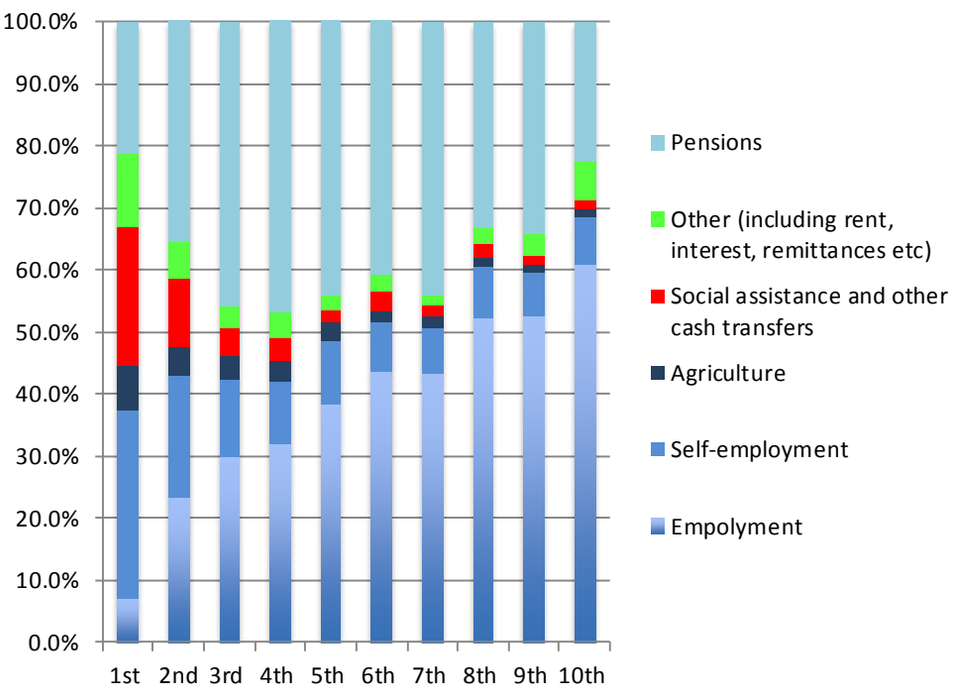


Figure 3-7 Decile income by type, HBS
Source: Authors' calculation based on HBS 2015 income data



Source: Authors' calculation based on SILC 2013 [27]
Note: In the 1st SILC wave agricultural income was partly recorded as self-employed, partly as agricultural

[27] For later surveys SILC micro database is not available for research, hence it is not possible to calculate type of income in detail

Profile of the bottom 20% and 40% population

Gender structure of the bottom 20% and 40% is very similar to total population, both according to SILC income and HBS consumption (Figure 3-9.)[28].

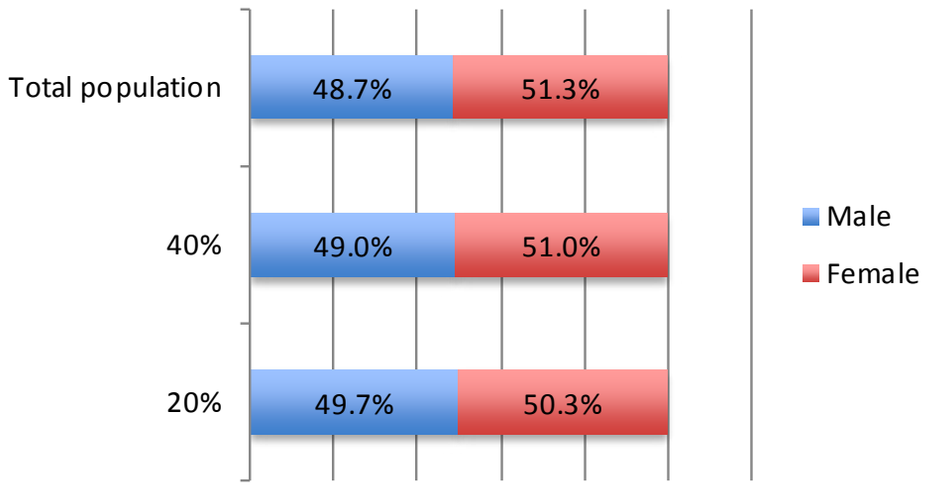


Figure 3-9 Gender structure of poorest 20% and 40% population (per capita)
Source: EU-SILC (2016)

The share of population from thinly-populated areas is higher within the poorest population, particularly the bottom 20%, than in the overall population. For example, 50% of the bottom 20% comes from the thinly-populated areas in Serbia while comparable share is below 40% for total population. Likewise, the incidence of population from densely-populated areas is lower for almost 10 pp compared to total population and also slightly lower for intermediate urbanized areas (Figure 3 10). This result is in line with poverty rates, which are typically higher in rural areas[29].

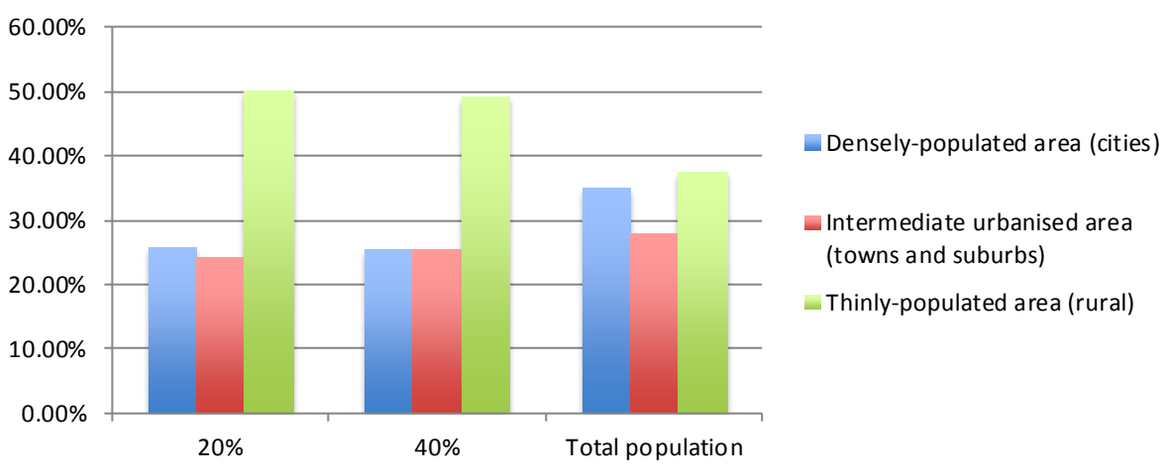


Figure 3-10 Bottom 20% and 40% population (per capita) according to degree of urbanization
Source: EU-SILC (2016)

[28] Similar results are obtained from HBS, bottom 20% and 40% consumptions (Annex3, Figure 7 10).
[29] For example, based on the first EU-SILC survey conducted in 2013, at-risk of poverty rates for thinly-populated areas were as high as 37-38% while for densely-populated areas it was below 15% (Matković, G., Krstić, G., & Mijatović, B. (2015). Srbija: prihodi i uslovi života, 2013. Republika Srbija, Republički zavod za statistiku, page 23.)

Very similar findings are obtained from HBS consumption data. Although the type of settlements is not defined in the same manner, the conclusion is still the same – the incidence of persons from "other" (non-urban) settlements is higher within bottom quintiles (Figure 3-11).

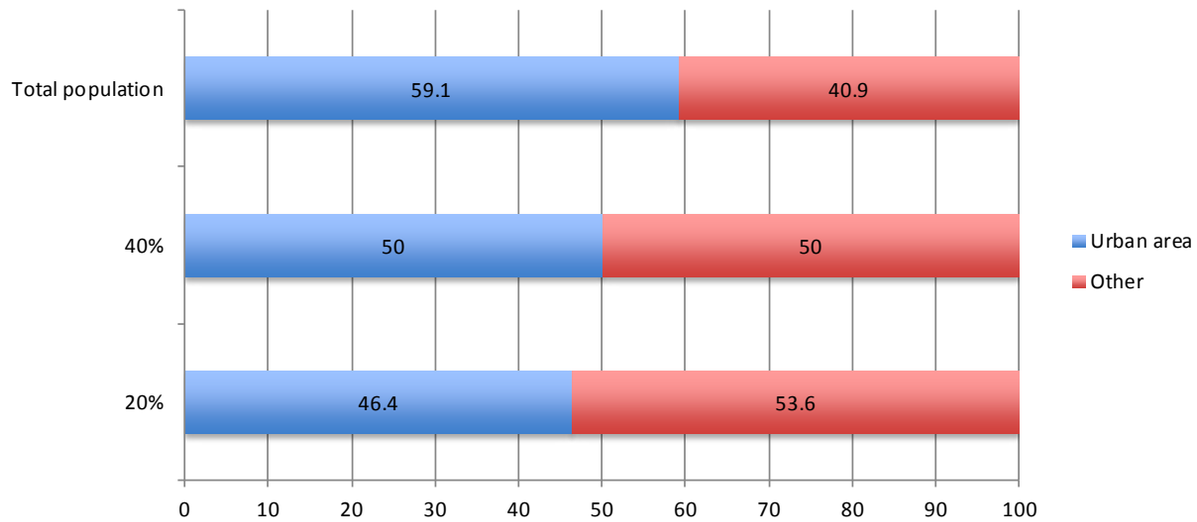


Figure 3-11 Bottom 20% and 40% population (per capita) according to type of settlement, HBS consumption
Source: Authors' calculation based on HBS (2016) – consumption

The incidence of population from East and South Serbia is higher within the poorest compared to total population while it is reverse for the Belgrade region. There is also slightly more people from Vojvodina in the poorest quintiles (Figure 3-12.) East and South Serbia are found to be the poorest regions in the poverty analysis as well, both absolute and relative[30]. In addition, HBS consumption data confirms these findings[31].

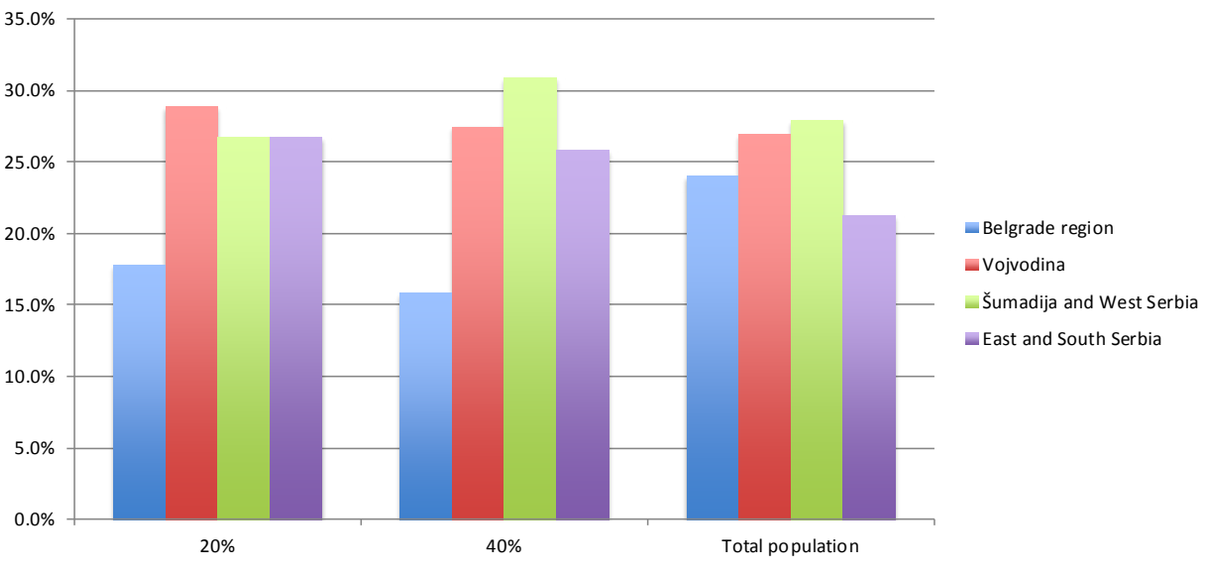


Figure 3-12 Bottom 20 and 40% population (per capita) by regions, EU-SILC
Source: Authors' calculation based on EU-SILC (2016)

[30] Mladenović, B. (2017). Siromaštvo u Republici Srbiji 2006-2016. Tim za socijalno uključivanje i smanjenje siromštva Vlade RS: Beograd; Matković, G., Krstić, G., & Mijatović, B. (2015). Srbija: prihodi i uslovi života, 2013. Republika Srbija, Republički zavod za statistiku
[31] Annex 23, Figure 7-11

The unemployed represent the majority of the poor population, according to SILC income data. The self-employed and inactive persons - such as pupils/students, persons fulfilling domestic tasks and care responsibilities, and the disabled are also more present within the poorest population. Employed and retired persons are significantly better off and their incidence in the bottom 40% and in particular the bottom 20% is considerably lower than in the overall population. Still, almost 25% of the poorest quintile are employed and retired persons (Figure 3-13.)

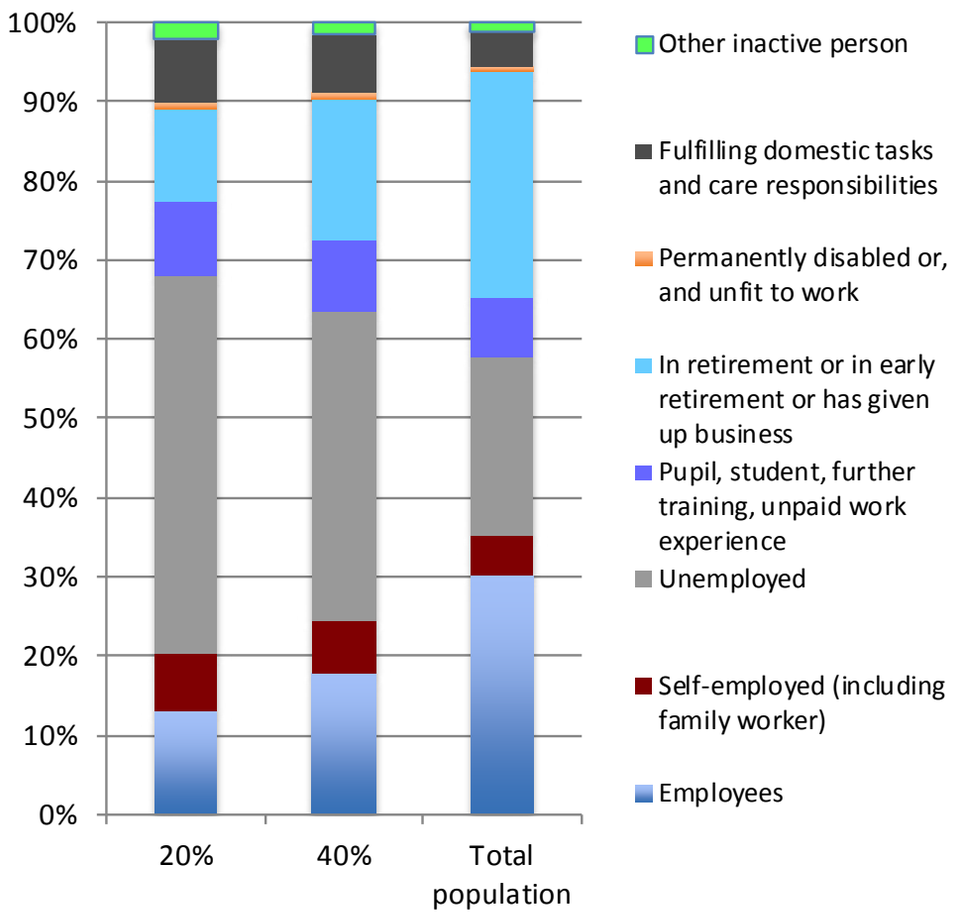


Figure 3 13 Self-defined current economic status (15+) of the bottom 20 and 40% per capita, SILC income data
Source: Authors' calculation based on EU-SILC (2016)

The economic status of the poor is somewhat different when the analysis is based on HBS consumption data – the majority of poor population consists equally of unemployed as well as pensioners (Figure 3 14). The self-employed with employed workers, do not appear to be worse off, while the self-employed without workers are worse off but not substantially (Table 7-3 in Annex 2).

The major difference between SILC income and HBS consumption data is with regards to pensioners, who are significantly better off according to SILC income, while according to the HBS consumption they are only slightly better off. The interpretation may be the following – the pension system in Serbia is actually quite successful in poverty prevention. However, consumption behaviour may be explained with research showing that "the elderly spend less than the nonelderly at the same level of income" (Danzinger et al., 1982: 22), what is in literature dubbed "retirement-consumption puzzle" (Banks et al., 1998; Disney & Tanner, 1999; Hurd & Rohwedder, 2003).

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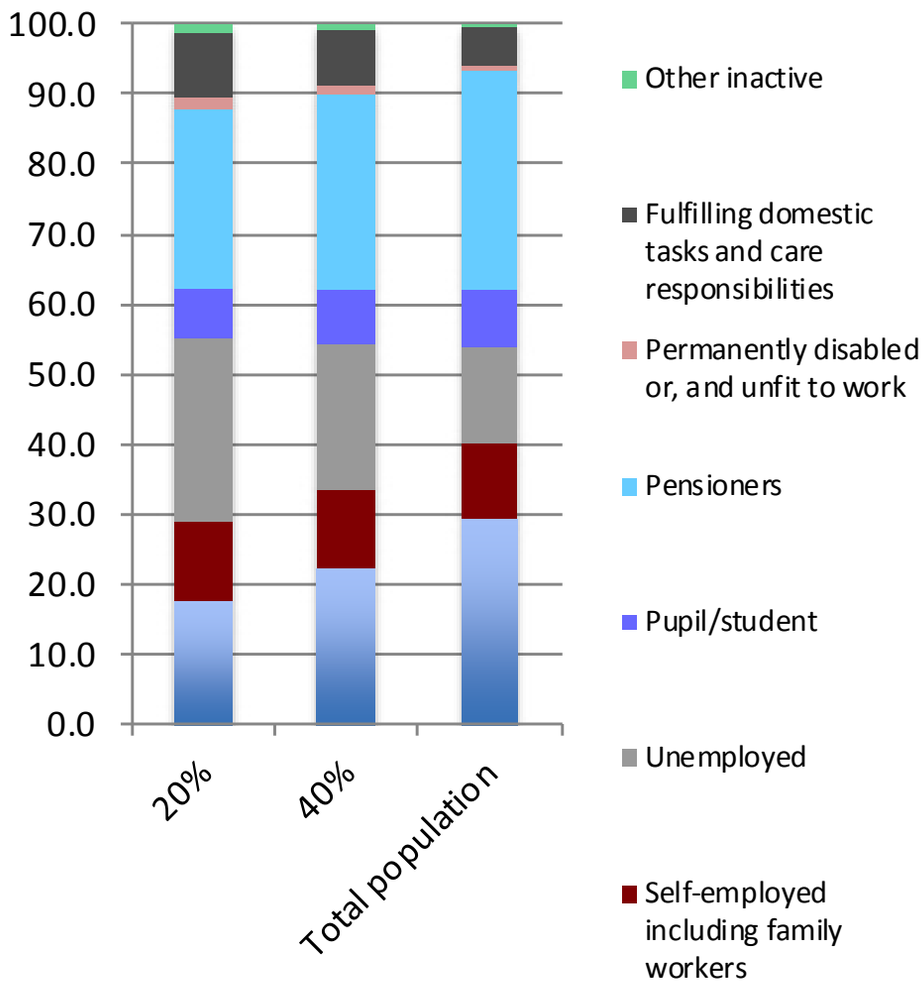

Figure 3-14 Self-defined economics status (15+) of the bottom 20 and 40% per capita, HBS consumption data
Source: Authors' calculation based on HBS (2016) – consumption

Children and young adults are more present in the poor population while the elderly – the male elderly in particular, are better off according to SILC data (Table 3 6). The reason why elderly males are better off is because women more often live alone in the old age due to longer life expectancy. Similar results are obtained when compared with HBS income data[32]. However, when HBS consumption data are analysed, the elderly are only slightly better off (Table 3 7). This again may be explained by the elderly/pensioners consumption behaviour.

	20%		40%		100%	
	Male	Female	Male	Female	Male	Female
0-17	23,1	22,9	22,2	20,9	17,4	15,9
18-24	10,6	10,5	9,9	9,6	8,1	7,3
25-64	58,2	54,6	56,9	52,8	56,6	54,6
Elderly 65+	8,1	12	11,1	16,6	17,8	22,3

Table 3-6 Bottom 20/40% population (per capita) by age and gender, SILC income data
Source: Authors' calculation based on EU-SILC (2016)

	20%		40%		100%	
	Male	Female	Male	Female	Male	Female
Children 0-17	23	21,8	21,4	19,1	17,1	14,8
18-24	8,3	6,8	7,5	7,3	8	6,7
25-64	51,4	48,9	52,5	49	54,8	53,1
Elderly 65+	17,3	22,4	18,6	24,7	20,1	25,5

Table 3-7 Table Bottom 20/40% population (per capita) by age and gender, HBS consumption
Source: Authors' calculation based on HBS (2016) – consumption

[32] Table 7-4 in Annex 2 (incidence of the elderly is still higher when HBS income data is analyzed, simply because they are represented in the HBS more than in the SILC and in the population according to RSO estimates, see table Table 7-5 in Annex 3 for comparison of SILC, HBS and RSO estimates of total population by age and gender).

Children and young adults, being in the households with more dependent persons, are typically worse off than overall population. However, one should bear in mind that above presented results are calculated on per capita basis, hence these results are slightly overstated since household economy of scale was not taken into account.

Frequency of population with education below secondary is significantly higher, while that of highly educated persons is significantly lower in the poorest population compared to total population, according to HBS consumption data. In the overall population, around 30% of population has less than secondary education, while in the bottom 20% this share is almost 50%. Conversely, the incidence of highly educated population is more than two times higher in the total population compared to the poor. Still, there is 6% of highly educated among the poorest 20% (Figure 3-15). Education profile by SILC is very similar[33].

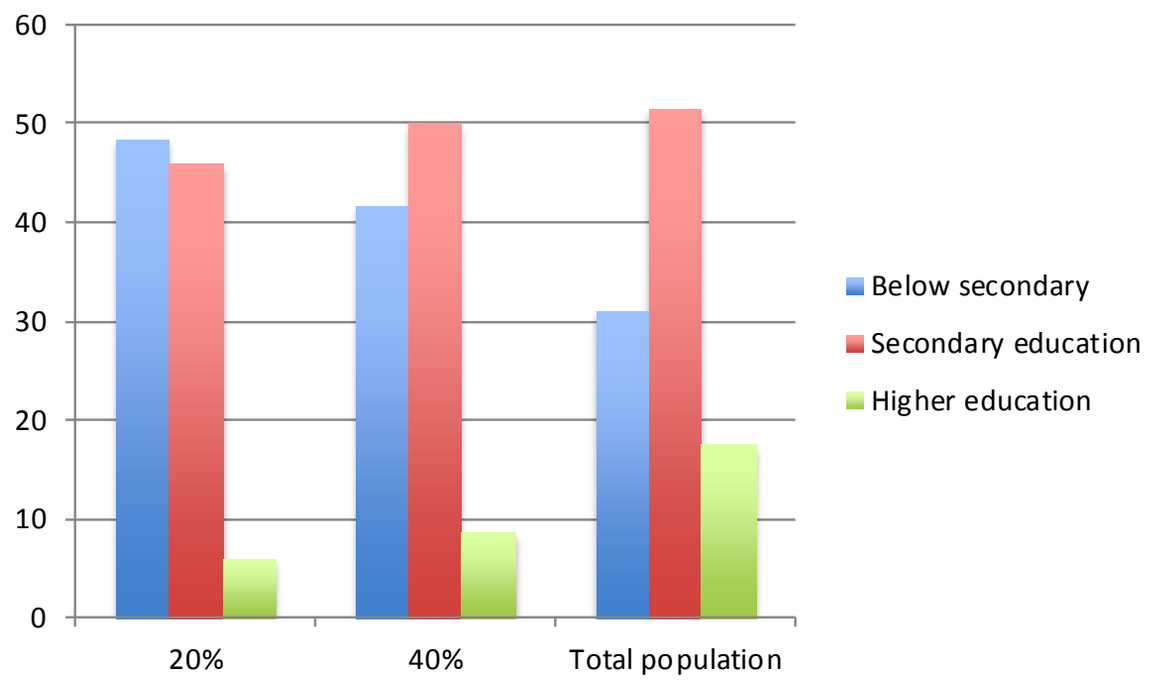

Figure 3-15 Bottom 20/40% population (per capita) 15+ by education
Source: Authors' calculation based on HBS (2016) – consumption

Multi-member households particularly 6+ are significantly more present within the poor population - by 9pp compared to total population. The incidence of households with less than 4 members is lower while 4-member families are slightly more represented within the bottom 20/40% population, according to SILC income data (Figure 3-16). HBS consumption data show very similar profile, while the incidence of 6+ member families is even more pronounced within the poor compared to total population – by more than 14pps (Annex 2 Figure 7-13).

[33] Figure 7 12 in Annex 2 for education structure of poorest quintiles according to SILC income data

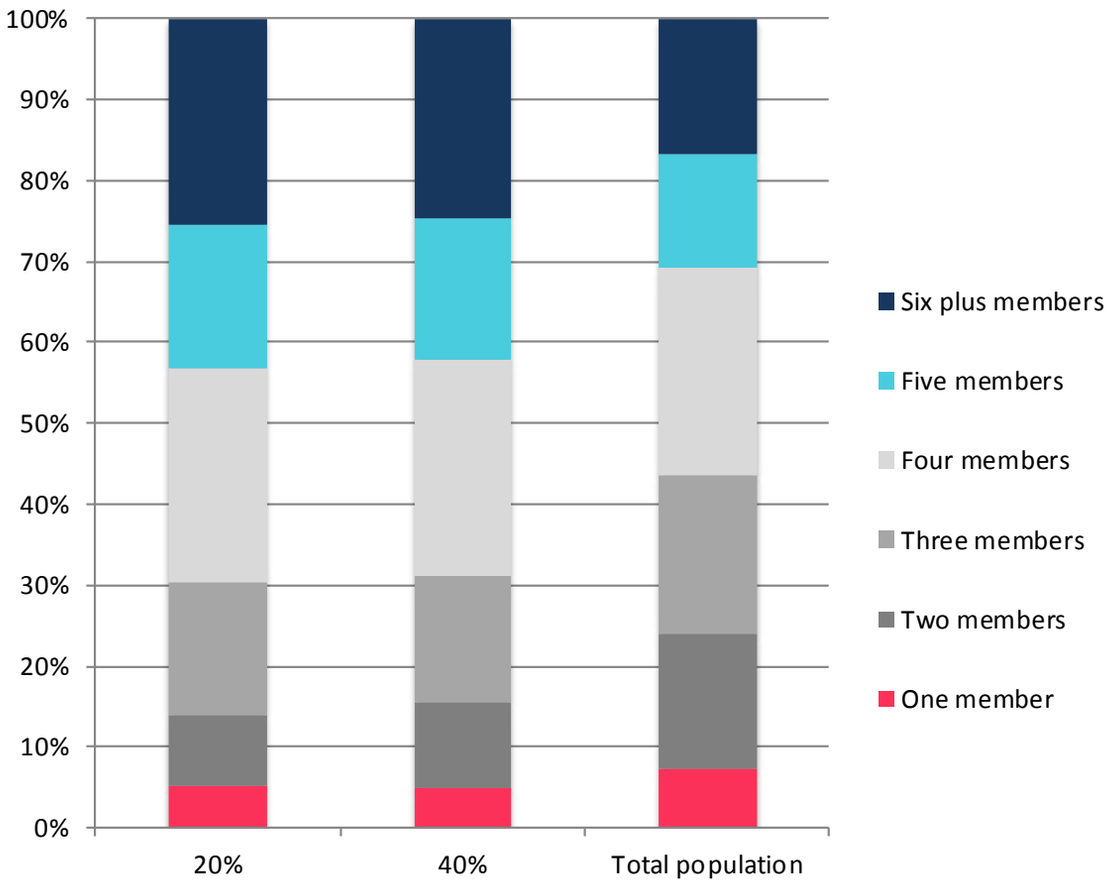

Figure 3-16. Bottom 20/40% population (per capita) by number of household members
Source: EU-SILC (2016)

Households with 6+ members are also found more vulnerable in the absolute poverty analysis (Mladenović, 2017:13). Again, it should be borne in mind that the above results are based on per capita analysis not taking into account households' economy of scale, therefore somewhat overstating vulnerable position of multi-member households.

Multi-member households with dependent children (two adults with 3+ children and 3+ adults with children), as well as single parent households are significantly more present within bottom quintiles. Two adults with two dependent children are just slightly more frequent within poor population compared to total, while single-person households younger than 65 are significantly more present in the bottom 20%. Conversely, elderly households and adults without children are better off, according to SILC income data (Table 3 8). HBS consumption data show the same pattern for multi-member households, while single-person households younger than 65 are better off as opposed to SILC data. In addition, elderly families are slightly worse off, which is again in line with previous findings based on economic status and age. Single elderly households show the same pattern in both SILC income and HBS consumption data[34].

[34] See Table 7 7 in Annex 3 for structure by household type according to HBS consumption.

	20%	40%	100%
One adult younger than 65	14,2%	9,2%	8,1%
One adult 65+	4,6%	7,8%	13,3%
Two or more adults 65+	2,5%	4,5%	7,6%
Two adults, no dependent children (one adult 65+)	3,2%	4,9%	7,0%
Two adults, no dependent children, younger than 65	8,1%	7,5%	9,4%
One adult with dependent children	5,2%	4,6%	3%
Two adults with one dependent child	6,8%	6,5%	6,8%
Two adults with two dependent children	10,9%	11,0%	9,3%
Two adults with three or more dependent children	4,0%	3,2%	1,6%
Three or more adults with dependent children	24,0%	24,1%	16%
Three or more adults without dependent children	16,5%	16,7%	18,2%

Table 3-8. Bottom 20/40% population (per capita) by household type
Note: Share of household type in total number of households
Source: Authors' calculation based on EU-SILC (2016)

Two adults with 3+ dependent children are also at higher risk of poverty, while this is not the case for 3+ adults with dependent children, which is quite intuitive due to more adults contributing to total household income (Matković et al., 2015: 26). This is not evident though in the above analysis, again due to the per capita approach.

Main findings

Income inequality in Serbia is high according to European standards and SILC data. Two most commonly used **SILC-based income inequality measures** clearly indicate this. Both Gini coefficient (38.6) and S80/S20 income quintile share ratio (9.7) are considerably higher than in any EU country. Inequality has been fairly stable since 2012 i.e. since the income data were recorded through the first SILC (2013) survey in Serbia.

Income distribution by deciles reveals that in Serbia the income share of the first decile is lower and the income share of the richest decile is higher than the EU average (Figure 7 2 in Annex 1). The difference diminishes in the medium income brackets.

The first decile income especially stands out. The income share of the first decile in total national disposable income is only 0,9%, far below the share in any EU country[35].

According to SILC (2016) data, the first decile income mean in Serbia is only approx. 2,500 RSD (23 USD) per equivalent adult and median income is approx. 3,800 RSD (35 USD) (Table 3 3). These amounts are extremely low and far below basic needs according to the absolute consumption poverty thresholds[36]. The first decile income would be higher if we add in-kind income (for approx. 1350 RSD per equivalent adult or 12 USD). Still, the amount is too low especially since surveys usually don't capture extremely vulnerable population, such as Roma living in substandard settlements.

On the other hand, the median income of the richest decile is approx. 64,000 RSD (588 USD) per equivalent adult. The family of two adults and one child thus has an income of approx. 122,000 RSD or 1.121 USD. It is only fair to claim that these incomes are not captured as well, since wealthy households do not usually participate in surveys. UNDP's 2016 Regional Human Development Report (UNDP, 2016c:27) indicates under-reporting of incomes in upper-income households all across the region. Across EU member states this issue is considerably less severe in register countries (Törmälehto, 2017). When it comes to the super rich, according to Milanović and Ersado (2008, p. 87) and Milanović (2012: 13) they are only a tiny part of the population in the transition countries and in Serbia, and a random sample would exclude them anyway.

Three methodological caveats partly explain high inequality in Serbia and large differences in income inequality between Serbia and EU countries, according to the SILC survey. First, SILC survey only partially includes in-kind income, if it does at all[37], that would ceteris paribus reduce the distributional differences in Serbia compared with more advanced economies and EU average. Second, the inequality would be lower and the difference smaller if the Serbian survey better captured social assistance benefits targeted towards the poor, since this problem is not present in the majority of the EU countries. The third caveat relates to a different treatment of negative income and outliers. Methodological differences between the countries are the result of the survey flexibility. "The flexibility of the EU SILC instrument may be seen as both its main strength and its main weak¬ness. While flexibility should allow embedding EU SILC into the national systems of social surveys, the lack of harmonisation can affect comparability across countries" (Di Meglio et al. 2017: 56). These methodological specificities affect the results.

First, **in Serbia some types of in-kind income are particularly important for lower income households** - if we add food, wood and some other items consumed according to HBS data, the mean first SILC decile income will increase by more than 50%.

[35] According to SILC (2016) data, it is only half of the level recorded even in the EU countries with the lowest corresponding share (e.g Bulgaria, Romania and Italy 1,8%) and more than three times below non-weighted EU average (3,0%)
[36] Absolute poverty line in 2016 was 11694 RSD (~105 USD) per equivalent adult (Mladenović, 2017)
[37] See methodological notes

Several countries rely on HBS data for calculating both own consumption and self-employment income. In Romania, according to Domnisory (2014: 14), in both SILC and HBS "agricultural products from own consumption which are consumed in the household are imputed at market prices using consumption diaries and regional prices in the HBS"[38]. In addition to Romania, Belgium, the UK and Finland also use other surveys to estimate the value of goods from own consumption instead of SILC (Čomić, 2018). According to SILC quality reports, some countries take unit costs from HBS (Estonia, Latvia), and Slovenia's report states that "for preparing the model of own production we used HBS as reference source". Related to self-employment income some countries use registers and administrative data.

Second, according to Krstić (2016: 30) **the number of FSA and child allowance beneficiaries in Serbia[39] is underestimated in SILC (2013) by 20-23%.** This indicates that actual level of inequality in Serbia is lower than observed. This share is not negligible since the level of FSA in 2015 was higher than 7,840 RSD (~72 USD) per equivalent adult, similar to the top cut-off point of the first decile. In an increasing number of EU countries incomes are taken from the administrative sources reflecting the accurate income from means tested social benefits. Some countries use register data for all sources of income (old register countries: Denmark, Finland, Ireland, the Netherlands, Sweden and Slovenia and new register countries: Austria, Spain, France and Italy[40]) and some use a combination of registers and surveys, mainly relying on administrative data for cash social benefits (Cyprus, Estonia, Latvia, Lithuania)[41].

Third, **different treatment across EU countries of negative/zero incomes and outliers adds to the problems of comparability.** As pointed out in ILO (2015: 63) in EU SILC "there is no standardized procedure across countries regarding the manner in which negative, zero and very large values are treated". Top or bottom coding of income variables leads to lower inequality figures". Contrary to Serbia, other countries intervene in their database. Earlier studies indicate that only half of the countries record negative values for income from self-employment and that only one-third permit negative values for total gross income (Eurostat, 2007, 62)[42]. Increased use of registers as income source in many countries additionally adds to comparability issues since the definition of income from self-employment (profit and loss) varies according to these two sources[43] (Burricand, 2013: 119).

Further understanding leads to exploring the HBS income data.

Gini coefficient and income quintile share ratio **based on HBS income data are substantially lower. Gini (30.4) is lower** for one fifth (8 points) and S80/S20 ratio is only approx. half of the value calculated based on SILC data (5 compared with 9.7) According to HBS dataset, income inequality it is even slightly decreasing compared with ten years ago (Table 3-1 and Table 3-2).

This kind of discrepancy between the two surveys is rare. Based on Eurostat analysis the difference of this magnitude existed in 2010 only in Bulgaria and Lithuania, countries with the highest SILC based income inequality indicators (Eurostat, 2015). The latest national quality reports for SILC also confirm this finding.

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[38] In 2015 Gini coefficient according to HBS and SILC data in Romania is similar, 32.5 and 34.7 respectively http://ec.europa.eu/eurostat/web/income-and-living-conditions/quality/eu-and-national-quality-reports

[39] These are the only two benefits targeted to the poor in Serbia

[40] According to Di Meglio et all. 2017

[41] http://ec.europa.eu/eurostat/web/income-and-living-conditions/quality/eu-and-national-quality-reports

[42] It was suggested that "a common methodology for the treatment of outliers (especially negative income components) should be used at national and EU level" (Eurostat, 2007, 29)

[43] "In the income tax return, the entrepreneurial income corresponds to the concept of profit or loss. However negative incomes represent, in most cases, the flow of income drawn by self-employed people from their business activity for personal and household's needs. In the survey, the concept of income for entrepreneur was therefore more directly measured with a question on the money drawn out of the business for personal use" (Burricand, 2013: 119)

Where is the biggest difference between the two sources? Our analysis shows that if we apply the same equivalence scale in both surveys, the biggest difference is in the first decile. According to HBS data, the mean income is 3.3 times higher and the median income is 2.4 times higher in the first decile. The substantial difference is recorded in the second decile as well (40% higher income based on HBS for both mean and median incomes). The difference diminishes as we approach higher deciles and it ceases to exist in 9th decile. In 10th decile the difference ceases to exit for the median income.

To some extent the disparity can certainly be attributed to further methodological differences. Higher income registered in HBS is mainly the result of different treatment of in-kind income and negative values that are turned into zeros for the agriculture income and income from non-registered self-employment, where it may be negative. Still, a part of the disparity cannot be explained by these methodological differences.

We assume that the explanation partly lies in the fact that the majority of the poorest households in Serbia rely on unstable and non-regular incomes mainly from agriculture and grey economy and that it is likely to be under-¬reported if the questionnaire is designed as it is in the SILC. Given the circumstances, it is easier to get a more accurate answer about the poorest decile's income if the time horizon is three months (HBS) rather than the previous year (SILC) and if data collection is based on diary rather than on recall data.

Finally, mean consumption of the poorest according to HBS is 4 times higher than SILC income (RZS, 2016). Eurostat (2013: 9) discloses that "evidence from a range of countries suggests a general tendency for i**ncome to be under-reported by households with low levels of resources, whilst reporting of expenditure by this group is relatively accurate".**

Assessment of the changes in the living standard of the poorest population segments compared with total population also varies depending on the source of data (SILC or HBS) and the criteria used (income versus consumption).

Inequality in Serbia worsens according to the SDG 10.1 indicator based on SILC data. In the period 2012-2015 real disposable income of the bottom 40% declined to a greater extent than for the total population (Chart 3-12). The deterioration of living standards is even more pronounced for the poorest quintile (bottom 20%) whose real income from 2012 to 2015 has declined at a rate of -5%.

The overall picture is different when the same SDG indicator is based on HBS data. In the period 2013 - 2016, both real incomes and consumption per capita of the bottom 40% grew slightly compared to the total population. The difference is more pronounced when based on the consumption data. Also, the real consumption of the poorest quintile increased most, at a rate of almost 4%.

V**ulnerability profiles according to both income and consumption of the bottom 40% are similar regardless of the source of data.** The share of population from thinly-populated areas is higher within the poorest population, as well as the incidence of population outside Belgrade region. While there are no significant differences in vulnerability profiles between men and women, children and youth are more vulnerable. Population with below secondary education is over-represented among the poorest as well as population living in multi-member households, especially with 6 and more members. Consistently, households with dependent children are significantly more present within bottom quintiles. Vulnerability profiles differ more according to self-declared economic status, but it is obvious that employees and pensioners are better off than the rest of population.]

Conducted research indicates that national localized SDG 10.1 target and indicator should additionally include both income and expenditure growth of bottom 20% of the distribution; both SILC and HBS data should be used.

4. OVERVIEW OF STRATEGIC FRAMEWORK, MEASURES AND POLICIES TO REDUCE INEQUALITY

Overview of the national strategic framework in relation to inequality

The challenges related to inequality, measured both by income and consumption have not been recognized as a major issue in the existing strategic framework of the Republic of Serbia. Consequently, the strategic framework of the Republic of Serbia has not defined specific policies dealing with income or consumption inequality. On the contrary, challenges related to poverty and social inclusion are recognized as more relevant policy issues within the Serbian strategic framework, with measures aimed at decreasing poverty and ensuring social inclusion.

Government's Employment and Social Reform Programme (ESRP) is the only policy document which explicitly discusses significant differences in the levels between income and consumption inequality indicators. ESRP notes that "even though consumption inequality measured by the Household Budget Survey (HBS) indicates that Serbia can be classified among countries with an even distribution (the Gini coefficient stood at 0.26 in 2012[44]), the values obtained through a comparable methodology (SILC) point to a highly pronounced problem of income distribution inequality in Serbia (Gini 0.38[45])" (ESRP, 2016). The ESRP also provides partial explanation for this difference saying that "part of the explanation can certainly be found in the fact that the share of goods and services produced for own consumption is high among the households from lower quintiles (over 12% of their total consumption), and that, according to the SILC methodology, this income is not assessed or included in the total income" (ESRP, 2016). The ESRP stresses that this issue has to be additionally addressed through further in-depth research. In this sense, this Human Development Paper contributes to the efforts of the Government of Serbia envisaged in the ESRP.

Horizontal inequality, i.e. inequality which occurs as a result of affiliation with a specific social group and identity, has been more often recognized in the strategic framework of Serbia. This particularly refers to the position of some ethnic minorities (i.e. Roma), sexual minorities or gender equality issues. Policies which relate to the challenges of these groups have been assessed, analysed and developed.

The issue of gender inequality is covered in the most comprehensive way through the strategic framework in Serbia. The analysis of gender inequality as well as the related policy recommendations have been covered by majority of the analysed strategic documents: Gender Equality Strategy, Screening Report Serbia: Chapter 19 – Social Policy and Employment, ESRP, Roma Social Inclusion Strategy.

This chapter presents an overview of the relevant policy framework in the Republic of Serbia dealing with issues of inequality. The following strategic and policy documents have been reviewed for this purpose: 1) Economic Reform Programmes (ERP) for the period 2017-2019 as well as for the period 2018-2020; 2) Employment and Social Reform Programme (ESRP); 3) Strategy for Education Development in Serbia 2020; 4) National Gender Equality Strategy 2016 – 2020 with the Action Plan 2016 – 2018; 5) Strategy for the Social Inclusion of Roma in the Republic of Serbia 2016-2025; 6) Action Plan for the EU Negotiations Chapter 23 (Judiciary and Fundamental Rights); and 7) Screening Report for Serbia for the Chapter 19 (Social Policy and Employment).

[44] Centre for Liberal Democratic Studies, Centre for Social Policy. (2014). Draft Report – Absolute Poverty in the Republic of Serbia and Trends in Measuring Poverty, commissioned by the Social Inclusion and Poverty Reduction Unit.
[45] http://webrzs.stat.gov.rs/WebSite/repository/documents/00/01/25/92/PD10_366_engl.pdf

This strategic framework overview has been prepared taking into consideration both inequality of outcomes (such as income and asset inequality) and inequality of opportunities (access to education, health care, employment), which can have a negative impact on social circumstances. More specifically, this overview takes into consideration inequality which occurs as a result of affiliation with a specific social group and identity.

National Gender Equality Strategy 2016 – 2020 with the Action Plan 2016 – 2018

National Gender Equality Strategy 2016 – 2020 with the Action Plan 2016 – 2018 (further on: Gender Equality Strategy/GES) focuses on different aspects of gender inequality.

The economic status of women and men is mainly determined by their sources of income. According to the Gender Equality Strategy "men comprise the majority of persons for whom the main source of living funds are earnings (58%), followed by financial compensation for unemployed persons (60%), property income (63.8%), as well as loans/savings (64%)". On the other hand, "women comprise the majority among persons for whom the main source of income is a pension (57%), scholarships (56.5%) and social income (55.5%)" (GES, 2016).

Another factor of inequality between men and women in Serbia is "strongly pronounced gender-property inequalities" (GES, 2016). Gender Equality Strategy stresses that "houses where women live in villages are owned by men in 88% of the cases, they do not hold any land properties in 84% of the cases, and they have almost no funds for agricultural production."

The issue of higher unemployment rates among women and their lower income is another factor contributing to gender inequality in Serbia. Gender Equality Strategy warns that "women are the most numerous vulnerable group in the labour market of the Republic of Serbia". The average earnings of men are higher than those of women both in the public and private sectors, primarily due to the concentration of female workforce in less paid sectors. The strategy recognizes that education plays a key role in the mobility of women in the labour market, but it "does not provide for equal earnings" (GES, 2016). Due to lower earnings, women on average have lower pensions as well.

A significant difference in the workload of women and men is another inequality aspect analysed by the Gender Equality Strategy. The difference is particularly based on unpaid labour of women and men, which is evident in the Time Use Survey of the Statistical Office of the Republic of Serbia. Inequality between men and women is observed through the evidence that women "are significantly less covered by pension and health insurance compared to male household members". Strategy says that "a total of 12% of women have no health insurance, while over 60% of women are not covered by pension insurance. The situation is even less favourable for women under the status of assisting members of households – as many as 93% do not make payments for pension insurance, mostly due to lack of funds. This status places them at a greater risk of poverty" (GES, 2016).

The issues of rural poverty and regional inequalities have been specifically analysed in the Gender Equality Strategy. Strategy notes that "women living in rural areas comprise one of the most vulnerable groups regarding equal opportunities for making use of human rights in all areas of public and private life, from the possibility of participating on an equal footing in positions of power and decision-making in the state, community and family, to access to healthcare, educational, social and other services, finance and other resources, as well as the inheritance of farms and other property"(GES, 2016).

The Strategy defines a specific strategic goal (goal 2) aimed at increasing equality of men and women by implementing an equal opportunities policy and measures. Two specific objectives are linked to this goal of the Strategy:

1. **Improving economic and labour market status of women.** This objective covers measures to eliminate obstacles for women's access to employment, career advancement, professional development and all resources without discrimination on any grounds. This specific objective also envisages ensuring access to regular income through formal employment, self-employment, or running an own business or family farm.
2. **Promoting equality of women and men in rural areas and ensuring equal access to development results.** This specific objective defines a more general goal of "restoration of social cohesion and the creation of a favourable economic environment that will improve the quality of life of women and men alike". This objective requires actions from "all sectors (economic, social, cultural, healthcare) and all levels (state, local government, rural community) while activating various stakeholders.

The Economic Reform Programme (2017-2019 and 2018-2020)

The Economic Reform Programmes for periods 2017-2019 and 2018-2020 note that the "inequality of income distribution is high, as shown by the indicator of quintile distribution" (ERP, 2017-2019). The ERP uses income based inequality indicators and SILC statistics noting that "the most affluent 20% of the population had 9.7 times higher equalised income compared to the poorest 20%, and the Gini coefficient, which stood at 38.6 (which is above its average value in the EU-28 – 31, SILC, 2015)" (ERP, 2018-2020).

Gender inequality is another aspect of inequality noted by the ERP – according to the ERP "gender equality in Serbia is still not at a satisfactory level" (ERP, 2017-2019). Main domains of the gender equality index show that the biggest gap in gender equality between Serbia and the EU is in the areas of work and money. "When it comes to managerial positions in public enterprises, the situation improved, because in 2016, as much as 22% of women have been in positions of general managers and board members, which is an increase of 9 pp against 2015" (ERP, 2017-2019).

Challenges in employment sector are one of the key obstacles to competitiveness and inclusive growth, notes the ERP. More precisely, ERP stresses that "large numbers of employees working in the "grey" zone, gender inequality in the labour market, as well as the limited funds for active labour market measures constitute the main problems and challenges of the labour market in Serbia" (ERP, 2017-2019).

According to ERP, the main challenges for the social welfare system include: "prevalence of poverty, insufficient coverage and adequacy of cash benefits designed to protect the poor, the low quality of services coupled with weak mechanisms for oversight, regulation, monitoring and evaluation". Similar to the ESRP, ERP also concludes that "there is a considerable scope within the existing envelope to improve the quality of social protection" (ERP, 2017-2019).

Economic Reform Programs 2017-2019 and 2018-2020 do not recognize specific measures and policies which directly deal with the issue of inequality. However, as for the priority reforms in the social sectors, the ERP envisages the following: improving adequacy, quality and targeting of social protection through the

"increase of adequacy of cash payments and improvement of availability and quality of social welfare services through amendments in the legislation", "IT interconnection of different sectors", "increase efficiency of social benefits for people below the poverty line" and creating a "sustainable institutional setup for promotion of gender equality" (ERP, 2017-2019). Similarly, measures have been defined within ERP 2018-2020: "Improving the adequacy, quality and targeting of social protection – Increasing the adequacy of cash benefits and improving the accessibility and quality of social protection services, as well as linking different sectors' information systems" (ERP, 2018-2020).

Employment and Social Reform Programme (ESRP)

According to the ESRP, the main challenges in the sphere of social and child protection is that the "living standard is low and poverty is prevalent". The absolute poverty rate measured by consumption shows that in Serbia, in recent years, between 6% and 9% of the total population has not been able to meet even its basic needs.[46] According to the ESRP, "the 2012 at-risk-of-poverty rate of 24.6% and the severe material deprivation rate of 27% show that the level of vulnerability is substantially higher, judging by the low-income levels and the inordinate number of items that individuals in Serbia cannot afford. According to these indicators, in particular the at-risk-of-poverty rate, the level of vulnerability in Serbia is higher than in the EU Member States" (ESRP, 2016).

The ESRP stresses different aspects of inequality through presenting the position of the most vulnerable groups. "In Serbia, as in many other countries, child poverty rates are considerably higher, and research, especially from earlier years, warns of a pronouncedly disadvantaged position of certain groups, such as the Roma, particularly those in informal settlements, internally displaced persons, persons with severe disability, the elderly without pensions, individuals without education or with low education levels, non-urban population" (ESRP, 2016).

One of the main challenges in the sphere of social and child protection in Serbia relates to the need to increase the coverage and improve the adequacy of means-tested cash benefits. "In comparative terms, the amounts of financial social assistance and child allowance are low in relation to those in the EU Member States. In relation to the new Member States, the amounts – particularly child allowance – are not wholly unsatisfactory.[47] "Another challenge relates to "maintaining pension adequacy and safeguarding the living standard of the elderly". Also, the ESRP stresses that the "living standard of the elderly without pensions must be safeguarded" (ESRP, 2016).

The ESRP specifically stresses the issue of relatively unequal access to health services. According to the ESRP "one in five Serbian citizens has statutory health insurance in compliance with Article 22 of the Law on Health Insurance[48]. These persons are not insured on the grounds of employment, pensions, self-employment, agriculture, etc. For these persons, the funds for statutory health insurance contributions are provided from the budget of the Republic.

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[46] Mijatović, B. (2014). Absolute Poverty in Serbia 2011-2012, CLDS and CSP, draft.

[47] In 2010, child allowance for the first child aged 3–6 amounted to 40 PPS in Serbia, which was equal to or higher than that in former transition countries, except Hungary and Slovenia. Matković, G., Mijatović, B. (2012). Program dečijih dodataka u Srbiji: Analiza i predlozi za unapređenje. Beograd: Centar za liberalno-demokratske studije

[48] Law on Health Insurance. Official Gazette of RS Nos 107/2005, 109/2005 – corrigendum, 57/2011, 110/2012 – Constitutional Court decision and 119/2012.

These funds are considerably lower than the amount required under the law governing statutory social insurance contributions, which compromises access to health care, not only for them, but also for the overall population[49]. The 65+ population in rural areas, the Roma, persons with disabilities, refugees and expellees are particularly vulnerable. The statutory health insurance does not cover approximately 3.3%[50] of Serbian citizens and these people are not entitled to health care provided under the statutory health insurance, except emergency medical assistance" (ESRP, 2016).

Strategy for Education Development in Serbia 2020

Strategy for Education Development in Serbia discusses measures to ensure equal access and integration of all students into education system. The Strategy defines policies and measures to cover "all costs of the educational process, in order to provide universal accessibility and application of the principles of excellence at the highest level of formal education" (SEDS, 2012). More precisely, the Strategy develops a number of specific measures focusing on the education of ethnic minorities, gifted pupils and students, and persons with disabilities and/or developmental delays.

Regarding the issue of inequality, the Strategy for Education Development puts a special focus on growing "regional economic polarization" (SEDS, 2012). The Strategy stresses that the scale of regional disparities is characterized by an intensive process of population decline in rural, near-border, underdeveloped and industrially devastated areas. The Strategy warns that in 85 municipalities (out of total 145 in Serbia) people are in the stage of deep demographic ageing. In addition, the Strategy stresses that the "underdeveloped area comprises 46 municipalities with more than 813,000 residents, or 11% of the total population". The Strategy concludes that "the problem of regional distortions culminated after the devastating effects of the global recession on the employment and the devastation of the manufacturing industry" (SEDS, 2012).

The Strategy also stresses the issue of social inequality which increases as the result of "powerful waves of recession, with unfinished transformation of the Serbian economy and a huge transition delay" (SEDS, 2012). As a result, Serbia has "one of the highest unemployment rates in Europe". Strategy stresses that one of the biggest related problems is unemployment structure by the level of education in Serbia – in comparison to the EU member states, Serbia has "the highest rate of the unemployed with secondary education (15.9% in 2011, Bulgaria 9.6%, and so on)" (SEDS, 2012).

In order to deal with these challenges, the Strategy defines some of the main policies which cover different aspects of inequality: adjusting the regional distribution of high education institutions as well as the regional network of vocational secondary schools and setting up a system of financial assistance to the poor to ensure social inclusion.

[49] For 2013, RS budget envisaged only RSD 615.05 million for health care of these persons, instead of RSD 15,381.81 million as stipulated in the Law. 2013 Report on Financial Operations of the National Health Insurance Fund. Belgrade, April 2014. Available at: www.rfzo.rs.
[50] National Health Insurance Fund. Available at: www.rfzo.rs/index.php/about-main-47/onama-info

Strategy for the Social Inclusion of the Roma in the Republic of Serbia 2016-2025

Strategy for the Social Inclusion of the Roma deals with the elimination of social inequality and poverty of Roma in Serbia through political, economic, social and financial systems. This Strategy focuses on the issue of economic powerlessness of Roma in Serbia. Data show that "more than one-quarter (27.6%) of Roma households earn their income receiving social assistance" and that the share of Roma among beneficiaries of social safety services is "almost four times higher than that in the total population in Serbia" (SSIR, 2016).

Strategy for the Social Inclusion of Roma envisages development and implementation of different affirmative measures. The aim of these measures is to "provide equal access to real people who, as a result of the long-term impact of unfavourable socio-economic factors, have found themselves in the position that is the source of their inequality and social exclusion". Strategy stresses that the design and implementation of affirmative measures for the inclusion of Roma "requires capacity building in public administration for the management of inclusive policies" (SSIR, 2016).

Screening Report Serbia: Chapter 19 – Social Policy and Employment

European Commission within the Screening Report Serbia: Chapter 19 – Social Policy and Employment discusses the issue of unequal position of different groups within the society without explicit mentioning of the income or consumption inequality. European Commission assesses that the "overall, Serbian legislation is partially aligned with the acquis in the field of social policy and employment" and warns that the "resolute action is needed in order to advance in legal alignment and to address also the critical labour market situation, including undeclared work. Efforts should be stepped up as regards poverty reduction, improving the inclusion of the Roma, people with disabilities and other vulnerable groups" (EC, Chapter 19, 2016).

Specifically, European Commission acknowledges different state institutions dealing with gender equality. However, further efforts are necessary to coordinate and strengthen the relevant institutional structures dealing with gender equality, including the necessary human and financial resources. In addition, the European Commission requires further legal adjustments in the Republic of Serbia with the EU Acquis such as "e.g. aligning several definitions with those of the Anti-Discrimination Law and further bringing the legislation in line with the EU Acquis, notably on the application of the principle of equal treatment between women and men in the access to and supply of goods and services (Directive 2004/113/EC), maternity leave (Directive 92/85/EEC) and parental leave (Directive 2010/18/EU)" (EC, Chapter 19, 2016).

Action Plan for Chapter 23

Action Plan for Chapter 23 does not contain specific measures related to the issue of income or consumption inequality. Instead, it focuses on the improvement of the position of specific vulnerable groups which are in an unequal position in the society. Action Plan for Chapter 23 defines measures aiming to stop violation of equality based on the sexual orientation or gender identity (3.10.1.2), measures which aim at improving the position of Roma (3.8.2), as well as measures to improve protection and enforcement of rights of children and of persons with disabilities (3.6.2) (Government of Serbia, AP23, 2016).

Specific attention of Action Plan 23 is gender equality. The section on Fundamental rights (chapter Gender equality) says that "in the forthcoming period, the Republic of Serbia plans to pay due attention to the promotion of the principle of gender equality, including mainstreaming gender equality issues in relevant policy areas, both at strategic and legislative levels, as well as to strengthen capacity of the institutions and their mutual coordination". One of the central activities in that sense is "monitoring the implementation of the Law on Anti-discrimination" (Government of Serbia, AP23, 2016).

Alignment of national policies and EU accession agenda with 2030 Agenda for Sustainable Development

Related to correspondence of national policies with Agenda 2030, the draft Rapid Integrated Assessment (UNDP, 2018: 34) concludes that SDG 10 - Reduce inequality within and among countries falls into a group of moderately covered SDGs and "is the only SDG at which matching of targets by overall national policy documents and overarching policy documents overlaps, which means that sectoral/multi-sectoral strategies, programs and APs are not compensating for overarching programs' shortcomings."

Related to correspondence between SDGs and EU chapters the draft Rapid Integrated Assessment (UNDP, 2018: 43) concludes that since the reduction of inequality is a very complex goal with seven targets "policies corresponding to this goal are also relevant for large set of negotiation chapters (4), public procurement (5), financial services (9), information society and media (10), agriculture and rural development (11), food safety (12), fisheries (13), taxation (17), social policy (19), regional policy and coordination of structural instruments (22), fundamental rights (23), justice, freedom and security (24), education and culture (26), customs union (29), external relations (30), financial control (32), and financial and budgetary provisions (33)."

Among the accelerators the document highlights EU accession process, establishment of Inter-Ministerial Working Group for the implementation of Agenda for Sustainable Development 2030 and multisectoral approach to policies (UNDP, 2018: 58).

Overview of the national measures and policies to reduce inequality

In most countries, a common response to rising income inequality has been to extend social protection coverage, combined with labour market policies and policies in the sphere of education and health care (ILO, 2015, p. 61). In general, the key redistribution effect is achieved through taxes and transfers, whose inequality-reducing capacity varies widely, depending on the type and prevalence of each individual fiscal instrument and social benefit. In addition to social transfers, other segments of the welfare state are also important, which primarily affect the equality of opportunities. Thus, access to health care and education services for the poor is also among the main policies relevant to reducing inequality[51].

In countries where unemployment is low and the majority of those employed work in the formal sector, the key measures are taxes, social transfers and pre-distribution policies, including – in some countries – the minimum wage level and institutional arrangements determining trade unions' bargaining power. In countries where unemployment and hidden unemployment are high, and a large proportion of the population generates income in the informal sector, on small family farms and through temporary and casual work, policies affecting employment and development are crucial.

Labour-market-induced inequality depends on the wage range, employment rate, as well as differences in household composition. In Serbia, wages decisively contribute to rising inequality, while all other income sources reduce it (Arandarenko, Krstić, Žarković Rakić, 2017; Milanović, 2003). As any other income, wage income is attributed to all household members; hence, wage income at the household level depends both on wage levels and on the number of full-time employed household members (impact of wages and impact of employment) (ILO, 2015). Households also vary by size and age composition, which additionally potentially affects the distribution of wage income (OECD, 2012). The least favourable is the combination of a wide wage range and a low rate of full-time employment. Even if the wage range is not wide, high unemployment and hidden unemployment result in high income inequality.

In Serbia, the poorest population includes a very high proportion of the unemployed and people living in households with virtually no employed members. According to the SILC (2016) data, in Serbia's population over 15 years of age, the share of employed stood at only 9.5% in the first income decile and exceeded 50% in the tenth decile, while the share of the unemployed followed an almost reverse pattern (Table 3 5). According to the same source, the share of people in Serbia (0-59) living in households with very low work intensity stood at 57.6% in the first quintile, and at only 3.3% in the fifth[52].

Consequently, the share of wage income in the total income of the poorest is negligible, at approximately 7%, while in the richest decile it exceeds 60% (Figure 3 8). At the same time, there are indications that wage inequality in Serbia is not pronounced, i.e. not higher than in most EU Member States. The 2014 Eurostat survey on earnings in enterprises and institutions with over 10 employees showed that, in Serbia, the ratio of gross hourly earnings, expressed in PPS, of the ninth earnings decile to those of the first decile was 3.6[53]. In the EU (28), this ratio ranged between 2.1 in Sweden and 4.7 in Poland (Annex 3, Figure 7 14). According to the same source,

[51] The importance of these in-kind transfers is not taken into consideration in the common measurements of income inequality.

[52] The corresponding figures in the EU (28) are 33.3% and 1.6%. Eurostat database, Table People living in households with very low work intensity by income quintile and household type (population aged 0 to 59 years).

[53] (1,189,000 employees, not including those employed in administration, social insurance funds and defence). Beside Poland, high ratios were also recorded in Romania (4.6), Cyprus (4.5), Portugal (4.3), Bulgaria (4.2) and Ireland (4.1). Source: Eurostat database Structure of earnings survey: hourly earnings; Earnings statistics http://ec.europa.eu/eurostat/statistics-explained/index.php/Earnings_statistics

the share of low-wage earners in Serbia stood at 23%[54], exceeding the EU (28) average (17.9%). However, figures above 20% were also recorded in 11 EU Member States – all former transition countries, as well as Germany, the UK and Ireland.

Policy implications are clear, and general recommendations range from fostering an investment-friendly environment and eliminating barriers to private sector development, intensifying the reforms of active labour market policies (including higher allocations for these purposes), ensuring guaranteed public-sector employment at the minimum wage, or reducing the tax burden on low wages, raising productivity to potentially drive wages and employment upwards, especially through the creation of higher-quality jobs, to creating specific development strategies, industrial, as well as macroeconomic policies conducive to job creation (Mijatović, 2012; IMF, 2014; ILO, 2015a; UNDP, 2016a; IMF, 2016; Atkinson, 2017).

Serbia's National Employment Strategy[55] (Vlada Republike Srbije, 2011) stresses the need to improve the investment and business environment, support to foreign direct investments and export-oriented programmes, job-creation support to small and medium-sized enterprises and entrepreneurship promotion. Special emphasis is placed on the measures and activities relevant to enhancing the quality of human capital, institution building and expansion of active labour market policies. The Strategy focuses on the measures and programmes targeting vulnerable groups, which are very broadly defined, and underdeveloped areas.

In countries with substantial shares of agricultural population, agrarian policy is of particular importance as well. As noted in UNDP's Human Development Report (2016: 106), policies should also focus on rural areas where people live and work, and measures should facilitate an improvement in agricultural productivity.

Labour market inequality and access to formal employment constitute a key challenge of overall inequality in the wider region[56] (UNDP, 2016a). Unemployment is the leading cause of inequality in most European Union Member States as well; however, in some countries, taxes and transfers also play an important role (European Commission, 2017). Earlier research points to the weak redistributive role of taxes and transfers in Serbia (Krstić, Žarković, Rakić 2017: 48) (Arandarenko, Krstić, Žarković Rakić, 2017:19).

More progressive taxation of income is among the standard proposals within packages of measures to reduce inequality, as income tax is the most progressive form of taxation, which directly takes into account the individual or household ability to pay (OECD, 2012; IMF, 2014). The schedular taxation system with a minor component of global annual taxation (annual individual income tax) in place in Serbia does not ensure any significant degree of progressivity.

Proposals to modify Serbia's taxation system with a view to reducing inequality have been made in earlier researches, including raising the tax-exempt wage threshold, as well as introducing a taxation system that would integrate labour and capital income, with high progressive tax rates (Krstić, Žarković Rakić, 2017:50; Arandarenko, Krstić, Žarković Rakić, 2017:29). As of January 2018, the tax-exempt wage threshold in Serbia was raised by 27%. According to the assessments outlined in the Fiscal Strategy, this change will "lead to reduction of tax burden on earnings, and slightly increased taxation progressivity" (Vlada Republike Srbije, 2018:52).

[54] Eurostat database, Table Low-wage earners as a proportion of all employees (excluding apprentices) by sex
[55] Overview of the Relevant Strategic Framework in Serbia Dealing with the Issues of Inequality (Annex 1)
[56] Region comprises Eastern Europe, Turkey, and Central Asia.

Given that unemployment, as well as self-employment in agriculture and the informal sector, constitutes an important driver of inequality in Serbia, the labour market impact of the taxation system, in addition to its redistributive effect, is crucial for inequality reduction. It should also be noted that, judging by the SILC, the income of the middle class, and even the "more affluent" strata[57], cannot be considered a very abundant source of additional budget revenues, and also that higher taxes on higher wages might be shifted to employers and/or the end consumers, but that they might also have an adverse impact on the supply of jobs in the formal economy. As pointed out by Milanović (2012: 14), Serbia's essential problem lies in low productivity and low overall income, rather than inequality; hence, the only solution for Serbia is real income growth.

Another topical issue is the design of specific tax forms which affect the more affluent population to a greater extent, such as capital, inheritance and property taxes (OECD, 2012; IMF, 2016).

Finally, inequality reduction is only one among a range of possible goals and criteria for the evaluation of the taxation system, which is evaluated primarily in terms of its budget balance effects, as well as in terms of its possible impact on economic growth; it is, therefore, essential to design and deliberate on tax reforms taking into account the broadest context[58].

To the extent that raising tax revenues is important for financing social expenditures, other tax reforms are also important, as is tax administration reform. From the aspect of inequality, it is worth analysing what budgetary expenditures benefit the rich population to a greater extent, including tax exemptions, which often tend to have that outcome.

In developed countries, **social transfers** reduce inequality to a significantly greater extent than taxes (OECD, 2012)[59] (IMF, 2014) (OECD, 2016). Although all social transfers reduce inequality, their objectives are different, and the highest redistributive capacity lies in transfers geared towards poverty reduction. The share of expenditures on social cash transfers in Serbia corresponds to the EU average (17% and 18%, respectively, in 2014); however, in the same year, the share of expenditures on transfers targeting the poor in Serbia was half of that in the EU (0.8% of GDP compared to 1.7% of GDP in the EU).[60]

Inequality in Serbia is substantially reduced by pensions, given that, without them, the Gini coefficient would be higher by 18 points. In absolute terms, the impact of pensions on reducing inequality, as measured by this indicator, is even higher than the EU (28) average, while in relative terms, the impact is slightly lower (31.8% compared to 33.3%). The key goal of pension benefits is consumption smoothing; hence, these benefits are usually designed with this goal in mind, with the exception of countries with liberal traditions (Barr, 2012; OECD, 2012). Since pensions are, for the most part, based on the contributions paid and past earnings of pension beneficiaries, the progressivity of these benefits is low in most countries (IMF, 2014). A higher inequality-reducing potential of these social transfers is present in countries which, in addition to pensions under social insurance, also award non-contributory pensions (with or without a means test), known as social pensions. Earlier research has shown that, under the existing conditions, the most advantageous choice in Serbia would be to develop a dedicated module within the financial social assistance scheme, as the first step towards additional protection of elderly who do not qualify for a pension on the grounds of social insurance (Matković & Stanić, 2014). Detailed recommendations

[57] For more information about this topic, see, for instance OECD (2012a).
[58] For wider proposals for tax reforms, see: Arsić, Ranđelović, Nojković (2017), Altiparmakov, Minić, Ugrinov (2017)
[59] Three quarters of the average reduction in inequality achieved across the OECD is due to transfers (OECD, 2012, p. 183).
[60] Source: Eurostat database, Tables by functions, aggregated benefits and grouped schemes – in % of the GDP

concerning this option are discussed in next section, as part of the proposal to modify the financial social assistance scheme. Within the pension and disability insurance system, more scope for redistribution could be considered, primarily with regard to introducing minimum protection for survivor pension beneficiaries.

In Serbia, **social transfers excluding pensions** contribute substantially to reducing inequality: in absolute terms, more than in the EU (28) (the reduction of the Gini coefficient before and after transfers, with pensions treated as income, stands at 6.2, compared to 5.4 points), and in relative terms – to a somewhat lesser extent (13.8% compared to 14.9%, respectively). In order to assess the further inequality-reducing potential of social transfers, excluding pensions, it is essential to look into the objectives of different benefits in Serbia.

Some social transfers are awarded as **benefits under the social insurance system,** and their objective is, in fact, to provide protection against risks. In Serbia, beside pensions, these include sick pay, unemployment benefit and care allowance (under pension and disability insurance). These transfers reduce inequality to the extent that their absence would leave individuals without any income during sickness or unemployment; however, in countries where the proportion of those covered by social insurance is relatively low and where the majority of the population does not generate any income in the formal economy, it may be assumed that these benefits are received by the higher deciles to an above-proportionate extent. The progressivity of these transfers in each country depends on their design (IMF, 2014). In view of their primary objective, the evaluation of these schemes depends not so much on their inequality-reducing potential, as on their coverage and benefit adequacy.

Another group of social transfer is **non-means-tested and is awarded to specific vulnerable groups in pursuit of specific objectives.** This group includes, for instance, benefits for disabled war veterans and war-disabled civilians, or the care allowance, awarded either to uninsured persons with disabilities or, as a top-up, to insurance-based care allowance beneficiaries with the most severe disabilities. In theory, these transfers should be distributed evenly across income deciles; however, the poorer population's access to some entitlements may be lower owing to lack of awareness and complicated administrative procedures. It is, however, especially important to stress that these very entitlements, in essence, enable the alleviation of the adverse material status of persons with disabilities, whose living standard may be compromised despite relatively high income, if expenditures are high on account of disability (e.g. care and assistance services). Hence, with regard to this especially vulnerable population, measuring outcomes, rather than income, would, in fact, be far more adequate[61].

This group also includes **birth-related leave benefit.** Together with preschool childcare services, these benefits are considered the key factor in enabling work-parenthood reconciliation and bearing the desired number of children.

Research by Stanić and Matković (2017) shows that the total leave (maternity and childcare) in Serbia amounts to 52 weeks of full-rate equivalent leave for the first- and second-born children[62], on a par with half of EU Member States. Indeed, only countries with liberal traditions[63] are characterised by very short paid birth-related leave

[61] Indeed, income is not a sufficient indicator of persons with disabilities' living standard. The fact that, with regard to vulnerability, the gap between persons with disabilities and the general population is much wider when measured by the severe material deprivation indicator than when measured by the at-risk-of-poverty rate thus makes sense. In 2015, the severe material deprivation rate in Serbia stood at 40.3% for persons with disabilities aged over 16 and at 21.2% for persons without disabilities of the corresponding age, while the at-risk-of-poverty rates were 29.2% and 23.7%, respectively. For more details, see Eurostat database, Tables Severe material deprivation by level of activity limitation, sex and age and People at risk of poverty by level of activity limitation, sex and age.

[62] In the comparative analysis of leaves, the OECD indicator "full-rate equivalent" (FRE) is used; it takes into account both the length of leave and the level of benefit during leave. Out of the total of 52 weeks in Serbia, maternity leave accounts for 16.8-18.5 weeks, and childcare leave – for 33.5-35 weeks (Stanić i Matković ,2017)

[63] Ireland, the UK, Malta and Cyprus.

(Matković, Mijatović, Stanić, 2018). Research conducted indicates that there is certainly ample scope for improving these social transfers (some proposals have been accepted in the new Law on Financial Support to Families with Children), but not in a direction that would result in any substantial reduction of income inequality. More specifically, given the small number of formally employed women in the first decile, these benefits are predominantly received by the more affluent (World Bank, 2017).

The third group of social transfers **targets the poor and is subject to a means test.**

Two benefits target the poor population in Serbia: financial social assistance (FSA) and child allowance. At the household level, the financial social assistance scheme has the highest poverty- and inequality-reducing potential, given that the child allowance is designed not as basic income, but rather as a benefit to meet only part of children's needs. The total expenditures on these two schemes amount to about 0.6% of the GDP.

The FSA scheme is characterised by a low coverage of the income-poor, especially according to the at-risk-of-poverty criterion, as well as good targeting in terms of vertical efficiency, which is on a par with the highest-developed countries, according to the World Bank (2017) assessments. The incomplete coverage is chiefly a consequence of the low income and land ownership ceilings as well as of the combination of numerous eligibility requirements, which inevitably result in a small number of those who simultaneously meet all the requirements. Benefit adequacy is unsatisfactory, in terms of both the ability to meet the basic needs and the gap relative to the at-risk-of-poverty threshold. When adequacy is assessed in terms of disincentive to work, the scope for raising the benefit amount is narrow, primarily in view of the fact that the FSA is the "passport" to numerous other benefits[64], as well as that the child allowance is received by virtually all FSA recipient families with younger children. The cumulative financial social assistance and child allowance amounts exceed the minimum wage level for all family types, except those with only one child (Matković, Mijatović, Stanić, 2018).

Finally, it is also worth noting that in 2016 the assistance amount for an individual unfit for work reached 90.4% of the farmers' pension, which constitutes a natural limit for further increase of financial social assistance (Matković, Mijatović & Stanić, 2018).

In formulating recommendations for improving the FSA, it should be noted that assistance amounts top up the household income to the administrative poverty line, as a result of which the issue of coverage is directly linked to the issue of benefit adequacy. Improving adequacy by raising the income ceiling would, thus, automatically increase the number of recipients and the coverage of the poor. Any improvements in coverage, which would not simultaneously entail higher amounts of entitlements (more adequate benefits), could only be achieved by relaxing other eligibility criteria, primarily those related to asset ownership.

The other social transfer targeting the poor in Serbia is the **child allowance** scheme. Given the level of the income ceiling, the scheme could cover almost all children at risk of poverty; however, according to the SILC (2016) data, the coverage rate stood at approximately 45% (Matković, Mijatović, Stanić, 2018). Beside asset ownership and other eligibility criteria (such as the requirement for parents to be covered by health insurance), the coverage of older children is especially affected by the regular school attendance requirement. According to the World Bank (2017) assessments, the child allowance is well targeted in terms of vertical efficiency. The SILC (2016) data show that over 70% of the total funds for this scheme are disbursed to the population in the first (poorest) and second quintiles. Child allowance adequacy is unsatisfactory, as the benefit amounts do not suffice to cover any significant portion of consumption of children from poorer families, especially older children (Matković, Mijatović, Stanić, 2018). In comparative terms, child allowance amounts are not low compared to new EU Member States, which have also undergone transition processes (Matković, Mijatović, Stanić, 2018).

[64] FSA recipients are entitled to the status of vulnerable energy customers, receiving a reduction of their monthly electricity or gas bills; health care; and in most local governments also one-of cash assistance or in-kind benefits, such as free-of-charge meals in soup kitchens, textbooks, clothing and footwear for children, reduction in utility bills etc.

The new Law on Financial Support to Families with Children contains several elements that might improve child allowance coverage, targeting and adequacy[65]. More specifically, the new Law, which is applicable as of 1 July 2018, provides for the introduction of a universal non-means tested entitlement for children with the most severe disabilities who are care allowance recipients, and a 50% increase in the child allowance amount for all children with developmental disabilities. The Law also foresees granting an additional, "thirteenth" child allowance instalment for secondary-school-age children. Further, the requirement for parents to be covered by health insurance is cancelled, and the entitlement is granted to children from FSA recipient families without an additional procedure, upon presentation of proof of regular school attendance. On the other hand, the new legal provisions do not set the income and asset ceilings and benefit amounts, nor do they foresee their regular uprating in order to maintain their real values; instead, this is left to the Government, at the proposal of the minister in charge of social affairs (Articles 32 and 33). Consequently, it is, in fact, uncertain whether child allowance adequacy and coverage will improve or decline, especially in real terms and in the longer run.

Birth grant is universal, non-means tested entitlement. Although poverty reduction is not the principal goal of this benefit, the design of these entitlements may also affect both poverty and inequality. From the aspect of inequality reduction, especially important is the decision to award a monthly benefit to mothers upon birth of the third- and/or fourth-born children, amounting to RSD 12,000 and RSD 18,000 per month, respectively, over a period of ten years[66]; the combined benefit amount exceeds the minimum wage level.

To the extent that families with three and four children are more prevalent among the poorer strata[67], the new **birth grant scheme** may have an inequality-reducing impact. Yet, the proportion of these families is low, even among families with children[68], and some adverse characteristics of this arrangement also need to be taken into account. Firstly, a similar arrangement for third-born children, which has been in place in Macedonia for ten years, has not resulted in an increase in the total number of live births, despite substantial expenditures (estimated at about 0.4% of the GDP in 2018), simply because the number of first- and second-born children, who are the most numerous, has continued to decline, which could not be compensated by the rise in the number of third-born children[69] (Boranova, 2014) (Državen zavod za statistika na Republika Makedonija, 2017). Another especially relevant issue is women's reduced employment potential (if they withdraw from the labour market) after ten years, when the entitlement expires, as well as the capacity to support a large family after the expiry of state assistance.

Finally, it is important to highlight measures and policies in the sphere of **creating equal opportunities**, which are concerned with education and skills development, housing and access to child, social and health care services for the poor. In general, the use of services is distributed more evenly than disposable income, except in countries where the poor do not have equal access to education or health, for instance (IMF, 2014). Especially high importance is attributed to education, since, as noted by Milanović (2012: 30), "for growth to be fast, at higher stages of economic development, education must be widespread, and widespread education is tantamount to less inequality". Reducing discrimination in all spheres should also, generally speaking, contribute to a more balanced use of services, as should access to justice for the most vulnerable (UNDP, 2016; UNDP, 2016a). In the medium term, these policies should pave the way for leaving the vicious circle of poverty.

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[66] Article 23

[67] The share of households with two adults and more than three children in the total population stands at only 2.9%, and among households below the at-risk-of-poverty threshold – 5.6%. Source: Eurostat database, Tables Distribution of population by household type and income group.

[68] In 2016, of the total number of households with children in Serbia, those with three children accounted for 6.7%, and those with four or more children – for 1.6%. Source: Eurostat database, Tables Distribution of households with children by number of children.

[69] While 2956 third-born children were born in 2009, 3498 were born in 2016. During the same period, the total number of live births continued to decline, from 23,684 to 23,002. (Državen zavod za statistika na Republika Makedonija, 2017).

5. POLICY RECOMMENDATIONS

The above considerations indicate that, when it comes to reducing income inequality in Serbia, the decisive role is played by policies to accelerate economic development and boost employment and wage growth, and highlight the need for a comprehensive assessment of possible taxation system reforms. Agrarian policy is also of particular importance in Serbia, specifically where it concerns small, non-commercial family farms, given the share of agricultural income in the total income of the poorest population.

In the context of the research carried out and the findings pointing to the extremely low-income levels of the poorest deciles, **the detailed recommendations below are primarily focused on modifications in the benefits targeting the poor.**

In the medium term, improving the coverage and benefit adequacy in the **financial social assistance** scheme would involve gradually raising the FSA amount/income ceiling to the absolute poverty threshold[70]. In view of the asset ownership criteria, this modification would not result in the full coverage of the poor, either by income or by consumption; however, it would mean that those receiving the assistance would be able to meet their basic needs with the amount received. In the medium term, the minimum wage can also be expected to grow in real terms; thus, any disincentive to work would not necessarily increase in comparison with the current situation. In addition, with increasing employment opportunities in the formal sector and if the FSA amounts considerably approach the minimum wage level, gradual benefit withdrawal – which is currently assessed as inordinately costly at lower benefit withdrawal rates (Žarković Rakić et al., 2017) – should be reconsidered.

There are grounds for further reviewing the asset ownership criteria, and even for awarding lower assistance amounts to those with somewhat more assets, instead of fully excluding them from the entitlement. It is especially important to analyse the experiences of the implementation of FSA recipients' activation, on which no data or research is available.

As the first step towards improving financial social assistance adequacy, and partly also coverage, the following proposals are worth considering in the short term:

1. Increasing the weight assigned to children aged over 14 from 0.3 to 0.5, according to the OECD modified equivalence scale

Standard consumption models support the increase in the weight for children in this age group, and the proposed equivalence scale is also applied in Serbia in the calculation of FSA amounts, as well as risk of poverty. These modifications in the FSA scheme would result in slightly improved benefit adequacy for families with children in this age group, as well as a higher coverage of FSA recipients. An additional argument is that most new EU Member States assign a higher weight to children in their social assistance schemes, aiming to provide an above-proportionate level of protection to these families (Matković, 2014). In theoretical terms, there is also a case for according special protection to families with the youngest children (up to the age of three), as is, indeed, done by some countries. In Serbia, however, these families are additionally protected owing to the birth-related benefits, which are very high for children of higher birth order.

[70] In 2016, the consumption poverty threshold stood at approximately RSD 11,600 per equivalent adult. At the same time, it should be noted that the Household Budget Survey applies the OECD equivalence scale, with the weights of 0.7 for the second adult and 0.5 for children up to the age of 14.

The budgetary implications of the proposal to increase the weight assigned to older children are twofold: firstly, increased expenditure for the families already receiving FSA, and secondly, increased expenditure owing to new recipients becoming eligible as a result of raising the income ceiling. Taking both effects into account, the cumulative budgetary implications of increasing the weight for older children would amount to approximately 0.01% of the GDP, according to the 2015 data (Annex 3, Table 7-8).

2. Increasing the weight assigned to children who simultaneously receive FSA and the care allowance to 1 (equal to the household head)

In Serbia, there are no other instruments beside the augmented child allowance to safeguard the material status of this especially vulnerable group. The only entitlement available to children with the most severe disabilities is the care allowance, which is not intended to cover the daily living costs.

The budgetary implications of this proposal would also entail increased budget expenditures for the existing recipients (about 900 children are simultaneously entitled to both FSA and care allowance), as well as coverage of new recipients, whose cumulative amount, according to assessments, could reach 0.005% of the GDP (see more detailed calculations in Annex 4).

3. Introducing a "social pension" as a dedicated "module" within the financial social assistance scheme.

Approximately ninety thousand elderly people in Serbia, or 12% of those aged over 65, are not entitled to a pension. At the same time, according to earlier research, FSA take-up rate is low among the elderly. Assistance is received by only about 10% of the total number of the elderly who meet the income criterion. According to estimates, more than half of the elderly do not have access to the entitlement owing to the asset ownership criterion (more rooms per household member than allowed and/or ownership of more than 1 ha of land). The remaining reasons are lack of awareness, excessively complicated administrative procedures, and presence of relatives who have a support obligation (Matković i Petrović, 2012; Matković i Stanić, 2014).

Efforts to increase the FSA coverage of the elderly should, therefore, primarily focus on relaxing the asset ownership criteria. As the first step, raising the land ownership ceiling to 2 ha for elderly households should be considered. Although the Law on Social Protection provides for the possibility of mortgaging land in order to access FSA, research shows that the poor are mainly unaware of this option, and the elderly population also tends to show resistance to such arrangements (Matković i Petrović, 2012)[71]. According to earlier research, if all asset ownership criteria for elderly households were eliminated, with maximum take-up, the expenditures for these purposes would amount to 0.2% of the GDP (Matković i Stanić, 2014).

In addition to relaxing the asset ownership criteria, an increase in the assistance amount for elderly households can be proposed as well. More specifically, since the elderly are, by definition, out of the labour force, there is no risk of moral hazard, i.e. the disincentive to work does not hinder setting more adequate assistance amounts. Simulations show that raising the assistance amount to the level of the absolute poverty line, combined with assigning the weight of 0.7 to the second adult in an elderly household and doubling the take-up rate (from 10% to 20%), would result in expenditures for these purposes amounting to 0.1% of the GDP (Matković i Stanić, 2012).

[71] In addition, social work centres are not motivated to initiate the costly, lengthy and demanding procedure, despite the fact that, in the event the mortgage is enforced, the proceeds will go to the national budget. Transferring these powers to public attorneys could remove part of the hindrances.

Another proposal is to raise the age threshold for relaxed eligibility requirements or higher assistance amounts from 65 to 70 years, or precisely 5 years above the retirement age. This would reduce the moral hazard in terms of any negative impact that the introduction of a rudimentary form of social pensions might have on the payment of pension and disability insurance contributions.

Additionally, as part of legislative changes, the treatment of cadastral income as an eligibility criterion[72] should be eliminated. The existing level of cadastral income for farming households in Serbia was computed decades ago, has not been changed or revalued since, and represents an entirely inadequate indicator of material status. These amounts are so low that they are no longer used in assessing income, while the general assets ceiling is already highly restrictive (0.5 ha), implying that the cadastral income could not be significant in any case. For these reasons, cadastral income tax has been repealed by amendments to tax legislation.

Finally, in the short term, gradual benefit withdrawal can be realised by allowing the recipients who were entitled over a longer period of time (e.g. for another year) to continue receiving the child allowance, retain the vulnerable energy customer status, receive free-of-charge textbooks etc. during a specified period after becoming employed, without a means test.

Under the existing circumstances, the first recommendation for improving the **child allowance scheme** primarily concerns restoring the arrangement whereby the ceiling and benefit amounts and their indexation are expressly specified, thus ensuring, inter alia, that benefits for the poor play the role of an automatic stabiliser in times of economic crisis.

With regard to improving adequacy, the recommendation to raise the benefit amount to a level that would compensate at least half of the costs attributed to children in families whose consumption corresponds to the poverty line remains relevant (Matković, Mijatović, Stanić, 2013).

With a view to improving targeting in terms of vertical efficiency and coverage, the possibilities of granting a universal child allowance entitlement to primary-school-age children living in substandard Roma settlements[73] (area-based targeting) should be explored further. This would reduce the exclusion error and increase the coverage of the vulnerable, as well as accentuate the role of the child allowance as a conditional transfer aimed also at promoting school attendance. This change would, in fact, motivate parents to enrol children in school when moving to another municipality to take up seasonal work, without fear of losing the entitlement. According to the MICS data, 70% of the primary-school-age children (7-14) living in Roma settlements already receive the child allowance; hence, the additional financial expenditures for the scheme designed as outlined above would not be high (Republički zavod za statistiku i UNICEF, 2014).

In the medium term, it would be worthwhile to address the issues of relaxing or modifying the asset ownership criteria, the treatment of agricultural income, as well as the further increase of child allowance adequacy.

[72] Decree on Receipts and Income Relevant to the Exercise of the Entitlement to Financial Social Assistance (Official Gazette of the RS No 36/2011, Article 4).

[73] As defined in the Geographic Information System for monitoring the situation in substandard Roma settlements (Đorđević, 2017).

Regarding the new **birth grant** scheme, it should be noted that such high income, which virtually represents a "salary" to mothers who bear children of higher birth order, should not be disregarded in assessing income for the purpose of awarding FSA and the child allowance, which is common practice with regard to other social benefits. Otherwise, for example, a family with two children where the mother works and earns the minimum wage may be ineligible for the child allowance if the total household income is even slightly above the income ceiling, whereas a family with three or four children, with essentially equal income per household member, would be eligible because the birth grant income is disregarded. On account of the child allowance alone, a family with four children now receives over RSD 11,000 in total; with the newly introduced entitlement, the assistance from the national budget would, therefore, exceed RSD 40,000. If the family is also a FSA beneficiary the assistance will amount to RSD 62,000.

Among the measures and policies in the sphere of creating **equal opportunities**, regarding the income inequality improvements in the area of education are of primary importance. In that respect, in Serbia, the focus should be on improving education quality, introducing compulsory secondary education, covering young children by preschool education, implementing measures to prevent early school leaving, as well as expanding scholarship programmes, not only for higher, but also for secondary education. Given the regressive funding of higher education, which is pursued by children from the more affluent strata to an above-proportionate extent, inequality reduction would also be aided by increasing higher education funding from private sources.

The SILC (2015) data show that, in Serbia, the poorest people rated their own health worse and reported a greater inability to meet their health care needs for financial reasons. According to the SILC (2013) data, health insurance coverage was not full and stood at 93.7% (Simić, 2017). These findings point to the need to consider introducing universal health care funded from the national budget, as well as additional exemptions from co-payment for medications and treatment for the poorest population.

Specific set of recommendations refers to **better alignment of national development and strategic framework with SDGs** on inequalities and especially SDG 10.1, which is in the focus of this document.

A number of outstanding issues concern statistical surveys. The key one is the treatment of negative income and outliers, as well as the assessment of value of goods produced for own consumption and income from agriculture in the SILC. The shift to registers as income data sources is another possibility to be considered, in addition to other elements of importance to improving the quality of both the Survey on Income and Living Conditions and the Household Budget Survey. Another problem worth noting is that, according to the protocol of the Statistical Office of the Republic of Serbia, SILC detailed microdata are not available to the research community.

Regarding consumption versus income dilemma it should be reiterated that disposable income as a measure of inequality clearly enables taking into account the fact that the richer population, in most cases, saves a portion of its income, rather than spend all of it, and that individuals are also able to live without income for a while by drawing on their savings and borrowing money. Each measure has its weaknesses, especially when applied in concrete circumstances.

This also applies to the SILC data, which, in Serbia, do not eliminate negative income or outliers, and unrealistically assess or entirely disregard income in kind. In addition, in the circumstances where the majority of the poorest population generates intermittent, irregular and informal income, whose amount they are requested to recall at the annual level for previous year may induce significant recall bias. A major difference between the poorest deciles' income and consumption gives rise to the conclusion that monitoring consumption-based indicators remains highly relevant in Serbia and that the data on income inequality ought to be interpreted with caution.

For these reasons SDG 10.1 target and indicator should refer to both income and consumption and both SILC and HBS data should be used. Additionally conducted research indicates that national localized SDG 10.1 target and indicator should also include income and expenditure growth of bottom 20% of the distribution, not only of bottom 40%.

Finally, although this document is focused on income inequality it has to be acknowledged that inequality is multidimensional phenomenon interlinked with other dimensions of sustainable human development (social, environmental, human rights, etc.) and that it has to be accessed within broader "leaving no one behind" agenda.

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7. ANNEX

ANNEX 1. HBS vs. SILC Methodology Comparison (negative and extreme values)

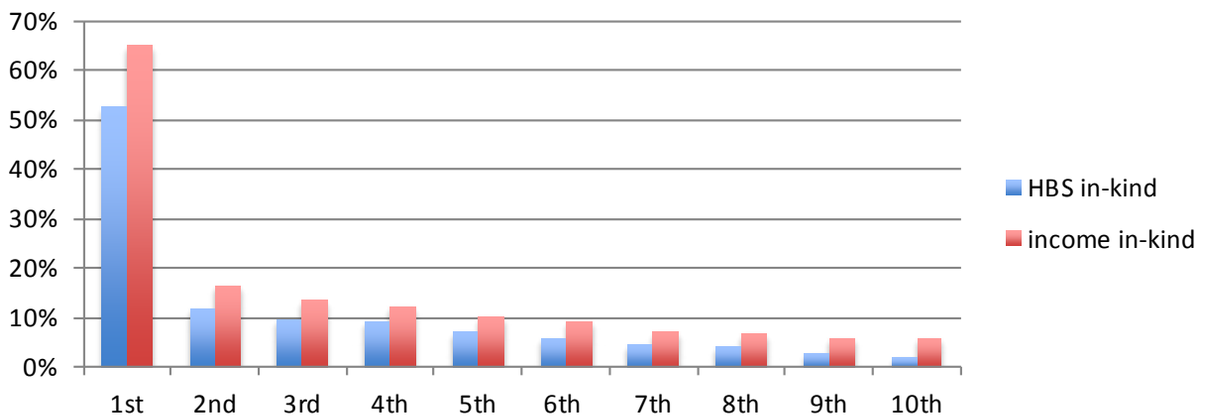

Figure 7-1 Income in-kind by deciles (% of SILC income)
Source: Authors' calculation based on HBS (2015) income data
Note: In-kind income is calculated based on broader concept than HBS income in-kind (see methodology)

Distribution of income by deciles in Serbia compared to the EU-average shows the largest difference in the 10th and 1st deciles, and with quite obvious difference in 2nd and 3rd as well as in 9th deciles (Figure 7 2). The share of the income of 1st decile is by 2 pp lower than in the EU and the share of 10th decile is by 3pp higher than in EU.

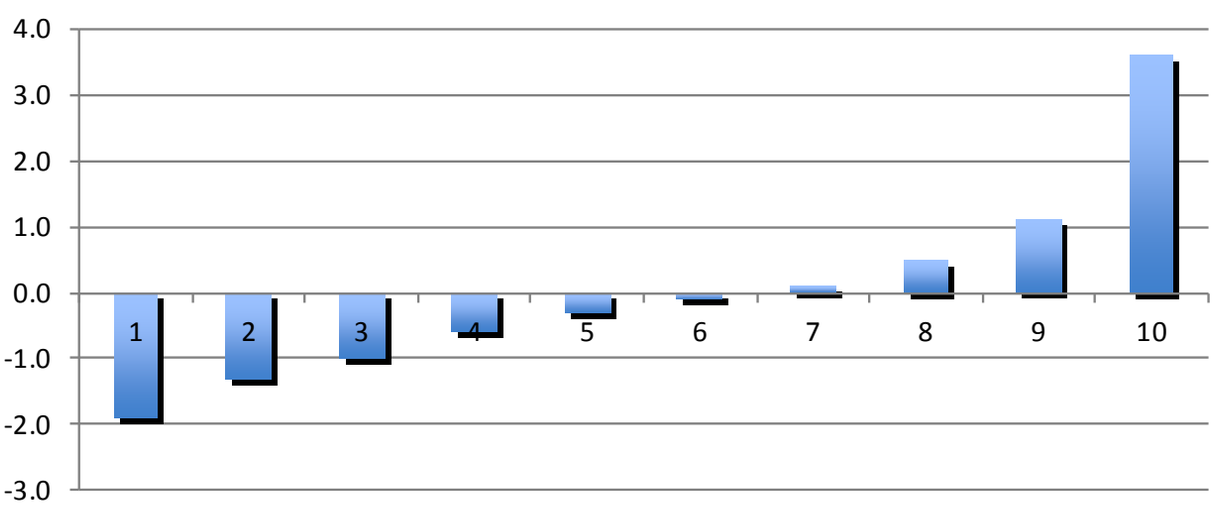

Figure 7-2 Difference in distribution of income by deciles - Serbia vs. EU (in pp)
Source: Eurostat (EU-SILC, 2016)

When cut offs in PPS are compared to EU non-weighted average we can see that the top deciles are actually way below EU average, while the first decile is exceptionally low – only 19% of EU average in PPS (Figure 7 3.).

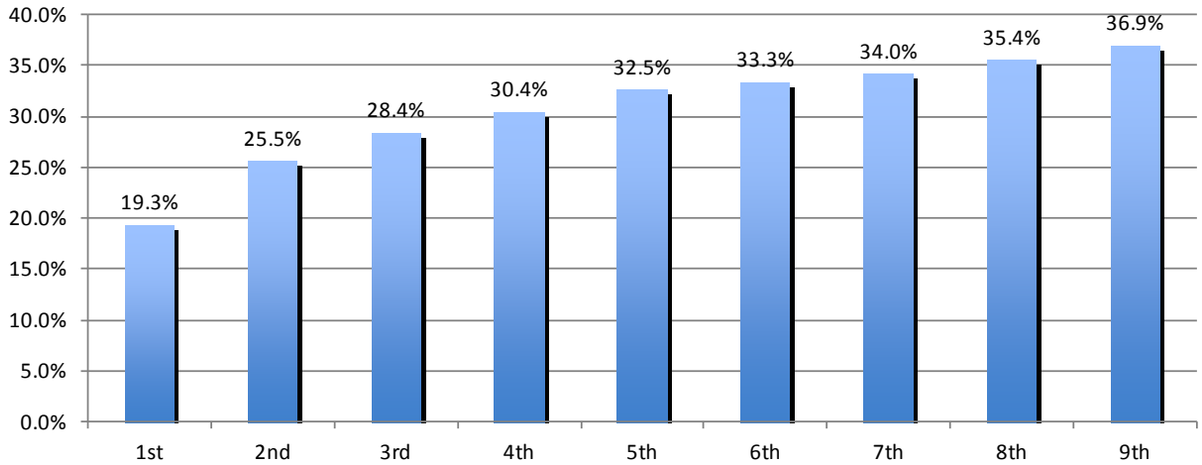

Figure 7-3 Decile top cut off point in PPS, Serbia as % of EU non-weighted average
Source: Eurostat (EU-SILC, 2016)

What follows is comparison of deciles income distribution of SILC with HBS data. For the sake of SILC and HBS comparison same equivalence scales (modified OECD) are applied. Official HBS income is used in comparison, which includes HBS in-kind income[74].

If we take a closer look at the cut offs, minimum/maximum values, means and medians, the difference in 10th decile can be easily explained by extreme values in SILC survey. By observation of histograms of deciles distributions, we can see huge extreme values in 10th decile.

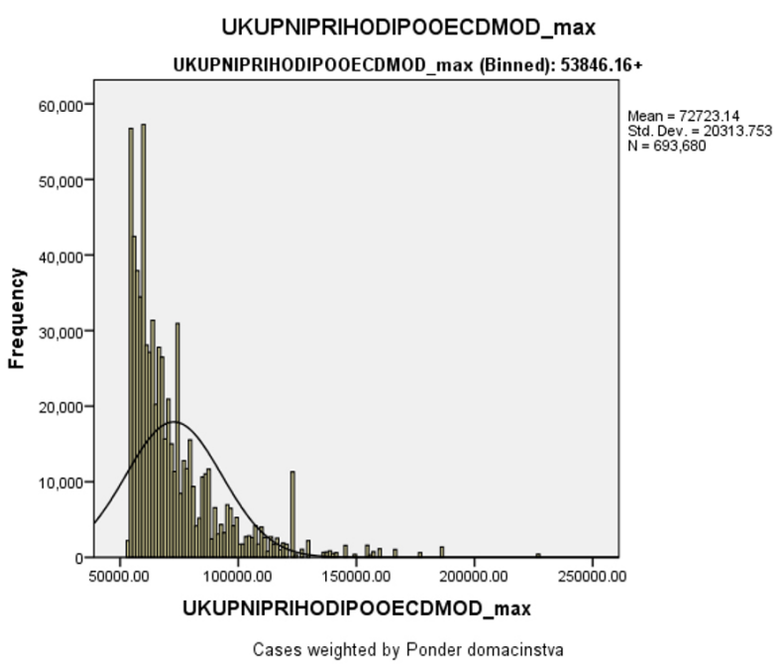

Figure 7-4. Histogram of HBS income 10th decile

[74] More details in methodology section.

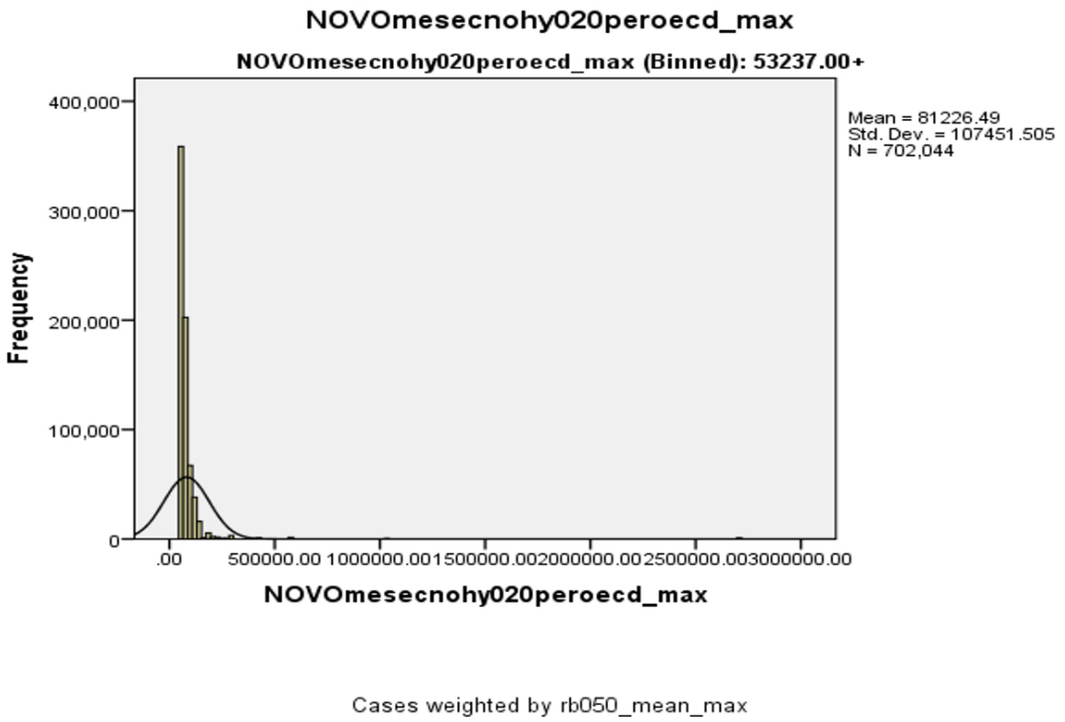

Figure 7-5 Histogram of SILC 10th decile

Median values of HBS and SILC in 10th decile, presented in Table 3-3, are almost the same, HBS being slightly higher, which is expected due to in-kind income included in HBS data. Minimum negative values of total disposable income in the SILC are also very high but this explains tremendously low mean in the 1st decile only to some extent. Difference between median values of SILC and HBS data in the 1st decile is still very high (Figure 7-6).

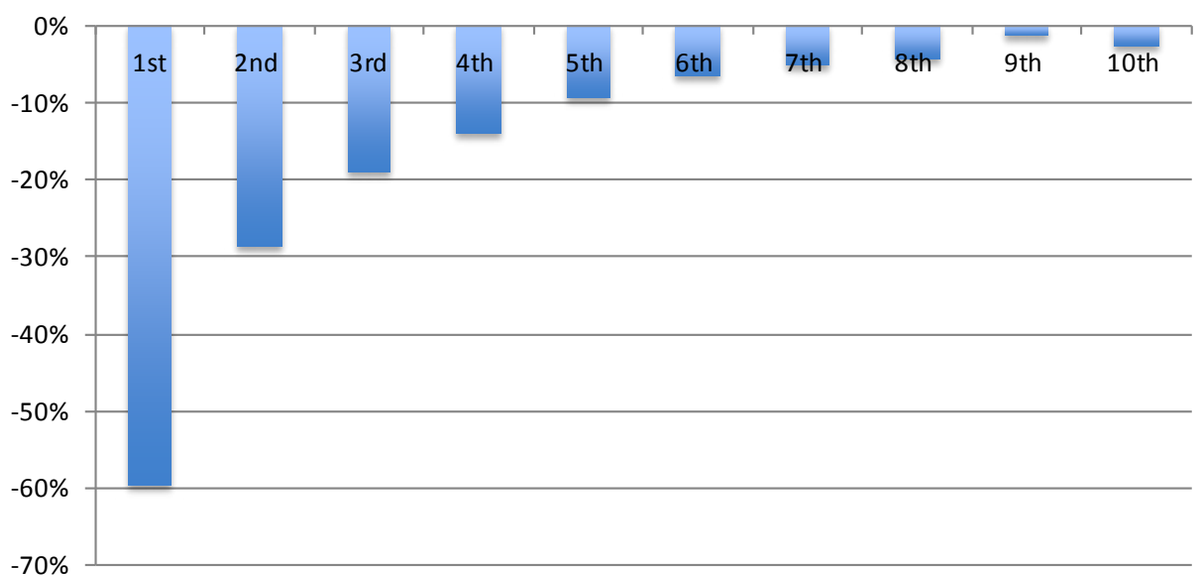

Figure 7-6 Percentage difference between median by deciles, SILC vs HBS income data for 2015
Source: Authors' calculation based on SILC 2016 (data for 2015) and HBS 2015 (data for 2015)
Note: OECD-modified equivalence scale applied to both SILC and HBS income data

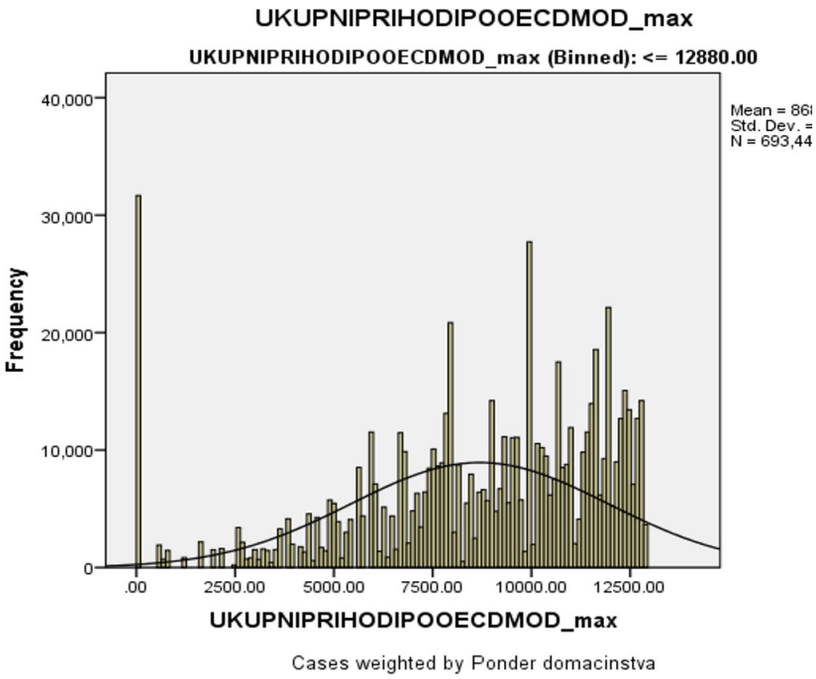

Figure 7-7 Histogram of HBS income 1st decile (negative values as 0)

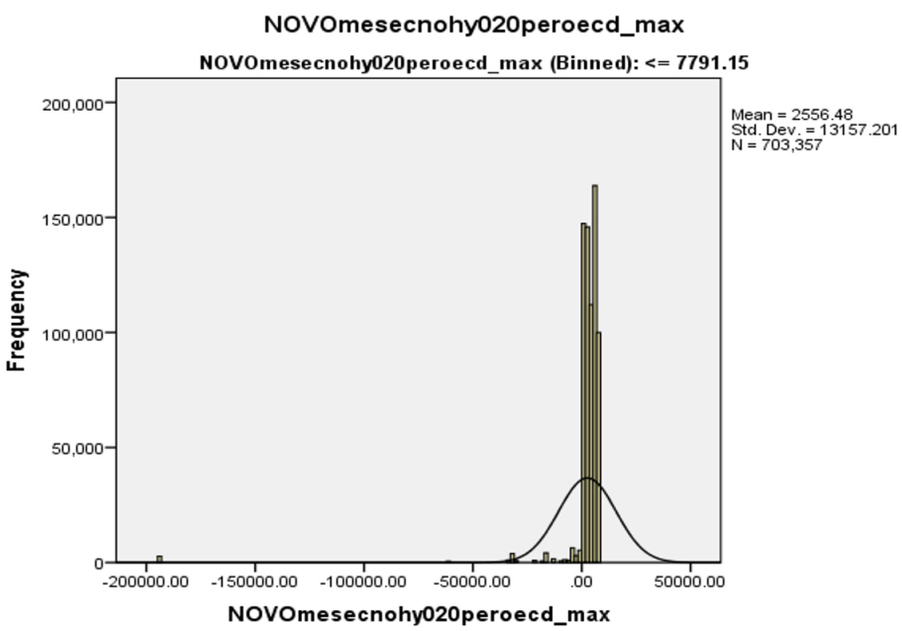

Figure 7-8 Histogram of HBS income 1st decile (negative values as 0)

Mijakovac (2017) argues that the difference in the 1st decile is caused by the different methodology of recording income of self-employed (which includes income from agriculture in SILC) between two surveys. SILC record earnings from self-employment as income or loss, while HBS also calculates net income from agriculture and non-registered self-employment based on the questions regarding revenues and investments, however, those with negative values are treated as zeros.

Indeed, when HBS net income from agriculture and non-registered self-employment is calculated including losses, it turns out that the mean in the first decile is around 5,000 dinars, including HBS income in-kind[75]. To compare it with SILC, we have added HBS income in-kind to the SILC data (Table 7-1, Column 3).

	1	2	3	4
	Official data (SILC with losses/ negative TDHI, without in-kind; HBS without losses and negative income, with in-kind)	**Official SILC and HBS according to SILC methodology (with losses/ negative TDHI, without in-kind)**	**With losses and negative TDHI, with in-kind**	**With losses, without negative TDHI, with in-kind**
SILC	2.556	2.556	3.899	5.225
HBS	8.687	3.657	5.000	7.632
SILC lower than HBS	-70,6%	-30,1%	-22%	-31,5%

Table 7-1 Mean of HBS vs. SILC according to different treatment of losses and income in-kind
Source: Authors' calculation based on SILC 2016 (data for 2015) and HBS 2015 (data for 2015)
Note: TDHI is total disposable household income (HY020 in SILC)

Difference between two surveys now has shrank significantly, though there is still around 30% of unexplained disparity. One of the explanations may be a different structure by economic status in two surveys - HBS is slightly overestimating number of pensioners and SILC seems to be slightly overstating number of unemployed while HBS is underestimating it. SILC is slightly underestimating the number of pensioners (for example, 1,678,022 in 2013 compared to 1,722,649 in the same year), while HBS is overestimating number of pensioners – 1,807,415 compared to 1,735,942 in 2015. Furthermore, HBS is underestimating total population hence share of pensioners in HBS is 3pp higher than in SILC and according to administrative data compared to population (see Table 7-2).

	SILC	HBS	LFS
Employees, self-employed (including family worker)	35,3%	39,9%	35,4%
Unemployed	22,6%	13,7%	19,2%
Pupil, student, further training, unpaid work	7,4%	8,4%	9,1%
In retirement or in early retirement	28,5%	31,3%	27,3%
Permanently disabled or, and unfit to work	0,6%	0,7%	1,1%
Fulfilling domestic tasks and care responsibilities	4,5%	5,3%	7,2%
Other inactive person	1,1%	0,7%	0,7%

Table 7-2. Self-perceived economic status, SILC vs. HBS vs. LFS
Source: Authors calculation based on SILC (2013) and HBS (2015), LFS Bulletin for 2016
Note: pensioners are 28,2% according to the PDI fund data compared to population estimates

[75] Cut offs are now also sligthly lower

ANNEX 2. Descriptive Statistics

Economic status	20%	40%	Total population
Employees	17,8	22,3	29,2
Self-employed with workers	0,4	0,6	1,2
Self-employed without workers	8,0	7,7	7,2
Unpaid family worker	2,8	2,9	2,3
Unemployed	26,1	20,8	13,7
Pensioners	25,6	28,1	31,3
Pupil/student	7,2	7,6	8,4
Fulfilling domestic tasks and care responsibilities	9,0	7,8	5,3
Permanently disabled or, and unfit to work	1,7	1,2	0,7
Other inactive person	1,3	0,9	0,7

Table 7-3 Self-defined economics status (15+) of bottom 20 and 40% per capita, HBS consumption
Source: Authors' calculation based on HBS (2016) – consumption

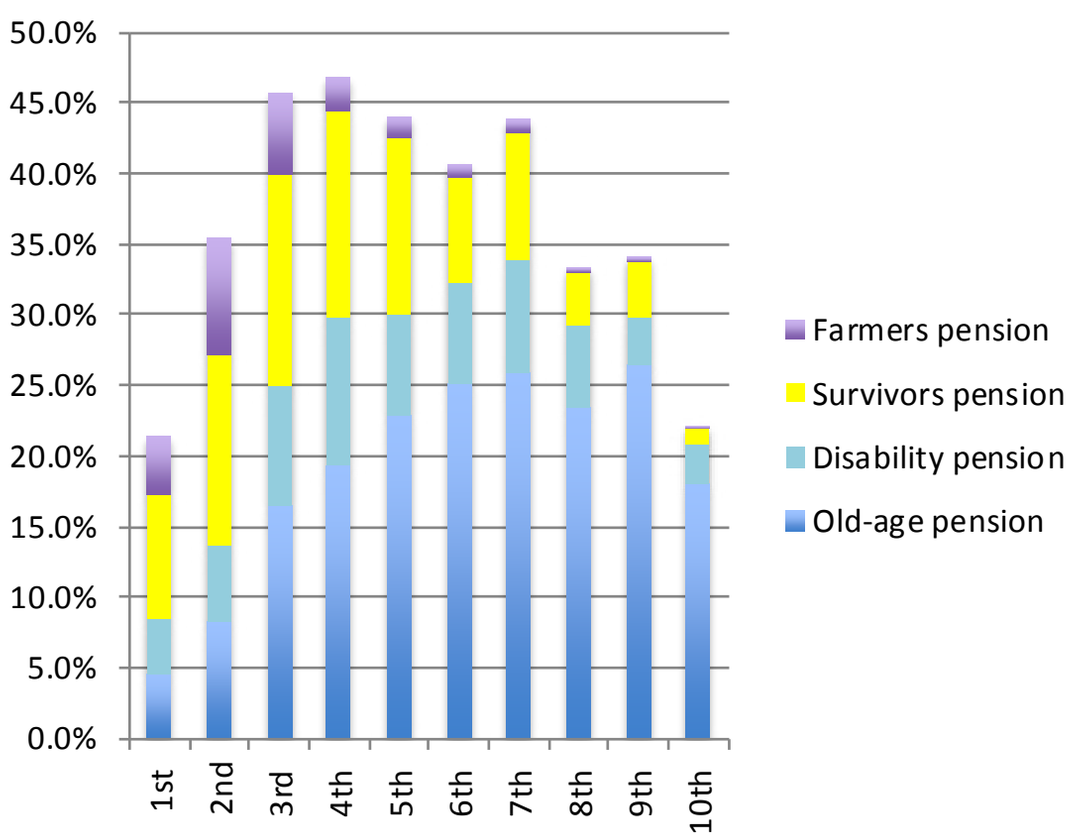

Figure 7-9 Income from pensions by deciles, 2012

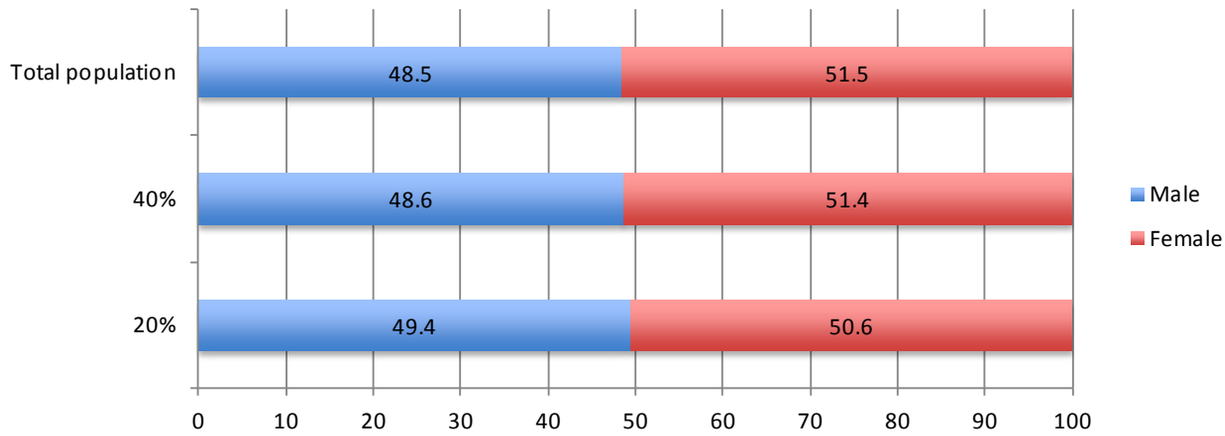

Figure 7-10 Gender structure of poorest 20% and 40% population
Source: Authors' calculations based on HBS-2016– consumption

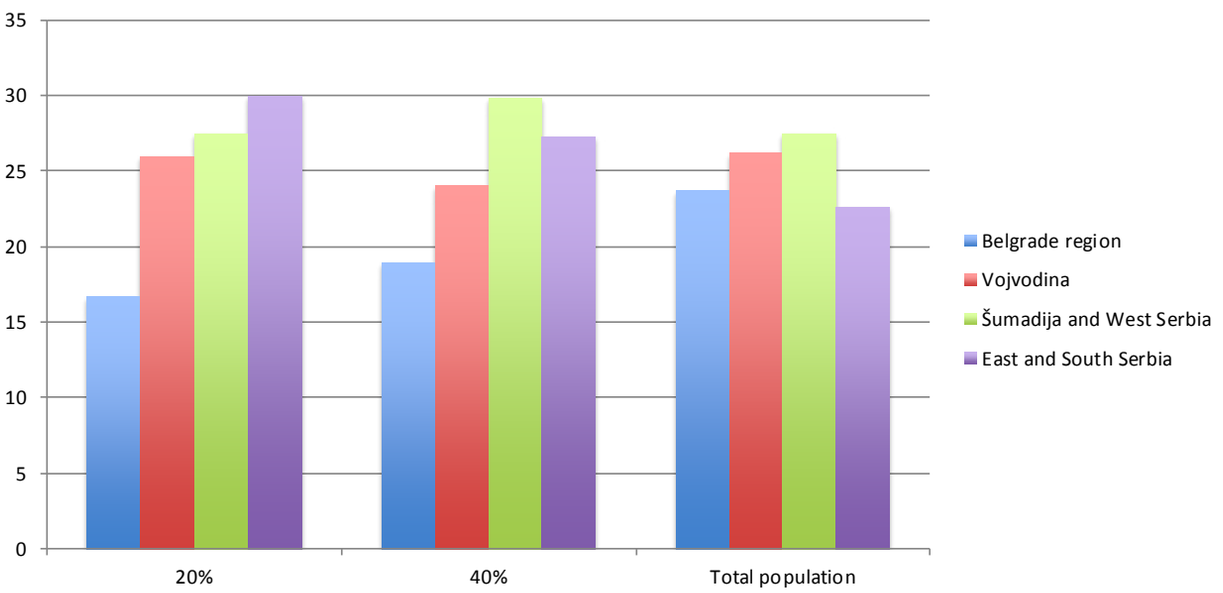

Figure 7-11 Bottom 20 and 40% population by Region
Authors' calculations based on HBS-2016– consumption

	20%		40%		100%	
	Male	Female	Male	Female	Male	Female
Children up to 17	24	25	21,9	21,6	17,1	14,8
18-24	9,6	9	9,1	8	8	6,7
25-64	55,3	51,8	54,8	51,3	54,8	53,1
Elderly 65+	11,1	14,2	14,2	19,2	20,1	25,5

Table 7-4 Bottom 20/40% population by age and gender, HBS income
Source: Authors' calculations based on HBS-2016– income

	SILC		HBS		RSO	
	Male	Female	Male	Female	Male	Female
Children up to 17	17,4	15,9	17,1	14,8	19,5	17,5
18-24	8,1	7,3	8	6,7	7,3	6,5
25-64	56,6	54,6	54,8	53,1	56,9	55,0
Elderly 65+	17,8	22,3	20,1	25,5	16,3	21,0

Table 7-5 Total population by age and gender (SILC, HBS and RSO)
Source: RSO and authors' calculations based on HBS-2016 and SILC-2016

	SILC	HBS	Census 2011
Less than primary education	8,6	10	13,68
Primary education	20	21	20,76
Secondary education	51,9	51,5	48,93
Higher education	19,6	17,5	16,24

Table 7-5 Total population by age and gender (SILC, HBS and RSO)
Source: RSO and authors' calculations based on HBS-2016 and SILC-2016

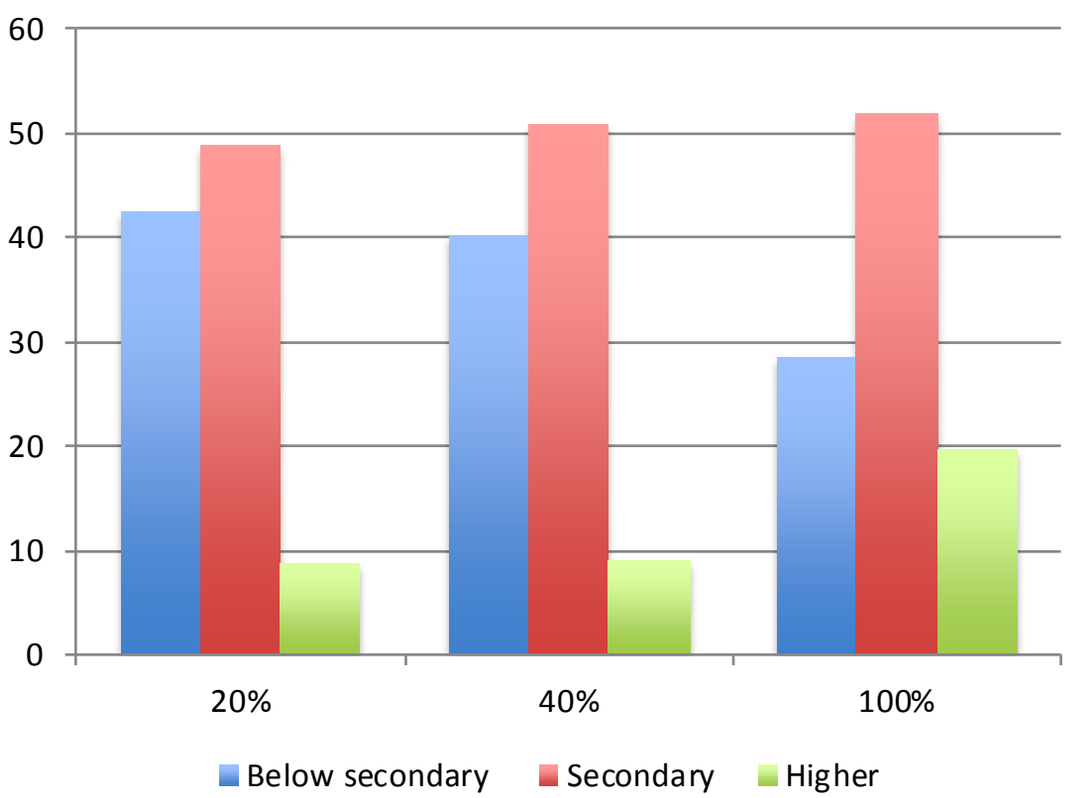

Figure 7-12 Bottom 20/40% population 15+ by education, SILC
Source: Authors' calculations based on HBS-2016– income

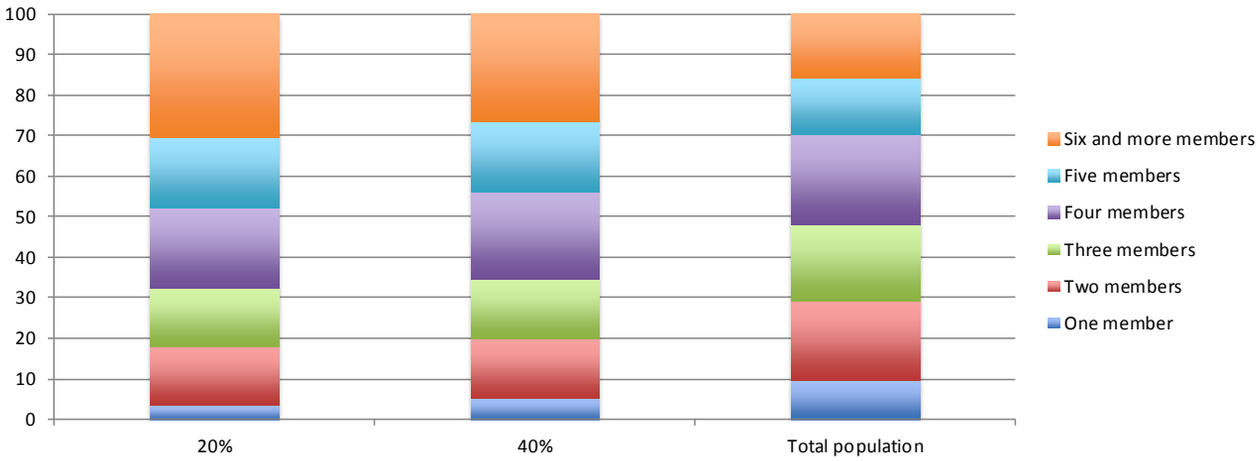

Figure 7-13. Number of household members of bottom 20/40% population
Source: Authors' calculations based on HBS-2016– consumption

	20%	40%	Total population
One adult younger than 65	4,2	5,1	10,8
One adult 65+	8,7	11,5	15,9
Two or more adults 65+	10,7	10,4	8,6
Two adults, no dependent children (one adult 65+)	6,3	6,2	6,5
Two adults, no dependent children, younger than 65	7,4	7,3	10,6
One adult with dependent children	2,2	1,8	2,2
Two adults with one or two dependent child	11,6	13,1	13,4
Two adults with three or more dependent children	4,2	3	2
Three or more adults with dependent children	24,7	22,4	13,6
Three or more adults without dependent children	20,2	19,1	16,3

Table 7-7 Bottom 20/40% by household type
Note: Share of household type in total number of households
Source: Authors' calculations based on HBS-2016– consumption

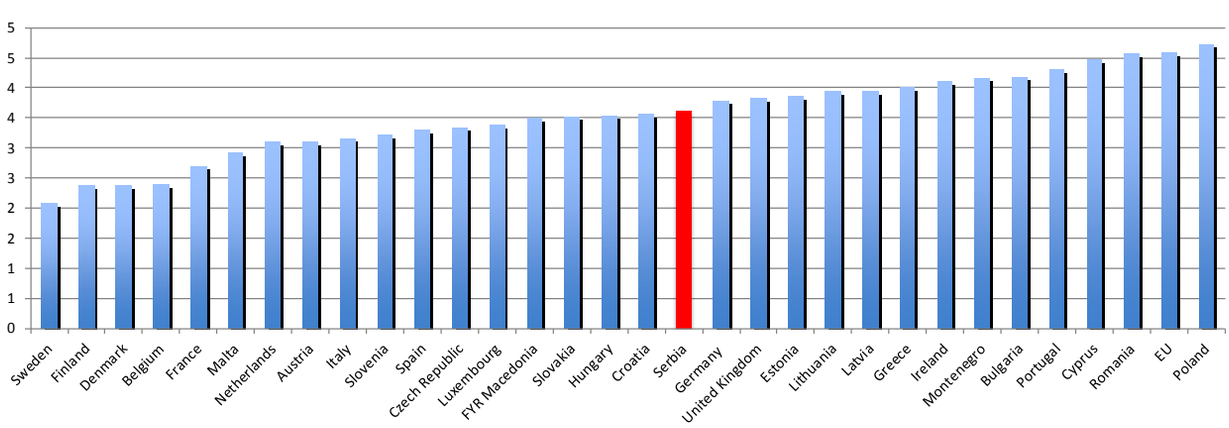

Figure 7-14 Ratio of 9th/1st decile, earnings distribution
Source: Eurostat (Structure of earnings survey: hourly earnings [earn_ses_hourly])

ANNEX 3. Financial Aspects of the Policy Proposals

1. Increasing the weight assigned to children aged over 14 from 0.3 to 0.5, according to the OECD modified equivalence scale

The budgetary implications of this proposal are twofold: firstly, increased expenditure for the families already receiving FSA, and secondly, increased expenditure owing to new recipients becoming eligible.

I Increased expenditure for the families currently receiving FSA

According to the information system data, in January 2015, FSA was received by 20,173 children aged 14-17 living in 16,792 families. The FSA base in the same period amounted to RSD 7,789, and an increase in the weight from 0.3 to 0.5 for children in this age group would result in an FSA increase by RSD 1560 per child.

In some of these families, the members able to work outnumber those unable to work (two parents with one child, or shared households with other adult members able to work). These families are entitled to FSA during only 9 months, instead of all 12 months in a year.

According to the information system data, 2,070 families with children aged 14-17, or 12.3% of the total number of FSA recipient families of this type, lost the entitlement during the preceding year. As most shared households, in fact, register as separate families to qualify for higher total assistance amounts, it may be assumed that, among these 2070 families, those consisting of one child and two parents prevail. Hence the assumption that, out of the 20,173 children, there are 2070 who will not be entitled to FSA during the entire year, while the remaining 18103 are assumed to be entitled during all 12 months.

Finally, it should be noted that the number of single-parent families with children in this age group who receive augmented FSA is not known. If we assume that the share of single-parent families in this segment of families with children is also 35.55% (out of the 16,792), and that each of these families includes only one child of the relevant age, then 5970 children will be entitled to augmented FSA, and their assistance amount will be higher by RSD 309 per month (1869 compared with 1560 RSD. It is further assumed that members able to work do not prevail in any of these families[76] and that the entitlement is granted for all 12 months in a year.

	No of children 14-17	Amount of increase	Monthly expenditure	Annual expenditure
Entitled for 9 months	2,070	1,560	3,229,200	29,062,800
Entitled for 12 months	12,133	1,560	18,927,480	227,129,760
Entitled to augmented FSA	5,970	1,869	11,157,930	133,895,160
Total	**20,173**		**33,314,610**	**390,087,720**

Table 7-8 Increased expenditure for current recipients

The estimated total increase in the expenditures on these grounds would amount to a maximum of RSD 390 million per year.

[76] Which is the case if all children aged over 15 attend school.

II Increased expenditure owing to new recipients becoming eligible

Increasing the weight assigned to older children will result in raising the total income ceiling. The entitlement will also be available to families with children in the said age group whose income is above the ceiling under the existing legal provisions. To assess this aspect of the budgetary implications, it is necessary to estimate the number of families and the amount of assistance to which they would be entitled.

The estimated number of new families that could become eligible owing to the raised income ceiling, i.e. the changed weight for children aged 14-17, is based on the data on the sensitivity of poverty incidence to changes in the poverty threshold/line.

According to the data from the Survey on Income and Living Conditions (RZS, 2015), when the poverty threshold/line is raised by a quarter, the number of individuals in families with children who are below the threshold is increased by slightly less than a third; in other words, for every percentage point by which the threshold (base) changes, the number of individuals below the threshold grows by 1.5 percentage points.

% of median income	Threshold in RSD (base)	No of individuals in families with children below the threshold (in 000)
50	11400	860
40	9120	618
Change in absolute terms	2280	242
Change in %	25	39.1

Table 7-9 Sensitivity of changes in the number of the poor to changes in the poverty threshold
Source: SORS database based on the Survey on Income and Living Conditions

The change in the equivalence scale for children aged 14-17 leads to a rise in the income ceiling for families with one child in this age group by approximately 10% (Table 7-10). Assuming that the sensitivity pattern described above applies, the number of individuals in FSA recipient families with one child in this age group will increase by 15% (Table 7-11). At the same time, for families with two children in this age group, the income ceiling will be raised by 19% (Table 7 10), and the number of individuals living in FSA recipient families of this type will increase by approximately 28.5% (Table 7-11).

As the sensitivity of the income ceiling applies to FSA recipient families, and not to all families with children in the entire population, the impact of the assets ceiling is implicitly taken into account.

	Family with two children, one aged 14-17		Family with one child aged 14-17		Family with two children, both aged 14-17	
	current	new	current	New	current	new
First adult	7789	7789	7789	7789	7789	7789
Second adult	3894.5	3894.5	3894.5	3894.5	3894.5	3894.5
First child	2336.7	2336.7	2336.7	3894.5	2336.7	3894.5
Second child	2336.7	3894.5			2336.7	3894.5
Total	16356.9	17914.7	14020.2	15578	16356.9	19472.5
Increase		1557.8		1557.8		3115.6
% increase		9.5		11.1		19.0

Table 7-10 Change in assistance amount owing to change in weights for children aged 14-17 (in RSD)

The change in the number of families will depend on the increase in the number of individuals and on family size, which is assumed to remain unchanged, at 4 members per family, on average. Under these assumptions, the total number of families with children aged 14-17 will increase by 2772 or 16.5%.

	January 2015		Increase in the number of		
			individuals		families
With 1 child	15,102	60,964	15	9145	2286
With 2 children	1691	6824	28.5	1945	486
Total	16,792	67,788			2772

Table 7-11 Increase in the number of individuals and families with children aged 14-17
Note: Total number of individuals and families – MoLEVSA data.

How much will FSA expenditures increase on account of entry of new recipients (2772 families)?

These families are not entitled to FSA, which means that their income is above the current legally stipulated income ceiling. Since FSA is disbursed as an income top-up, it means that these families' income is currently at the level of the legally stipulated income ceiling and the maximum amount of FSA they can receive is the amount of the increase per older child.

Assuming that, just as in the current FSA recipient families, the new recipient families have an average of 1.2 older children per family, the number of children of the relevant age in the 2772 families would total 3326. Assuming, further, that the breakdown of these children by the level of entitlement (basic or augmented amount) and by duration (9 or 12 months) corresponds to that recorded in reality (as in Table 7 12), the expenditures due to new families becoming eligible would amount to a maximum of RSD 64 million per year.

	No of children aged 14-17	Monthly expenditure	Annual expenditure
Entitled for 9 months	341	532,475	4,792,272
Entitled for 12 months	2,001	3,121,022	37,452,260
Entitled to augmented FSA	984	1,839,872	22,078,464
Total	3326	5,493,368	64,322,996

Table 7-12 Increased expenditure owing to new families becoming eligible

According to the estimates outlined above, the cumulative budgetary implications of increasing the weight for older children (14-17) (I + II) would total approximately RSD 454 million per year, according to the data for 2015. This estimate does not take into account the effects of the CPI indexation of entitlement amounts.

2. Increasing the weight assigned to children who simultaneously receive FSA and the care allowance to 1 (equal to the household head)

The budgetary implications of this proposal would be somewhat lower compared to the above. According to the information system data from 2015, the two entitlements (FSA and care allowance) were simultaneously received by 991 children aged up to 18. In monetary terms, increasing the weight from 0.3 to 1 would imply raising the FSA amount by approximately RSD 5452 per child, under the assumption that, in the given household, not all members are unable to work. The monthly budget expenditures would amount to RSD 5.4 million, and the annual expenditures – to RSD 64.8 million, assuming that members unable to work prevail in all the households and that assistance is received during 12 months in a year. This is a realistic assumption, since, under the Law on Social Protection, an unemployed person caring for and care allowance recipient child is also considered unable to work.

It should be noted that this is not the only increase in budget expenditures on account of this proposal. More specifically, it is certain that raising the total income ceiling by RSD 5452 will result in a number of additional households with care allowance recipient children becoming eligible for FSA as well.

As an indication, approximately 6500 children aged up to 18 in Serbia receive the care allowance i.e. 5500 of these children live in households not receiving FSA. There are no data on these families' material status; however, it is clear that additional households could qualify for assistance of up to RSD 5452, since their income is obviously above the current administrative income ceiling, or they are excluded from the entitlement by other criteria (asset ownership). If we assumed that the number of these additional households would be as high as 2750 (half of the care allowance recipient children who do not receive FSA) and that, on average, they would qualify for an income top-up of about RSD 4000 (roughly two thirds of the maximum amount), the annual expenditures would total RSD 132 million.

The cumulative budget expenditures would be below RSD 200 million, or 0.005% of the GDP.