

Simulating redistributive social policy scenarios for Montenegro

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Giulio Bordon, Francesco Iacoella and Franziska Gassmann

UNU-MERIT

Maastricht University

Boschstraat 24, NL-6211 AX Maastricht

The Netherlands

www.merit.unu.edu

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Table of Contents

Executive Summary.....	viii
1. Introduction	1
2. Country context.....	3
2.1 Demographics.....	3
2.2 Economic context	5
2.3 Labour market	8
2.4 Personal income tax and social security contributions.....	11
3. Poverty and inequality.....	13
3.1 Monetary poverty	14
3.2 Multidimensional poverty, vulnerabilities, and risks	17
3.3 Inequality	19
4. Social protection	21
4.1 System overview	21
4.2 Regular non-contributory social and child protection benefits	23
4.3 Non-recurring social and child protection benefits	28
4.4 Social and child protection benefit performance.....	29
4.5 Social Budget.....	36
4.6 Poverty reduction efficiency.....	38
4.7 Discussion.....	39
5. Policy simulation: Methodology	40
5.1 Tax/benefit microsimulation models.....	40
5.2 Building a microsimulation model for Montenegro	45
6. Policy Simulation: Scenarios and Results	48
6.1 Child Allowance.....	48
6.2 Financial Support Allowance.....	53
6.3 Personal Income Tax.....	60
7. Discussion and recommendations.....	64
References.....	67
Annex A – Additional tables	73
Annex B – Interview guide for KILs	82
Annex C – Complete results from microsimulation.....	85

List of Tables

Table 1 Demographic historic data and future assumptions	3
Table 2 Demographic historic data and future projections	5
Table 3 Montenegro's economic outlook, historical data, and projections, 2015 – 2026	6
Table 4 Labour Market Statistics, 2015 - 2020	8
Table 5 Unemployment Statistics, 2015 - 2020	9
Table 6 Minimum and average monthly wages, 2015 - 2020	9
Table 7 Monthly wages compared to monthly minimum standard of living, 2015 - 2020	10
Table 8 Social security contribution rates	12
Table 9 Labor tax wedge for a single average wage worker	12
Table 10 At Risk of Poverty or Social Exclusion rates in Montenegro and neighbouring countries. 2015-2019, %	13
Table 11 Absolute poverty in Montenegro, 2018	14
Table 12 At-risk-of-poverty rate, before and after social transfers (excluding pensions), 2015 - 2019	15
Table 13 At-risk-of-poverty rates, 2019	16
Table 14 Multidimensional Poverty Index in Montenegro, 2018	18
Table 15 Gini coefficient of equivalised disposable income, before and after social transfers (excluding pensions), 2015 - 2019	20
Table 16 Main social and child protection benefits	23
Table 17 Financial Support Allowance overview	24
Table 18 Personal disability allowance overview	25
Table 19 Care and support allowance overview	25
Table 20 Parental or Guardian Allowance overview	26
Table 21 Child allowance overview	26
Table 22 Child Allowance amendment as of May 2021	27
Table 23 Benefit (Recurring) for a new-born child overview	27
Table 24 Funeral costs overview	28
Table 25 Nonrecurring financial assistance overview	28
Table 26 Benefit (Non-recurring) for a new-born child overview	29
Table 27 Social assistance coverage and average benefits, 2018	29
Table 28 Comparability of SILC and legal social assistance benefits	31
Table 29. Number of transfers per households, per quintiles and total	32
Table 30 Social protection coverage across income quintiles and total population, percentages	33
Table 31 Distribution of benefits across pre-transfers income quintile, percentages	33

Table 32 Adequacy across pre-transfer income quintiles and total population (recipient households only).....	35
Table 33 Social protection expenditure breakdown, 2017	36
Table 34 Costs of social and child protection benefits in 2018, as for SWIS	37
Table 35 Cost of social protection benefits, as from SILC	38
Table 36 Poverty efficiency measures of non-contributory benefits (according to SILC data)	39
Table 37 Basic descriptive variables.....	46
Table 38 Reform options for the Child Allowance.....	49
Table 39 Coverage, distribution, and adequacy of CA reform options	50
Table 40. FSA beneficiaries net gain from employment	54
Table 41. Percentage of working age adults receiving FSA in the first quintile, by labour force status and education	54
Table 42 Reform scenarios for the Financial Support Allowance	56
Table 43 Current and new equivalence scales for FSA benefits.....	57
Table 44 Eligibility cut-offs and maximum benefit based on current and new equivalence scales of FSA, EUR.....	57
Table 45 Coverage, distribution, and adequacy of FSA reform options.....	58
Table 46 Reform scenarios for the Personal Income Tax	60

List of Figures

Figure 1 General Revenue Statistics in 2018, percentage of GDP.....	7
Figure 2 Social Protection Programmes in Montenegro, by type, as of 2018	22
Figure 3 Poverty effectiveness and efficiency of the CA reform options	51
Figure 4. Cost of rolling out universal child benefit <18	52
Figure 5 Poverty effectiveness and efficiency of the FSA reform options	59
Figure 6 Inequality under PIT reform scenarios.....	61
Figure 7 Personal Income Tax to GDP ratio under PIT reform scenarios.....	62
Figure 8 Households' tax burden under PIT reform scenarios	62

List of Boxes

Box 1. A roll-out plan towards universal child benefit coverage	52
Box 2. FSA beneficiaries net gain from employment take-up.....	53
Box 3. Impact of tax-benefit reforms at the household level	63

List of Annex tables

Table A 1. Risks and Vulnerabilities across the life cycle in Montenegro	74
Table A 2. Social Protection programmes, by type, area, responsible agency, and risk, 2018	77
Table A 3. Review of relevant microsimulations	81
Table C1 FSA simulation results: coverage across quintiles and total	85
Table C2 FSA simulation results: coverage across quintiles and total (households with children).....	85
Table C3 FSA simulation results: distribution of benefits (share of expenditure per quintile)	85
Table C4 FSA simulation results: adequacy across quintiles and total	85
Table C5 FSA simulation results: Total expenditure and number of beneficiaries	86
Table C6 FSA simulation results: poverty headcount and poverty gap rate	87
Table C7 FSA simulation results: poverty efficiency measures	87
Table C8 CA simulation results: coverage across quintiles and total	88
Table C9 CA simulation results: coverage across quintiles and total (households with children)	88
Table C10 CA simulation results: distribution of benefits (share of expenditure per quintile)	89
Table C11 CA simulation results: adequacy across quintiles and total.....	90
Table C12 CA simulation results: Total expenditure and number of beneficiaries	92
Table C13 CA simulation results: poverty headcount and poverty gap rate	93
Table C14 CA simulation results: poverty efficiency measures.....	93
Table C15 Tax simulation results: Gini coefficients under different tax scenarios	95
Table C16 Tax simulation results: Tax Burden, personal income taxes as percentage of total household gross income	95
Table C17 Tax simulation results: Personal income tax to GDP share.	95

List of Abbreviations

AROE	At Risk of Poverty or Social Exclusion
BNC	Benefit for a New-born Child
CA	Child Allowance
CIT	Corporate Income Tax
COFOG	Classification of Functions of Government
CPI	Consumer Price Index
CSA	Care and Support Allowance
ECD	Early Childhood Development
ES	Equivalence Scale
ESSPROS	European System of Integrated Social Protection Statistics
EU	European Union
FC	Funeral Costs
FSA	Financial Support Allowance
FTE	Full-time Equivalent
GDP	Gross Domestic Product
HE	Horizontal Expansion
ISCED	International Standard Classification of Education
ISCP	Institute for Social and Child Protection
JP Activate	United Nations Joint Programme “Activate! Integrated Social Protection and Employment to Accelerate Progress for Young People in Montenegro”
KII	Key Informant Interviews
MGSOG	Maastricht Graduate School of Governance
MGW	Minimum Gross Wage
MICS	Multiple Indicator Cluster Surveys
MONSTAT	Statistical Office of Montenegro
NFA	Non-recurring Financial Assistance
OADS	Old-age, Disability, and Survivors’ pensions
PDA	Personal Disability Allowance
PGA	Parental or Guardian Allowance
PIT	Personal Income Tax
SA	Social Assistance
SILC	Survey on Income and Living Conditions
VAT	Value Added Tax
VE	Vertical Expansion

Glossary of terms

Equivalence scale	The non-proportional increase in financial needs for a household for each additional household member. The needs of a household grow with each additional member but – due to economies of scale in consumption– not in a proportional way. Needs for housing space, electricity, etc. will not be three times as high for a household with three members than for a single person. With the help of equivalence scales each household type in the population is assigned a value in proportion to its needs. The factors commonly taken into account to assign these values are the size of the household and the age of its members (whether they are adults or children).
Poverty headcount	The share of individuals or households below the poverty line.
Poverty gap	The average distance of the population from the poverty line expressed in monetary values. All individuals above the poverty line are considered having a poverty gap of 0.
Poverty gap rate	Similar to the poverty gap, the poverty gap rate is expressed as a percentage of the poverty line instead of monetary value. This is useful when comparing poverty gaps between countries/years.
Poverty severity	The square of the poverty gap rate, this indicator puts a higher weight on individuals with a larger poverty gap and gives a better idea of how severe poverty is in the country.
Effective average tax rate (EATR)	The average rate at which an individual's earned and unearned income is taxed is known as their effective average tax rate (EATR).
Effective marginal tax rate (EMTR)	The effective marginal tax rate (EMTR) is the effective tax rate on each additional unit of income.
Coverage	The share of population over total benefitting from a social protection programme.
Distribution	The share of total benefit expenditure by income quintile of beneficiaries.
Adequacy	The share of benefit value over total income of beneficiaries.

Disclaimer on data availability and representativity

The poverty assessments and simulated scenarios presented in this document are based on SILC data collected in 2019. The information on incomes refers to 2018. The simulations are benchmarked against social protection policies and benefit values as they were applicable in 2019. They do not consider the recent increase in Minimum Wage. Changes to the Child Allowance enacted in 2020 and 2021 are described in detail in the document.

Because the data were collected in 2019, the analysis could not account for the economic downturn due to COVID-19, nor was it possible to precisely predict the poverty reduction effects of the simulated reforms in 2022. The findings presented in this document should be understood as the comparison between different reform scenarios in terms of their impact on poverty and inequality and the associated costs.

Executive Summary

Social protection transfers are effective instruments for poverty and deprivation alleviation. However, to ensure the effectiveness and efficiency of such transfers, it is paramount that specific needs of the target population are identified and potential gaps in programme design filled. The first part of this report reviews the present landscape of social protection policies for poverty and inequality reduction in Montenegro and provides a general overview of the country's socio-economic trends (chapters 1 to 4). It subsequently reports the results from a microsimulation study that estimates the impact of social protection reforms aimed at improving the effectiveness of anti-poverty measures (chapters 5 and 6). The microsimulation model itself shall inform stakeholders on the potential impact of policy reform scenarios and be a flexible and adaptable tool for future simulation designs.

This study has been produced with the aim of strengthening evidence-based policy making and supporting the Government of Montenegro in developing a well-designed, well-targeted, and cost-effective social protection system. The project is under the aegis of the United Nations Joint Programme "Activate! Integrated Social Protection and Employment to Accelerate Progress for Young People in Montenegro" (JP Activate).

Montenegro's economy grew substantially in the recent past. Its annualised growth rate has been 4.2% during the five years preceding the 2020 pandemic crisis. Considerable investments and the tourism sector drove the country's growth. However, the primary fiscal balance¹ remained negative over the same period, exposing the country's economic weaknesses (high trade deficit, low productivity, high informality, and significant risks related to public debt sustainability). In 2020, the Montenegrin economic outlook worsened. The global crisis hit the country hard, contracting growth by about 15 percentage points. Labour force participation suddenly dropped by 5 percentage points, while unemployment increased to 19%, exposing the newly inactive and unemployed and their families to the risk of poverty and deprivation. Estimates indicate that more than 34,000 Montenegrins may have fallen into monetary poverty² due to the economic downfall related to the pandemic.

Before the pandemic, monetary poverty in Montenegro was already among the highest in the region and higher than the EU-28 average poverty rate. With the national poverty line at 198 EUR per month, the poverty headcount was 27% in 2018, and the poverty gap rate 10%. Social transfers (excluding pensions) contributed to reducing monetary poverty by 16%. However, if the equivalised minimum consumer basket (defined at 635 EUR) is considered as the poverty line, poverty levels substantially increase. In this case, close to 50% of the Montenegrin population live in poverty, and the average poverty gap rate is 20%. Income inequality is also among the highest in the region and within the EU-28. In 2019, the Gini coefficient was 34.1 after social transfers (38.2

¹ Surplus / deficit at net of interest payments and net increase in liabilities.

² This is calculated based on a poverty line of \$5.5/day in 2011 PPP.

before social transfers). The income of the richest 20% of the country is 6.7 times higher than the income of the poorest 20%.

Social protection transfers contribute to poverty and inequality reduction in the country, although the current social protection system is limited in its effectiveness by low coverage and adequacy. The Law on Social and Child Protection is the main policy instrument regulating non-contributory social protection in Montenegro. The Law regulates fourteen benefits and programmes, of which the most relevant in terms of coverage, costs and expected impact are (i) Financial Support Allowance,³ (ii) Personal Disability Allowance, (iii) Care and Support Allowance, (iv) Parental or Guardian Allowance, (v) Child Allowance, (vi) Benefit for a New-born Child, (vii) Funeral Costs, and (viii) Nonrecurring Financial Assistance.

In terms of costs, social protection accounted for 12.8% of GDP in 2017, however contributory benefits occupy most of the social protection budget. In 2018, expenditure on non-contributory social and child protection benefits was 55.5 million EUR (1.2% of GDP) based on administrative sources. However, estimates based on SILC data reflect expenditures at 46.3 million EUR (1% of GDP). The Care and Support Allowance and the Financial Support Allowance benefits are the most expensive programmes with 4.6 million EUR (0.1% of GDP) and 20.6 million EUR (0.4% of GDP), respectively.

Overall, 60% of the population live in households⁴ reached by at least one social protection benefit. More than 50% of social transfers (in financial terms) are distributed to the wealthiest two income quintiles. However, this ratio is driven by the distribution of contribution-based transfers (e.g., old-age and survivors' pensions). Non-contributory benefits cover 16% of the population, and 38% of the poorest quintile. While close to 70% of non-contributory transfers are concentrated in the two poorest quintiles, the system fails to entirely cover the lowest end of the income distribution. Social protection benefits (including pensions) reduce the poverty headcount by 42.3%, i.e. 18 percentage points, and reduce the poverty gap by 17%. Contributory programmes are the ones mainly contributing to the poverty headcount and poverty gap rate reduction. Indeed, from the non-contributory programmes only reduce the poverty headcount by 4% and the poverty gap rate by 3.6%.

The main non-contributory, poverty-alleviation benefit in the country, the Financial Support Allowance (FSA), has the highest coverage across quintiles compared to all other benefits, although this is still very low. According to the data analysed by the research team with the use of SILC, the FSA covers 9% of the entire population (31% of the poorest quintile). However, administrative SWIS data show an even lower coverage (5% among total population). The FSA share of recipient household's income in the lowest quintile is 54%. However, most of FSA recipients in the lowest quintile only receive that one benefit. Hence, the FSA does not seem to be nor horizontally nor

³ As named in the English translation of the 2017 the Law on Social and Child Protection. Also known as Family Allowance, Family Material Support, or Family Material Allowance.

⁴ The analysis in this document refers to the household as main unit of analysis, while the Law on Social and Child Protection refers to the family as underlying unit. There is no perfect overlap between the two concepts, as a household can consist of more than one family. The data used for the analysis only identify households and not families.

vertically adequate for the neediest population. For these reasons, despite being the main poverty alleviation programme, the FSA only reduces the poverty headcount by 1.37% and the poverty gap by 1.9%.

Connected to FSA targeting criteria, at least until 2018, is the Child Allowance, designed to reduce child poverty. However, due to its connection to FSA targeting, the CA only covers 9.5% of all Montenegrin children (up to an including 17 years), while overall 33.7% of them live in poor households. With these coverage rates, the exclusion error among children living in poor households is 84%, and many others living just above the poverty line are not covered by the child benefit.

To develop the Montenegrin microsimulation model, the research team used the 2019 round of the Survey on Income and Living Conditions (SILC). The dataset contains 4,280 respondent households or 12,810 individuals.⁵ While being nationally representative, SILC is organized following EU international guidelines. This standardization affects the way information on social transfers is presented. Several Montenegro social transfers are aggregated under broader transfers categories, limiting the ability of the researchers to disaggregate income from different benefits. Moreover, the research team could not replicate the targeting mechanisms of relevant transfers because of the questionnaire's absence of the concerning questions. A further limitation identified is the possibility of income and taxation underreporting or misreporting, which might affect the resulting estimations.

Based on discussions with key stakeholders, a set of policy options have been determined to be simulated that included changes in vertical and horizontal adequacy of the Child Allowance and the Financial Support Allowance. Additionally, the team developed new rates and brackets relative to the Personal Income Tax to increase its progressivity and ensure the financial sustainability of the reform scenarios.

The report includes the Child Allowance simulation results for an option including children until six years, as per the May 2021 amendment of the Law on Social and Child Protection, as well as reforms that include children until fifteen and seventeen years old. Including children 14 years old or younger, CA coverage would increase substantially from 4.9% of the population to 49.2%. In the lowest quintile, the increase would be from 15.2% to 58.1%. Adequacy indicators (i.e. a measure of the share of household income covered by the benefit) would also increase due to the larger number of eligible children per household, especially in lower quintiles. Similarly, including children 17 years old or younger, CA coverage would increase to 56.3%, or 67.7% in the lowest quintile. Even though it would require a significant increase in budget allocation (close to 40 additional million EUR per year for the up to 14 expansion, and 46 million EUR for up to 17), reforming the CA can transform it into a significant and effective poverty alleviation and prevention benefit. The simulation indicates that the poverty headcount can decrease between 3.2 and 3.8 percentage points (13.1% to 15.1% in relative terms) and the poverty gap by 1.8 to 2.2

⁵ The Statistical Office of Montenegro (MONSTAT) provided access to the anonymised SILC data in accordance with the provision of Article 58 of the Law on Official Statistics and Official Statistical System.

percentage points (19.3% to 23.3%), depending on the reform. Similarly, the child poverty headcount, which is at 31.5% in Montenegro before CA is transferred to beneficiaries, can decrease between 5.8 and 6.7 percentage points (18.8% to 21.2%) and child poverty gap (at 12.1% before CA is transferred to beneficiaries) by 4.4 to 4.8 (46.8% to 50.8%).⁶ It is relevant to note that the expansion to children up to 14 is estimated to be a more cost-efficient option than the expansion to children up to 17. Nonetheless, based on international demographic and economic projections, Montenegro can already forecast the future roll-out of a universal child benefit. If the eligibility age were increased by one year every year, 100% of children could be receiving the monthly benefit of 30 EUR per month by 2033 and the total cost for government would be 0.62% of GDP in 2033.

Among the options proposed for the FSA are vertical expansion and horizontal expansion of the benefit. Vertical expansions are based on newly calculated equivalence scales that can account for the different necessities of larger families. Horizontal expansions are based on the increase of the means-test cut-offs, allowing for a broader beneficiaries' base. Alongside these two options, the simulation included a withdrawal rate scenario that allows for a smoother transition from reciprocity to work, since with the current provision beneficiaries might be disincentivised to be actively participating in the labour market.

On the one hand the vertical expansion with the use of updated equivalence scales can increase benefit adequacy just by a modest amount. On the other hand, the horizontal expansion with a slightly higher means-test cut-off would increase the number of beneficiaries by 75%, and hence the costs. The results show that significantly reforming the FSA is not a cheap option and that when facing budget limitations there are critical trade-offs between coverage, adequacy, and activation. Ideally vertical and horizontal expansions would be jointly implemented so that the impacts are combined. If so, the combined effect of the FSA reform could achieve up to 1.1 percentage points poverty headcount reduction, and 1.6 percentage points poverty gap rate reduction. The low impact can be explained, besides by its limited coverage and rigid exclusion criteria, by the modest level of the basic benefit, which corresponds to one-sixth of the equivalised minimum consumption basket, or thirty per cent of the minimum wage.

Once the FSA becomes more meaningful to more beneficiaries, activation mechanisms and policies can be elaborated, starting from the profiles of beneficiary households, the status of the labour market, and the effectiveness of employment services. Nevertheless, stronger incentives to labour activation could be obtained by lowering the tax wedge to lower earners.

The last reform option presented in the report refers to the Personal Income Tax system. The current tax system includes two brackets which relatively similar tax rates (9 and 11 per cent). This system can be seen as a flat tax system, inherently regressive since lower-income households allocate a proportionally higher share of their budgets to basic goods spending and have an inferior opportunity for savings. The reform scenario adds a third bracket and moves the bracket cut-offs to 1 and 7.4 times the minimum gross wage. Below minimum wage, either a 0% (tax-

⁶ Child poverty indicators are calculated including only households with children.

exemption for the poorest) or 9% tax rates are simulated. Between 1 and 7.4 times the minimum wage, the simulated tax rate is 20%, above 7.4 times 30%.

With the reformed tax systems, the Gini coefficient index decreases by at least 1.5 points, reducing it by 13.9% in total. Exempting earners below the minimum gross wage does not seem to reduce the Gini coefficient significantly. Moreover, under the new reform, tax collection can increase significantly. In 2019, PIT corresponded to 3.6% of GDP (a value that could already increase to 5% if informality was solved). With the proposed reform, Montenegro can collect up to 8.8% of GDP in PIT (6.4% after correcting for informality). The increase in tax revenues can generate an additional 130EUR million (corrected for informality). Likewise, exempting the lowest earners from taxation can increase revenues up to 5.4% of GDP (ca. 90EUR million additional revenues). In both cases, the newly generated revenues are more than sufficient for financing all the CA and the FSA reforms simulated in this report, freeing fiscal space for relevant sectors as health, education, and social services.

Eventually, the analysis and discussion can be resumed in the following set of policy recommendations:

- To continuously extend coverage of the Child Allowance, decoupling it from the FSA targeting mechanisms making use of categorical targeting;
- To introduce a new equivalence scale for the Financial Support Allowance, reflecting the economy of scales of families;⁷
- To increase the basic amount of the Financial Support Allowance, determining it as a significant share of a minimum standard be it a national poverty line, the minimum wage, or the minimum consumer basket.;
- Expand the FSA beneficiaries' base, increasing the means-test cut-off;
- To include new relevant variables in the SILC questionnaire to hereafter evaluate the effectiveness and efficiency of the Financial Support Allowance;
- To Adopt a nationally defined absolute poverty line
- To restructure the social protection module in the SILC questionnaire so that it mirrors the actual social protection system, to hereafter evaluate single programmes individually;
- To reform the Personal Income Tax system, introducing additional brackets and higher tax rates for higher incomes;
- To invest the additional revenues from taxation in social protection benefits, creating a tax-benefit system that pays dividends to its participants proportionally.

⁷ By economy of scales, it is meant the non-proportional increase in financial needs for a household for each additional household member. The needs of a household grow with each additional member but – due to economies of scale in consumption– not in a proportional way. Needs for housing space, electricity, etc. will not be three times as high for a household with three members than for a single person. With the help of equivalence scales each household type in the population is assigned a value in proportion to its needs. The factors commonly taken into account to assign these values are the size of the household and the age of its members (whether they are adults or children).

1. Introduction

After gaining independence in 2006, and thanks to support from the European Union after 2011, Montenegro has been achieving great improvements in its social and child protection system to empower individuals and families and raise their quality of life. Today, the Montenegrin social protection system consists of both contributory and non-contributory programs. Contributory social protection includes unemployment, maternity, and pension benefits. Non-contributory benefits are regulated under the Law on Social and Child Protection of 2013, amended in 2017 (Government of Montenegro, 2017) and include the provision of cash and in-kind transfers such as financial support to families, child allowance, personal disability allowance, caregivers' allowance, and new-born allowance. The several cash benefit programs in place are either categorically targeting vulnerable groups or seeking to identify the most in need through proxy indicators of income. The same law also regulates social and child protection services as well as public and private institutions performing activities in social and child protection. (Government of Montenegro, 2017).

The Montenegrin social protection system, inherited from former Yugoslavia, was under considerable pressure during the 1990s, due to the process of transition to a modern socioeconomic society. As a result, the system was not particularly proactive and progressive in its coverage (Hrast, Janković, & Rakar, 2020). Since the early 2000s, the country initiated a reform of its social protection system, which accelerated after 2011. The current COVID-19 pandemic, however, has the potential to further exacerbate the gaps in coverage of vulnerable groups. It is estimated that the economic shock induced by the pandemic sent up to 34,000 citizens into poverty (or a 5.5% increase in poverty headcount),⁸ while at the same time forcing the Government to introduce budget cuts for social assistance as an austerity measure (The World Bank, 2021). Moreover, more than eighty percent of the new poor in Montenegro (i.e. approximately 4% of the population, or 27,000 people) do not currently have access to any social protection measure (The World Bank, 2020). Therefore, finding appropriate measures ensuring that vulnerable groups receive required support will be crucial.

The overall objective of the assignment was to provide recommendations for the design or reform of social protection and tax policies in Montenegro through the development of a policy simulation model. The microsimulation model aims at informing stakeholders of the potential impact of policy reform scenarios. Among the key elements of the assignment are (I) understanding the design, targeting, and cost-effectiveness of the national social protection system; (II) presenting redistributive social protection policy scenarios based on the tax/benefit microsimulation model; and (III) building the capacity of government stakeholders in using the policy simulation tools to enable the planning, development, and implementation of effective and sustainable social protection policies. The project was implemented under the aegis of the United Nations Joint Programme "Activate! Integrated Social Protection and Employment to Accelerate Progress for Young People in Montenegro" (JP Activate), that has the objective to improve the performance of

⁸ This is calculated based on a poverty line of \$5.5/day in 2011PPP.

the national social protection system for accelerating the achievement of the SDGs. One objective of JP Activate is to strengthen evidence-based policy making and support the Government of Montenegro in developing a social protection system that is well-designed, well-targeted and cost-effective.

This report presents the findings of the first two assignment objectives. It describes and analyses the current national social protection system, and it estimates the impact of social protection reforms designed to prevent and mitigate poverty using the microsimulation tool developed specifically for this purpose.⁹ The analysis in this report is based on the 2019 round of the Survey on Income and Living Conditions (SILC). The dataset contains information on households'¹⁰ demographic characteristics, education, dwelling, assets, health, employment, migration, gross and disposable income, and social transfers.¹¹ Although previous assessments provide insights on potential policy reforms, a more detailed investigation of the current status of income distribution, monetary poverty, and inequality was required to formulate relevant policy scenarios. Hence, the report includes an analysis of the current status of poverty, inequality, and social protection in Montenegro. The benefit performance assessment is needed to understand the ability of the transfers to reach their targets, especially among vulnerable populations. Similarly, assessing the adequacy of transfers shows whether Montenegro's social protection system is achieving its aim of reducing poverty and assisting those in need. The analysis of current transfers provides an overview of the effects and shortcomings with respect to different dimensions of poverty and social exclusion. Drawing from existing literature, the assessment of the social protection system and fiscal framework in Montenegro and interviews with government stakeholders, a static microsimulation model for non-contributory benefits is developed that allows the ex-ante analysis of multiple policy reform scenarios. The policy simulations in this report include changes of the child benefit allowance, the financial allowance, and the tax system.

The report is structured as follows: Chapter 2 provides an overview on the political, demographic, and economic context of Montenegro; Chapter 3 explores in details poverty and inequality in the country, identifying the vulnerable groups and the determinants of poverty. Chapter 4 discusses social protection schemes currently in place in Montenegro, highlighting specific characteristics such as eligibility criteria, targeting methods and benefit levels, followed by an assessment of the social protection scheme's performance. Finally, Chapters 5 and 6 focus on the scope of the assignment: a microsimulation model for Montenegro. The fifth chapter includes a desk review of existing microsimulation models on social protection in the Balkans and EU, while the sixth chapter drafts a methodology for a Montenegrin policy microsimulation model.

⁹ A separate report will be provided after delivery of the training.

¹⁰ The analysis in this document refers to the household as main unit of analysis, while the Law on Social and Child Protection refers to the family as underlying unit. There is no perfect overlap between the two concepts, as a household can consist of more than one family. The data used for the analysis only identify households and not families.

¹¹ The Statistical Office of Montenegro (MONSTAT) provided access to the anonymised SILC data in accordance with the provision of the Article 58 of the Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12 and 47/19).

2. Country context

2.1 Demographics

Based on statistics from the Statistical Office of Montenegro, the total population of Montenegro was estimated to be 620,739 as of 1st January 2021. More than fifty percent of the population is concentrated in the three municipalities of Podgorica (the capital), Nikšić, and Bar. Montenegro's population has continuously increased over the last twenty years, although at a decreasing pace, especially in the last five years. The main reason for the slower growth rate is that since 1991 the fertility rate has been continuously lower than the natural replacement rate of 2.1, and net migration has also been negative. Infant mortality has been decreasing drastically from 11.1 deaths per 1000 live births in 1991, to 2.4 per 1000 in 2019. Life expectancy has been increasing since 1990: in 2019, the average life expectancy at birth in Montenegro was 76.7 years, lower for males (74.0) than for females (79.5) (MONSTAT, 2019a). The latest projections estimated life expectancy in 2050 to reach 79.8 years for males and 84.5 for females (MONSTAT, 2008).¹²

Table 1 Demographic historic data and future assumptions

Indicator	1990	2020	2050 MONSTAT Medium variant	2050 MONSTAT Constant variant	2050 UN Medium Variant
Net Migration	-20,000	-2,000	2,624	-527	-2,000
Total fertility rate	2.1	1.80	1.90	1.67	1.73
Life expectancy at birth – Males	72.0	74.0	74.0	72.4	79.02
Life expectancy at birth – Females	78.4	79.5	79.5	77.1	82.83

Notes: "medium variant" estimates are corrected for past trends in the country and future uncertainties.

"Constant variant" estimations, instead, take the last registered values and project them in the future.

Source: Data from MONSTAT and United Nations (MONSTAT, 2008, 2019a; UNDESA, 2019)

National population projections estimated the total population to reach 783,479 by 2050.¹³ However, this projection assumed that the fertility rate would have had a positive upward trend, while net migration would have turned to be positive around 2010-2015. After 2015, net migration was expected to be positive until 2050. In fact, net migration has kept a negative trend since the breakup of Yugoslavia, and continued negatively after Montenegro's independence in 2006 (MONSTAT, 2008). The latest UN Population Prospects (medium variant) estimates that in 2050 the total population may decrease to 589,336 (UNDESA, 2019). National projection based on a

¹² MONSTAT's "medium variant": Positive net migration, increased fertility rate, increased life expectancy.

¹³ Ibid.

different scenario – assuming a negative net migration trend – forecast the Montenegrin population to decrease to 542,042 in 2050 (MONSTAT, 2008).¹⁴

International migration in Montenegro is, nowadays, an economically motivated phenomenon (Western Balkans Democracy Initiative, 2019). For young people, the most mobile part of the population and workforce, the high unemployment rate is one of the main drivers for migration (Western Balkans Democracy Initiative, 2019). Recent findings from the Balkan Barometer indicate that over 70% of youth in Western Balkans think about going to work abroad.¹⁵ Youth emigration, together with the birth rate decrease and life expectancy increase has led to the population ageing of Montenegro. Since 1990, the share of the total population aged 65 years and above doubled from 8% to the present value of 16%. It is expected that in the next thirty years the population aged 65+ will further increase its relative share up to 21% to 24%. Therefore, it is expected that in 2050 the elderly dependency ratio¹⁶ will range between 34% and 39% (Mijanovic, Brajuskovic, Vujacic, & Spalevic, 2017; MONSTAT, 2008; UNDESA, 2019), which means that per every 100 adults there will be 34 to 39 elders.

Due to its history in the Balkan region, Montenegro has a varied population in terms of ethnicities. Montenegrins make 45% of the total population, followed by Serbs (29%), Bosniaks (9%), and Albanians (5%). The remaining 12% of the population is composed by a wide range of ethnicities. The Roma and Egyptians communities, whose situation is more precarious than for other groups, were 1.3% in 2011 (MONSTAT, 2011). However, it is estimated that in 2020 the Roma and Egyptians in Montenegro were close to 20,000 i.e. 3.2% of the population (Roma Integration Regional Cooperation Council, 2020).

¹⁴ MONSTAT's "constant variant": constant negative net migration, constant fertility rate, constant life expectancy. Figures from MONSTAT are confirmed by more recent estimates of Montenegro migration trend by IOM, which was estimated to be negative for the period 2015-2020 at -0.8 migrants every 1,000 population. See IOM country profile at: <https://www.iom.int/node/29898/facts-and-figures>

¹⁵ See Regional Cooperation Council analysis at: <https://www.rcc.int/news/638/youth-unemployment-in-the-western-balkans-youth-is-crucial-in-designing-of-employment-policies>

¹⁶ The ratio between the number of elders and number of adults.

Table 2 Demographic historic data and future projections

Indicator	1990	2020	2050 MONSTAT Medium variant	2050 MONSTAT Constant variant	2050 UN Medium Variant
Population	615,004*	621,873	783,479	542,042	589,336
Age group 0-14	16%	18%	17%	15%	15%
Age group 15-64	66%	66%	62%	64%	61%
Age group 65+	8%	16%	21%	21%	24%
Child dependency ratio	38%	27%	28%	23%	25%
Elderly dependency ratio	12%	23%	34%	33%	39%
Total dependency ratio	50%	50%	62%	56%	64%

Source: Data from MONSTAT and United Nations (MONSTAT, 2008, 2019a; UNDESA, 2019)

2.2 Economic context

Assessing the macroeconomic stability and fiscal vulnerabilities of a country is essential to make accurate predictions about public finance sustainability, and making public expenditure more “efficient, equitable, and effective” (The World Bank, 2019). In the Western Balkans, between 2015 and 2019, the average Gross Domestic Product (GDP) growth rate has been steadily positive around 3.4%. Montenegro, with the highest average growth rate in the region, has been growing at a yearly rate of 4.2%, mainly because of large investments and touristic sector’s growth. While Montenegro’s current balance¹⁷ remained positive until 2019, the overall fiscal balance¹⁸ has been negative in the fiscal period 2015-2019, due to high levels of capital expenditures which account for 18.7% of total expenditures in 2019 (International Monetary Fund, 2020). However, capital expenditures are expected to be reducing from 2021, this will close the overall balance gap and re-establish equilibrium in the fiscal balance (International Monetary Fund, 2020). For example, the soon-to-be-completed Bar-Boljare highway project, that connects Belgrade to the Adriatic coast, represents a large reduction in capital expenditures, considering that it accounted for 34.5% of them in 2019 (International Monetary Fund, 2020). Montenegro’s growth model recently raised

¹⁷ Current revenues (total revenues excluding grants) minus current expenditure (total expenditure minus capital expenditures).

¹⁸ The difference between total revenues and grants, and total expenditure and net lending. It is important to clarify that grants are considered as contributions to the budget that do not require to be returned (as opposed to loans), such as donor assistance.

concerns among international financial institutions: the country has a high trade deficit, low productivity and high informality, and significant risks related to the sustainability of its public debt (International Monetary Fund, 2020; The World Bank, 2019).

Montenegro's macroeconomic outlook worsened significantly in 2020 because of the decisive response to the Covid-19 pandemic. Closing borders, airports and seaports, schools, non-essential businesses and banning public gatherings to curb the spread of the virus contracted the economy – mainly lead by tourism – by 14.9 to 15.2 percentage points (International Monetary Fund, 2021; The World Bank, 2021). The economic recovery is estimated to be slow, but the GDP is expected to grow again in 2021 at a 7% rate, and converge to lower rates from 2022 onwards (International Monetary Fund, 2021). Decreased government revenues and a sudden increase in expenditure to respond to the crisis have put additional pressure on the fiscal deficit. This additional pressure impacts substantially the general government debt level, which is estimated to have peaked at 107.2% of GDP in 2020, an all-time high for Montenegro (The World Bank, 2021). See **Table 3** on Montenegro's economic outlook, historical data, and projections.

Table 3 Montenegro's economic outlook, historical data, and projections, 2015 – 2026

Indicator	2015	2018	2019	2020	2021*	2022*	2023*
Real GDP growth	3.4	5.1	4.1	-15.2	7.0	5.6	3.6
CPI growth	1.5	2.6	0.4	-0.2	2.0	1.5	1.4
Total expenditures and lending % of GDP	46.4	47.2	44.0	54.3	48.3	45.0	44.1
Total revenues and grant % of GDP	40.4	41.1	42.2	43.3	43.3	42.5	42.0
Overall balance % of GDP	-6.0	-6.2	-1.8	-10.9	-5.0	-2.5	-2.1
General government debt (gross) % of GDP	68.8	71.9	78.8	107.2	93.4	82.4	78.8

Notes: *2021 are estimates, and 2023 are mid-term estimates.

Source: GDP and CPI data 2015-2020 (Central Bank of Montenegro, 2020); GDP and CPI from 2021, and Debt data (International Monetary Fund, 2021; The World Bank, 2021).

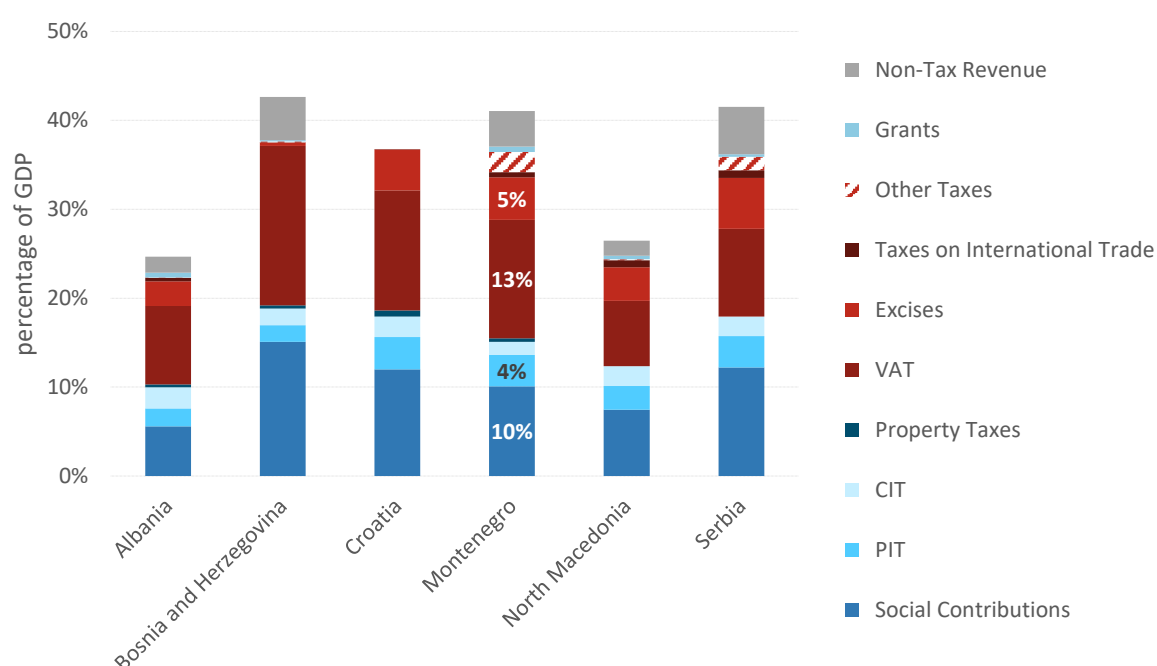
Government revenues

In 2018 Montenegro's total government revenues, including social contributions and grants, reached 41.1% of GDP (International Monetary Fund, 2019). Revenues are composed of indirect taxes (21.0% of GDP), direct taxes (15.5%), non-tax revenues¹⁹ (4.0%), and grants (0.6%) (UNU-WIDER, 2020). Social contributions account for the largest share (66.5%) of direct taxes, followed by Personal Income Tax (PIT) (22.8%), Corporate Income Tax (CIT) (9.5%), and property taxes (2.5%). On the indirect tax side, VAT contributes the most to revenues (63.6% of indirect taxes, followed by excise taxes (22.8%), other uncategorized indirect taxes (10.8%), and taxes on international trade (2.8%) (UNU-WIDER, 2020). From 2015 onwards, both total revenues as a share of GDP and their distribution across subcategories have not been varying significantly (see Figure A 1).

¹⁹ All recurring income earned by the government from sources other than taxes. These include, among others, revenues from interests from government loans and dividends and profits from state-owned companies.

Comparing total government revenues of Montenegro with Albania, Bosnia and Herzegovina, Croatia, Kosovo, North Macedonia, and Serbia, we can observe that Montenegro has a quite varied tax mix. The collection of social contributions, CIT, property taxes, excise taxes, and taxes on international trade in Montenegro are close to the group averages.²⁰ However, relevant differences occur when comparing PIT revenues across the group: Montenegro is collecting a slightly higher amount of personal income taxes than average, but still a very similar amount to Croatia and Serbia. VAT is also above average and like Croatia's level, yet significantly lower than Bosnia and Herzegovina's VAT revenues. The share of indirect taxation on total tax in Montenegro in 2018 revenues was 57.4%, a significantly higher share in comparison with the EU-28 average of 34.6%. (European Commission, 2021; UNU-WIDER, 2020).

Figure 1 General Revenue Statistics in 2018, percentage of GDP



Source: Authors' elaboration of data from UNU-WIDER Government Revenue Dataset, 2020

Government expenditure

Total government expenditure in 2018 was 47.2% of GDP, of which 77.3% incurred by current expenditures and 22.7% by capital expenditures (International Monetary Fund, 2020). In 2017 government expenditure broken down by functional classification saw 27.2% of total expenditure allocated to social protection, including contributory benefits. General public services accounted for the second-largest post (23% of total expenditure), followed by economic affairs (18.7%), health (10%), and education (8.9%). Social protection spending (both contributory and non-contributory) taken together was 12.8% of GDP in 2017, which was six percentage points below the EU28

²⁰ The group averages are: Social Contributions 10.4%; PIT 2.9%; CIT 2.1%; Property Taxes 0.4%; Excises 3.7%; Taxes on International Trade 0.4% (UNU-WIDER, 2020).

average, but in line with the spending in EU small states. Social protection spending on non-contributory benefits was 1.19% of GDP in 2018, meaning that contributory benefits occupied most of the functional budget for social protection (The World Bank, 2019).

2.3 Labour market

Although labour force participation has increased over the last five years, the total labour force has decreased between December 2019 and December 2020 by approximately 10,000 workers, as a consequence of the Covid-19 outbreak (Central Bank of Montenegro, 2020). Relative to the adult population (15 years and above), the labour force participation rate has fallen from 57.6% in 2019 to 52.5% in 2020. This is worrisome because it means that many working-age adults are not employed and neither are actively seeking for work and may depend on their relatives or on Social Assistance measures. Alongside more than 20,000 workers leaving the labour force, the unemployed increased by close to 5,000 workers too. The unemployment rate has increased from 15.3% in 2018 to 19.1% in 2020, reverting the decreasing trend in the years preceding 2020. The number of unemployed reached a record height of 47.8 thousand in November 2020, almost 11,000 more compared to 2019 (Central Bank of Montenegro, 2020). Among the labour force estimated through the latest Labour Force Survey, 26.0 thousand unemployed are male, and 21.8 thousand unemployed are female. Although less in absolute numbers, unemployment is slightly higher (18.4% vs 17.5%) among the female labour force (MONSTAT, 2020c). Moreover, youth unemployment reached 46.5% in 2020, while the share of 15-29 not in education, employment, or training, increased from 21.3% in 2019 to 26.6% in 2020 (RCC, 2021; EU Commission Progress Report, 2021). In 2019, around 20% of Montenegrin employees worked in *Wholesale and retail trade*, 11% in *Public Administration and defence*, 9% in *Accommodation and food service activities*, and 7% in *Construction*. Overall, close to eighty per cent of the employed are in the services sector (MONSTAT, 2020b). The sectors hit the hardest by the current employment crisis are *accommodation and food service*, *retail*, and *constructions* (The World Bank, 2020).

Table 4 Labour Market Statistics, 2015 - 2020

Indicator	2015	2016	2017	2018	2019	2020
Labour Force Participation Rate (%)	49.5	52.1	55.2	55.7	57.6	52.5
Labour Force	210,204	220,752	232,878	233,744	240,239	218,305
Employed	175,617	177,908	182,368	190,132	203,545	176,693
Unemployed	34,587	42,844	50,510	43,612	36,693	41,612
Unemployment Rate (%)	16.5	19.4	21.7	18.7	15.3	19.1

Source: Data from MONSTAT and Employment Agency (Central Bank of Montenegro, 2020).

Table 5 Unemployment Statistics, 2015 - 2020

Indicator	2015	2016	2017	2018	2019	2020
Total (000's)	47.2	48.3	43.9	42.5	43.4	47.8
Men (000's)	26.0	27.5	23.4	23.9	23.5	26.0
Women (000's)	21.1	20.8	20.6	18.5	20.0	21.8
Unemployment Rate Total (%)	17.6	17.7	16.1	15.2	15.1	17.9
Men (%)	17.7	18.2	15.4	15.2	14.7	17.5
Women (%)	17.3	17.1	17	15.1	15.7	18.4

Notes: "000's" for thousands.

Source: Data from Labour Force Survey (MONSTAT, 2020c).

Since 2015, average monthly salaries have been increasing at an average rate of 1.6% annually. This is slightly higher than average inflation in the period (1.3%), meaning that wage growth has been in line with prices. In 2020, the average gross salary was 786 EUR, the net salary being 524 EUR after taxes and contributions (Central Bank of Montenegro, 2020). In 2019, the net statutory minimum wage was increased to 222 EUR per month.²¹ Therefore, close to 60,000 employees (29% of the employed population) who earned less than 222 EUR per month saw their salaries increased at the level of 43% of the average salary (Golubovic, 2019). The last time before 2019 when Montenegro increased the statutory minimum wage was in 2013. The trade unions resumed the debate in 2018. The 2019 increase came because of negotiations on labour costs, which led to a reduction of two per cent points in the health insurance premium paid by the employers (from 4.3% to 2.3%). With this measure, the Government was estimated to increase revenues from taxes and contributions by five million EUR per year, but to lose revenues from health contributions by thirteen million EUR per year (Golubovic, 2019).²²

Table 6 Minimum and average monthly wages, 2015 - 2020

Indicator	2015	2016	2017	2018	2019	2020
Average gross salary in EUR	725	751	765	766	773	783
Average salary without taxes and contributions in EUR	480	499	510	511	515	524
Wage Growth Y-o-Y, %	4.0	2.2	0.2	0.7	1.4	1.4
Net statutory minimum wage in EUR	193	193	193	193	222	222

Notes: "Y-o-Y" for Year-on-Year.

Source: Central Bank of Montenegro and European Social Policy Network (Central Bank of Montenegro, 2020; Golubovic, 2019).

²¹ The Government of Montenegro has recently announced it is intentioned to increase the minimum salary to 250 EUR. See <http://www.rtcg.me/vijesti/ekonomija/311150/minimalna-zarada-250-eura-od-treceg-kvartala.html>

²² Nonetheless, because of the impact of COVID-19 on employment and jobs, both PIT and health SSC decreased in both nominal and relative terms from 2019 and 2020 (Ministry of Finance and Social Welfare, 2020, 2021).

MONSTAT calculates the value of a minimum expenditure basket²³ for a household of four members. The basket, as of November 2020, amounted to 642 euro for a family of four, and includes food, non-alcoholic beverage, non-food items, and basic services.²⁴ While the net average salary of a worker corresponds to 81.5% of the minimum basket of goods, the statutory minimum wage corresponds to 34.5% of the minimum basket (MONSTAT, 2020f, 2020d). This implies that a household composed by two employees earning the statutory minimum, and with two dependents, lives in a state of material deprivation.

It is possible to benchmark the statutory minimum wage with the at-risk-of-poverty threshold. The at-risk-of-poverty threshold is set at 60% of the national median equivalized disposable income after social transfers. In 2019, this relative poverty line (calculated for a single adult) was 188 euro per month, and the statutory minimum wage was 118% of it (MONSTAT, 2020f). Therefore, a single adult with no dependents earning the statutory minimum wage would not be considered at risk of poverty. The ratio between the minimum wage and the poverty line for a household with two adults and two children is 56.1% (MONSTAT, 2020f). This means that if two adults are minimum wage earners, and have two dependent children, their household will not be considered at risk of monetary poverty (see **Table 7**).

Table 7 Monthly wages compared to monthly minimum standard of living, 2015 - 2020

Indicator	2015	2016	2017	2018	2019	2020
Minimum consumer basket, in EUR	606	...	...	635	644	644
Minimum wage to minimum basket, %	31.8	...	...	30.4	34.5	34.5
Average net wage to minimum basket, %	79.2	...	...	80.5	80.0	81.5
At-risk-of-poverty line, in EUR						...
single person	156	160	174	189	188	
two adults and two children	329	336	367	397	396	
Minimum wage to At-risk-of-poverty line ratio (%)						...
single person	123	120	110	102	118	
two adults and two children	58.7	57.4	52.6	48.6	56.1	

Notes: The minimum consumer basket values are presented as annual average, in 2020 it is calculated as average from January to November.

Source: Data from Survey on Income and Living Conditions and Household Budget Survey (MONSTAT, 2020f, 2020d)

²³ The minimal consumer basket contains 92 food products, and minimal value of caloric intake of 2211 Kcal per day, per person. The content of the food basket satisfying 2211 kcal per person per day was empirically derived from household survey data. The value of the food basket is monthly updated with actual food prices. The value of the non-food allowance is adjusted with the CPI (MONSTAT, 2018). It is important to notice that housing rents are not included in the calculation of the minimum non-food basket.

²⁴ Rent is excluded.

2.4 Personal income tax and social security contributions

Personal Income Taxes and Property Taxes, which together constituted 3.9% of GDP in 2019, are levied on residents and non-residents generating income from personal earnings, self-employment activity, property and property-based rights, capital, and capital gains. Individuals are taxed individually and not based on their households' wealth. According to the Law on Personal Income Tax (Government of Montenegro, 2016)²⁵, income shall not include revenues generated on the following basis:

- 1) regulations on rights of disabled persons
- 2) child allowances and special assistance for supplies for new-born children
- 3) basic rights in the area of social protection
- 4) assistance in the event of destruction or damage of property as a result of natural disasters or other extraordinary events
- 5) compensations paid from health insurance, except for wage compensation
- 6) inheritances and gifts
- 7) organized social and humanitarian assistance
- 8) state awards established by law
- 9) pensions, except for pensions obtained in accordance with the law governing the wages of the state and public officials, and disability allowances
- 10) games of chance and lotteries
- 11) goods, life, and property insurance

All income is summed, and the government applies a flat tax rate of 9%. According to the Law on Personal Income Tax *"the income tax rate on personal earnings exceeding average monthly gross wage for the previous year [...] shall be 11% on the amount of earnings exceeding the average wage"* (Government of Montenegro, 2016). The additional tax rate of 11% has been progressively lowered from 15% in 2013 to the current value (Kaludjerovic & Golubovic, 2019).

Social Security Contributions (SSC) are mandatory for employees in Montenegro – including part-time workers, occasional and temporary contract), self-employees and farmers - and they are collected on behalf of both the employers and the employees. Workers contribute to the pension scheme, the health insurance scheme, and to the unemployment insurance scheme. Contributions tend to be skewed towards the employee's side (although they are still deducted by the employer from the gross salary), and they are regulated by the Law on Contributions for Mandatory Social Insurance (Golubovic, 2019; Kaluđerović & Golubović, 2019; KPMG, 2019).

Practically, an employer would pay a gross salary (or total labour cost) of 853 euro to a single employee, upon which he would pay 71 euro of SSC. From the remaining 782 euro, the employee will see deducted 70 euro of PIT and 188 euro of SSC, leaving him/her with a net salary of 524 euro. The tax wedge (net of social transfers) is 39% a value close to the Serbian and Croatian ones.

²⁵ Law was last amended in 2019. See <https://www.paragraf.me/propisi-crnegore/zakon-o-porezu-na-dohodak-fizickih-lica.html>

Table 8 Social security contribution rates

Scheme	Employees' contribution	Employers' contributions
Pension plan	15.0%	5.5%
Health insurance	8.5%	2.3%
Unemployment insurance	0.5%	0.5%

Source: KPMG (2019) and Golubovic (2019).

Table 9 Labor tax wedge for a single average wage worker

Wage component	EUR
(A) Net wage	524
(B) PIT	70
(C) Employee SSC	188
(D) Gross wage (A + B+ C)	782
(E) Employer SSC	71
(F) Labor Costs (D+ E)	853
(G) Tax wedge (B + C+ E) / F	39%

Source: Own elaboration

Summary

The Montenegrin economy grew at regional record rates in the period 2015-2019. However, because of the COVID-19 pandemic consequences, growth slowed down considerably, yet is expected to return to pre-crisis rates during 2021. The economic shock exacerbated unemployment and poverty. Alongside unemployment and social assistance measures for those workers who paid the price of the 2020 crisis, interventions are required to address in-work poverty (for both formal and informal workers), with specific measures for low-income families and individuals. Interventions should look in particular at youth unemployment, which increased exponentially in 2020, hitting hard an already vulnerable group.

A higher investment in social policies requires additional resources to be allocated to the social protection budget. At present, the Montenegro's economic outlook is negative in terms of fiscal balance and debt levels. Hence, the fiscal space for introducing new measures is limited and has to be found domestically, either by reallocating current spending or by increasing tax revenues. The personal income tax, for example, could be made more progressive and simultaneously collect more revenues.

Currently, the net minimum wage is still lower than the equivalised minimum consumer basket. Therefore, any reform concerning the personal income tax system shall be wary of the consequences of new tax rates and brackets on the net income levels of Montenegrin lowest earners.

3. Poverty and inequality

Social protection transfers can have a distributional effect that directly affect households' disposable income and consequently reduce income deprivation and economic inequality (Gassmann, Cherrier, Mora, & Mohnen, 2013). To understand the performance of the social protection system in Montenegro, and consider policy reforms, it is crucial to understand who is in need, how big and heterogenous this group is, and why its members are poor. In this section we establish the country's poverty profile and outline the causes and consequences of poverty and inequality.

Poverty assessments in Montenegro are based on the approach used in the European Union. The *'At Risk of Poverty or Social Exclusion (AROPE)* rate is composed of three indicators: the *at-risk-of-poverty rate*, the *severe material deprivation rate*, and the *share of people living in households with very low work intensity*. The AROPE shows the share of individuals that are deprived in at least one of those three dimensions. The AROPE incidence in the Montenegrin population slowly decreased from 35.9% in 2015 to the current value of 30.5% in 2019 (EUROSTAT, 2020f). This trend is similar to countries such as Croatia or Serbia (see Table 10).

Table 10 *At Risk of Poverty or Social Exclusion rates in Montenegro and neighbouring countries. 2015-2019, %*

Country	2015	2016	2017	2018	2019
Montenegro	35.9	34.6	33.7	31.4	30.5
Croatia	29.1	27.9	26.4	24.8	23.3
North Macedonia	41.6	41.1	41.6	41.1	39.9
Serbia	41.7	38.5	36.7	34.3	31.7
Kosovo	...	...	...	56.7	...
EU -28	17.3	17.3	16.9	17.1	16.8

Source: Data from EUROSTAT (EUROSTAT, 2020f)

The *severe material deprivation rate* measures the share of persons having living conditions severely constrained by lack of resources.²⁶ In 2019, 12% of the Montenegrin population were materially deprived (EUROSTAT, 2021). Additionally, AROPE takes into account the share of people living in households with very low work intensity.²⁷ In Montenegro, 14.9% of the population lived in a household where the adults worked 20% or less of their total work potential during the past year (MONSTAT, 2020f).

²⁶ "Severely materially deprived persons have living conditions severely constrained by a lack of resources, they experience at least 4 out of 9 following deprivations items: cannot afford i) to pay rent or utility bills, ii) keep home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone" (EUROSTAT, 2020f).

²⁷ "People living in households with very low work intensity are those aged 0-59 living in households where the adults (aged 18-59) work 20% or less of their total work potential during the past year" (EUROSTAT, 2020f).

3.1 Monetary poverty

Until 2013, poverty in Montenegro was assessed using an absolute poverty line calculated by MONSTAT based on Household Budget Survey data of 2006. The poverty line of 2006 was annually adjusted with the consumer price index. Since 2013, monetary poverty in Montenegro is assessed using the EUROSTAT *at-risk-of-poverty* rate, and the poverty rate using the national absolute poverty line has not been recalculated. The *at-risk-of-poverty* rate measures the percentage of individuals with an income below 60% of the median disposable income per adult equivalent. It is a relative threshold that is sensitive to economic developments and changes in the overall income distribution. In 2019, the monthly after social transfers *at-risk-of-poverty* threshold for a single person in Montenegro was 188 euro, or 373 euro for a household with two adults and two children younger than 14 years (MONSTAT, 2020f). The single person *at-risk-of-poverty* threshold (188 EUR) would match 95% of the 2013's national absolute poverty line indexed to 2019 prices (198 EUR) using the consumer price index growth rate (Central Bank of Montenegro, 2020; MONSTAT, 2020a).

In Montenegro, 24.5% of the population was *at-risk-of-poverty* in 2019. Given that the poverty rate before social transfers (except pensions) was 29.5%, social transfers reduced the risk of monetary poverty by five per cent points, which is a relative reduction of 16.9%. The poverty reduction effect of social transfers in Montenegro is similar to the effect in Serbia, where poverty decreases from 28.3% to 23.2%, but significantly lower than the EU average indicator where social transfers reduce relative poverty by one third, from 25.1% to 16.8%, (EUROSTAT, 2020a, 2020b).

In addition to the relative at-risk-of-poverty, we carried out additional poverty analyses using two absolute poverty lines: the 2013 national poverty line, and the minimum basket poverty line. The first is the absolute poverty line from 2013 adjusted for inflation until 2018. The second poverty line is based on the 2018 average minimum basket defined monthly by MONSTAT.

Table 11 Absolute poverty in Montenegro, 2018

Poverty Line	Income	P0 (%)	P1 (%)
Indexed National Absolute Poverty Line	Disposable Income	27.1	10.0
	Income after pensions	32.3	15.2
	Income before pensions	45.5	27.0
Minimum Basket Poverty Line	Disposable Income	47.7	19.1
	Income after pensions	52.5	24.4
	Income before pensions	65.6	36.8

Notes: The indexed national absolute poverty line is 198 EUR per person per month. The minimum basket poverty line is 244 EUR per person per month for households with 1 adult, and 302 EUR per person per month for households with 2+ members. P0 stands for poverty headcount index, P1 for poverty gap rate.

Source: Own elaboration based on SILC 2019 data.

Based on the indexed national poverty line (absolute) 27.1% of the population live in monetary poverty, a share that would be 45.5% in the absence of social transfers (especially pensions). Using the average monthly minimum basket, almost half of Montenegro population seems to be unable to meet the nationally defined minimum standards.

Table 12 At-risk-of-poverty rate, before and after social transfers (excluding pensions), 2015 - 2019

Country	Indicator	2015	2016	2017	2018	2019
Montenegro	Before social transfers	29.4	29.0	31.4	31.2	29.5
	After social transfers	24.4	24.0	23.6	23.8	24.5
	% Difference	-17%	-17%	-25%	-24%	-17%
Croatia	Before social transfers	31.0	27.3	26.6	25.7	24.3
	After social transfers	20.0	19.5	20.0	19.3	18.3
	% Difference	-35%	-29%	-25%	-25%	-25%
North Macedonia	Before social transfers	24.8	25.7	25.9	25.7	25.4
	After social transfers	21.5	21.9	22.2	21.9	21.6
	% Difference	-13%	-15%	-14%	-15%	-15%
Serbia	Before social transfers	33.4	32.9	31.6	29.6	28.3
	After social transfers	26.7	25.9	25.7	24.3	23.2
	% Difference	-20%	-21%	-19%	-18%	-18%
EU - 28	Before social transfers	26.1	25.9	25.6	25.5	25.1
	After social transfers	17.3	17.3	16.9	17.1	16.8
	% Difference	-34%	-33%	-34%	-33%	-33%

Notes: “% difference” reports the reduction in % of people at risk of poverty after social transfers have been accounted for.

Source: Survey on income and living conditions (EUROSTAT, 2020a, 2020b)

The relative median at-risk-of-poverty gap rate²⁸ was 33.1% in 2019 meaning that, the median disposable income of Montenegrins considered to be at risk of poverty was 66.9% of the at-risk-poverty-threshold (EUROSTAT, 2020g). Similarly, to the at-risk-of-poverty rate, the poverty gap has been decreasing in the last five years. Although the relative poverty rate is similar for men and women in Montenegro, the poverty gap rate seems to indicate that women are on average poorer than men (MONSTAT, 2020f).

The World Bank estimated in April 2020 that in the Western Balkans, without government response measures, the COVID-19 crisis could have pushed at least 1,350,000 new people into poverty. In Montenegro this would mean an estimated increase of the poverty rate by 5.5 additional percentage points.²⁹ More than 34,000 Montenegrins could have fallen into monetary distress due to the economic shock of the pandemic. Moreover, it is estimated that more than 80 percent of the new poor currently have no access to any social protection measure in Montenegro (The World Bank, 2021).

²⁸ Calculated as the distance between the median equivalised net income of persons below the at-risk-of-poverty threshold and the at-risk-of-poverty threshold itself, expressed as a percentage of the at-risk-of-poverty threshold. Note, that this index differs from the poverty gap rate which is the average income gap expressed as a percentage of the poverty line (Haughton and Kandkher 2009).

²⁹ This is calculated based on a poverty line of \$5.5/day in 2011PPP.

Monetary poverty profile

According to the 2019 Survey on Income and living Conditions (MONSTAT, 2020f), the incidence of the *at-risk-of-poverty* rate is higher than average among children 0-18 (33.7%), meaning that one third of Montenegrin children live in an *at-risk-of-poverty* household. Similarly, the poverty incidence among the youth 18-24 is 30.5%, up 5 percentage points since the previous survey round. Several other factors can be considered determinants of monetary poverty in Montenegro. Location plays a role as well: the risk of living in poverty is higher in rural areas and in the North of the country. Poverty incidence in the Northern region (41.2%) is more than twice as high than in the Centre and Southern regions. Across all regions, the rural population *at-risk-of-poverty* was double (36.3%) than in urban settlements (17.9%). Within the group of households with dependent children, those with a single parent, or two parents and three or more dependents, have the highest *at-risk-of-poverty* rates (35.4% and 45.0% respectively). Not surprisingly, labour market status is closely correlated with the risk of living in poverty. Being unemployed increases the poverty risk by 100%, while being inactive increases the poverty risk by 50%. Among adults, those whose highest level of education attained is *less than primary, primary, and lower secondary* are at a higher risk of poverty, a risk which is more than double than for *upper secondary and post-secondary non-tertiary education*, and four times than for adults with tertiary education. This reflects on the share of children 0-17 living in poverty by level of education of their parents. It is estimated that 84.5% of children whose parents only attained *less than primary, primary, and lower secondary education* (i.e. 8% of all children) are living in an *at-risk-of-poverty* household. See **Table 13** for further disaggregation of the *at-risk-of-poverty* rate by socio-demographic indicators and categories.

Table 13 *At-risk-of-poverty rates, 2019*

Indicators and categories	Total
<i>At-risk-of-poverty threshold (EUR per month)</i>	
Single person household	188.0
Household with two adults with two children younger than 14 years	396.0
Before social transfers	42.9%
Before social transfers (except pensions)	29.5%
After social transfers	24.5%
<i>By age group</i>	
Age 0-18	33.7%
Age 18-24	30.5%
Age 18-64	23.0%
Age 65+	15.1%
<i>By region</i>	
Centre	16.6%
North	41.2%
South	19.9%
<i>By type of settlement</i>	
Rural	36.3%
Urban	17.9%
<i>By household type</i>	

With dependent children	29.6%
Single parent with dependent children	35.4%
Two adults with three or more dependent children	45.0%
Households without dependent children	13.9%
Other households with dependent children	29.1%
Other households without dependent children	12.1%
Single household	18.9%
By most frequent activity status	
Employees	7.0%
Inactive population -	35.9%
Retired	11.4%
Self-employed	19.9%
Unemployment	45.5%
By highest level of education attained	
Less than primary, primary, and lower secondary education	38.7%
Upper secondary and post-secondary non-tertiary education	19.6%
Tertiary education	8.1%
Children (0-17) by educational attainment level of their parents	
Less than primary, primary, and lower secondary education	84.5%
Upper secondary and post-secondary non-tertiary education ISCED	32.8%
Tertiary education	12.4%

Source: Authors' elaboration of data from: MONSTAT (2020). Survey on Income and Living Conditions. Retrieved January 12, 2020, from <https://www.monstat.org/eng/page.php?id=1531&pageid=1531>

3.2 Multidimensional poverty, vulnerabilities, and risks

The welfare of Montenegro can also be assessed by the global Multidimensional Poverty Index (MPI). The MPI is based on the methodology developed by Alkire and Foster (Alkire et al., 2015), indicating acute multidimensional poverty across over 100 countries. The MPI has three dimensions and 10 indicators, *“each dimension is equally weighted, and each indicator within a dimension is also equally weighted. Any person who fails to meet the deprivation cut-off is identified as deprived in that indicator”* (OPHI, 2020). The MPI can shed light on those areas of deprivation not covered by monetary poverty measurements. The latest MPI for Montenegro estimated by the Oxford Poverty and Human Development Initiative (OPHI) stems from 2020, using UNICEF's Multiple Indicator Cluster Survey (MICS) data of 2018.

The multidimensional poverty incidence in Montenegro is very low. Based on the global MPI indicators, only 1.2% of the total population is deprived in at least one-third of the weighted indicators, with no distinction between the rural and urban population. Moreover, those deprived have an intensity of deprivation of 39.6%. Disaggregating the relative contribution of each indicator by urban and rural populations unveils significant results: eighty percent of the MPI in urban areas can be explained by deprivations in nutrition and health. In rural areas, nutrition, years of schooling, and school attendance equally account to approximately more than 70% of the MPI (OPHI, 2020).

Table 14 Multidimensional Poverty Index in Montenegro, 2018

Area	MPI	Incidence	Intensity	Vulnerable	Severely Poor	Population Share
National	0.005	1.2%	39.6%	2.9%	0.1%	100.0%
Urban	0.005	1.2%	38.8%	2.4%	0.0%	64.8%
Rural	0.005	1.3%	41.1%	3.7%	0.2%	35.2%

Notes: A person is identified as vulnerable to poverty if they are deprived in 20–33.33% of the weighted indicators; a person is identified as living in severe poverty if they are deprived in 50–100% of the weighted indicators

Source: Adapted from OPHI (2020).

The analysis of material deprivation and of the MPI shifts the focus from monetary poverty to different dimensions of deprivation that can be experienced. The global MPI, with its fixed list of indicators and thresholds, can identify the most severe barriers to wellbeing, yet it cannot indicate and analyse key deprivation areas that are exclusively relevant to the Montenegrin context.

As highlighted in a forthcoming report by EPRI and by the latest available impact assessment of the Covid-19 outbreak in Montenegro, the main risks and vulnerabilities across the life cycle are indeed related to health and education, but based on different indicators than the MPI (EPRI, 2020; United Nations Montenegro, 2020a, 2020b). Based on the latest analysis of social and economic vulnerabilities, the most vulnerable groups in Montenegro are children, adolescents, and persons with disabilities and functional difficulties (EPRI, 2020; United Nations Montenegro, 2020a). Young children, especially in the lowest wealth quintile, are at risk of malnutrition. According to MICS³⁰ 2018, only 48% of the children between 6 to 23 months achieve the minimum dietary diversity, and in the lowest quintile that applies to only 34% of the children. The stunting prevalence among all children below the age of 5 is 7%. Between 2013 and 2018, underweight has more than doubled and currently stands at 3.7% of children under 5 (EPRI, 2020). The health dimension is especially relevant at the earliest stage of life, stressing the relevance of increased preventive health care efforts for new-borns and during early childhood. Immunization from main diseases for children is far from universal, and ranges between 42% and 95% depending on the disease (see Table A 1). Based upon the studies above, education is the most worrying domain, since it intersects with other dimensions such as health and security. The adjusted net attendance rate for primary school (age 6-10) is 95% and for lower-secondary school (age 11-14) is 93% with the significant exception of Roma adolescents in the Northern region whose secondary school attendance rate is 2% (EPRI, 2020). Among children aged 12 to 14 years, 30% in the lowest quintile are engaged in child labour (EPRI, 2020). Relatively low education indicators, together with unplanned teenage pregnancies and functional difficulties are severely affecting the Montenegrin youth (see **Table A 1** for further data on risks and vulnerabilities across the life-cycle). For example, below the age of 18, 7.6% of girl are already married (1% below 15), and 1% of girls aged 15-19 have had a live birth or pregnant with a first child (EPRI, 2020). A recent assessment on Covid-19 consequences on adolescents and youth found that NEET rate increased by approximately 10 percentage points between 2019 and 2020 (United Nations Montenegro, 2020b).

³⁰ All data from this paragraph and below are based on UNICEF's Multiple Indicator Cluster Surveys (MICS).

The results from UNICEF's *Multidimensional Overlapping Deprivation Analysis* (Carraro, Gavrilovic, Novkovic, Stanistic, & Smolovic, 2020) strengthen the findings highlighted so far. Less than 20% of the Montenegrin children (age 0-5) do not suffer from any deprivation, and children (age 0-2) experience the highest prevalence of multidimensional poverty, close to 80%.³¹ The Roma population by background have demographic characteristics increasing the likelihood of multidimensional deprivation (living in the northern region and in female-headed households). On top of the background characteristics, almost all children in the Roma communities are deprived in two or more dimensions of wellbeing. The most significant overlap in deprivations among the Roma are early childhood development (ECD) and housing, and 65% of children under two years of age experience a third overlap on the dimension of housing (Carraro et al., 2020).

These vulnerabilities, together with those listed in Table A 1 suggest relevant risks of deprivations in health outcomes, literacy, employment and income security, and safety and security. This specific set of vulnerabilities and risks affects the accumulation of human capital and hampers children, adolescents' and youth's development potential.

3.3 Inequality

Inequality is relatively high in Montenegro. In 2019, the Gini coefficient for disposable income was 34.1. This was higher than in Serbia, North Macedonia, Croatia, and it was also above the EU average. Before social transfers (excluding pensions), the Gini coefficient was 38.2 in 2019, down from 41.0 in 2015 (EUROSTAT, 2020d). This is the highest coefficient compared to Serbia, North Macedonia, Croatia, and the EU average. Social transfers reduced inequality in Montenegro by 4.1 points, which is the highest differential compared to Serbia, North Macedonia, and slightly lower than the EU-28 average (see **Table 15**) (EUROSTAT, 2020c). In 2019, the income of the top 20% of the country was 6.7 times higher than the income of the lowest 20%. While Montenegro's top quintile earned 39.9% of the national income, the bottom quintile earned only 5.9% (EUROSTAT, 2020e).

³¹ On a multidimensional poverty index built choosing child discipline/neglect, health, nutrition, early child development, water and sanitation, housing, and utilities as dimensions (Carraro et al., 2020).

Table 15 Gini coefficient of equivalised disposable income, before and after social transfers (excluding pensions), 2015 - 2019

Country	Indicator	2015	2016	2017	2018	2019
Montenegro	Before social transfers	41.0	40.9	42.2	39.6	38.2
	After social transfers	36.5	36.5	36.7	34.7	34.1
	% Difference	-11%	-11%	-13%	-12%	-11%
Croatia	Before social transfers	36.8	34.3	34.1	33.8	33.0
	After social transfers	30.4	29.8	29.9	29.7	29.2
	% Difference	-17%	-13%	-12%	-12%	-12%
North Macedonia	Before social transfers	36.2	36.2	35.3	34.7	33.2
	After social transfers	33.7	33.6	32.4	31.9	30.7
	% Difference	-7%	-7%	-8%	-8%	-8%
Serbia	Before social transfers	44.9	44.1	42.2	39.5	36.6
	After social transfers	40.0	39.8	37.8	35.6	33.3
	% Difference	-11%	-10%	-10%	-10%	-9%
EU - 28	Before social transfers	36.5	36.2	35.9	35.9	35.5
	After social transfers	31.0	30.8	30.6	30.8	30.7
	% Difference	-15%	-15%	-15%	-14%	-14%

Notes: “% difference” reports the reduction in Gini coefficient (as a percentage of before transfer Gini) after social transfers have been accounted for.

Source: Survey on Income and Living Conditions (EUROSTAT, 2020c, 2020d).

Summary

Inequality is a declining but persistent issue in Montenegro. Social transfers contribute significantly to the reduction of the Gini coefficient, however further reduction could be achieved with the reorganization of the personal income tax system. As it currently is, the PIT system is regressive, thereby not reducing inequalities, but rather increasing them. A tax reform could also collect increased revenues to be invested in the reform of social benefits that aim at covering the most vulnerable groups.

While the COVID-19 exacerbated unemployment and poverty in Montenegro, depending on the poverty line used, which may vary considerably in size, between 25 and 50 percent of the population was living in poverty before the crisis. Using the official poverty line (corresponding to 60% of the median income), the poverty headcount in 2019 was 24.5% of the population. The monetary poverty profile suggests the priorities in terms of groups to whom to direct policy

interventions. The inactive and the unemployed have the highest poverty rates, together with large households with children, and children whose parents have very low educational levels.

Altogether, a reform of current tax and social transfer policies could create a more redistributive, progressive, and protective environment for Montenegro.

4. Social protection

4.1 System overview

If provided with the appropriate blend of instruments and integration with labour systems and tax policies, social protection can improve resilience, equity, and opportunity (Devereux & Sabates-Wheeler, 2004; Gassmann et al., 2013; Holzmann & Jørgensen, 2001; Merrien, 2013). Poverty reduction in Montenegro cannot only be attributed to economic progress. The social protection system plays a role in mitigating monetary poverty through redistribution mechanisms. In Montenegro, social transfers (after pensions) reduce the risk of monetary poverty by five percentage points, from 29.5% to 24.5%. Hence, social protection directly reduces poverty. Additionally, inclusive social protection systems allow households to invest in human and physical capital which facilitates the management of risks and contributes to economic stability and social cohesion (Alderman & Yemtsov, 2014; Barrientos, 2012; Gassmann et al., 2013).

Montenegro's history shaped its social protection system. Former Federal Yugoslavia had a mixed Bismarckian-Beveridgean system that protected the labour force and the neediest (Hrast et al., 2020). Yugoslavia's breakup brought war and emigration, and the transition highlighted and strengthened structural factors that led to social polarization and stratification. To tackle the risks of poverty and social exclusion, policymakers initially acted with the aim of "putting out fires" mainly implementing one-off financial support interventions focused on the "losers" of the transition process, e.g., refugees, pensioners and unemployed (Hrast et al., 2020). This short-term poverty reduction strategy led to many people falling into vicious cycles of poverty. The implementation of a comprehensive social protection system in Montenegro only began in 2000, intending to address poverty traps and to contribute to society's transformation (Hrast et al., 2020). Since the early 2000s, the social protection system in Montenegro has been reformed and strengthened. Today, a mix of contributory and non-contributory benefits, active labour market policies, and social services shape the system. The implementation of benefits and services is the responsibility of state agencies such as the Ministry of Finance and Social Welfare, Centres for Social Work, the Ministry of Economic Development, the Employment Agency, the Pension and Disability Insurance Fund, and the Health Insurance Fund.

In the following section of this chapter, we refer only to those social and child protection cash benefits implemented by the Centres for Social Work and the Ministry of Finance and Social Welfare. An exhaustive list of social protection programming in Montenegro can be found in **Figure 2**, and Table A 2, with additional details on implementing agencies and risks covered.

Figure 2 Social Protection Programmes in Montenegro, by type, as of 2018

Contributory benefits • Old age pensions • Disability pensions • Survivors pensions • Health insurance • Unemployment benefit • Sickness / injury benefits • Funeral grants
Social and Child Protection Benefits • Financial support allowance • Personal disability allowance • Care and support allowance • Health protection • Funeral costs • Non-recurring financial assistance • Parental or guardian's allowance • Benefit for a new-born child • Child allowance • Costs of nutrition in preschool institutions • Assistance for up-bringing and education • Salary compensation for maternity or parental leave • Maternity leave pay • Salary compensation for part-time work
Wartime and disability protection • Care Allowance • Financial Support Allowance • Family Disability Allowance • Financial Compensation Of Material Security • Free And Privileged Ride • Funeral Costs • Health Care • Orthopaedic And The Other Supplement • Orthopaedic Supplement • Personal Disability Allowance • Spa And Climate Treatment
Support programs of the Ministry of Agriculture and rural development • Allowance for old people in agriculture • One-time Financial assistance • Agriculture insurance
Support to children of Roma and Egyptian population • Free textbooks • Scholarships in secondary school and University • Allowances at the local level • Electricity subsidies
Social and Child Protection Services • Support for the life in the family • Counselling-therapy and social-educational service • Family placement and fostering • Placement in an institution • Urgent intervention services
Active Labour Market Policies • Technical and Vocational Education and Training • Employment incentives / wage subsidies • Employment measures for disabled • Public works • Entrepreneurship support • Other ALMPs

Note: Blue for contributory schemes, red for non-contributory policies, green for social services, grey for active labour market policies.

Source: Social Welfare Information System of Montenegro (Social Welfare Information System, 2020)

The most relevant social and child protection programmes in terms of coverage, costs and expected impact are listed in **Table 16**. In the subsequent sections, we present the characteristics and targeting criteria of the main benefits that are financed through taxation and whose entitlement is non-contributory. The Law on Social and Child Protection (Government of Montenegro, 2017) distinguishes between two main sets of social assistance benefits: “Basic Material Benefits in Social Protection” and “Fundamental Material Benefits in the Area of Child Protection” among which fourteen programmes or interventions are prescribed.

Table 16 Main social and child protection benefits

Regular benefits	Nonrecurring benefits
1. Financial support allowance	7. Funeral costs
2. Personal disability allowance	8. Nonrecurring financial assistance
3. Care and support allowance	9. Benefit for a new-born child
4. Parental or Guardian Allowance	
5. Child allowance	
6. Benefit on the basis of childbirth	

Notes: Financial support allowance is also referred to as Family support allowance.

Source: Law on Social and Child Protection (Government of Montenegro, 2017).

Most benefits are indexed regularly (every six months) according to changes in living costs and average salaries. Half of the benefits' indexation is composed by the growth in living costs and half by the growth in salaries (Government of Montenegro, 2017). Yet, ad-hoc adjustments occur as well depending on available government resources (EPRI, 2020).

4.2 Regular non-contributory social and child protection benefits

Financial Support Allowance (FSA), Article 21

The Financial Support Allowance (FSA) is a means-tested benefit intended to guarantee a minimum level of income. The benefit level corresponds to the difference between the applicant family's average income of the previous three months and minimum income levels prescribed in the Law on Social and Child Protection. In addition to the income test, the possession of other assets or benefits is used to determine eligibility. These filters include the possession or use of business premises, the size of the apartment in relation to the number of household members, the possession of land (agricultural or urban) or commercial forests, ownership of cattle, agricultural

and construction machinery and other means for performing business activity, and property of a motor vehicle, except if it serves for transport of an individual or a family member beneficiary of the Personal Disability Allowance or Care and Support Allowance.

Table 17 *Financial Support Allowance overview*

Target group	Poor families
Targeting method	Means-tested
Eligibility Criteria	1. Family income is below the minimum income level 2. Family does not possess or use business premises. 3. Family does not possess or use: • One room apartment in case of one member household • Two rooms apartment for household with two or three members • Three rooms apartment for household with four and more members 4. Family does not possess land in town or suburban region. 5. Family does not possess or use agricultural land or commercial forests of surface larger than: • 20 acres in case of one member household • 30 acres in case of two-member household • 30 acres in case of three-member household • 30 acres in case of four-member household • 30 acres in case of household with five and more members • or does not possess or does not use other land of surface larger than 2 hectares. 6. Family does not own two animal units³², agricultural and construction mechanization and other means for performing business activity. 7. Family does not own a motor vehicle, except the motor vehicle which serves for transport of a person with disability.
Benefit value in 02/2018	The benefit level is the difference between the minimum income level determined for each family according to the law and the family's average income in the previous three months. Minimum income levels per month: Individual: 67.05 EUR Family with 2 members: 80.52 EUR Family with 3 members: 96.64 EUR Family with 4 members: 114.09 EUR Family with 5 and more members: 127.48 EUR
Beneficiaries in 2018	9,311 families (31,003 members)
Total Expenditure in 2018	10,926,991 EUR

Source: *Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).*

³² One animal unit means a cow, or a bull, or a horse, or two heifers, or ten sheep, or ten goats, or five pigs.

Personal Disability Allowance (PDA), Article 32

The Personal Disability Allowance (PDA) is provided to people with severe disabilities, upon confirmation by the Social Care Centre.³³ It is a categorical transfer. There is no income test, but if individuals are already receiving the Care and Support Allowance, they are not eligible for the disability allowance.

Table 18 Personal disability allowance overview

Target group	Persons with disability
Targeting method	Categorical
Eligibility Criteria	Severe disability Excluded if beneficiary is already receiving the care and support allowance
Benefit value in 02/2018	181.41 EUR per month per person
Beneficiaries in 2018	2,488 individuals
Total Expenditure in 2018	5,478,852 EUR

Source: Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).

Care and Support Allowance (CSA), Article 33

The Care and Support Allowance is intended to promote access to the fulfilment of needs of a person requiring care and support due to bodily, mental, intellectual, or sensory disorders or changes in health condition. Although not being income-tested, beneficiaries are eligible for it only if they are not already receiving the personal disability allowance.

Table 19 Care and support allowance overview

Target group	Person requiring care and support due to bodily, mental, intellectual, or sensory disorders or changes in health condition
Targeting methods	Categorical
Eligibility Criteria	Excluded if beneficiary is already receiving personal disability allowance
Benefit value in 02/2018	66.53 EUR per month per person
Beneficiaries in 2018	15,196 individuals
Total Expenditure in 2018	12,984,546 EUR

Source: Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).

Parental or Guardian Allowance (PGA), Article 39a

A parent or guardian of a beneficiary of the Personal Disability Allowance is entitled to a monetary benefit per each of the individuals taken care of, and per each additional individual entitled to the Care and Support Allowance (CSA). A parent or guardian of at least two beneficiaries of the Care

³³ Person with severe disability means a person with longstanding physical, mental, intellectual or sensory disorders which, in conjunction with diverse barriers, can make difficult full and effective participation of this person in the society based on equality with others.

and Support Allowance (CSA) is also entitled to a monetary benefit per each of the individuals taken care of. Parental or Guardian Allowance is considered as income when calculating the right to Financial Support Allowance.

Table 20 Parental or Guardian Allowance overview

Target group	A parent or guardian of a beneficiary of the personal disability allowance
Benefit value in 02/2018	196.48 EUR per month, per individual assisted
Beneficiaries in 2018	2,031 individuals
Total Expenditure in 2018	5,097,467 EUR

Source: Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).

Child allowance (CA), Article 42

The right to the Child Allowance can be exercised by the family of a child who is beneficiary of the PDA, or beneficiary of the CSA, or living in a household receiving the FSA, or by a child without parental care. Families can receive child allowances for up to three children (with exceptions). The benefit is paid monthly up to the eighteenth birthday of the child, depending on the child regular attendance of the education system. The monthly amount disbursed varies depending on the combination with other benefits.

Table 21 Child allowance overview

Target group	Families with children until 18 years
Targeting method	Hybrid (means tested and categorical)
Eligibility Criteria	Families are eligible if: i. they are entitled to the FSA; or ii. they receive the CSA; or iii. they receive the PDA; or iv. they are without parental care; or v. at least one of the parents, adoptive parents, guardians, or foster parents has been entrusted as "beneficiary of financial benefit established employment relationship based on an agreement on active overcoming of an unfavourable social situation".
Benefit value 02/2018	Monthly benefits per child: • 24.11 EUR for beneficiary of FSA; or • 32.45 EUR for beneficiary of CSA; or • 40.28 EUR for beneficiary of PDA; or • 40.28 EUR for child without parental care; or • 24.11 EUR for a child of a parent specified in (v) above.
Beneficiaries in 2018	7,590 families (14,903 children)
Total Expenditure in 2018	4,623,418 EUR

Source: Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).

Following a parliamentary debate held in early 2021, an amendment of the Law on Social and Child Protection was approved in May 2021. The amendment includes a significant reform of the CA benefit that extends coverage to all children below six years and keeps including children beyond

six years of age in households' recipients of FSA, PGA, and CSA (**Table 22**). The same amendment expanded the number of eligible beneficiaries in a household to five children.

Table 22 *Child Allowance amendment as of May 2021*

Target group	Children until 18 years
Targeting method	Hybrid (means tested and categorical)
Eligibility Criteria	A child is eligible if: i. Is up to the age of six. ii. Is a beneficiary of financial support allowance; iii. Is a beneficiary of care and support allowance; iv. Is a beneficiary of personal disability allowance; v. Whose parent, adoptive parent, guardian, foster parent, i.e., person to whom care, upbringing and education of the child have been entrusted as a beneficiary of financial benefit established employment relationship based on an agreement on active overcoming of an unfavourable social situation.
Benefit value 02/2018	Monthly benefits per child: • 30.00 euros for a child up to the age of six. • 44.00 euros for a beneficiary of financial support. • 44.00 euros for a child whose parent, adoptive parent, guardian, foster parent as a beneficiary of financial support entered into employment on the grounds of the individual activation plan. • 52.00 euros for a beneficiary of care and support allowance. • 60.00 euros for a beneficiary of personal disability allowance. • 60.00 euros for a child without parental care;

Source: *Parliament of Montenegro (2021)*

Benefit on the basis of childbirth (BCB), Article 54

Parents registered to the employment agency (at least one parent) and student parents are entitled to receive a monthly benefit of 79.03 EUR until the child completion of the first year of age.

Table 23 *Benefit (Recurring) on the basis of childbirth overview*

Target group	Parent or guardian of a new-born child
Targeting method	Categorical
Benefit value	79.03 EUR per month if the parent or guardian is registered with the Employment agency or a student (up to 12 months)
Beneficiaries in 2018	3,552 children (average)
Total Expenditure in 2018	3,351,639 EUR

Source: *Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).*

4.3 Non-recurring social and child protection benefits

Funeral costs (FC), Article 35

In the event of death of a beneficiary of the FSA, PDA, or CSA, the person taking over the payment of the funeral is entitled to a one-off payment covering funeral expenses. The amount of the payment is 315 euro.

Table 24 Funeral costs overview

Target group	Beneficiaries of Financial Support Allowance, Personal Disability Allowance, Care and Support Allowance;
Benefit value in 02/2018	315 EUR, one-off
Beneficiaries in 2018	586 individuals
Total Expenditure in 2018	205,413 EUR

Source: Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).

Nonrecurring financial assistance (NFA), Article 37

A one-off benefit may be delivered to individuals or families in the state of social need because of special circumstances affecting their residential, material and health condition. The benefit is administered by the Ministry of Finance and Social Welfare through transfers to municipal Social Care Centres which can set up specific eligibility criteria and determine the benefit amount.

Table 25 Nonrecurring financial assistance overview

Target group	Families
Targeting method	At the discretion of Social Welfare Centres
Benefit value in 02/2018	At the discretion of Social Welfare Centres
Beneficiaries in 2018	7,489 families
Total Expenditure in 2018	596,029 EUR

Source: Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).

Benefit for a New-born Child (BNC), Article 41.

Benefit for a New-born Child (BNC) consist of a one-off payment upon the birth of a child. The one-off payment for every new-born can be claimed until the infant reaches one year of age. This categorical benefit is delivered to a parent, an adoptive parent, a guardian, or a foster parent. Recipients of the FSA receive a higher amount.

Table 26 Benefit (Non-recurring) for a new-born child overview

Target group	Parent or guardian of a new-born child
Targeting method	Categorical
Benefit value	111.04 EUR, lump-sum (133.25 for recipients of FSA)
Beneficiaries in 2018	6,650
Total Expenditure in 2018	797,774 EUR

Source: Law on Social and Child Protection (Government of Montenegro, 2017); Social Welfare Information System of Montenegro (Social Welfare Information System, 2020).

4.4 Social and child protection benefit performance

This section reviews the effectiveness of the current social assistance programmes in terms of coverage, distribution, and adequacy. Montenegro seems to be reaching only a residual share of its population with its social assistance benefits. **Table 27** summarizes the number of beneficiaries, average monthly transfers' costs, and estimated coverage of the main social assistance programmes in 2018. The programme with the largest beneficiary base is the FSA which reaches 4.9% of the population. All other programmes have even lower coverage rates.

Table 27 Social assistance coverage and average benefits, 2018

Programme	Beneficiaries	Average monthly benefit (EUR)	Coverage	Denominator
Recurring benefits				
Financial Support Allowance	31,003 (9,311 families)	29 (98 per HH)	4.9%	Share of Tot. Pop.
Personal Disability Allowance	2,488	184	3.6%	Share of Tot. Pop.
Care and Support Allowance	15,196	71	2.4%	Share of Tot. Pop.
Parental or Guardian Allowance	2,031	209	81.6%	Share of PDA
Child Allowance	14,903 (7,590 families)	26 (51 per HH)	10.8%	Share of Pop. 0-17y
Benefit on the basis of childbirth	3,552	79	48.4%	Share of Pop. 0y
Non-recurring benefits				
		Average transfer (EUR)		
Funeral costs	586	351	3.0%	Share of FSA (FM) + PDA + CSA (FM)
Nonrecurring Financial Assistance	7,489	80	80.4%	Share of FSA (FM)
Benefit for a New-born Child	6,650	120	90.0%	Share of Tot. Pop.

Notes: The Denominator column reports the denominator used to calculate the coverage of the programmes – e.g., for FSA, the nominator is the number of FSA beneficiaries, while the denominator is the total population of Montenegro. FM stands for families. Tot. Pop. stands for total population.

Source: Social Welfare Information System of Montenegro data 2018 (Social Welfare Information System, 2020), Coverage calculated using population data from UNDESA (2019).

While it is not possible to understand how many times the NFA was delivered to the same households, assuming a single payment per household (an assumption based on informal conversations held with centres for social work), the coverage rate among households' beneficiaries of the FSA stands at 80.4%, which indicates that the benefit level of the FSA may not be sufficiently adequate and that a vast number of beneficiaries must seek for additional income support.

Indeed, the average monthly FSA benefit transferred to households corresponds to 44% of the statutory minimum wage or 15% of the minimum consumer basket of a four-member household. Even in a specific month in which an FSA transfer is combined with an NFA transfer, the total value does not reach minimum wage levels and is still far from minimum basket levels. The programme that gets the closest to satisfying minimum standards is the Parental or Guardian Allowance (PGA), which would transfer 209 EUR per month – i.e., 95% of the minimum wage – to the caretakers of people with disabilities, getting closer to satisfying the programme's objective of substituting the income of the caretaker.

The latest scope and performance review of the social assistance programmes, including *Financial Support Allowance, Children's Allowance, and Disability Allowances* dates to 2015 when the World Bank's Atlas of Social Protection Indicators of Resilience and Equity (ASPIRE) analysed the programmes using MONSTAT's 2014 Household Budget Survey.

In 2014, close to 25% of the population in the poorest quintile and 8% of the total population had access to social assistance programmes. This, of course, implies that 75% of people in the poorest quintile were not covered. Of all beneficiaries, 61% belonged to the poorest quintile before transfers indicating that social assistance allowances were progressive benefits. However, close to 40% of transfers were reaching beneficiaries in higher quintiles – although these may be living close to the poverty line. Also, in 2014, 55% of total transfers was received by the poorest quintile confirming the progressive nature of the scheme. The total transfers received by the poorest quintile accounted for 28% of their post-transfer total income (The World Bank, 2018). The World Bank estimated that social assistance in Montenegro reduced the poverty headcount by 4 percentage points, the poverty gap by 23 percentage points, and the Gini coefficient by 2.6 points (The World Bank, 2018). These values align with the latest EUROSTAT estimates presented in section 2, page 14 of this report.

It appears that social assistance programmes in 2014 had limited coverage among the poorest quintile, with 75% of the population not reached by any programme. Stricter eligibility criteria increase targeting accuracy and decrease inclusion errors, but they result in higher exclusion errors among the poor (Coady, Grosh, & Hoddinott, 2004). Moreover, Montenegro has a set of three policies (the *Personal Disability Allowance*, the *Care and Support Allowance*, and the *Parental or Guardian Allowance*) which seemingly cater for the same households, albeit with minor differences. It would be interesting to know the extent of these benefits overlap and distributional outcomes. Lastly, the former *Child Allowance benefit*, although targeting families, granted access to the benefit upon satisfaction of the eligibility criteria of the entire previous set of policies. Hence, while mitigating the risk of poverty for families with children, this benefit may eventually exclude low-income families a second time and duplicate exclusion and inclusion errors.

Since the latest review was carried out in 2014, this report provides an update of the performance review using the 2019 round of EU-SILC data and the pre-standardised version provided by MONSTAT, referring to 2018. Both the pre-standardised and the EU-SILC version of the survey present a slightly different set of benefits than the main legal instrument (the 2017 Law on Social and Child Protection). This difference brings incoherence between the set of benefits legally in place and those captured by the survey. The SILC dataset contains a set of sixteen benefits, nine of which are deemed to be non-contributory.

Of the nine main non-contributory benefits, five find a direct correspondence in SILC: the FSA, the PDA, CSA, and PGA, and the CA. However, the three disability-related benefits (PDA, CSA, and PGA) are seemingly combined under the unique SILC category *Disability benefit* (**Table 28**). Therefore, comparability is hampered since questions on some of the eligibility criteria of the FSA (e.g., land ownership) are also absent from SILC, the Child Allowance is the only main social assistance benefit that can be analysed in full. The following sections analyse coverage, distribution, and adequacy of social transfers as included in SILC.

Table 28 Comparability of SILC and legal social assistance benefits

Law on Social and Child Protection (2017)	SILC (2018)
Financial Support Allowance (FSA) (Art. 21)	Financial support allowance
Personal Disability Allowance (PDA) (Art. 32)	Disability benefit
Care and Support Allowance (CSA) (Art. 33)	
Parental or Guardian Allowance (PGA) (Art. 39a)	
Child Allowance (CA) (Art. 42)	Child allowance
Benefit for a New-Born Child (BNC) (Art. 41)	N/A
Benefit on the basis of childbirth (BCB) (Art. 54)	N/A
Funeral Costs (FC) (Art. 35)	N/A
Subsidy utility (Art. 39)	Subsidy utility
N/A	Mothers benefit
N/A	Housing allowance
N/A	Education allowance
N/A	Other benefit

Notes: N/A indicates that no corresponding benefits have been found in either data or the Law.

Source: Law on Social and Child Protection (Government of Montenegro, 2017) and Survey on Income and Living Conditions (MONSTAT, 2019b).

Coverage

In this section the coverage of social transfers in Montenegro is analysed per programme and category of type (contributory and non-contributory) across quintiles with the use of the 2019 SILC round.³⁴ Overall, close to 61% of the population lives in a household which is reached by at least one social protection benefit (**Table 29**). On the one hand, most of the coverage is secured through contribution-based benefits received at the individual level but assumed to be shared in the household. In this way, contributory benefits cover almost half of the Montenegrin population.

³⁴Quintiles based on pre-transfers income after pensions per adult equivalent.

On the other hand, non-contributory benefits reach 13% of the population. This share indicates that non-contributory benefits coverage is not adequate relatively to the share of the population living at risk of poverty (i.e., 24.5% of the total population). In the lowest (poorest) quintile, 67% of the population is not reached by any non-contributory benefit. As contributory benefits strengthen coverage in the lowest quintile, the overall coverage among the poorest quintile is 76% and 61% in the second quintile. Montenegrin non-contributory social transfers, while mainly based on a means-targeting system, fail to entirely cover the lowest end of the income distribution.

Table 29. Number of transfers per households, per quintiles and total

Type	Number of transfers per households	Q1	Q2	Q3	Q4	Q5	Total
NC & C	0	23.6	38.8	42.0	42.6	45.5	39.0
	1	49.2	45.0	45.2	47.0	47.2	46.7
	2	19.0	12.1	10.3	8.4	6.6	11.0
	3	5.4	3.3	1.5	1.5	0.7	2.4
	4	2.3	0.8	0.9	0.5	...	0.9
	5	0.2	0.1	0.1	...	...	0.1
	6	0.2	...	...	...	...	0.0
Non-Contributory	0	67.3	86.8	90.3	93.2	94.1	87.0
	1	18.7	8.4	7.4	5.7	5.2	8.8
	2	10.7	4.3	2.0	1.2	0.7	3.5
	3	2.6	0.5	0.3	...	...	0.6
	4	0.4	...	...	...	...	0.1
	5	0.2	...	...	...	...	0.0

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used.

NC = Non-Contributory benefit. C = Contributory benefit. Inter-HH transfers received not included in NC or C.

Source: Own elaboration of SILC 2019 data

The Financial Support Allowance and the Child Allowance are the transfers that cover the largest groups. Nine per cent of the population (30.5% in Q1) live in households receiving the FSA. This share contradicts administrative data from SWIS that indicate that ca. 5% of the population is covered by the FSA (**Table 27**). As the CA is assigned to households benefitting from either FSA, PDA, CSA, or to children without parental care, the overlap between the FSA and the CA coverage is significant (88%). This led CA overall coverage to stand close to 5%, covering only 15% of the entire population in the lowest quintile. The results indicate that the former CA covered 9.5% (25% in Q1) of Montenegrin children below 18 years old. Moreover, children not going to school are currently excluded from the benefit. Such conditionality, although motivated by the will to increase school attendance, might have repercussions on households that rely on child labour to survive or cannot afford to send their children to school. Low coverage of the current system suggests that universalistic approaches to child social protection may represent a necessary solution to benefit those who need assistance the most.³⁵

³⁵As of October 2021, the proposed amendment to the law on social and child protection included the modification of the child allowance eligibility criteria. The proposal puts forward for adoption the exercisable right to the child allowance for all children up to the age of six.

Similarly, the utility subsidy and one-time assistance benefits, although being relatively small (close to 2% of the population covered), share 56% and 36% of beneficiaries with the FSA. This may indicate that the FSA does not entirely meet the financial needs of the poorest households, who must seek for multiple assisting programmes (as it is in their rights, according to Montenegro Law on Social and Child Protection). Vertical adequacy results are presented later in this section, while it follows an analysis of benefits distribution.

Table 30 Social protection coverage across income quintiles and total population, percentages

Type	Benefit	Q1	Q2	Q3	Q4	Q5	Total
Non-Contributory	Financial support allowance	30.5	7.7	4.3	2.7	0.9	9.2
	Child allowance	15.2	5.6	2.0	1.3	0.4	4.9
	Subsidy utility	6.8	2.2	1.3	1.7	0.7	2.5
	Disability benefit	3.2	1.4	1.2	0.7	0.4	1.4
	Housing allowance	0.5	0.2	1.2	0.6	3.6	1.2
	Other benefits	1.9	1.1	0.3	0.3	0.6	0.8
	One-time assistance	2.0	0.6	0.7	0.1	0.1	0.7
	Education allowance	0.3	0.6	0.6	0.5	0.3	0.5
	Mothers benefit	0.8	0.4	0.4	0.3	0.1	0.4
Contributory	Old-age pension	4.7	7.8	10.7	13.5	16	10.6
	Survivor pension	1.6	5.2	4.8	4.7	3.8	4.0
	Disability pension	5.7	2.6	1.9	1.1	0.8	2.4
	Unemployment benefit	2.6	1.4	1.1	0.9	1.0	1.4
	Sickness benefit	0.5	0.3	0.3	0.6	0.2	0.4
	Pension abroad	0.1	0.2	0.1	0.2	0.6	0.2
	Pension private	0.1	0.0	0.0	0.0	0.0	0.0
NC	At least 1 Non-contributory	32.7	13.2	9.7	6.8	5.9	13.0
C	At least 1 Contributory	42.7	49.1	48.0	51.5	50.1	48.3
NC & C	At least 1 SP programme	76.4	61.2	58.0	57.4	54.5	61.0
...	Inter-HH transfers	11.5	8.5	6.9	5.3	3.8	7.2

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used.

NC = Non-Contributory benefit. C = Contributory benefit. *Inter HH transfer received not included in NC, C, or SP totals.

Source: Own elaboration of SILC 2019 data

Distribution

Beneficiary incidence, or benefits distribution, indicates the percentage of program beneficiaries in a quintile relative to the total number of beneficiaries in the population. The distribution of benefits is analysed per programme through quintiles created using pre-transfer income after pensions per adult equivalent. This measure can indicate the efficiency of targeting criteria since high shares of non-contributory benefits in higher quintiles may point to inefficiencies in identifying the poorest (**Table 31**).

Table 31 Distribution of benefits across pre-transfers income quintile, percentages.

Type	Benefit	Q1	Q2	Q3	Q4	Q5	Total
NC	Financial support allowance	64.6	15.4	11.3	5.7	3.0	100.0

	Child allowance	59.4	21.2	12.5	5.2	1.7	100.0
	One-time assistance	43.9	15.4	16.8	2.1	21.8	100.0
	Subsidy utility	43.5	18.6	16.1	15.1	6.7	100.0
	Disability benefit	43.4	25.8	17.1	9.4	4.2	100.0
	Other benefits	42.0	22.8	12.9	6.4	15.9	100.0
	Mothers benefit	36.1	21.5	21.5	16.3	4.6	100.0
	Education allowance	10.9	25.2	32.6	21.3	10.1	100.0
	Housing allowance	3.2	2.2	19.5	12.7	62.5	100.0
Contributory	Disability pension	46.3	20.4	16.8	8.8	7.8	100.0
	Unemployment benefit	45.4	20.4	13.1	10.1	11.0	100.0
	Pension private	17.9	31.3	18.0	11.9	20.9	100.0
	Sickness benefit	13.9	28.8	19.9	32.7	4.7	100.0
	Old-age pension	4.8	10.8	17.4	26.2	40.8	100.0
	Survivor pension	4.6	20.7	21.7	26.8	26.2	100.0
	Pension abroad	2.6	5.7	5.8	8.1	77.9	100.0
NC	All non-contributory	50.6	17.4	15.1	9.1	7.9	100.0
C	All contributory	12.3	14.5	17.9	22.9	32.4	100.0
NC & C	All SP benefits	15.5	14.8	17.6	21.8	30.3	100.0
...	Inter-HH transfers	19.6	21.1	18.4	18.4	22.6	100.0

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used.

NC = Non-Contributory benefit. C = Contributory benefit. *Inter HH transfer received not included in NC, C, or SP totals

Source: Own elaboration of SILC data

Overall, more than fifty per cent of transfers are distributed to the richest two quintiles. However, this ratio is driven by the distribution of contribution-based transfers (e.g., old-age and survivor's pensions). With respect to non-contributory transfers 68% are concentrated in the two poorest quintiles. Hence, on average, the allocation of non-contributory benefits is clearly progressive and appears to be positively geared towards the neediest. All non-contributory benefits follow this distribution – exception made for the housing allowance and the education allowance. While the housing allowance is employment-related (directed to civil servants and tied to a rental agreement, but not based on contribution), the education allowance is not income-related but rather granted based on particular needs of children and families. These eligibility criteria may explain the housing allowance distributed to the richest, and the education allowance being distributed across the middle quintiles.

While it is not possible to verify in detail the efficacy of the FSA targeting mechanism, the results confirm that eighty per cent of the transfers are allocated to beneficiaries belonging to the two lowest quintiles. Less than nine per cent of beneficiaries are from the uppermost two quintiles. Because of its conditional link to the FSA, the Child Allowance follows the same distribution pattern of the FSA.

Adequacy

Hints about the adequacy of social transfers can be obtained by comparing their size against households' disposable income. This measure also suggests the relevance of transfers for beneficiary households' budgets.

Table 32 Adequacy across pre-transfer income quintiles and total population (recipient households only).

Type	Benefit	Q1	Q2	Q3	Q4	Q5	Total
Non-Contributory	Financial support allowance	53.8	17.1	13.7	10.5	9.2	40.5
	Mothers benefit	55.9	32.7	23.4	22.0	10.7	36.9
	Disability benefit	40.4	19.1	10.4	6.9	5.0	24.8
	Other benefits	37.7	11.0	20.4	9.3	6.6	23.0
	One-time assistance	27.8	4.6	4.4	3.6	13.1	18.3
	Child allowance	20.5	7.8	8.8	4.8	3.7	15.6
	Education allowance	9.7	9.7	9.1	4.6	2.8	7.6
	Housing allowance	8.0	10.0	10.7	11.1	5.7	7.5
	Subsidy utility	5.5	3.1	2.9	1.6	1.2	4.1
Contributory	Old-age pension	69.7	59.4	50.1	47.8	44.1	51.9
	Disability pension	72.8	38.4	31.6	22.6	18.8	46.7
	Pension abroad	59.3	42.8	39.5	16.5	68.2	45.5
	Survivor pension	73.5	49.6	41.8	35.5	28.7	42.8
	Pension private	84.8	100.0	50.0	8.7	12.5	37.9
	Sickness benefit	100.0	33.6	19.2	9.2	4.3	22.4
	Unemployment benefit	36.2	13.2	9.3	5.8	3.6	18.3
NC	All non-contributory	61.8	18.6	15.6	10.1	6.2	36.7
C	All contributory	71.4	54.0	47.5	43.4	40.3	51.0
NC & C	All SP benefits	78.4	52.1	46.7	42.4	38.2	53.2
...	Inter-HH transfers*	36.1	24.5	19.4	17.1	17.5	25.4

Notes: Adequacy based on disposable income of beneficiary households only. Quintiles are based on pre-transfer income after pensions per adult equivalent. NC = Non-Contributory benefit. C = Contributory benefit. *Inter HH transfer received not included in NC, C, or SP totals. **Source:** Own elaboration of SILC data

Considering all SP benefits, their share of beneficiary households' income stands at 53.2%, meaning that SP contributes to more than half of beneficiary households' incomes (**Table 32**). The share increases for the lower quintiles, reaching 78.4% for the poorest twenty per cent of the population. The largest shares derive from contributory benefits such as sickness and old-age, disability, and survivors' pensions (OADS). These benefits have the specific purpose of income replacement which explains the relevant role in beneficiary households' budgets.

Overall, non-contributory benefits contribute to close to 37% of recipients' income. The share almost doubles for the lowest quintile. Among the poorest, non-contributory transfers mean 60% of their incomes. Mothers benefit, disability benefits and the FSA are the most relevant benefits, but all others play a significant role too. While non-contributory benefits should not aim to replace income, they may play a fundamental role in preventing monetary poverty. For example, the FSA weighs close to 54% of households' income in the lowest quintile, already a significant share. Moreover, only close to 10% of FSA recipients also receive unemployment or disability benefits.

Hence, for its incidence and weight in the lowest quintile, the FSA can be deemed as the most relevant poverty prevention program in the country.³⁶

4.5 Social Budget

Social protection spending (both contributory and non-contributory) taken together was 12.8% of GDP in 2017 according to the COFOG classification system (The World Bank, 2019), or 17.2% of GDP according to the ESSPROS methodology (MONSTAT, 2020e).³⁷ Following the ESSPROS methodology, the total expenditure on social protection in 2017 was 739,801,263 EUR. The system is mainly financed via social contributions³⁸ for about 71% and government expenditure for the remaining share (Kaluđerović & Golubović, 2019). Most social protection expenditures go to old-age benefits (39.1% of total), and sickness and health care (27.6%). While most of the budget is spent as cash benefits (71.8%), only a small share is assigned through means-tested programmes (2.3% of total). Following the ESSPROS classification, means-tested benefits are mainly labelled as *social exclusion not elsewhere classified*.

Table 33 Social protection expenditure breakdown, 2017

Item	Total, %	GDP %	Cash %	Means-tested %
Total social protection expenditures	100.0	17.7		
Total expenditures for social transfers	97.1	17.2	71.8	2.3
Sickness/Health care	27.6	4.8	7.1	0.0
Disability	8.5	1.5	91.0	0.0
Old age	39.1	6.7	99.7	1.1
Survivors	12.0	2.1	94.4	0.4
Family/Children	7.5	1.3	95.4	1.5
Unemployment	3.1	0.5	95.1	0.0
Social exclusion not elsewhere classified	2.2	0.4	77.0	93.0
Administration costs	2.8	...	...	...
Other expenditure	0.1	...	...	...

Source: Statistical Office of Montenegro (MONSTAT, 2020e)

Contributory benefits occupy most of the functional budget for social protection. In 2018, expenditure on non-contributory social and child protection benefits was 55,510,338 euro, or 1.19% of nominal GDP (Social Welfare Information System, 2020). Overall, expenditure on social assistance programmes decreased from 1.36% of GDP in 2013 to 1.19% in 2018 (International

³⁶ Mothers' benefit, on the other hand, provided beneficiaries with an allowance corresponding to 70% of the average net salary in Montenegro for women with at least 25 years of work experience and at least three children (or four children and 15 years of work experience), and 40% of the average net salary for women who have been in the record of the Employment Bureau for at least 15 years. However, this benefit was deemed unconstitutional and removed from the law, but not before drawing several women out of the labour force.

³⁷ In ESSPROS, social protection includes health care expenditures from the Health Insurance Fund of Montenegro.

Monetary Fund, 2017). The *Care and Support Allowance* and the *Financial Support Allowance* benefits are the largest programmes in terms of social assistance expenditure.

Table 34 *Costs of social and child protection benefits in 2018, as for SWIS*

Programme	Cost (millions EUR)	GDP %	Revenues %
1. Social and Child Protection benefits Main Benefits	46.3	0.99	2.65
Recurring benefits	39.9	0.86	2.29
Financial support allowance	10.9	0.23	0.63
Personal disability allowance	5.5	0.12	0.31
Care and support allowance	13.0	0.28	0.74
Caregiver allowance	5.1	0.11	0.29
Child allowance	4.6	0.10	0.26
Benefit for a new-born child	0.8	0.02	0.05
Nonrecurring benefits	0.8	0.01	0.04
Funeral costs	0.2	0.00	0.01
Nonrecurring financial assistance	0.6	0.01	0.03
Other benefits	5.6	0.12	0.32
2. Social and Child Protection Services	3.2	0.07	0.18
3. Wartime and Disability Protection	6.0	0.13	0.34
Total	55.5	1.19	3.18

Notes: Revenues as total government revenues in 2018

Source: Social Welfare Information System of Montenegro (Social Welfare Information System, 2020)

Social expenditure can also be estimated using SILC data, inferring programme budgets with the use of population weights of the dataset. However, due to the limitations explained above, the matching between administrative and survey data is inconclusive. Survey data suggest a 15 million EUR lower non-contributory expenditure. Also, disability benefits (PGA, CSA, and PDA) in administrative data account for close to 25 million EUR, while in SILC they stand at 9 million. Notably, another large discrepancy comes from data on the FSA. From administrative data, the expenditure on FSA is close to 11 million EUR, while estimates from SILC suggest almost double expenditure (**Table 35**). Overall, the discrepancy of non-contributory social protection expenditure from administrative data and expenditure accounts for 0.3% of GDP, a relatively small figure which hides several inconsistencies.

Table 35 Cost of social protection benefits, as from SILC

Type	Benefit	Cost (millions EUR)	GDP %	Share to the poor (%)
Non-Contributory	Financial support allowance	20.6	0.4	79.2
	Disability benefit	9.1	0.2	74.4
	Mothers benefit	8.4	0.2	55.1
	Child allowance	4.7	0.1	68.1
	Housing allowance	2.4	0.1	16.1
	Other benefit	1.8	0	71.4
	Education allowance	1.7	0	40.8
	Subsidy utility	0.9	0	81.1
	One-time assistance	0.5	0	66
Contributory	Old-age pension	267.0	5.7	64.1
	Disability pension	61.8	1.3	61.6
	Survivor pension	80.0	1.7	64.1
	Pension abroad	7.1	0.2	92.0
	Pension private	0.4	0.0	60.7
	Unemployment benefit	8.4	0.2	60.1
	Sickness benefit	3.8	0.1	35.5
NC	All non-contributory	40.9	0.9	67.2
C	All contributory	437.8	9.4	64.1
NC & C	All SP benefits	478.7	10.3	64.4
...	Inter-HH transfers received*	22.3	0.5	46.9

Notes: Inter-HH transfers received not included in SA, SI, or SP. "Poor" identify the population living in households whose adult equivalent disposable income is below the relative poverty line.

Source: Own elaboration of SILC data

4.6 Poverty reduction efficiency

Systems and programmes can also be evaluated by their impact on poverty measures, such as the poverty headcount and the poverty gap. Starting from disposable income after contributory benefits, non-contributory benefits are estimated to reduce the poverty headcount by 2 percentage points, or relatively by 7.5% (**Table 36**). In this group, the most effective benefit is the FSA which reduces the poverty gap by 13.7%. However, the FSA still only reduces the poverty headcount by 0.9 percentage points, because its relatively low benefit amount compared to the poverty line. Therefore, while the FSA efficiency in terms of cost of poverty reduction is among the most positive (40.2 million EUR per percentage point), and the program seems to be properly targeted, its coverage and adequacy combined are insufficient to make it an impactful benefit.

Table 36 Poverty efficiency measures of non-contributory benefits (according to SILC data)

Benefit	Poverty reduction % Points	Poverty reduction %	Cost of 1% poverty reduction (Million EUR)	Poverty gap reduction %
Financial support allowance	0.9	3.2	40.2	13.7
Disability benefit	0.4	1.6	34.8	3.7
Child allowance	0.1	0.3	103.2	3.3
Mothers benefit	0.3	1.2	44.7	2.6
Other benefits	0.0	0.2	66.0	0.8
Subsidy utility	0.0	0.0	...	0.4
Education allowance	0.0	0.1	139.8	0.4
One-time assistance	0.0	0.0	...	0.3
Housing allowance	0.1	0.2	76.2	0.1
Non-contributory	2.0	7.5	42.2	24.1

Note: Poverty reductions and poverty gap reduction are calculated taking into account the single benefits separately..

Source: Own elaboration of SILC data, adjusted to factual expenditures.

4.7 Discussion

The analysis presented in this chapter and, in smaller part, in the previous two, exposes several limitations of the current social protection system in Montenegro. Half of the Montenegrin population cannot afford the statutory minimum consumer basket, and one fourth of the population is considered to be living in monetary poverty, with significantly higher rates among the most vulnerable groups and among children. In 2018, only 48% of children aged 6-23 months achieved the minimum dietary diversity, and children aged 0-2 experience the highest prevalence of multidimensional poverty, at 80%. Even though poverty rates declined over time, the situation requires policy responses to address to the needs of the less well-off. Until 2019, expenditure on social assistance measures declined rather than increased (starting from 2015). While the country spends 12.8% of GDP on social protection, less than one tenth of the budget envelope is currently allocated to non-contributory programmes capable of reaching the neediest.

The non-contributory system is studded with small programmes each costing less than 0.4% of GDP. The integration of these social programmes is unclear. While formally indicated in the regulatory bills, policy integration does not emerge from the analysis of quantitative data. Moreover, the available data hardly allows for the assessment of the targeting performance and overlapping inefficiencies which might be present given the multitude of intersecting benefits.

The results from the poverty and benefit analysis call for additional interventions in the field of social protection programming for children and for those households living close to the poverty line. The overall coverage (i.e., for contributory and non-contributory benefits) among the poorest twenty per cent is 73%, and 58% in the second quintile, but mainly due to pensions. However, non-contributory benefits only reach 16% of the population, and 38% of the poorest twenty percent. The main non-contributory poverty-alleviation benefit, the Financial Support Allowance, has the highest coverage rate across quintiles compared to all other benefits (9% of the population, and 31% in the lowest quintile). With 2020 crisis increasing unemployment rates to 19%, and with at-

risk-of-poverty rates already 36% and 45% for inactive and unemployed respectively in 2019, an effective and well-targeted poverty alleviation and job activation programme becomes essential. However, the current means-tested targeting of FSA, which automatically excludes individuals above a certain income threshold from receiving the benefit, acts as a clear disincentive to formal employment, especially in a country in which informality rates are as high as 27%.

The one benefit catering for children, the Child Allowance, piggybacks on the FSA targeting which means that coverage is even lower. While 34% of Montenegrin children live in poor households, only close to 16% of them are benefiting from the CA, generating an exclusion error of 84% among the poor children, and many other households living just above the poverty line are also by default excluded from the child benefit. Once again, this type of targeting represents a disincentive to find formal employment for households with children who are afraid to lose their benefit.

Nonetheless the potential of social transfers for poverty reduction can be demonstrated with results from the poverty efficiency analysis. Per one percentage point of GDP spent on social transfers, poverty is reduced by 1.5 percentage points, and the poverty gap by 3.6%. These figures suggest that investing in the horizontal expansion of social protection policies (i.e., by increasing the pool of beneficiaries) might bring about a more than proportional reduction in poverty. A good step in this direction is the current expansion of CA to cover all children aged 0-5 in the country, although the country should consider expanding this coverage even further to encompass a larger portion of the population. However, expanding horizontal coverage in itself is insufficient to address the depth of poverty in Montenegro. Reforming social transfers requires to reflect on the adequacy of the benefits distributed. Benefit amounts shall be meaningful and adequate for beneficiaries, adapted to the household size and age structure, and integrated with other existing benefits. For example, the FSA benefit accounts for 54% of recipient households' income in the lowest quintile, although often it is the only benefit these households receive.

Advocating for additional social spending must consider critical fiscal limitations such as the government deficit and public debt. Increasing the adequacy and coverage of social transfers comes at high costs for a country like Montenegro. However, the country has potential resources that allow social protection reforms not to increase the government deficit or public debt. Domestic revenues can be increased while addressing the problem of the tax system regressivity. Redistribution towards the neediest can be financed via reform of tax rates and brackets that overcome the current flat tax scheme. The next chapters will build on these findings to simulate policy reform options for specific social protection programmes and alternative taxation scenarios.

5. Policy simulation: Methodology

5.1 Tax/benefit microsimulation models

Microsimulation is a technique for the study of public policies at the micro level whose objective is to analyse distributional effects of new or reformed policies (Merz, 1993, 1994). This technique

can provide insights at both micro- and macro-level to policymakers before (i.e., ex-ante) a new policy is introduced. This methodological approach entails clear budgetary advantages compared to ex-post evaluation of policies, but also allows to fine-tune policies to obtain better results. Social transfers have been studied in different countries using microsimulation models (Annabi, Cissé, Cockburn, & Decaluwe, 2005; Atkinson, Bourguignon, O'Donoghue, Sutherland, & Utili, 2002; Cogneau, Grimm, & Robilliard, 2003; Cogneau & Robilliard, 2000; Creedy, Scutella, & Kalb, 2003; de Souza Ferreira Filho, dos Santos, & do Prado Lima, 2007; Gassmann & Behrendt, 2006; Gassmann et al., 2013; Llambí, Laens, Perera, & Ferrando, 2011; Siqueira, Immervoll, O'Donoghue, & Nogueira, 2000; Vandeninden, 2012; Wong, Arguello, & Rivera, 2008).

Microsimulation models can be categorized into two macro-categories. Most microsimulation models belong to the category of static microsimulations, which concentrate on distributional effects of policies, such as poverty reduction, or on specific static effects to create a "day-after" screenshot of the potential impact of a new or reformed policy (Bourguignon, Ferreira, & Leite, 2003). The second macro-category is that of dynamic microsimulations. Dynamic models analyse the effect of policies through time and allow for households' change due to endogenous factors (e.g., demographic development) and exogenous shock (e.g., economic crisis, or the outbreak of a pandemic). Dynamic models are more complex than static ones and more data-intensive, although scenarios modelled through them predict long-term policy implications more adequately (Li & O'Donoghue, 2012). Finally, a third microsimulation category sits at the intersection between static and dynamic models: behavioural microsimulation models. At times considered part of the dynamic model's category, behavioural simulations consider individuals' responses to policies. Technically, a behavioural model can either be estimated through a structural econometric model or through the calibration of a static model to make it responsive to what is observed in the survey (Bourguignon & Ferreira, 2003). A classic example of behavioural simulation is one conducted to estimate a tax/benefit system reform with labour supply response, as in the case of a "too generous" employment benefit that increases households' disposable income and reduces job-seeking behaviours among beneficiaries.

Microsimulation models in Eastern Europe

Microsimulation models as policy tools have been implemented in Eastern Europe starting from the mid-2000s. Mainly funded by national governments and banks, these microsimulation models were initially developed to work with national micro-level data and were later adapted to function with standardized EU-SILC data (Orsolya, 2007). The Czech Republic, for example, initially developed a microsimulation model based on Czech Mikrocensus data from 2002 and adapted it in 2013 to support EU-SILC data. The model is currently designed to evaluate the taxation of earnings from employment and self-employment of the working and potentially working population and welfare benefits collected by these individuals and households, although its results are not fully capitalized by policy officials in the country (Šatava, 2014).

In Hungary, experience with microsimulation models dates back to 1995, when the first national model was built and it has been updated to function with SILC data, although it has not been much used for policy analysis (Orsolya, 2007). Additionally, the Magyar Nemzeti Bank (Central Bank of Hungary) developed a general-equilibrium behavioural microsimulation model in 2012 to explore

the impact of personal income tax rate reduction and different tax shifts, together with simulating long-run results of already implemented policies (Benczúr, Kátay, & Kiss, 2017). Findings predict that cutting marginal tax rate for wealthier individuals would not have an impact on employment levels, while programmes like an employee tax credit would have a significant effect. Moreover, researchers find that policies enacted in the country between 2008 and 2013 (e.g., the introduction of a flat tax rate at 16%, which was later turned into a three-bracket rate) would contribute to an increase in inequality on the long run. The model from the Central Bank was recently updated (Szoboszlai, Bögöthy, Mosberger, & Berta, 2018) and simulations were run considering tax/benefit reforms in Hungary over the 2010-2017 period. Again, results seem to reinforce the finding that the flat tax system did not increase employment among the lower income brackets and that the current tax credit scheme was not adequately targeted.

Also known as SRMOD, the microsimulation model for Serbia was developed in 2010 (Randelović & Žarković Rakić, 2012). Serbia and Montenegro share not only geographical, historical, and cultural similarities, but also their socio-political environment and regulatory system. Informality and unemployment are high in Serbia as they are in Montenegro, especially in low-paid labour. Those taking up low-paid employment often see that significant part of their gross earnings is consumed by income taxes and/or social contributions, as well as followed up by a reduction in social benefits. One of the first applications of SRMOD was to study effects on labour supply of the abolishment of a mandatory minimum base for social security contribution (SSC). Results from the microsimulation model showed that the abolition of the mandatory minimum base for the SSC could lead to a larger reduction in effective average tax rates (EATR) than in effective marginal tax rates (EMTR),³⁹ indicating that the reform would have a larger impact on increased labour participation than on number of hours worked. The simulation also finds that the reform would not affect income inequality between different income brackets. Another country sharing numerous similarities with Montenegro is Bosnia and Herzegovina (BiH). BiH recently developed its own microsimulation model based on EUROMOD. The BiHMOD development started in 2016 and is currently based on Bosnia Household Budgetary Survey (BHBS) data, but it will soon be able to integrate SILC data (which was collected in 2019 for the first time in BiH). BiHMOD is a static microsimulation model and is currently able to simulate the following means-tested benefits: child allowance, benefits for unemployed mothers, benefit for equipment for new-borns, up to 6 months' benefit for child nutrition, and permanent financial assistance for the disabled, although no study has been conducted yet which makes use of the new model (Kurta & Oruc, 2020). Finally, Macedonia developed its own microsimulation model based on EUROMOD (Blazevski et al., 2013) based on 2011 SILC data and simulating a reform of in-work benefits. Interestingly, the results from the simulation show that the country's family in-work benefit would be more effective for singles, while individual in-work benefit would be more effective for couples. These findings show the potential of microsimulations in helping fine-tune policies that might already exist within a country.

³⁹ The average rate at which an individual's earned and unearned income is taxed is known as their effective average tax rate (EATR). The effective marginal tax rate (EMTR) is the effective tax rate on each additional unit of income.

Tax/benefit microsimulation models have also been developed in the past with the aim of conducting cross-country analysis for Eastern Europe and the Balkans. We review here evidence from relevant studies to better inform the design of our model for Montenegro. Galuscak and Katay (2019) design a simulation model to compare Czech Republic and Hungary tax-benefit systems. Their aim is to investigate the role of tax-benefit systems in aggregate labour force participation. Czech Republic and Hungary differ markedly in labour force participation rates, so the investigators aimed at comparing the results on participation rates of switching tax-benefit systems between the two countries. Interestingly, results show that implementing Czech Republic tax-benefit schemes in Hungary, even if the latter presents a more progressive tax system⁴⁰ and spends a larger portion of the GDP on social benefits, would increase labour participation rates by a significant amount. These results are somewhat in contrast with multi-country evidence from a different study (which included data from Hungary, Romania, and Bulgaria). The study investigates, through microsimulation, the impact of more progressive tax systems in countries that have opted for a flat-tax rate (Barrios et al., 2020).⁴¹ The study shows that by increasing taxation on high-income earners and reducing the tax burden on the poorest, inequality and poverty rates in all countries would decrease with little to no impact on average income for highest income deciles. Budget neutral reforms combining changes in the progressivity of taxation with a working tax credit or with tax allowances would yield similar results or, in some cases, would lead to further reduction in income inequality, although substantial variations are present in this case depending on country-specific tax-benefit systems. Finally, Urban et al. (2019) compare personal income tax (PIT) rates in Croatia, Slovenia, and Slovakia making use of a specifically designed microsimulation model for Croatia (miCROMod) and of EUROMOD for the other two countries. The study finds that flat tax rates in Slovenia and Slovakia correspond to more unequal income distributions and that, while Croatia's decision to move from a three-rate to a two-rate tax system reduces the total tax wedge, it marginally increases income inequality and does not provide the incentives for work for which it was designed. See Table A 3 for a summary of all reviewed national microsimulation models.

International microsimulation models

*EUROMOD*⁴² is an openly available, multi-country tax-benefit microsimulation model for the 28 member states of the EU based on representative household micro-data from the European Union Statistics on Income and Living Conditions (EU-SILC) (Sutherland, 2001). EUROMOD simulates as much as possible the policy components of household disposable income, although some elements cannot be simulated due to lack of data in EU-SILC surveys (e.g., most pension incomes and disability benefits). Results are presented at household level and can be used to assess changes in household budgets based on tax/benefit reforms. The software allows for comparative analysis across the EU and possesses a library of "policy layouts" from EU countries (i.e. a database

⁴⁰ In 2007, Hungary changed its flat-tax rate of 16% into a three brackets personal income tax (PIT) of 18%, 36%, and 40%.

⁴¹ All countries included in the study have a personal income tax (PIT) system with fixed rates set at three specific thresholds.

⁴² See <https://euromod-web.jrc.ec.europa.eu/>

with information on tax-benefit systems in each country through time) starting from the mid-2000s. EUROMOD's quality has been assessed in the past (Sutherland, 2018), and based on its model, several country-specific simulation models have been designed (e.g. UKMOD, RUSMOD, SRMOD for Serbia, or MKMOD for North Macedonia). However, the software presents an important limitation in its inability to build dynamic microsimulation models.

The World Bank's *ADePT Simulation Model*⁴³ is a software to automate and standardize the production of analytical reports. ADePT suite of data analysis tool uses micro-level data from various types of surveys (although it relies mainly on World Bank Living Standard Measurement Study (LSMS) data) to produce rich sets of tables and graphs for a particular area of economic research. ADePT suite of tools also presents a simulation module that can be used to simulate the impact of policies on households' welfare. ADePT Simulation Module differs from other ADePT modules since it generates a simulated dataset that can later be used for analysis. Moreover, it also produces diagnostic tables reflecting the quality of the simulations and documenting the changes and transitions that occurred (Olivieri et al., 2014). The ADePT software, although still in use, appears to not have been updated recently.

The *OECD Tax-Benefit web calculator*⁴⁴ enables users to quickly see and compare how tax liabilities and benefit entitlements affect the incomes of working-age families across countries and over time. The tool is web-based and straightforward to use and allows cross-country comparison. However, its pool of countries is limited to OECD countries. Moreover, the estimated model is static and does not allow for simulations of taxes on wealth and propriety, old-age benefits, and sickness benefits.

The International Labour Organization offers open access to both the "*Rapid Social Protection Calculator for COVID-19*"⁴⁵ and the "*Social Protection Floors Calculator*"⁴⁶. The *Rapid Social Protection Calculator for COVID-19*⁴⁷ has been developed in the wake of the global COVID-19 pandemic in 2020 and offers quick excel-based calculations on extending coverage for existing social security programmes such as new benefits for contributors, unemployment schemes, prophylactic paid leave, and temporary wage subsidies. The rapid tool is based on macro data, and the main aim is to suggest the potential fiscal space needed for extending coverage to new beneficiaries. The Social Protection Floors calculator⁴⁸ is an online tool that quickly calculates the expected cost of basic programmes such as universal child benefits or universal pensions depending on benefit amounts set as a percentage of the poverty line or minimum salary. The underlying database of the floors' calculation exclusively contains data from the global south, and Montenegro is omitted.

⁴³ See https://elibrary.worldbank.org/doi/10.1596/978-1-4648-0384-0_ch3

⁴⁴ See <https://www.oecd.org/els/soc/tax-benefit-web-calculator/>

⁴⁵ See https://www.social-protection.org/gimi/ShowResource.action;jsessionid=UuqNbJ6UgMxfVp09R3d00xc5W_TPQN-Wb_9S2pasFjX4slvWP1z3!445242879?id=56007&lang=AR

⁴⁶ See <https://www.social-protection.org/gimi/SPFCalculReport.action>

⁴⁷ <https://www.social-protection.org/gimi/ShowWiki.action?id=7>

⁴⁸ <https://www.social-protection.org/gimi/SPFCalculReport.action>

One additional simulation model from the ILO is the *ILO Pension Model*,⁴⁹ a highly versatile, excel-based tool that supports practitioners from social security institutions in forecasting social insurance schemes' expenditure in a determined actuarial period. However, the ILO pension model does not simulate social assistance schemes and does not make use of microdata which does not allow to assess poverty and inequality reduction effects of social assistance programmes (ILO, 2018).

5.2 Building a microsimulation model for Montenegro

Based on the reviewed literature and the assessment of the current social protection system and the fiscal framework in Montenegro, we built a static microsimulation model for non-contributory social transfers and taxation Montenegro allowing for multiple policy reform scenarios. With this tool, a large variety of scenarios can be simulated and compared with the status quo and with each other. The design options that the model can address and simulate include targeting criteria, benefit amounts, and withdrawal rates⁵⁰ of existing and new benefits. Users can aim at increasing cost-effectiveness and cost-efficiency of the benefit system through the modification of the various design parameters.

For the selection of relevant policy simulation options, issues affecting the current tax-benefit system in Montenegro were assessed. Previous reviews of the tax-benefit system such as the one conducted by UNDP, in its 2019-2021 Decent Work Country Programme, have highlighted the shortcomings of Montenegro's system in terms of coverage and ability to reduce informality in the labour market (UNDP, 2019). Similarly, the Government of Montenegro Economic Reform Programme (2019-2021) highlighted the importance to increase coverage and to facilitate access to social services for children and disabled individuals by reducing bureaucratic bottlenecks (Government of Montenegro, 2019). Previous assessments have also highlighted the potential benefits of introducing means-tested targeting to keep nominal fiscal costs of the benefit constant (International Monetary Fund, 2017).⁵¹ Triangulating the results from the desk review, the performance review included above (Section 4.4), and interviews with key stakeholders, the team proposed and simulated a set of initial policy reform options.

Model assumptions

In simulating benefit reforms, the research team has followed key underlying assumptions. These assumptions include: (i) 100% marginal propensity to consume social assistance transfers, which implies no substitution effects with other income sources; (ii) constant exclusion and inclusion

⁴⁹ See <https://www.social-protection.org/gimi/RessourcePDF.action?id=55195>

⁵⁰ By withdrawal rate, it is intended the level of income (or other targeting criteria) at which an individual is entirely or partially excluded from receiving a benefit.

⁵¹ The reported comment on means-testing was directed in particular to the then active "Mothers' Law", a lifetime mothers' benefit. However, the potential for reducing fiscal costs apply also to other non-means-tested benefit.

errors (based on empirical analysis of 2019 SILC data);⁵² and, (iii) constant demographic structure of Montenegro's population. Additionally, the simulation includes both budget neutral reforms and reforms that require additional funds (although these are supposed to be covered through tax reforms). Administrative costs are not included in the estimation of expenditures.⁵³ Finally, the simulation does not consider the economic downturn following the COVID-19 pandemic. The research team considered it appropriate to conduct the analysis based on the pre-pandemic *status quo* under the assumption that the economy of the country will return to that status once movement restrictions are removed.

Several assumptions are also made for modelling the tax reform scenarios. Firstly, PIT payments included in SILC are discarded from the dataset, because of unclear distribution and amounts. Secondly, PIT payments are imputed on the entirety of households' income, even if these may be obtained from non-taxed sources. Thirdly, to account for informal work and tax evasion, is applied an informality rate of 27% extrapolated from SILC.

Data

Quantitative survey data

With regards to data, individual- or household-level data from a recent survey is required. The data should ideally include, together with demographic information, information on employment, income sources and benefit receipt disaggregated to the lowest possible level, so that simulation scenarios can be built starting from single benefits within Montenegro's Social Protection System.

Table 37 Basic descriptive variables

Variable	Observations	Mean	Std. Dev.	Min	Max
Female (ratio)	12,810	0.50	0.50	0	1
Age (years)	12,810	38.44	22.14	0	102
Disposable income (EUR)	12,810	10,014.03	6811.42	-148	59,718
Total income (EUR)	12,810	13,003.59	9415.12	0	86,638
Household size	12,810	4.30	1.78	1	11

Notes: Income variable reflect annual values .

Source: Survey on Income and Living Condition, 2019

The latest available Survey on Income and Living Conditions (SILC) data is the 2019 round which includes a total of 4,280 households, or 12,810 individuals. The Statistical Office of Montenegro (MONSTAT) provided access to the anonymised SILC data in accordance with the provision of the Article 58 of the Law on Official Statistics and Official Statistical System (Official Gazette of Montenegro No 18/12 and 47/19). The dataset presents information on households' demographic

⁵² Targeting errors were estimated for the FSA per quintile, then proportionally and randomly applied when simulating new eligibility criteria.

⁵³ This choice is related to lack of reliable data on administrative costs divided by benefit type.

characteristics, education, dwelling, assets, health, employment, gross and disposable income, and social transfers.

Qualitative data

The research team also interviewed 20 key informants from the Government of Montenegro, MONSTAT, UN agencies, NGOs, Centres for Social Work, and Academics. These interviews informed the policy analysis and simulation by providing insights on strengths and weaknesses of the current tax/benefit system in the country. Interviewees included:⁵⁴

- Officials from UNICEF and UNDP Montenegro offices
- Officials from the Ministry of Economic Development
- Officials from the Union of Municipalities of Montenegro
- Officials from the Ministry of Finance and Social Protection
- Officials from the Department for services
- Officials from MONSTAT
- Officials from Centres for Social Work
- Officials from the Employment Agency
- Officials from NGOs involved in poverty alleviating activities
- Researchers from University of Montenegro and the Institution for Social and Child Protection

Limitations

The variables included in the SILC dataset are organized following European Union Statistical Office, EUROSTAT guidelines. This standardisation has repercussions on the way in which information on social benefits is presented. In fact, multiple Montenegro social protection system specific benefits are aggregated under a broader macro-category, limiting the ability to disaggregate income from different benefits. For this reason, we also obtained a pre-standardisation version of the dataset from MONSTAT. These data allowed the research team to conduct a more detailed analysis of the current social protection system and to design a more informative simulation model. Notwithstanding access to the pre-standardised version of data, the results on social spending do not always mirror the administrative and budget data (see section 4.5). Therefore, the cost estimates are based uniquely on SILC data with the caveat of inconsistencies with official budget figures, especially for the Financial Support Allowance. In fact, SILC data estimates for total expenditure on FSA are reported to be around 18 million euro, compared 11 million euro from official budget figures (2018).

A further limitation of SILC data, which unfortunately could not be overcome by the team, relates to the absence of specific survey questions that would allow the assessment and simulation of social transfer targeting criteria. For example, land ownership is an essential eligibility criterion for

⁵⁴ The interview guide is included in Annex B – Interview guide for KIIs

the means-tested benefits, such as the Financial Support Allowance. Hence, it was not possible to mirror the targeting process.

Finally, a limitation of every survey is its reliance on respondents to correctly report their income and the amount of taxes paid. Therefore, having imputed personal income taxes on incomes reported on the survey may reproduce the under or misreporting bias. Moreover, even though the current FSA benefit is determined by the gap between household income and eligibility threshold, this is not appropriately reflected in the SILC data. It seems that beneficiary households receive the full benefit amount. Hence, the simulation also assigns the full benefit amount to eligible households.

6. Policy Simulation: Scenarios and Results

Based on the social protection performance review and discussions with stakeholders, a set of policy options has been prepared as input for the microsimulation. The options are relative to changes in vertical and horizontal adequacy of the Financial Support Allowance (FSA) and the Child Allowance (CA), and the personal income tax rates and brackets. In this section, we first present a description of all simulated scenarios for each of the three policy and present in detail the characteristics of the selected scenario. Subsequently, we show simulation results of the preferred scenario. CA scenarios' description and results are presented first, followed by FSA and tax reform. Complete results tables for all the simulated reforms can be found in the annex section.

6.1 Child Allowance

Scenarios

The second set of reform scenarios concerns the Child Allowance (**Table 38**). For the CA, seven scenarios have been elaborated. All scenarios extend the number of beneficiary children by increasing the eligible age up to and including age five, fourteen, or seventeen years old. Affluence tests are applied as separate options for all scenarios, excluding children from the wealthiest households (richest 10% or 20%) from the list of beneficiaries. Additionally, for each of these scenarios we test different options based on different benefit amounts: two levels of flat transfers (30 and 44 EUR) and one staggered version where the amount depends on the child's birth order (44 EUR per month for the first child, 30 EUR for the second and the third, 25 for the fourth and the fifth child). Under all scenarios, children already receiving the CA in SILC continue to be recipient of the benefit, notwithstanding of the age eligibility criteria. Moreover, if any beneficiary is already receiving a benefit amount higher than the simulated one, the current amount substitutes the simulated one. Both these assumptions are necessary to not decrease the welfare of beneficiary families, and to estimate the impacts excluding these possible errors.

Until very recently, the child allowance used to be a hybrid categorical programme that piggybacked on the FSA targeting mechanism for most of its beneficiaries. Overall coverage and coverage in the lowest quintiles were very low and as such did not allow addressing the needs of children living in poverty. While 33.7% of children live in poor households, the CA reached less

than one in ten children, of which two thirds belonged to the poorest quintile. This means that the CA program suffered from a large exclusion error.

Table 38 Reform options for the Child Allowance

Scenario	Option	Eligibility age**	Targeting	Benefit	N of children	Cost (Million EUR)
Old CA	...	...	...	...	14,059	4,7
1*	1	5	Categorical	30	53,768	21.91
2	1	14	Categorical	30	119,923	43.17
	2			44		63.32
	3			44, 30, 25		53.68
3	1	14	Affluence test top 10%	30	113,039	40.69
	2			44		59.68
	3			44, 30, 25		50.45
4	1	14	Affluence test top 20%	30	103,453	37.24
	2			44		54.62
	3			44, 30, 25		46.02
5	1	17	Categorical	30	146,959	52.91
	2			44		77.59
	3			44, 30, 25		53.51
6	1	17	Affluence test top 10%	30	138,638	49.91
	2			44		73.20
	3			44, 30, 25		50.29
7	1	17	Affluence test top 20%	30	127,337	45.84
	2			44		67.23
	3			44, 30, 25		45.86

Note: Benefit amount in EUR per month. N for children. *The first scenario corresponds to the amendment of the Law on Social and Child Protection approved in May 2021 which extends coverage to all children below six years and keeps including older children currently living in households receiving FSA, PGA, CSA, and PDA. The benefit amount allocated is 30 EUR per month (44, 52, or 60 EUR if the household is recipient of one among FSA, PGA, CSA, and PDA). **Up to and including the age.

Source: Authors' own elaboration

Results

In this section, we present the results for three options: Scenario 1 Option 1 (<6, *categorical*), Scenario 2 Option 1 (<15, *categorical*), and Scenario 5 Option 1 (<18, *categorical*) of **Table 38**. In all cases, the monthly benefit amount is 30 EUR per child, transferred to a maximum of five children per family.

Under all scenarios, the new CA coverage would increase significantly from 4.9% of the population under the old CA to 28.4% with a categorical approach covering all children under the age of 6, to 49.2% covering all children under the age of 15, and to 56.3% covering all children under the age of 18. In absolute numbers, our model estimates that under Scenario 1, 53,768 children would be covered by the benefit. This number raises to 119,923 children under Scenario 2, and to 146,959

children under Scenario 5.⁵⁵ Coverage in the lowest quintile would increase from 15.2% to 40.1%, 58.1% and 67.7, respectively. The benefit distribution would be less progressive but still slightly skewed towards the poorest quintiles. Benefit adequacy would slightly increase mainly due to the larger number of eligible children per household (**Table 39**).

Table 39 Coverage, distribution, and adequacy of CA reform options

Measure	Option	Q1	Q2	Q3	Q4	Q5	Total
Coverage (total population)	Old CA	15.2	5.6	2.0	1.3	0.4	4.9
	<6	40.1	32.2	24.4	28.8	16.2	28.4
	<15	58.1	55.7	49.3	48.0	34.7	49.2
	<18	67.7	63.1	57.4	54.6	39.7	56.3
Coverage (households with children)	Old CA	21.6	8.8	3.2	2.2	0.8	8.3
	<6	60.1	51.1	52.4	52.8	40.9	50.4
	<15	87.1	88.3	86.0	87.9	87.5	87.4
	<18	100	100	100	100	100	100
Distribution	Old CA	59.4	21.2	12.5	5.2	1.7	100.0
	<6	36.3	21.5	14.8	17.2	10.2	100.0
	<15	24.4	22.9	19.3	19.6	13.7	100.0
	<18	25.3	22.5	20	18.9	13.4	100.0
Adequacy	Old CA	20.5	7.8	8.8	4.8	3.7	15.6
	<6	24.0	8.3	4.9	3.8	2.7	10.6
	<15	22.9	10.3	6.6	5.1	3.2	10.5
	<18	22.9	10.3	6.6	5.1	3.8	11.0

Notes: Quintiles based on pre-transfer income after pensions per adult equivalent. Individual weights used.

Coverage as a share of total population. Current benefit adequacy may differ from **Table 32** because in this table the current benefit has been simulated to mirror statutory amounts. Adequacy as a share of total disposable income and only for recipient households.

Source: Authors' own elaboration.

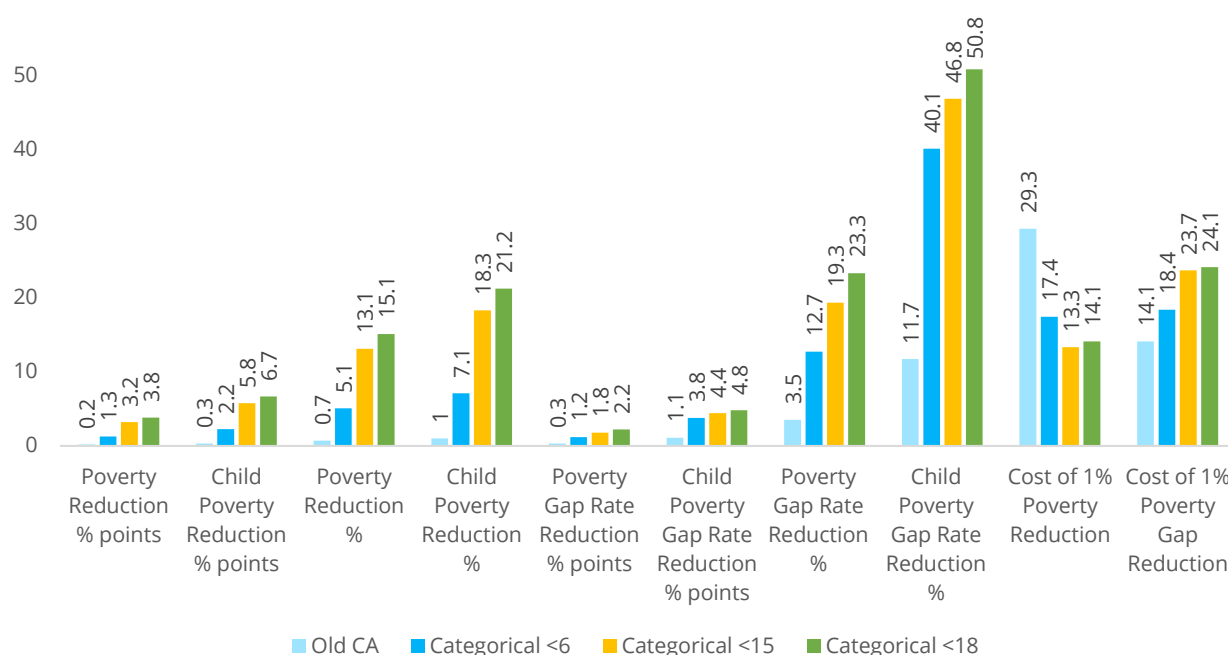
The expected impact of the simulated CA options on poverty is significantly larger compared to the Old CA design (i.e. before it was reformed to cover all children below the age of 6). Yet, it would also require a substantial increase in spending (close to tenfold or more, for expansion to children <18). Under Scenario 1, the poverty headcount could decrease by 1.3 percentage points compared to pre-transfer rates (or a total decrease of 5.1%). Scenario 5 could generate an even larger poverty headcount decrease of approximately 3.8 percentage points (or 15.1%). The poverty gap can be reduced by 1.2 percentage points (or 12.%) under Scenario 1, and up to by 2.2 percentage points (or 23.3%) under Scenario 5. It is important to notice that the mentioned decreases, as all the reductions from pre-transfer mentioned in this and the next section, include the reduction in poverty (or poverty gap) generated by the Old CA. For example, the 1.3 percentage points

⁵⁵ Based on administrative data, the total amount of children covered by the current CA expansion (all children <6) is 48,745, showing that our estimated figure of 53,768 covered children under Scenario 1 might be an overestimation. If corrected for this error, the number of children covered under Scenario 2 becomes 109,130, while for Scenario 5 it becomes 133,733.

reduction generated by the implementation of Scenario 1 includes the 0.2 percentage points reduction already obtained after implementing the Old CA transfer.

CA reforms do an even better job at reducing child poverty. Before transfer, child poverty in Montenegro is estimated to be at 31.5%. Scenario 1 could decrease it by 2.2 percentage points (5.1%), while Scenario 5 could bring the figures down by 6.7 percentage points (21.1%). Similarly, the child poverty gap (which is at 12.1% before CA transfer) could decrease by 3.8 percentage points under Scenario 1, compared to the 1.1 percentage points decrease of the Old CA. An expansion of CA to all children below 18 could generate a poverty gap decrease of 4.8 percentage points, or 50.8%. The costs of 1% poverty reduction will almost be halved under the current reform (Scenario 1), although the Old CA is more efficient than the simulated reforms in terms of poverty gap reduction.⁵⁶ It is also relevant to notice that the reform under Scenario 5 (i.e. CA expansion to all children <18) is less cost efficient than Scenario 2, as a 1% reduction in poverty cost approximately 800,000 EUR more for Scenario 5 than Scenario 2.

Figure 3 Poverty effectiveness and efficiency of the CA reform options



Notes: Poverty reduction difference refers to the difference in poverty rates before and after the benefit is accounted for. Poverty reduction % refers to the difference in poverty rates as a percentage of pre-CA poverty rate. The same applies for poverty gap difference and poverty gap rate reduction %. Individual weights used.

Source: Authors' own elaboration.

Overall, the results from the simulation of child allowance reforms indicate that shifting the eligibility criteria from the current to a categorical targeting, as envisaged by the May 2021 reform will significantly increase coverage, but also have relevant impacts on the overall and child poverty headcount or the poverty gap rate, larger than the standalone FSA ones. The multiple scenarios

⁵⁶ This is connected to the current targeting criteria of CA, which piggybacks on FSA to identify beneficiaries.

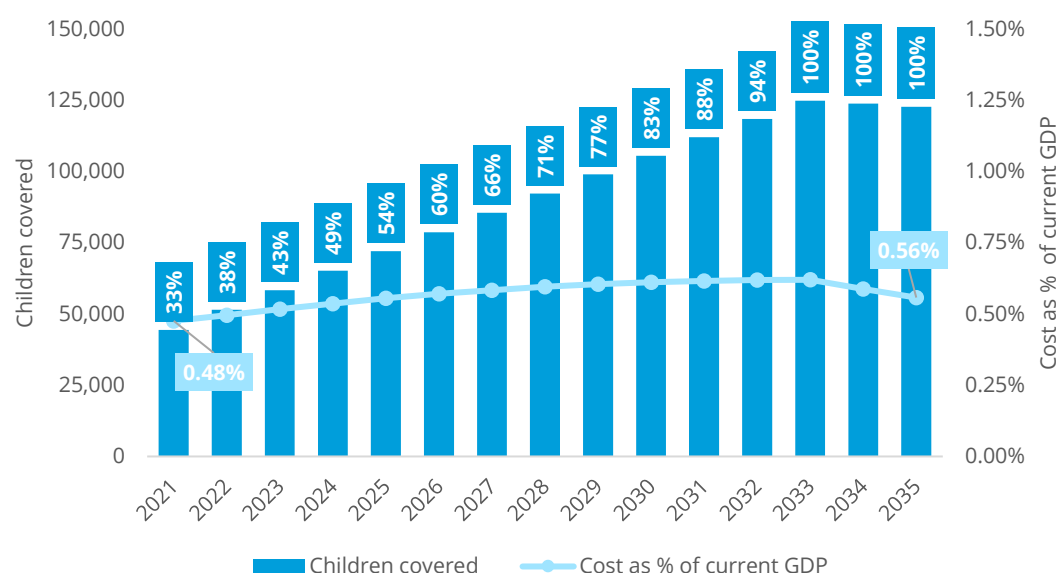
simulated (results in *Annex C – Complete results from microsimulation*) include higher benefit amounts and stricter exclusion parameters for the wealthiest households. Several scenarios have been simulated that expand CA coverage to children <15 and <18yo. For each of these reforms, we also simulate scenarios that exclude from the list of beneficiaries those households in the top 10% or top 20% of the income distribution. These affluence tests could potentially reduce reforms' costs without affecting poverty reduction, as only wealthier households would be excluded from the benefit. However, it is not possible to assess if affluence tests would be more efficient and effective than categorical targeting, given that there is no available data on the efficiency of targeting mechanisms and administrative costs.

Box 1. A roll-out plan towards universal child benefit coverage

As of 2021, Montenegro, has made its first step towards the universality of child benefits. The recent expansion of beneficiaries to all children under the age of 6 sets coverage among children at 33% (using all children below 18 as denominator). This expansion significantly increased the child allowance expenditure, from 4.7 million in (0.1% of 2018 GDP) to the estimated 21.9 million EUR (0.48% of 2021 GDP).

All scenarios simulated in this chapter are based on static "day-after" simulations. This means that all scenarios are assumed to be implemented separately and exclusively. Therefore, if Montenegro were to implement a universal child benefit (for all children below 18) current estimates set the cost at 52.9 million (1.15% of 2021 GDP). Achieving universality in 2021, would have meant increasing the Old CA expenditure by more than 11 times, at a price that given the current fiscal balance might had been hard to fund.

Figure 4. Cost of rolling out universal child benefit <18



Source: Own elaboration of data United Nations and International Monetary Fund (UNDESA, 2019; International Monetary Fund, 2021)

Nonetheless, based on international demographic and economic projections (see **Figure 4**), Montenegro can envision the future roll-out of a universal child benefit. If the eligibility age were increased by one year every year, 100% of children could be receiving the monthly benefit of 30 EUR per month by 2033 (indexed yearly by inflation), and the total cost for government would be 0.62% of GDP in 2033.

These results are driven by the demographic development of the country conjointly with the economic assumptions on economic growth. Due to a recovering economy in an ageing country, Montenegro will soon be able to afford the child benefit universality, at a decreasing cost over time, which would also allow for punctual vertical adjustments of the benefit.

6.2 Financial Support Allowance

Promoting activation and social inclusion is a policy priority for Government of Montenegro and UN Agencies involved in the “Joint Programme Activate!”. JP Activate! aims towards protection and activation through the combination of social protection instruments that can also incentivize job searching and finding. So far, the FSA programme is identified as the main non-contributory cash transfer in Montenegro, with the highest potential of combining (extreme) poverty protection and labour activation.

However, looking at FSA structure, concerns regarding the fact that its receipt might create work disincentives are raised from anecdotal evidence. The FSA eligibility criteria exclude households with able-to-work individuals if, when selected from Social Care Centres for “*offered employment [...], or vocational training [...], unless a minimum of two year has expired from the refusal*”, they refuse the offer. However, while the benefit amount is in principle defined by the difference from the benefit income threshold and the household income, from SILC data it emerges that the benefits received are closer to the full benefit amount and not to this difference. This mechanism could cause individual disincentives to accept employment which would raise income above the household eligibility threshold, incentivizing inactivity.

Box 2. FSA beneficiaries net gain from employment take-up

In order to understand the potential incentives of employment take-up for FSA beneficiary families, it is possible to assess the net gain from employment for two hypothetical households (see **Table 40**). Hypothetical household 1 is composed of one inactive but able to work adult, and two children, aged 6 and 9. Hypothetical household 2 is composed of two inactive but able to work adults and two children, aged 5 and 9. Both households have no income from employment and receive the FSA amount established by their respective thresholds. Both households also receive the Non-recurring Financial Assistance (NFA), and the Child Allowance (CA). The CA delivers 30 EUR to the children aged 5 (as per the May 2021 amendment), and 24.1 EUR to the children aged 9 (as per the current FSA design).

If one adult per household would take-up a full-time job receiving the minimum wage, both households would lose the entitlement to the FSA, and therefore to the CA for the older child. In this case, assuming that the NFA would be still received, but in the reduced form for non-FSA beneficiaries, the net gain for household 1 would be 70.4 EUR per month, and the net gain for household 2 would be 53.0 EUR per month.

Table 40. FSA beneficiaries net gain from employment

HH	Employment	Net wage	FSA	NFA	CA	Disposable income	Net Gain
HH1	No Job	0.0	96.6	11.1	54.1	161.9	...
	1 job 0.6 FTE	115.8	...	9.3	30.0	155.1	-6.8
	1 job 0.8 FTE	154.4	...	9.3	30.0	193.7	31.8
	1 job 1.0 FTE	193.0	...	9.3	30.0	232.3	70.4
HH2	No Job	0.0	114.1	11.1	54.1	179.3	...
	1 job 0.6 FTE	115.8	...	9.3	30.0	155.1	-24.2
	1 job 0.8 FTE	154.4	...	9.3	30.0	193.7	14.4
	1 job 1.0 FTE	193.0	...	9.3	30.0	232.3	53.0

Notes: HH= household. FTE = Full-time equivalent. All values expressed in EUR per month.

Source: Own elaboration

However, the incentive for labour activation may be significantly smaller, if not negative, if the employment would be a part-time job. If one adult per household would take-up a 0.8 FTE (full-time equivalent) job scaled to the minimum wage, both households would lose the entitlement to the FSA, and therefore to the CA for the older child too. In this case, the net gain for household 1 would be 31.8 EUR per month, and the net gain for household 2 would be 14.4 EUR per month. The same scenarios, with a 0.6 FTE would see the households' net gain turning negative. In both scenarios, the small or negative net gains can be read as a decisive disincentive to step into the labour market with part-time contracts.

A closer look at the labour force status of working age adults living in FSA beneficiary households suggests that more than 60% of beneficiaries are out of the labour force and 29% are unemployed. Moreover, 33% of inactive individuals (out of the labour force) with a low educational level are FSA beneficiaries, and 60% of the unemployed with a low educational level are FSA beneficiaries too (see **Table 41**).

Table 41. Percentage of working age adults receiving FSA in the first quintile, by labour force status and education

Labour Force Status	Education categories			Distribution	
	Low	Medium	High	Percent of total	
Employed	30.7	8.1	5.4	8.1	
Unemployed	60.4	43.6	5.7	29.0	
Outside Labour Force	33.0	17.0	8.9	62.9	

Note: Low education = ISCED 2011 levels 0-2. Medium education = ISCED 2011 levels 3-4. High education = ISCED levels 5-8.

Source: Authors' own elaboration

Because of the low coverage and adequacy, the extent to which the FSA can contribute to overall unemployment and inactivity is likely to be limited. However, in theory, there may be disincentives to "take up part-time, temporary, or seasonal employment at levels below the social assistance

threshold" (The World Bank, 2013), see **Box 2**. In the same way, the current FSA design might incentivise taking up jobs in the informal sector to ensure the benefit is not lost. Therefore, ensuring the correct amounts calculation or introducing a withdrawal rate above the threshold could increase the utility gained from labour activation.

Further, the unlimited duration of the entitlement to FSA might discourage labour market activation, but time limits on a "last resort" programme could be disadvantageous to the welfare of the affected households, particularly for children (The World Bank, 2013). Moreover, in most of the EU and OECD social protection systems, the duration of social assistance programmes is not time limited, as long beneficiaries satisfy the eligibility criteria (The World Bank, 2013).

Scenarios

Despite the current targeting mechanism that correctly excludes the wealthiest households in the country, the FSA still has low coverage in the lowest quintile (30.5%). At the same time, benefit amounts are not adequate for larger households that must cater for increased needs. The FSA can be a crucial non-contributory transfer to the most vulnerable, only depending on its effectiveness.

To enhance its performance, the research team designed potential reforms of the Financial Support Allowance that entail either a vertical (i.e., larger benefit amount) or a horizontal (i.e., more beneficiaries) expansion. Under the first simulated scenario (**Table 42**), the eligibility criteria of FA remain unchanged, yet current beneficiaries may receive a higher benefit depending on the household composition. Scenarios 2 and 3, on the other hand, reform the FSA such that it reaches more beneficiaries. In scenario 2, we aim at expanding the horizontal coverage by increasing the income eligibility cut-offs (by 10% in option 1 and 5% in option 2) without increasing the benefit amounts. Scenario 3 aims at introducing a withdrawal rate, alongside with expanding horizontal coverage, to promote activation of FSA beneficiaries. Scenario 3 replicates the current benefit amounts to recipient households, adding a benefit reduction of 50% to households whose income is 10% above the threshold.

Table 42 Reform scenarios for the Financial Support Allowance

Scenario	Option	Name	Eligibility cut-offs	Benefit amount	Cost (Millions EUR)	N covered
1		Current	...	...	20.59	58,564
	1	Unique ES	Current cut-off	Determined by a new unique equivalence scale	25.69	58,564
	2	Double ES	Current cut-off	Determined by a new double equivalence scale	26.88	58,564
2	1	Cut-off +10%	Current cut-off +10%	Current benefit amount	34.95	102,810
	2	Cut-off +5%	Current cut-off +5%	Current benefit amount	34.82	102,518
3	1	Withdrawal rate	a. Current cut-offs b. Between current cut-off and 10% above current cut-offs	a. Current benefit amount b. 50% of current benefit amount	26.70	102,810

Note: ES for equivalence scale. Costs exclude administrative costs. N covered refers to the number of individuals in benefitting households.

Source: Authors' own elaboration

The current equivalence scale of the FSA does not differentiate between children and adults. Every additional household member is assigned a steeply declining coefficient. Currently, a two-member household receives 1.2 times the benefit of a one-member household; a three-member household 1.4; and a four-member household 1.7 times the benefit of a one-member household. Families with five and more members are entitled to 1.9 times the single FSA amount (see **Table 17**). Under the first scenario, two revised equivalence scales are proposed considering the household composition. The idea is to define a basic benefit amount and then multiply it with a coefficient based on an equivalence scale that depends on the household age structure. The rationale behind introducing a new equivalence scale relates to the need for a more adequate account of the different necessities of larger families.

In Scenario 1, the basic benefit amount is equal to the current benefit amount for a single-member household, i.e., 67.1 EUR per month, as per the February 2018 indexation. The first reform option includes a double equivalent scale that considers the household's age structure, applying a 0.5 multiplier per additional adult and 0.3 for each child under eighteen.⁵⁷ The second option applies a unique equivalence scale with the unique 0.5 multiplier per every additional member, adult, or child (**Table 43**).

⁵⁷ This option is very similar to the OECD2 equivalence scale which is also used to determine household income per adult equivalent in AROPE analysis. The difference is that 0.3 coefficient for children applies to all children under 18 and not only to children up to age 14.

Table 43 Current and new equivalence scales for FSA benefits

Household size	Current ES	Double ES		Unique ES
		1 adult	2 adults	Unique multiplier
1	1	1	1	1
2	1.2	1.3	1.5	1.5
3	1.4	1.6	1.8	2
4	1.7	1.9	2.1	2.5
5+	1.9	2.1	2.4	3

Notes: ES = Equivalence Scale.

Source: Authors' own elaboration

The new equivalence scales result in higher benefit amounts for larger households. For a family of four, the current benefit amount is at most 114.1 EUR. Under the new double equivalence scale (option 1), a family of two adults and two children under the age of 18 would receive up to 140.9 EUR per month. A household composed of one adult and three children would receive up to 127.5 EUR (**Table 44**).

Table 44 Eligibility cut-offs and maximum benefit based on current and new equivalence scales of FSA, EUR

Household size	Current ES	Double ES		Unique ES
		1 adult	2 adults	Unique multiplier
1	67.1	67.1	...	67.1
2	80.5	87.2	100.7	100.7
3	96.6	107.4	120.8	134.2
4	114.1	127.5	140.9	167.8
5+	127.5	140.9	161.0	201.3

Notes: ES = Equivalence Scale. All amounts expressed in 2018 prices

Source: Authors' own elaboration

Results

In this section, we present the results from the simulations of one option for each scenario, for a total of three options. The selected options are Scenario 1, option 2 (Vertical Expansion, unique Equivalence Scale), Scenario 2, option 1 (Horizontal Expansion, Cut-off +10%), and Scenario 3 (Horizontal Expansion, Withdrawal rate). The results for all other scenarios are included in *Annex C – Complete results from microsimulation*.

Coverage: By increasing the current means-test cut-offs (HE Cut-off +10% and HE Withdrawal rate), the share of total population living in households receiving the FSA almost doubles. Notably, the highest coverage expansion in percentage points occurs in the first (lowest) quintile, because the

cut-off is situated in this quintile. However, because of the simulated replication of inclusion errors,⁵⁸ the share of population receiving the FSA increases across all quintiles.

Distribution: By vertically increasing the benefit amount with the updated unique equivalence scale, the distribution of benefits across quintiles gets slightly more concentrated among the lowest two quintiles. This redistribution happens because of the underlying demographic structure of recipient households (larger among the poorest). With an horizontal expansion, the concentration of benefits increases among the poorest, because the cut-off is situated in this quintile. Under the withdrawal rate option, the distribution is only slightly less pro-poor because new beneficiaries above the means-test cut-off receive only half the benefit.

Adequacy: The simulation results on adequacy indicate that the three reform options have different levels of impact on households' income and living conditions. With the increased equivalence scale, the average adequacy for recipient households increases by 16% for all recipients (13% in Q1 and 37% in Q2). Significantly lower results are obtained with the horizontal expansions because newly included beneficiaries are selected above the means-test cut-offs. This happens because newly included beneficiaries' disposable income is already slightly higher, which causes the decrease of the adequacy ratio.

Table 45 Coverage, distribution, and adequacy of FSA reform options

Measure	Scenario	Q1	Q2	Q3	Q4	Q5	Total
Coverage	Current	30.5	7.7	4.3	2.7	0.9	9.2
	VE, Unique ES	30.5	7.7	4.3	2.7	0.9	9.2
	HE, Cut-off +10%	54.6	13.1	7.2	5.2	0.9	16.2
	HE, Withdrawal rate	54.6	13.1	7.2	5.2	0.9	16.2
Distribution	Current	64.6	15.4	11.3	5.7	3.0	100.0
	VE, Unique ES	63.8	17.4	10.5	6.0	2.3	100.0
	HE, Cut-off +10%	66.5	16.1	9.6	6.4	1.4	100.0
	HE, Withdrawal rate	65.4	16.5	10.1	6.2	1.8	100.0
Adequacy	Current	53.0	17.5	12.8	9.9	7.9	40.0
	VE, Unique ES	60.2	23.9	17.3	14.0	10.5	46.5
	HE, Cut-off +10%	47.3	17.8	12.9	10.3	7.9	36.7
	HE, Withdrawal rate	41.9	14.5	10.5	7.9	7.9	32.1

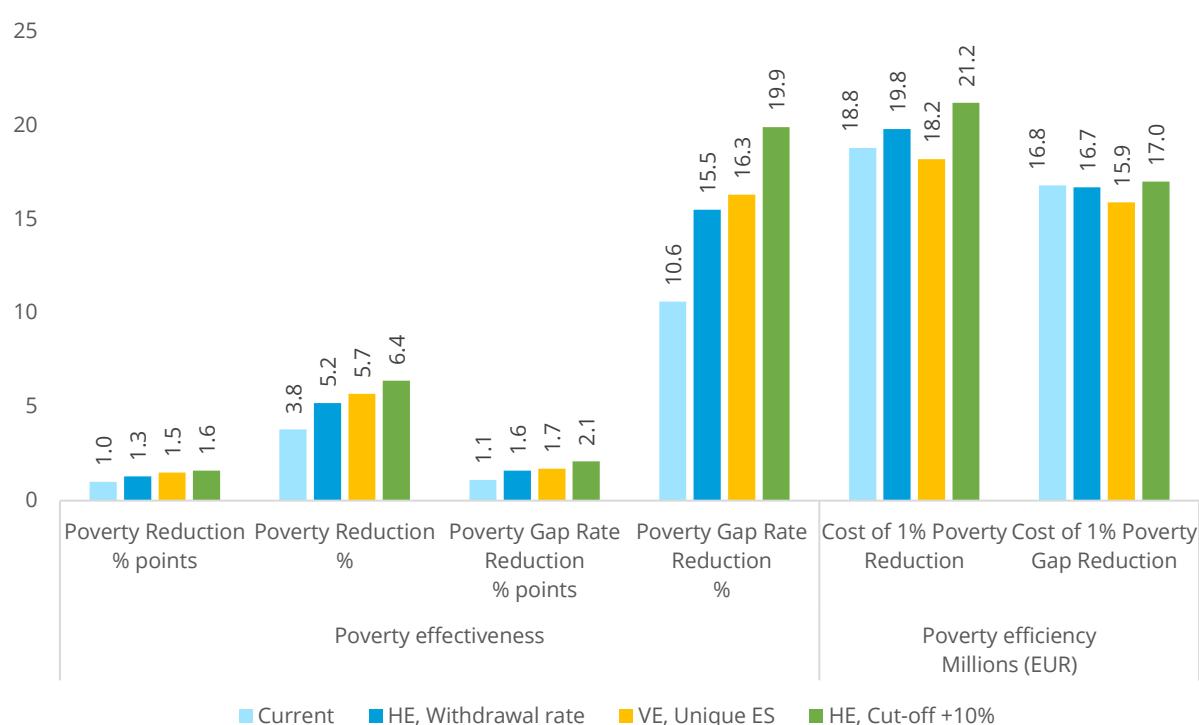
Notes: VE = Vertical Expansion, HE = Horizontal Expansion, ES = Equivalence Scale. Quintiles based on pre-transfer income after pensions per adult equivalent. Individual weights used. Coverage as a share of total population. Current benefit adequacy may differ from **Table 32** because in this table the current benefit has been simulated to mirror statutory (i.e. official) amounts. Distribution as a share of total benefits distributed. Adequacy as a share of total disposable income and only for recipient households. Coverage may differ from administrative data because it is based on SILC.

Source: Authors' own elaboration.

⁵⁸ Given the lack of the necessary variables to reproduce eligibility criteria faithfully, the inclusion error of individuals in higher quintiles of income had to be simulated based on inclusion present in the SILC data (i.e. the share of individuals from higher quintiles that received the benefit but should have not).

Estimates on the impact on poverty of the three reform options show modest results. The poverty headcount can be reduced in range between 0.3 and 0.6 additional percentage points, and the poverty gap rate between 0.5 and 1.0 percentage points. Relatively to the current benefit design, under the most effective reform (HE, Cut-off +10%) the poverty headcount could be ulteriorly reduced by 2.6% and the poverty gap rate by 9.3%, see **Figure 5**. It is possible to compare the reform options in terms of cost-efficiency, based on the poverty impacts and the estimated costs (see **Table 42** for reforms costing). Upon a significant cost increase (+70%) the simple horizontal expansion is the reform option which seems more efficient for reaching the poverty reduction objective, due to the significantly larger beneficiaries' base (+75%).

Figure 5 Poverty effectiveness and efficiency of the FSA reform options



Notes: VE = Vertical Expansion, HE= Horizontal Expansion, ES = Equivalence Scale. Poverty reduction difference refers to the difference in poverty rates before and after the benefit is accounted for. Poverty reduction % refers to the difference in poverty rates as a percentage of pre-transfer poverty rate. The same applies for poverty gap difference and poverty gap rate reduction %. Individual weights used.

Source: Authors' own elaboration.

The results show that significantly reforming the FSA is not a cheap option and that when facing budget limitations there are critical trade-offs between coverage, adequacy and activation. However, a vertical adjustment without an horizontal expansion may be less justifiable to those that are continuously excluded. In an ideal scenario the vertical and horizontal option could be jointly implemented so that the impacts are combined. If the FSA becomes more adequate to more beneficiaries, these beneficiaries can be included in activation mechanisms and policies. These policies can be designed starting from the profiles of beneficiary households, the status of the labor market, and the effectiveness of employment services, to achieve meaningful job activation

objectives. Nevertheless, pairing FSA reforms with a lower tax wedge on lower earners can provide even stronger incentives.

6.3 Personal Income Tax

Scenarios

The last set of scenarios concerns the reform of the personal income tax, inspired by different tax systems in neighbouring countries (**Table 46**). On the one hand, these scenarios aim at creating a more progressive tax environment in Montenegro. On the other hand, they can also generate additional revenues to fund social protection reforms and redistribute income from the rich to the poor. For each scenario, there are two options. One of the two options includes a tax-exempted income bracket up to the Minimum Gross Wage (MGW). The other option applies taxes to all income levels.

Table 46 Reform scenarios for the Personal Income Tax

Scenarios	Tax brackets (ratio of MGW)			Tax rate options	
	Bracket	From	To	w/o tax exemption	w/ tax exemption
Croatian	1	0.0	1.0	9%	0%
Model	2	1.0	7.4	30€ + 20% over 331€	20% over 331€
(HRV)	3	7.4	...	454€ + 30% over 2,450€	424€ + 30% over 2,450€
Albanian	1	0.0	1.0	9%	0%
Model	2	1.0	6.8	30€ + 13% over 331€	13% over 331€
(ALB)	3	6.8	...	280€ + 23% over 2,250€	250€ + 23% over 2,250€
Slovenian	1	0.0	1.0	9%	0%
Model	2	1.0	2.6	30€ + 16% over 331€	16% over 331€
(SVN)	3	2.6	5.3	145€ + 26% over 860€	115€ + 26% over 860€
	4	5.3	7.6	377€ + 33% over 1,754€	347€ + 33% over 1,754€
	5	7.6	...	628€ + 39% over 2,515€	598€ + 39% over 2,515€

Notes: MGW for Minimum Gross Wage

Source: Authors' own elaboration

Currently, Montenegro's personal income tax scheme consists of a simplified scheme that imposes a tax rate of 9% over income up to the average gross income per wage earner.⁵⁹ Above this threshold, the tax rate of 11% is applied to the remaining income. This tax system is inherently regressive since lower-income households allocate a proportionally higher share of their budgets to basic goods spending and have less opportunity for savings.

In the following section, we present the results from the simulation of both the current tax scenario and the alternative *Croatian* scenario, modelled around the Croatian (HRV) tax system and adapted to Montenegro's income distribution. The HRV scenario adds a third tax bracket. The first bracket includes incomes until one time the minimum gross wage (MGW), to which a tax rate of 9% is applied. The second bracket includes incomes from 1 to 7.4 times the MGW, applying a

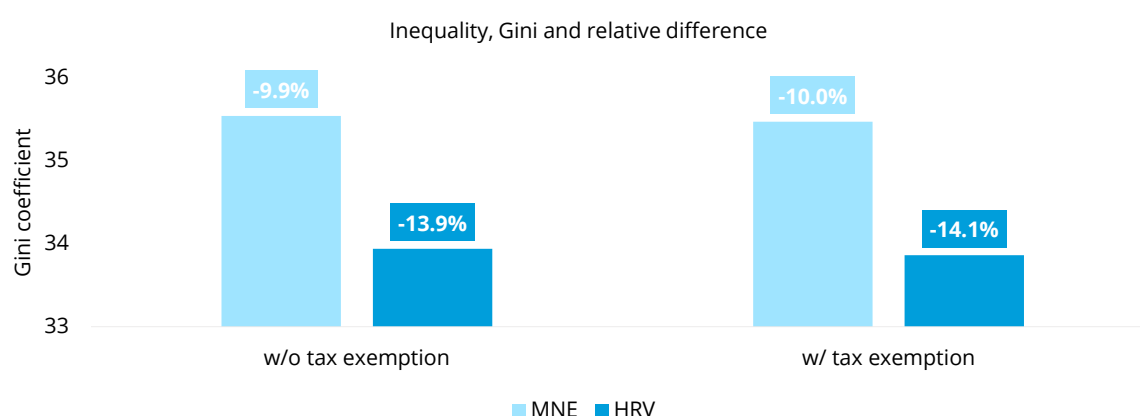
⁵⁹ Amounting to 766 EUR per month in 2018 (Central Bank of Montenegro, 2020)

tax rate of 20%. The third bracket applies a rate of 30% to incomes above 7.4 times the MGW. The tax base in the second and third brackets is defined by the difference between income and the lower cut-off so that the system is marginally progressive (i.e. higher tax brackets are only applied to income above the cut-off of the previous bracket) (**Table 46**). The simulation includes two options for the MNE and HRV scenario, one with a tax-exempted bracket for income below the MGW and one without tax exemption.

Results

Before taxation (gross household income), the Gini coefficient was 39.4. Under the current Montenegrin PIT system, inequality decreases by roughly 4 Gini points (-9.9%). Introducing in the current system a tax exemption for the lowest earners would reduce the Gini coefficient by 10%, not significantly different from the scenario without tax exemption. By introducing a more progressive system using the HRV scenario, the inequality index decreases by at least 1.5 points more (so, 5.5 points compared to pre-tax Gini), a reduction of 13.9%. However, even under the HRV scenario, the tax-exempting option does not seem to reduce income inequality significantly (**Figure 6**).

Figure 6 Inequality under PIT reform scenarios



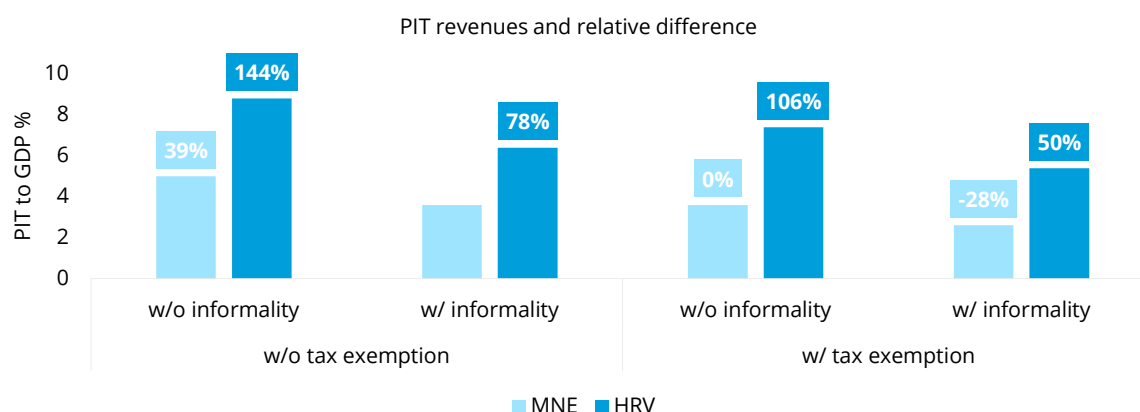
Notes: Relative differences to Gini coefficient estimated on equivalised total household gross income in label boxes.

Source: Authors' own elaboration.

From administrative sources, the PIT-to-GDP share in 2019 corresponded to 3.6% of GDP (Ministry of Finance and Social Welfare, 2020). The simulated amount, imputing informality, is 3.6%, which is in line with the administrative source. If Montenegro would achieve full tax compliance, PIT collection could increase by almost 40%, reaching 5% of GDP (see **Figure 7**). In comparison, maintaining the same informality level but applying the HRV reform model, Montenegro could reach PIT revenues of 6.4% of GDP. With the HRV scenario, tax revenues can increase by 78%, generating additional revenues of about 130 million EUR. Likewise, under the HRV scenario and exempting the lowest earners from taxation, PIT revenues can increase up to 5.4% of GDP (ca. 90 million EUR additional revenues). In both simulated HRV options, the newly generated revenues would be more than sufficient for financing the CA and the FSA reforms proposed in Sections 6.1

and 6.2, creating a more progressive tax environment and ensuring that all children are covered by at least one social protection measure.

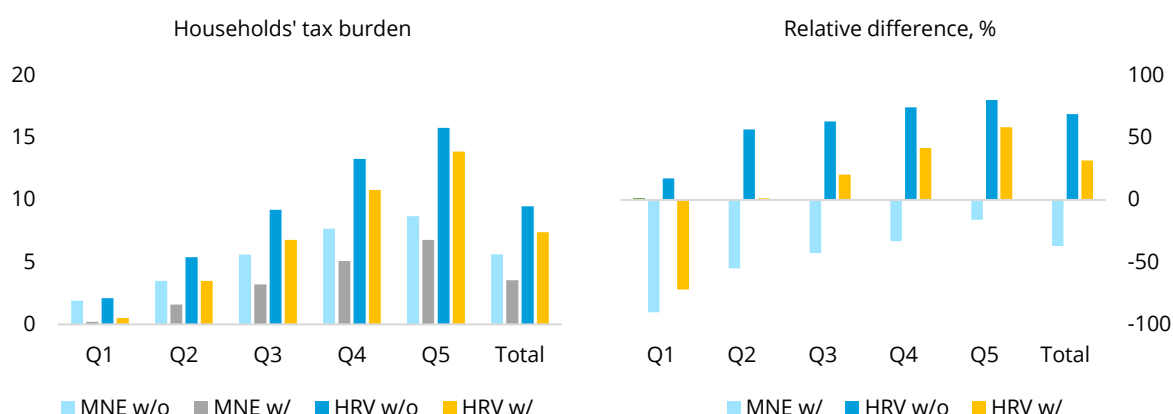
Figure 7 Personal Income Tax to GDP ratio under PIT reform scenarios



Notes: Relative differences in label boxes, relative to the current scenario (MNE, with informality, without tax exemption). PIT-to-GDP as % of 2018 GDP. Informality rate applied is 27%.

Source: Authors' own elaboration.

Figure 8 Households' tax burden under PIT reform scenarios



Notes: Tax burden as a share of total household gross income, per quintiles created using individual gross adult equivalent income (pre-tax). W/o stands for without tax exemption, w/ stands for with tax exemption. Relative differences are relative to the current scenario (MNE, without tax exemption)

Source: Authors' own elaboration.

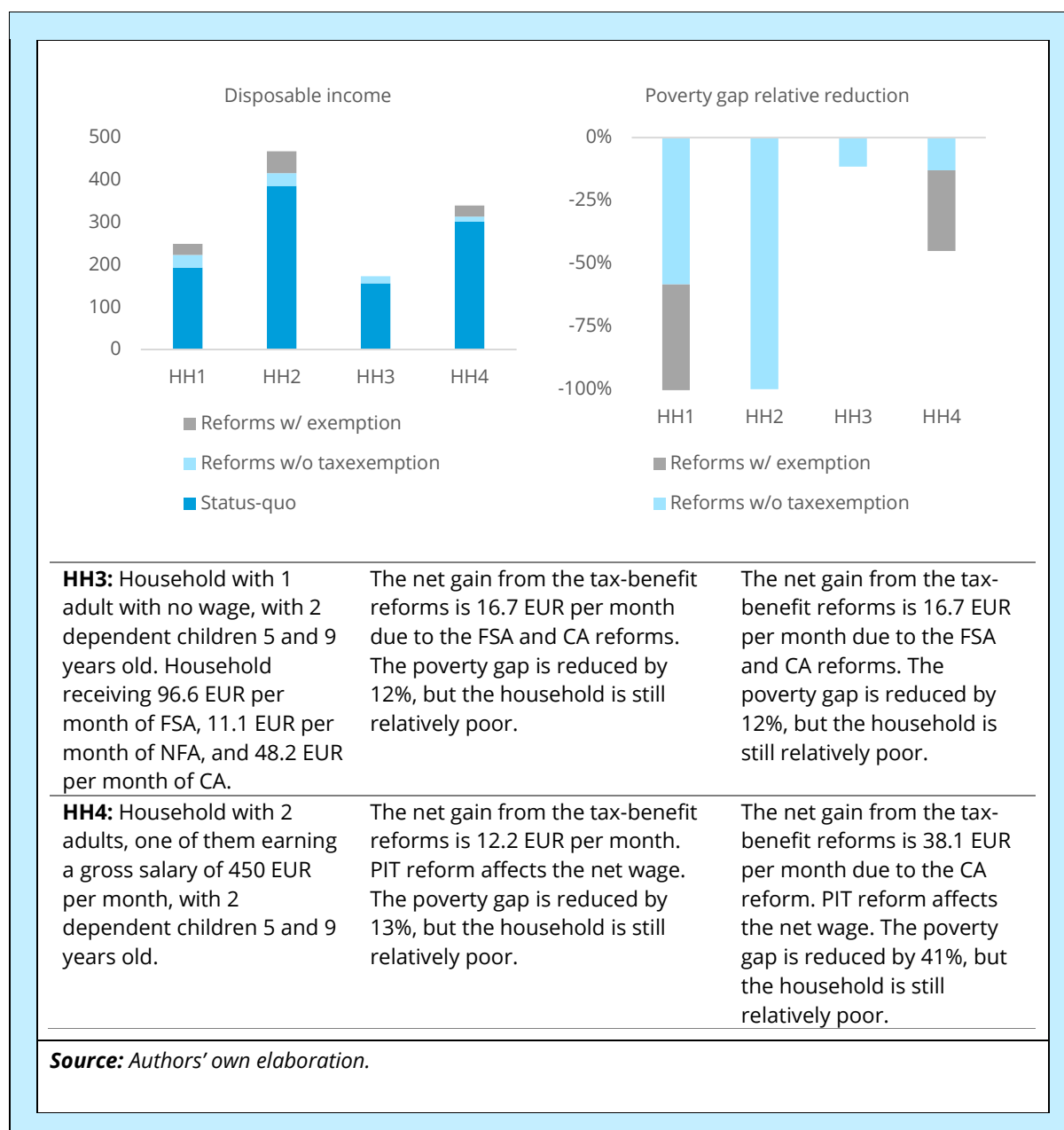
Under the HRV scenarios, the PIT tax burden on households' gross incomes increases proportionally across quintiles (**Figure 8**). Notably, in the wealthiest quintile, the tax burden would increase by up to 80%. For the bottom 40% of the population, the tax burden would increase only marginally and only under the HRV scenario without tax exemption. While a tax increase may seem inadequate given the monetary situation of the lowest earners, in absolute terms the additional tax burden is much lower. In fact, it is lower than the increased disposable income allocated by the reformed CA and FSA transfers proposed in previous sections (see Box 3 for examples on the impact of tax-benefit reforms at the household level).

Overall, the simulation of the Croatian scenarios, as well as of the other scenarios included in the Annex (*Annex C – Complete results from microsimulation*) shows that Montenegro has the potential to collect additional domestic resources. Reforming the personal income tax system to a more progressive one would allow to increase personal income tax revenues up to 9% of GDP, and at the same time decrease monetary inequality. A truly progressive tax system, combined with the reformed social policies proposed in this report, would contribute to build a significantly more redistributive tax-benefit system for Montenegro.

Box 3. Impact of tax-benefit reforms at the household level

In order to understand the potential impact of the tax-benefit reforms, it is useful to consider how they might affect households with different profiles. All four hypothetical households considered are deemed to be poor using the relative poverty line of 188 EUR per month for a single person. Similarly, all four hypotheses consider our “Croatian Model” PIT reform to be implemented, together with the CA for children below the age of 6. The wage used is the 2018 minimum gross wage of 288.1 EUR per month (193 net wage).

Hypothetical household	Impact (without tax exemption)	Impact (with tax exemption)
HH1: Household with 1 adult earning the minimum gross wage of 288 EUR per month, with 1 dependent child 5 years old.	The net gain from the tax-benefit reforms is 30 EUR per month due to the CA reform. PIT reform does not affect the net wage. The poverty gap is reduced by 58%, but the household is still relatively poor.	The net gain from the tax-benefit reforms is 55.9 EUR per month due to the CA and PIT reforms. The poverty gap is reduced by >100%, the household is no more relatively poor.
HH2: Household with 2 adults both earning the minimum gross wage of 288 EUR per month, with 2 dependent children 5 and 9 years old.	The net gain from the tax-benefit reforms is 30 EUR per month due to the CA reform. PIT reform does not affect the net wage. The poverty gap is reduced by 100%, the household is no more relatively poor.	The net gain from the tax-benefit reforms is 81.9 EUR per month due to the CA and PIT reforms. The poverty gap is reduced by >100%, the household is no more relatively poor.



7. Discussion and recommendations

We have presented simulations for three reform options for the Child Allowance, the Financial Support Allowance, and the Personal Income Tax to provide a first ex-ante assessment of their potential impact. The main assessment criteria concerned poverty and inequality and included benefit coverage, distribution, adequacy, and efficiency. The focus was particularly on the effects in the lowest quintiles. However, the results are also presented for the entire population. The simulated options provide a starting point for formulating policy recommendations. In this section, we summarize the proposals analysed and discuss their implications.

The first proposed (and simulated) reforms refer to the horizontal expansion of Child Allowance. As it became clear from the coverage analysis, the Old CA was, until 2021 reaching only marginal share of Montenegrin children, mostly due to its targeting method coupled with FSA. With a

categorical approach, as the one implemented in late 2021 by the government, the CA can ensure the highest coverage of households and households with children in the lowest quintiles, overcoming the limitations of the FSA targeting mechanism. Hence, the simulated CA horizontal reform seems adequate to ensure that Montenegrin children (whether below the age of 15 or 18) are covered by at least one social protection benefit, contributing significantly to SDG target 1.3.1. However, the CA reform proposals come at a higher absolute price than the poverty-targeted policies (i.e. the old benefit). The cost of a CA expansion to all children below the age of 15 would be around 43Mil euro, which will raise to 53Mil euro for the below 18 expansion. This is compared to the pre-reform CA cost of approx. 5Mil euro. In this sense, it is relevant to point out that the expansion to children below the age of 15 is expected to be more cost-efficient than the expansion to children below the age of 18. Nonetheless, based on international demographic and economic projections, Montenegro can already envision the future roll-out of a universal child benefit. If the eligibility age were increased by one year every year, 100% of children could be receiving the monthly benefit of 30 EUR per month by 2033 and the total cost for government would be 0.62% of GDP in 2033.

The second proposal concerns restructuring of the FSA equivalence scale, together with the expansion of the beneficiaries' base. Results show that a simple modification of the equivalence scale for benefit amounts might not lead to a relevant change in poverty rates in the country (around half percentage point less). Further, even with a new equivalence scale, the adequacy of the benefit in the lowest quintile does not increase to a level that can ensure transition out of poverty, nor purchasing the minimum consumer basket. This is most probably caused by the modest basic benefit level (67.1 EUR), which corresponds to one-sixth of the equivalised minimum consumption basket, or thirty per cent of the minimum wage. Hence, while the recalibration of the current equivalence scale is needed to ensure that the FSA is responsive to households' economies of scale, a more urgent matter is the vertical upscaling of the basic benefit. The level to which this amount is set determines its impact on recipient families' livelihood. In order for social protection to in Montenegro to reduce poverty rates as much as it does in EU-28 countries, such an upscale is key. However, the discussion on how much this should be lifted is also political, more than technical. Political considerations concerning labour activation, informal work, political economy, financing, and nationally defined minimum living standards intervene when it comes to defining the adequacy of social transfer.

Additionally, the FSA targeting criteria create significant low coverage in the lowest quintile (30%), pointing at the inefficiency or rigidity of the targeting mechanisms. To further increase the relevance of the FSA, expanding its beneficiaries' base is crucial too. This exercise could not simulate the selection process with SILC data because of the absence of relevant variables that by law determine the eligibility.⁶⁰ A necessary agenda item to facilitate the future evaluation of the FSA is to include these variables in the SILC questionnaire.

⁶⁰ The needed variables include (i) ownership or use of business premises, (ii) ownership of land in town or suburban region, (iii) possess or use of agricultural land or commercial forests, (iv) surface of the latter, (v) ownership of animal units, (vi), ownership of agricultural and construction mechanization and other means for performing a business activity, and (vii) ownership of a motor vehicle.

A higher investment in social protection policies requires additional resources to be allocated to the social protection budget. At present, the Montenegrin economic outlook is negative in terms of fiscal balance and debt levels. Hence, the fiscal space for introducing new measures can only be found domestically either with reallocations or increased tax revenues. The microsimulation of alternative PIT scenarios has the double objective of creating a more progressive tax system and increasing government revenues. Additionally, it allowed assessing the magnitude of tax evasion due to the informal sector. The current tax system can be reformed to acquire a more progressive shape. In this sense, models from Slovenia or Croatia can serve as blueprints for introducing new tax brackets and higher rates for higher income levels. Introducing higher tax levels is a political matter, and this analysis does not aim at providing solutions to it, but the introduction of a universal child benefit can indeed contribute to the general acceptance of new contribution levels.

Eventually, the analysis and discussion can be resumed in the following set of policy recommendations:

- Extend coverage of the Child Allowance, decoupling it from the FSA targeting mechanisms making use of categorical targeting.
- Introduce a new equivalence scale for the Financial Support Allowance, reflecting the economy of scales of households with different size and composition.
- Increase the basic amount of the Financial Support Allowance, determining it as a significant share of minimum standards, such as the minimum wage or the minimum consumer basket.
- Expand the FSA beneficiaries' base, increasing the means-test cut-off.
- Adopt a nationally defined absolute poverty line
- Include new relevant variables in the SILC questionnaire to allow the evaluation of the effectiveness and efficiency of the Financial Support Allowance.
- Restructure the social protection module in the SILC questionnaire so that it mirrors the actual social protection system, to evaluate social protection programmes individually.
- Reform the Personal Income Tax system, introducing additional brackets and higher tax rates for higher incomes.
- Invest the additional revenues from taxation in social protection benefits, creating a tax-benefit system that pays dividends to its participants proportionally.

References

- Alderman, H., & Yemtsov, R. (2014). How can safety nets contribute to economic growth? *The World Bank Economic Review*, 28(1), 1–20.
- Alkire, S., Roche, J. M., Ballon, P., Foster, J., Santos, M. E., & Seth, S. (2015). *Multidimensional poverty measurement and analysis*. Oxford University Press, USA.
- Annabi, N., Cissé, F., Cockburn, J., & Decaluwe, B. (2005). *Trade liberalisation, growth and poverty in Senegal: A dynamic microsimulation CGE model analysis*.
- Atkinson, T., Bourguignon, F., O'Donoghue, C., Sutherland, H., & Utili, F. (2002). Microsimulation of social policy in the European Union: Case study of a European minimum pension. *Economica*, 69(274), 229–243.
- Barrientos, A. (2012). Social transfers and growth: What do we know? What do we need to find out? *World Development*, 40(1), 11–20.
- Benczúr, P., Kátay, G., & Kiss, Á. (2017). Assessing changes of the Hungarian tax and transfer system: A general-equilibrium microsimulation approach. *MNB Working Papers 2012/7*.
- Bourguignon, F., & Ferreira, F. (2003). Ex ante evaluation of policy reforms using behavioral models. *The Impact of Economic Policies on Poverty and Income Distribution*, 123–142.
- Bourguignon, F., Ferreira, F. H. G., & Leite, P. G. (2003). Conditional cash transfers, schooling, and child labor: Micro-simulating Brazil's Bolsa Escola program. *The World Bank Economic Review*, 17(2), 229–254.
- Bourguignon, F., & Spadaro, A. (2006). Microsimulation as a tool for evaluating redistribution policies. *The Journal of Economic Inequality*, 4(1), 77–106. <https://doi.org/10.1007/s10888-005-9012-6>
- Carraro, A., Gavrilovic, M., Novkovic, M., Stanisic, S., & Smolovic, D. (2020). *Multidimensional Child Poverty in Montenegro – Understanding the complex realities of children in poverty using a mixed-methods approach*.
- Central Bank of Montenegro. (2020). Real Economy. Retrieved 14 January 2020, from <https://www.cbcg.me/en/statistics/statistical/real-economy>
- Coady, D., Grosh, M., & Hoddinott, J. (2004). *Targeting of transfers in developing countries: Review of lessons and experience*. The World Bank.
- Cogneau, D., Grimm, M., & Robilliard, A.-S. (2003). Evaluating poverty reduction policies. The contribution of micro-simulation techniques. *The New International Strategies for Poverty Reduction*, 340–393.
- Cogneau, D., & Robilliard, A. (2000). Growth Distribution and Poverty in Madagascar: Learning from a Microsimulation Model in a General Equilibrium Framework, TMD Discussion Paper 61. *International Food Policy Research Institute, Washington DC, 2000*. Citeseer.
- Creedy, J., Scutella, R., & Kalb, G. (2003). *Income distribution in discrete hours behavioural microsimulation models: An illustration of the labour supply and distributional effects of social*

- transfers*. Melbourne Institute of Applied Economic and Social Research.
- de Souza Ferreira Filho, J. B., dos Santos, C. V., & do Prado Lima, S. M. (2007). Tax Reform, Income Distribution and Poverty in Brazil: an Applied General Equilibrium Analysis. *Cahiers de Recherche MPIA*, 26.
- Devereux, S., & Sabates-Wheeler, R. (2004). Transformative social protection. *IDS Working Papers*;232. Retrieved from <http://opendocs.ids.ac.uk/opendocs/handle/123456789/4071>
- EPRI. (2020). *Part 1: What are the social and economic vulnerabilities faced by households in Montenegro?. Unpublished manuscript, accessed in December 2020*. Claremont.
- European Commission. (2021). Data on Taxation | Taxation and Custom Unions. Retrieved from https://ec.europa.eu/taxation_customs/business/economic-analysis-taxation/data-taxation_en
- EUROSTAT. (2020a). At-risk-of-poverty rate before social transfers (pensions excluded from social transfers) by poverty threshold, age and sex - EU-SILC and ECHP surveys. Retrieved 31 January 2021, from https://ec.europa.eu/eurostat/databrowser/view/ilc_li10/default/table?lang=en
- EUROSTAT. (2020b). At-risk-of-poverty rate by sex. Retrieved 13 January 2020, from <https://ec.europa.eu/eurostat/databrowser/view/tessi010/default/table?lang=en>
- EUROSTAT. (2020c). Gini coefficient of equivalised disposable income - EU-SILC survey. Retrieved 13 January 2020, from <https://ec.europa.eu/eurostat/databrowser/view/tessi190/default/table?lang=en>
- EUROSTAT. (2020d). Gini coefficient of equivalised disposable income before social transfers (pensions excluded from social transfers). Retrieved 31 January 2021, from https://ec.europa.eu/eurostat/databrowser/view/ilc_di12c/default/table?lang=en
- EUROSTAT. (2020e). Income quintile share ratio S80/S20 for disposable income by sex and age group - EU-SILC survey. Retrieved from <https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>
- EUROSTAT. (2020f). People at risk of poverty or social exclusion. Retrieved 12 January 2021, from https://ec.europa.eu/eurostat/databrowser/view/t2020_50/default/table?lang=en
- EUROSTAT. (2020g). Relative median at-risk-of-poverty gap. Retrieved 12 January 2020, from https://ec.europa.eu/eurostat/databrowser/view/sdg_10_30/default/table?lang=en
- EUROSTAT. (2021). Severe material deprivation rate by income quintile and household type. Retrieved from https://ec.europa.eu/eurostat/databrowser/view/ilc_mddd13/default/table?lang=en
- Galuscak, K., & Katay, G. (2019). Tax-benefit systems and differences in aggregate labour force participation: Comparative evidence from the Czech Republic and Hungary. *ECONOMIC SYSTEMS*, 43(3).
- Gassmann, F., & Behrendt, C. (2006). Cash benefits in low-income countries: Simulating the effects on poverty reduction for Senegal and Tanzania. *International Labour Office Discussion Paper*,

(15).

Gassmann, F., Cherrier, C., Mora, A. M., & Mohnen, P. (2013). *Making the Investment Case for Social Protection: Methodological challenges with lessons learnt from a recent study in Cambodia*.

Golubovic, V. (2019). *A minimum wage increase in Montenegro as of 1 July 2019 - ESPN Flash Report 2019/28*. Retrieved from <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiA-IKqnMHuAhWYuKQKHW8vAkeEQFjANegQIjxAC&url=https%3A%2F%2Fec.europa.eu%2Fsocial%2FblobServlet%3FdocId%3D21388%26langId%3Den&usg=AOvVaw1NokJsRej1B8du8xZJgmVt>

Government of Montenegro. (2016). *LAW ON TAX ON INCOME OF NATURAL PERSONS (LAW ON PERSONAL INCOME TAX)*. Retrieved from [https://www.mif.gov.me/ResourceManager/FileDownload.aspx?rid=263423&rType=2&file=L](https://www.mif.gov.me/ResourceManager/FileDownload.aspx?rid=263423&rType=2&file=Law on Personal Income Tax - OG of MN 83-16 EN.docx)aw on Personal Income Tax - OG of MN 83-16 EN.docx

Government of Montenegro. *LAW ON SOCIAL AND CHILD PROTECTION*. , (2017).

Government of Montenegro. (2019). *Montenegro Economic Reform Programme 2019 – 2021*. Retrieved from https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/montenegro_erp_2019-2021.pdf

Holzmann, R., & Jørgensen, S. (2001). Social risk management: A new conceptual framework for social protection, and beyond. *International Tax and Public Finance*, 8(4), 529–556. <https://doi.org/10.1023/A:1011247814590>

Hrast, M. F., Janković, U., & Rakar, T. (2020). Social policy in Slovenia and Montenegro: Comparing development and challenges. *Politics in Central Europe*, 16(3), 689–712. <https://doi.org/10.2478/pce-2020-0031>

ILO. (2018). *The ILO Pension Model A Technical Guide*. Retrieved from <http://www.ilo.org/secsoc>

International Monetary Fund. (2017). *Montenegro: Selected Issue Paper, IMF Country Report No.17/277*.

International Monetary Fund. (2019). 2019 ARTICLE IV CONSULTATION—PRESS RELEASE, STAFF REPORT, AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR MONTENEGRO. In *IMF Country Reports*. <https://doi.org/10.5089/9781513554167.002>

International Monetary Fund. (2020). *REQUEST FOR PURCHASE UNDER THE RAPID FINANCING INSTRUMENT—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR MONTENEGRO*. Washington, D.C.

International Monetary Fund. (2021). World Economic Outlook, April 2021. Retrieved from <https://www.imf.org/en/Publications/WEO/Issues/2021/03/23/world-economic-outlook-april-2021>

Kaluđerović, J., & Golubović, V. (2019). ESPN Thematic Report on Financing social protection – Montenegro. In *European Social Policy Network (ESPN)*. <https://doi.org/10.2139/ssrn.1204582>

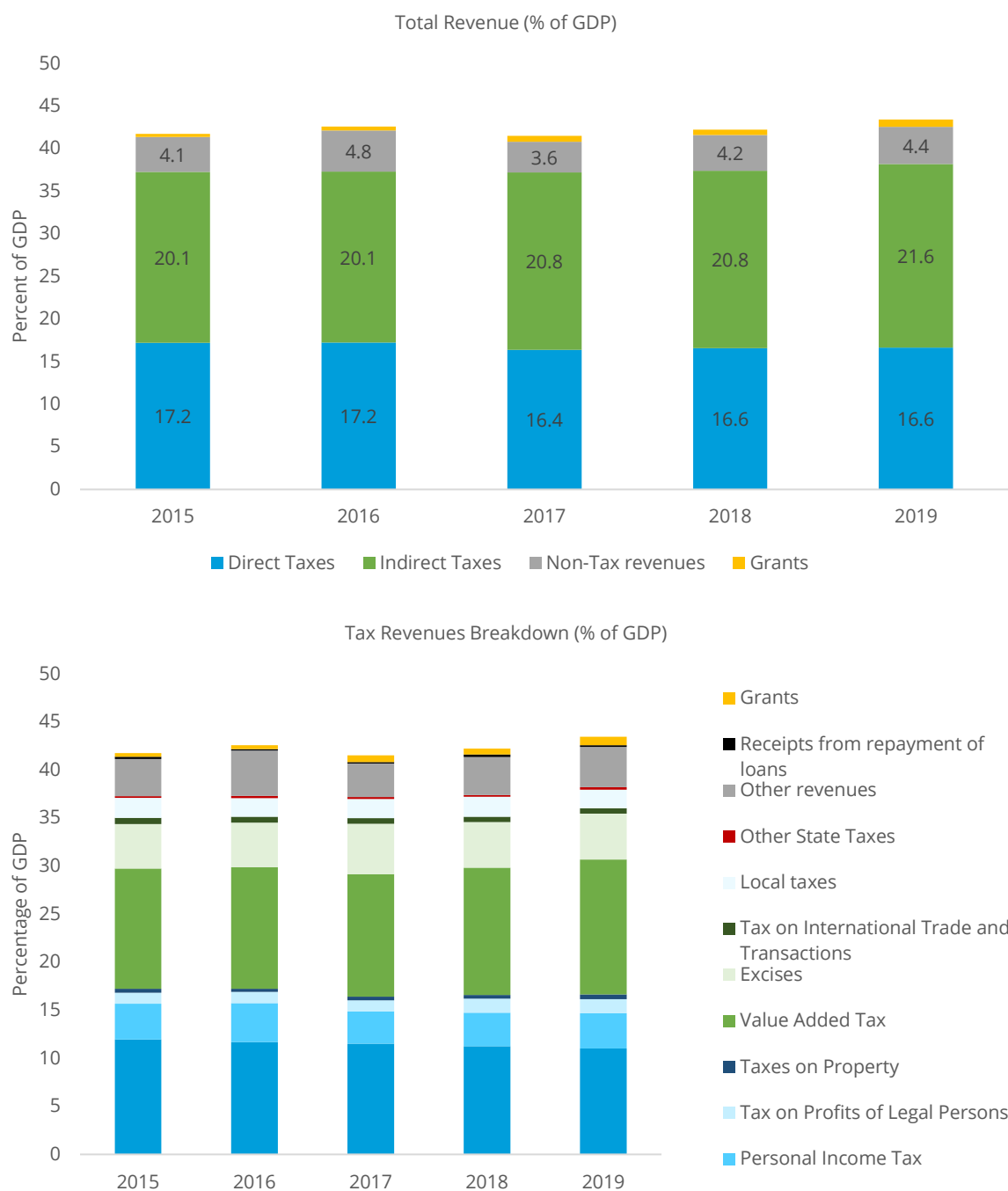
- Kaludjerovic, J., & Golubovic, V. (2019). *In-work poverty in Montenegro*. (January).
- KPMG. (2019). *Montenegrin Tax Card 2019*. Retrieved from <https://assets.kpmg/content/dam/kpmg/me/pdf/2019/07/MNE-Tax-Card-2019-new.pdf>
- Kurta, A., & Oruc, N. (2020). THE EFFECT OF INCREASING THE MINIMUM WAGE ON POVERTY AND INEQUALITY IN BOSNIA AND HERZEGOVINA. *Economic Annals*, LXV(226).
- Li, J., & O'Donoghue, C. (2012). *A methodological survey of dynamic microsimulation models* (No. 6(31) 3-55 UNU-MERIT Working Papers). Maastricht: UNU-MERIT.
- Llambí, C., Laens, S., Perera, M., & Ferrando, M. (2011). *Assessing the impact of the 2007 Tax Reform on poverty and inequality in Uruguay*.
- Merrien, F.-X. (2013). Social protection as development policy: A new international agenda for action. *International Development Policy | Revue Internationale de Politique de Développement*, (5.1). <https://doi.org/10.4000/poldev.1525>
- Merz, J. (1993). *Microsimulation as an Instrument to Evaluate Economic and Social Programme*. Lüneburg.
- Merz, J. (1994). Microsimulation – A Survey of Methods and Applications for Analysing Economic and Social Policy. In *MPRA PAPER No. 7232*. Munich.
- Mijanovic, D., Brajuskovic, M., Vujacic, D., & Spalevic, V. (2017). Causes and Effects of Aging of Montenegrin Population. *Journal of Environmental Protection and Ecology*, 18(3), 1249–1258. Retrieved from https://www.researchgate.net/publication/321120161_Causes_and_Effects_of_Aging_of_Montenegrin_Population
- Ministry of Finance and Social Welfare. (2019). GDDS annual data 2018. Retrieved 16 November 2021, from <https://www.gov.me/en/article/219421--gdds-annual-data-2018>
- Ministry of Finance and Social Welfare. (2020). GGO 2019. Retrieved 16 November 2021, from <https://www.gov.me/en/documents/c910ebc6-ca76-4da4-9e81-47943c10d0ee>
- Ministry of Finance and Social Welfare. (2021). GGO 2020. Retrieved from <https://www.gov.me/en/documents/6597e7af-938a-4148-abae-a7c4a643714f>
- MONSTAT. (2008). *Demografski trendovi u Crnoj Gori od sredine 20. vijeka i perspektive do 2050. godine*. Retrieved from <https://www.monstat.org/eng/page.php?id=54&pageid=54>
- MONSTAT. (2011). Population census 2011. Retrieved 29 January 2021, from <https://www.monstat.org/eng/page.php?id=57&pageid=57>
- MONSTAT. (2019a). Main demographic indicators. Retrieved 28 January 2021, from <https://www.monstat.org/eng/page.php?id=52&pageid=52>
- MONSTAT. (2019b). *Survey on Income and Living Conditions 2018*. Podgorica.
- MONSTAT. (2020a). Absolute Poverty Line. Retrieved 18 January 2021, from <https://monstat.org/eng/page.php?id=73&pageid=73>

- MONSTAT. (2020b). Employment - Data. Retrieved 29 January 2021, from <https://monstat.org/eng/page.php?id=1148&pageid=23>
- MONSTAT. (2020c). Labour Force Survey. Retrieved 15 January 2020, from <https://www.monstat.org/eng/page.php?id=22&pageid=22>
- MONSTAT. (2020d). Minimal consumer basket. Retrieved 29 January 2021, from <https://www.monstat.org/eng/page.php?id=31&pageid=31>
- MONSTAT. (2020e). Social protection in Montenegro (ESSPROS Methodology). Retrieved 2 February 2021, from <https://www.monstat.org/eng/page.php?id=1563&pageid=1563>
- MONSTAT. (2020f). Survey on Income and Living Conditions. Retrieved 12 January 2020, from <https://www.monstat.org/eng/page.php?id=1531&pageid=1531>
- Olivieri, S., Radyakin, S., Kolenikov, S., Lokshin, M., Narayan, A., & Sánchez-Páramo, C. (2014). *Simulating Distributional Impacts of Macro-dynamics: Theory and Practical Applications*.
- OPHI. (2020). *OPHI Oxford Poverty & Human Development Initiative Global MPI Country Briefing 2020: Montenegro (Europe and Central Asia)*. Retrieved from www.ophi.org.uk
- Orsolya, L. (2007). Tax-Benefit Microsimulation Models In Eastern Europe. *International Journal of Microsimulation* 2, 1(1), 54–56.
- Parliament of Montenegro. *PROPOSAL OF THE LAW AMENDING THE LAW ON SOCIAL AND CHILD PROTECTION February 3 2021.*, (2021).
- Ranđelović, S., & Žarković Rakić, J. (2012). Improving Work Incentives: Evaluation of Tax Policy Reform Using SRMOD. *EUROMOD Working Paper No. EM 11/12*.
- Roma Integration Regional Cooperation Council. (2020). Roma Integration 2020 | Roma in the Region. Retrieved 29 January 2021, from <https://www.rcc.int/romaintegration2020/pages/3/roma-in-the-region>
- Šatava, J. (2014). The political adequacy of quantitative impact assessment in the social field by means of micro-simulation model. *Social Impact Assessment*.
- Siqueira, R. B., Immervoll, H., O'Donoghue, C., & Nogueira, J. R. (2000). On simulating Brazil's tax benefit system using a multicountry microsimulation framework. *Available Electronically at the Following Address: Http://Www. Decon. Ufpe. Br/Pmes/Areas/Setorpublico/Multi-Country. Pdf*.
- Social Welfare Information System. (2020). *Detailed Budget*.
- Sutherland, H. (2001). EUROMOD: An integrated European Benefit-tax model. *EUROMOD Working Paper No. EM9/01*.
- Sutherland, H. (2018). Quality Assessment of Microsimulation Models The Case of EUROMOD. *International Journal of Microsimulation, International Microsimulation Association*, 11(1), 198–223.
- Szoboszlai, M., Bögöthy, Z., Mosberger, P., & Berta, D. (2018). Assessment of the tax and transfer changes in Hungary between 2010 and 2017 using a microsimulation model. *MNB Occasional Papers 2018/135*.

- The World Bank. (2013). *Activation and Smart Safety Nets in Montenegro: Constraints in Beneficiary Profile, Benefit Design, and Institutional Capacity*. Retrieved from https://www.worldbank.org/content/dam/Worldbank/Event/ECA/MONTENEGRO_Activation_note_FinalForPortal.pdf
- The World Bank. (2018). *The State of Social Safety Nets 2018*. Retrieved from <http://elibrary.worldbank.org/doi/book/10.1596/978-1-4648-1254-5>
- The World Bank. (2019). *Montenegro-Public Finance Synthesis Report: Restoring Sustainability and Strengthening Efficiency of Public Finance*. Retrieved from <http://documents.worldbank.org/curated/en/108101559640817785/Montenegro-Public-Finance-Synthesis-Report-Restoring-Sustainability-and-Strengthening-Efficiency-of-Public-Finance>
- The World Bank. (2020). *An Uncertain Recovery. Western Balkans regular economic report No. 18*. Retrieved from <https://openknowledge.worldbank.org/handle/10986/34644>
- The World Bank. (2021). Europe and Central Asia Economic Update, Spring 2021: Data, Digitalization, and Governance. In *Europe and Central Asia Economic Update, Spring 2021: Data, Digitalization, and Governance*. <https://doi.org/10.1596/978-1-4648-1698-7>
- UNDESA. (2019). World Population Prospects 2019, Online Edition. Retrieved from <https://population.un.org/wpp/Download/>
- UNDP. (2019). *Decent Work Country Programme 2019-2021: Montenegro*. UNDP.
- United Nations Montenegro. (2020a). *Report on the Rapid Social Impact Assessment of the COVID-19 outbreak in Montenegro April – June 2020*.
- United Nations Montenegro. (2020b). *REPORT on the Rapid Social Impact Assessment of the COVID-19 outbreak in Montenegro April – June 2020 - Summary*.
- UNU-WIDER. (2020). UNU-WIDER Government Revenue Dataset. Retrieved 20 December 2020, from <https://www.wider.unu.edu/project/government-revenue-dataset>
- Vandeninden, F. (2012). *A simulation of social pensions in Europe*. United Nations University-Maastricht Economic and Social Research Institute
- Western Balkans Democracy Initiative. (2019). *Cost of Youth Emigration*. Retrieved from https://www.wfd.org/wp-content/uploads/2019/10/WFD-Web-Brochure-Montenegro_FINAL.pdf
- Wong, S. A., Arguello, R., & Rivera, K. A. (2008). *Fiscal policies and increased trade openness: poverty impacts in Ecuador*.
- World Health Organization. (2020). WHO | Immunization Country Profile.

Annex A – Additional tables

Figure A 1. Montenegro General Revenue Statistics, 2015-2019



Source: Ministry of Finance and Social Welfare (Ministry of Finance and Social Welfare, 2019, 2020).

Table A 1. *Risks and Vulnerabilities across the life cycle in Montenegro*

Life cycle stage and vulnerability	Indicator	Risk	Dimension
Pregnancy and Birth			
Contraception and Reproductive Health	79% of women in age 15-49 use no contraception methods.	Early pregnancies;	Health
	43% of women in age 15-49 at high risk of unmet need for family planning.	Unspaced births	
Access to and uptake of the pre and post-natal care	73% percent of pregnant women make less than the 8 WHO's recommended visits.	Maternal mortality; Child mortality; Malnutrition;	Health
	14% of women in age 15-49 age group 15-49 who had a live birth in the past two years reported no postnatal health checks.	Infection transmission	
Childhood			
Essential Health Care	Immunisation coverage Diphtheria-Tetanus-Pertussis first shot 95%, second shot 87%. Haemophilus influenzae 87%. Polio 87%. Tuberculosis 83%. Hepatitis-B 73%. Measles, second dose 86% Rubella, second dose 42%	Infection transmission	Health
Feeding Practices	40% of households in the lowest quintile do not reach minimum dietary diversity. 66% of households in the lowest quintile do not ensure a minimum acceptable diet. 7% stunting below 5 y. 4% underweight. 2% wasting	Malnutrition; Stunting; Wasting; Underweight	Health
Organized Learning	18% of children in the poorest quintile attend Early Childhood Education (65% in the richest quintile).	Underdevelopment	Education
School attendance	95% school attendance in primary education. 93% school attendance in secondary education.	Drop-out	Education

Child Discipline and Care	48.5% of children under the age of 2 are exposed to psychosocial aggression (68.9% under 5). 51.9% under the age of 2 suffer some form of violent disciplining methods (71.1% under 5).	Underdevelopment; Violence; Abuse	Education, Security, Health
Child Labour	15% of children between 5 and 11 undertake at least 1 hour of economic activity.	Drop-out; Underdevelopment; Violence; Abuse	Education, Security, Health
Adolescence			
School attendance	Net attendance rate for children 12-14 is 93.2%	Drop-out; Underdevelopment	Education
Child Labour	25% of children between 12 and 14 undertake at least 1 hour of economic activity.	Drop-out; Violence; Abuse	Education, Security, Health
Functional Difficulties	5.8% of children aged 2-17 years report functional difficulties.	Drop-out	Education, Health
Child Marriage and Pregnancies	1% are married before age 15. 7.6% are married before the age of 18. 1% women aged 15-19 years have had a live birth or pregnant with a first child.	Drop-out; Violence; Abuse	Education, Health
Youth and Adulthood			
Literacy	83.5% of the women (80% of men) in the bottom quintile are literate compared with 97.8% women (99.6% men) or more in all other quintiles.	Unemployment	Education
NEET	Number of adolescents and youth NEET is estimated to have increased from 17.3% in 2019 to 27.3% in 2020.	Poverty; Deprivation; Underdevelopment	Education; Income security
Functional difficulties	0.3% of women and 2.2% of men aged 20-29 report functional (physical and mental) difficulties.	Discrimination; Stigma; Underdevelopment; Deprivation	Education, Health
Employment	See "Labour Market" section	Poverty	Income security
Safety and Security	39.4% of women aged 15-49 feel unsafe walking alone in their neighbourhood. 19.4% of women feel unsafe at home alone after dark.	Violence; Abuse	Security, Health
Older Persons			

Safety and Security	No figures	Violence; Maltreatment; Abuse	Security, Health
Uncovered by social protection	52.3% of population 60+ receiving old-age pension.	Poverty	Health, Income security

Source: Authors' elaboration of EPRI (2020), MICS (2018), ILO World Social Protection Report (2019), and World Health Organization (2020) data.

Table A 2. Social Protection programmes, by type, area, responsible agency, and risk, 2018

Type of SP	Area	Description	Responsible implementing agency	Risk covered/ function/objective
1 Contributory Social Insurance Programs/Schemes	1.1 Allowances from Health Protection and Health Insurance Sectors	Allowances to Unemployed Persons	Employment Agency of Montenegro	Unemployment
		Fee for the travel expenses of The Insured	Health Insurance Fund	Sickness
		Means for redundancies (guaranteed earnings, severance payments for redundancies, other)	Labour fund	Unemployment
		Orthopaedic appliances and supplies	Health Insurance Fund	Sickness
		Sickness allowance over 60 days	Health Insurance Fund	Sickness
		Treatment outside Montenegro	Health Insurance Fund	Sickness
	1.2 Allowances from Pension and Disability Insurance Fund	Disability pension	Pension and Disability Insurance Fund	Disability
		Entitlement to funeral costs allowance	Pension and Disability Insurance Fund	Health Care
		Old-age pension	Pension and Disability Insurance Fund	Old Age
		Subsidy for physical impairment	Pension and Disability Insurance Fund	Sickness
		Survivor's pension	Pension and Disability Insurance Fund	Child/Family Benefit
2 Labor Market Measures and Services	2.1 Labor Market Measures and Services	Adult Education and Training Programs	Employment Agency of Montenegro	ALMPs
		Other Programs Aimed at Increasing Employment	Employment Agency of Montenegro	ALMPs
		Programs Intended for Re Population	Employment Agency of Montenegro	ALMPs
		Public work	Employment Agency of Montenegro	ALMPs
		Self-employment loans	Employment Agency of Montenegro	ALMPs
		Self-paced training programs	Employment Agency of Montenegro	ALMPs
		Training for entrepreneurs starting business	Employment Agency of Montenegro	ALMPs
		Training programs for work at employers	Employment Agency of Montenegro	ALMPs
		Vocational rehabilitation and employment of persons with disabilities and less employable persons	Employment Agency of Montenegro	ALMPs
		Care and support allowance	Social Care Centre	Health Care

3 Non-contributory social assistance programs	3.1 Basic Material Benefits in Social Protection	Financial support	Social Care Centre	Poverty and Social Exclusion
		Funeral costs	Social Care Centre	Survivors
		Health protection	Social Care Centre	Sickness
		Nonrecurring financial assistance	Social Care Centre and Ministry of Labour and Social Welfare	Poverty and Social Exclusion
		Parental or guardian's allowance of the personal disability beneficiary	Social Care Centre	Child/Family Benefit
		Personal disability allowance	Social Care Centre	Disability
	3.2 Fundamental Material Benefits in The Area of Child Protection	Assistance for up-bringing and education of children and young people with special educational needs	Social Care Centre	Disability
		Benefit for a new-born child	Social Care Centre	Maternity
		Child allowance	Social Care Centre	Child/Family Benefit
		Costs of nutrition in pre-school institutions	Social Care Centre	Child/Family Benefit
		Reimbursement of salary compensation and salary compensation for part time work.	Social Care Centre	Maternity
		The maternity leave pays	Social Care Centre	Maternity
	3.3 Social and Child Protection Services	Accommodation (in family placement as fostering, family placement, in an institution, in a daily centre – refuge and other types of accommodation)	Social Care Centre	Poverty and Social Exclusion
		Counselling-therapy and social-educational service (counselling, therapy, mediation, sos telephone and other services with the objective of overcoming situations of crisis and improving family relations)	Social Care Centre	Poverty and Social Exclusion
		Support for the life in the family (daily stay, help in the house, living with support, daily centre, personal	Social Care Centre	Poverty and Social Exclusion

	assistance, interpretation and translation into sign language and other support services in the community)		
	Urgent interventions (for the purpose of ensuring safety in situations that endanger life, health, and development of beneficiaries)	Social Care Centre	Health Care
3.4 Support Programs of the Ministry of Agriculture and Rural Development	Agriculture insurance	Ministry for agriculture and rural development	Health Care
	Allowance program for old people in agriculture	Ministry for agriculture and rural development	Old Age
	One-time financial assistance	Ministry for agriculture and rural development	Old Age
3.5 Support to Children of Roma and Egyptian Population	Allowances at the local level	Municipalities	Poverty and Social Exclusion
	Free textbooks	Social Care Centre or Municipalities	Poverty and Social Exclusion
	Organization of winter and summer camps	Ministry of Human and Minority Rights	Poverty and Social Exclusion
	Providing free textbooks for children of Roma and Egyptian population	Ministry of Human and Minority Rights	Poverty and Social Exclusion
	Scholarships in secondary school and university	Ministry of Education, Ministry of Human and Minority Rights	Poverty and Social Exclusion
	Electricity subsidies	Montenegrin Electric Enterprise	Poverty and Social Exclusion
3.6 Wartime and Disability Protection	Care allowance and assistance from another person	Social Care Centre	Disability
	Family allowance	Social Care Centre	Survivors

Family disability allowance and increased family disability allowance	Social Care Centre	Disability
Financial compensation of material security	Social Care Centre	Disability
Free and privileged ride	Social Care Centre	Disability
Funeral costs	Social Care Centre	Survivors
Health care and other rights related to the exercise of health care	Social Care Centre	Disability
Orthopaedic and the other supplement	Social Care Centre	Disability
Orthopaedic supplement	Social Care Centre	Disability
Personal disability allowance	Social Care Centre	Disability
Spa and climate treatment	Social Care Centre	Disability

Source Social Welfare Information System of Montenegro, Social Protection Mapping (Social Welfare Information System, 2020)

Table A 3. *Review of relevant microsimulations*

Model name	Country	Year	Model type	Input data	Benefits modelled	Tax modelled	Comments
Czech Republic microsimulation model	Czech Republic	2002	Static	Mikrocensus (eu-silc from 2013)	Welfare benefits for working and potentially working population	Taxation of earnings from employment and self-employment of the working population.	The model, although functional, is not fully capitalized by policy makers.
Hungary national microsimulation model	Hungary	1995	Static	Hbs	N/A	N/A	Used rarely for policy analysis
Magyar nemzeti bank microsimulation model	Hungary	2012	Behavioural	Hbs	N/A	Personal income tax rate reduction and different tax shifts	Model predicts that programmes like an employee tax credit would have a significant effect employment level. Moreover, the introduction of a flat tax is predicted to increase inequality in the long run.
Srmod	Serbia	2012	Static	Silc	Effects of the abolishment of a mandatory minimum base for social security contribution (ssc)	N/A	Model estimates that the reform would have a larger impact on increased labour participation than on number of hours worked. Also, it would not affect income inequality between different income brackets.
Bihmod	Bosnia and Herzegovina	2016	Static	HBS, soon SILC	Child allowance, benefits for unemployed mothers, benefit for equipment for new-borns, up to 6 months' benefit for child nutrition, and permanent financial assistance for the disabled	N/A	No study conducted yet that applies the new model
Galuscak and Katay (2019)	Czech Republic & Hungary	2019	Static	SILC & HBS	Switching tax-benefit systems between the two countries		Aim of the model to investigate the role of tax-benefit systems in aggregate labour force participation. Results show that implementing Czech Republic tax-benefit schemes in Hungary would increase labour participation rates by a significant amount.
Barrios et al. (2020)	Eastern-European countries	2020	Static	SILC	N/A	Making taxation more progressive.	Model predicts that by increasing taxation on high-income earners inequality and poverty rates would decrease. Budget neutral reforms combining changes in the progressivity of taxation with a working tax credit or with tax allowances would yield similar results
Urban et al. (2019)	Croatia, Slovenia, Slovakia	2019	Static	SILC	N/A	PIT rates in different countries.	The model predicts higher inequality for flat rate countries (Slovenia and Slovakia). It finds that moving to two-rate PIT in Croatia increases inequality and doesn't provide work incentive.

Annex B – Interview guide for KIIs

Interview Guide for Government Officials

We are researchers with the Maastricht University School of Governance, and we have been tasked by UNICEF Montenegro with running microsimulations of the tax/benefit system of the country. To fulfil our task to the best, we would need your support and expertise to better understand the current social protection system. If you agree to participate in this interview, your details will remain private, and your opinions will only be mentioned anonymously in the final report.

To Check Before the Start of the actual interview:

The data you will disclose in this interview will solely be used for the purpose of this research project. We will ensure the confidentiality of the information given. If, in a later stage, you would like to learn more about the research project, have any other additional questions or would like to review the results before submission/publication, you can always contact us.

- Do you agree that I tape this interview?
- Would you like to remain anonymous? (Completely anonymous/mentioned in list of interviewees/ direct citations are ok)
- Do you have any more questions before we start the interview?

Turn on recording –

Ask them to reconfirm that:

- They received the consent form.
- They agree to participate.
- Which mode of anonymity they chose.

Questions:

- Could you please introduce yourself briefly and explain what your current function and role in your organization/ministry?
- *Can you briefly describe the poverty profile of Montenegro? What are the main challenges?*
- Can you briefly describe the social protection system in Montenegro? What are the main challenges and opportunities?

IF coverage and adequacy really do not come out from the previous answers, reinforce with questions below:

- What is your impression regarding the inclusiveness of the Montenegrin Social Protection System?
- What efforts have been done so far for extending the effective coverage of the system?
- What is your impression regarding the adequacy of benefits?

- How does the indexation of benefits over time work?
 - What is the attitude towards redistribution in Montenegro?
What are the trade-offs of targeted benefits such as the FSA? (Social protection schemes, especially means-tested benefit, incur in costs to ensure targeting is appropriate. Are you aware of the entity of any such costs?)
- How is the Personal Income Tax organized in Montenegro?
 - What are the main challenges to PIT and what has been done to overcome them?
 - How would a more progressive Tax system look like in Montenegro? To which countries would it resemble?
- We were made aware that the Ministry of Labour and Social protection has been split between the MFSW and Ministry of Economic Development. What do you think will be the impact of this decision on the capacity of the officials dealing with social protection in Montenegro? *Here we would like to know if the interviewee believes there would be consequences on former Ministry of Labour and Social Protection officials' capacity and freedom to operate now that their Ministry has been split. Interviewees can also mention any other issue related to logistics, communication, or cooperation.*

Have you heard or read about microsimulation for tax/benefit reform? *This question is general and does not have to be answered "as if" it was a test. Here the aim of the researcher is to understand the knowledge and capacity of government officials who will later be trained.*

- Finally, we would like to conclude asking for your opinion on the following themes. Please feel free to answer with your own ideas on their adequacy and feasibility in Montenegro:
 - Progressive taxation
 - Universal benefit vs. targeting

MONSTAT officials' specific questions:

Do you believe that household data currently collected in Montenegro (e.g., SILC, Census) covers all necessary aspects required to inform policymaking in the country? What about administrative data (e.g., SWIS data)?

We would like to ask you for your opinion regarding the cost-effectiveness of the current social protection scheme, starting from the targeting process to the background check and the ultimate impact on poverty as described by country-wide statistics.

TRAINING QUESTIONS

Part of our duties in this project will be to participate in capacity development of national stakeholders. UNICEF and MGSoG are planning to run a training for social protection practitioners in Montenegro, which will be focused on the main results from this study, and on enhancing the national capacity on the simulation of social policies' reform.

Would you be interested in participating in such activities?

What would be your most preferred format for such activities? (e.g., Online live lectures, Face-to-face training course, Pre-recorded lectures, Workshops (with practical activities), Seminars (theoretical and international best practices).

Would you be able to follow a course in English?

Do you have access to internet during office hours? Do you have access to internet outside of office hours?

Do you have a device for reading, writing, and making online research outside of your office?

What is your level of confidence with MS Excel? Have you ever worked with a statistical software (which one)?

Annex C – Complete results from microsimulation

Table C1 FSA simulation results: coverage across quintiles and total

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
1	1	Current benefit	30.5	7.7	4.3	2.7	0.9	9.2
		Unique ES	30.5	7.7	4.3	2.7	0.9	9.2
		Double ES	30.5	7.7	4.3	2.7	0.9	9.2
2	1	Cut-off +10%	54.6	13.1	7.2	5.2	0.9	16.2
	2	Cut-off +5%	54.4	13.1	7.2	5.2	0.9	16.1
3	1	Withdrawal rate	54.6	13.1	7.2	5.2	0.9	16.2

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C2 FSA simulation results: coverage across quintiles and total (households with children)

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
1	1	Current benefit	39.2	9.9	3.9	3.4	1.2	13.1
		Unique ES	39.2	9.9	3.9	3.4	1.2	13.1
		Double ES	39.2	9.9	3.9	3.4	1.2	13.1
2	1	Cut-off +10%	57.9	14.8	7.4	6.4	1.2	20.0
	2	Cut-off +5%	57.8	14.8	7.4	6.4	1.2	19.9
3	1	Withdrawal rate	57.9	14.8	7.4	6.4	1.2	20.0

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C3 FSA simulation results: distribution of benefits (share of expenditure per quintile)

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
1	1	Current benefit	64.6	15.4	11.3	5.7	3.0	100.0
		Unique ES	63.8	17.4	10.5	6.0	2.3	100.0
		Double ES	63.6	17.4	10.7	6.0	2.3	100.0
2	1	Cut-off +10%	66.5	16.1	9.6	6.4	1.4	100.0
	2	Cut-off +5%	66.4	16.2	9.6	6.4	1.4	100.0
3	1	Withdrawal rate	65.4	16.5	10.1	6.2	1.8	100.0

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C4 FSA simulation results: adequacy across quintiles and total

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
1	1	Current benefit	53.0	17.5	12.8	9.9	7.9	40.0
		Unique ES	60.2	23.9	17.3	14.0	10.5	46.5
		Double ES	59.4	23.1	16.9	13.5	9.9	45.7
2	1	Cut-off +10%	47.3	17.8	12.9	10.3	7.9	36.7
	2	Cut-off +5%	47.4	17.8	12.9	10.3	7.9	36.7
3	1	Withdrawal rate	41.9	14.5	10.5	7.9	7.9	32.1

Notes: Quintiles based on total household disposable (after tax/transfers) income per household. Only recipient households; individual level weights. benefits at the household level, results as a percentage of disposable income

Source: Own elaboration of SILC data

Table C5 FSA simulation results: Total expenditure and number of beneficiaries

Scenario	Option	Name	Total expenditure (EUR)	N. of beneficiary households
		Current benefit	20,587,280	14,260
1	1	Unique ES	26,881,504	14,260
	2	Double ES	25,688,857	14,260
2	1	Cut-off +10%	34,953,704	28,739
	2	Cut-off +5%	34,821,589	28,613
3	1	Withdrawal rate	26,701,490	28,739

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data.

Table C6 FSA simulation results: poverty headcount and poverty gap rate

Scenario	Option	Name	Poverty headcount			Poverty Gap rate		
			EUROSTAT poverty line	Minimum basket poverty line	Absolute poverty line	EUROSTAT poverty line	Minimum basket poverty line	Absolute poverty line
		Current benefit	24.8	48.6	27.2	9.2	19.6	10.1
1	1	Unique ES	24.3	48.3	26.5	8.6	19.1	9.5
	2	Double ES	24.5	48.3	26.6	8.7	19.2	9.6
2	1	Cut-off +10%	24.2	48.2	26.5	8.3	18.8	9.2
	2	Cut-off +5%	24.2	48.2	26.5	8.3	18.8	9.2
3	1	Withdrawal rate	24.5	48.4	26.8	8.7	19.2	9.6

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C7 FSA simulation results: poverty efficiency measures

Scenario	Option	Name	Poverty headcount				Poverty Gap rate				
			Poverty Reduction Difference, percentage points	Poverty Reduction %	Cost of 1% Poverty Reduction in millions	Poverty Headcount After Transfer	Poverty Gap Difference, percentage points	Poverty Gap Reduction %	Cost of 1% Poverty Gap Reduction in millions	Cost of 1 EURO Poverty Gap Reduction	Poverty Gap rate After Transfer
		Current benefit	1.0	3.8	18.8	24.8	1.1	10.6	16.8	0.9	9.2
1	1	Unique ES	1.5	5.7	18.2	24.3	1.7	16.3	15.9	1.0	8.6
	2	Double ES	1.3	5.2	19.1	24.5	1.6	15.5	16.0	1.0	8.7
2	1	Cut-off +10%	1.6	6.4	21.2	24.2	2.1	19.9	17.0	1.0	8.3
	2	Cut-off +5%	1.6	6.4	21.1	24.2	2.1	19.9	16.9	1.0	8.3
3	1	Withdrawal rate	1.3	5.2	19.8	24.5	1.6	15.5	16.7	1.0	8.7

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C8 CA simulation results: coverage across quintiles and total

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
		Old CA Benefit	15.2	5.6	2.0	1.3	0.4	4.9
1	1	Horizontal Expansion	40.1	32.2	24.3	28.9	16.2	28.4
2	1	Vertical Expansion	58.1	55.7	49.3	48.0	34.7	49.2
	2	Horizontal Expansion	58.1	55.7	49.3	48.0	34.7	49.2
	3	Staggered Vertical Expansion	58.1	55.7	49.3	48.0	34.7	49.2
3	1	Vertical Expansion	58.1	55.7	49.3	48.0	20.1	46.2
	2	Staggered Vertical Expansion	58.1	55.7	49.3	48.0	20.1	46.2
	3	Horizontal Expansion	58.1	55.7	49.3	48.0	20.1	46.2
4	1	Vertical Expansion	58.1	55.7	49.3	48.0	0.0	42.2
	2	Staggered Vertical Expansion	58.1	55.7	49.3	48.0	0.0	42.2
	3	Horizontal Expansion	58.1	55.7	49.3	48.0	0.0	42.2
5	1	Vertical Expansion	66.7	63.1	57.4	54.6	39.7	56.3
	2	Staggered Vertical Expansion	66.7	63.1	57.4	54.6	39.7	56.3
	3	Horizontal Expansion	66.7	63.1	57.4	54.6	39.7	56.3
6	1	Vertical Expansion	66.7	63.1	57.4	54.6	22.8	52.9
	2	Staggered Vertical Expansion	66.7	63.1	57.4	54.6	22.8	52.9
	3	Horizontal Expansion	66.7	63.1	57.4	54.6	22.8	52.9
7	1	Vertical Expansion	66.7	63.1	57.4	54.6	0.0	48.4
	2	Staggered Vertical Expansion	66.7	63.1	57.4	54.6	0.0	48.4
	3	Horizontal Expansion	66.7	63.1	57.4	54.6	0.0	48.4

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data **Table C9** CA simulation results: coverage across quintiles and total (households with children)

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
		Old CA Benefit	21.6	8.8	3.2	2.2	0.8	8.3
1	1	Horizontal Expansion	60.1	51.1	42.4	52.8	40.9	50.4
2	1	Vertical Expansion	87.1	88.3	86.0	87.9	87.5	87.3

3	2	Horizontal Expansion	87.1	88.3	86.0	87.9	87.5	87.3
	3	Staggered Vertical Expansion	87.1	88.3	86.0	87.9	87.5	87.3
	1	Vertical Expansion	87.1	88.3	86.0	87.9	50.6	82.1
4	2	Staggered Vertical Expansion	87.1	88.3	86.0	87.9	50.6	82.1
	3	Horizontal Expansion	87.1	88.3	86.0	87.9	50.6	82.1
	1	Vertical Expansion	87.1	88.3	86.0	87.9	0.0	75.0
5	2	Staggered Vertical Expansion	87.1	88.3	86.0	87.9	0.0	75.0
	3	Horizontal Expansion	87.1	88.3	86.0	87.9	0.0	75.0
	1	Vertical Expansion	100.0	100.0	100.0	100.0	100.0	100.0
6	2	Staggered Vertical Expansion	100.0	100.0	100.0	100.0	100.0	100.0
	3	Horizontal Expansion	100.0	100.0	100.0	100.0	100.0	100.0
	1	Vertical Expansion	100.0	100.0	100.0	100.0	57.4	94.0
7	2	Staggered Vertical Expansion	100.0	100.0	100.0	100.0	57.4	94.0
	3	Horizontal Expansion	100.0	100.0	100.0	100.0	57.4	94.0
	1	Vertical Expansion	100.0	100.0	100.0	100.0	0.0	85.9
8	2	Staggered Vertical Expansion	100.0	100.0	100.0	100.0	0.0	85.9
	3	Horizontal Expansion	100.0	100.0	100.0	100.0	0.0	85.9

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data **Table C10** CA simulation results: distribution of benefits (share of expenditure per quintile)

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
		Old CA Benefit	59.4	21.2	12.5	5.2	1.7	100.0
1	1	Horizontal Expansion	36.3	21.5	14.8	17.2	10.2	100.0
2	1	Horizontal Expansion	24.4	22.9	19.3	19.6	13.7	100.0
	2	Vertical Expansion	24.4	22.9	19.3	19.6	13.7	100.0
	3	Staggered Vertical Expansion	23.6	22.8	19.7	19.8	14.3	100.0
3	1	Horizontal Expansion	25.8	24.3	20.5	20.8	8.5	100.0
	2	Vertical Expansion	25.8	24.3	20.5	20.8	8.5	100.0
	3	Staggered Vertical Expansion	25.1	24.2	20.9	21.0	8.8	100.0
4	1	Horizontal Expansion	28.2	26.6	22.4	22.8	0.0	100.0

5	2	Vertical Expansion	28.2	26.6	22.4	22.8	0.0	100.0
	3	Staggered Vertical Expansion	27.5	26.6	22.9	23.0	0.0	100.0
	1	Horizontal Expansion	25.3	22.5	20.0	18.9	13.4	100.0
6	2	Vertical Expansion	25.3	22.5	20.0	18.9	13.4	100.0
	3	Staggered Vertical Expansion	23.4	22.8	19.7	19.8	14.3	100.0
	1	Horizontal Expansion	26.8	23.8	21.2	20.1	8.2	100.0
7	2	Vertical Expansion	26.8	23.8	21.2	20.1	8.2	100.0
	3	Staggered Vertical Expansion	24.9	24.2	21.0	21.1	8.8	100.0
	1	Horizontal Expansion	29.2	25.9	23.1	21.8	0.0	100.0
8	2	Vertical Expansion	29.2	25.9	23.1	21.8	0.0	100.0
	3	Staggered Vertical Expansion	27.3	26.6	23.0	23.1	0.0	100.0

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data **Table C11** CA simulation results: adequacy across quintiles and total

Scenario	Option	Name	Q1	Q2	Q3	Q4	Q5	Total
		Old CA Benefit	21.8	8.4	8.6	5.0	4.4	17.3
1	1	Horizontal Expansion	24.0	8.3	4.9	3.8	2.7	10.6
2	1	Horizontal Expansion	22.9	10.3	6.6	5.1	3.2	10.5
	2	Vertical Expansion	22.9	10.3	6.6	5.1		11.7
	3	Staggered Vertical Expansion	29.2	14.3	9.3	7.3		15.7
3	1	Horizontal Expansion	29.2	14.3	9.3	7.3	4.6	14.1
	2	Vertical Expansion	25.9	12.4	8.2	6.3		13.7
	3	Staggered Vertical Expansion	23.9	10.6	7.0	5.2	3.3	10.9
4	1	Horizontal Expansion	25.9	12.4	8.2	6.3	4.1	12.4
	2	Vertical Expansion	30.3	14.7	9.9	7.4	4.7	14.6
	3	Staggered Vertical Expansion	22.4	10.9	7.0	5.5	3.6	10.7
5	1	Horizontal Expansion	22.9	10.3	6.6	5.1	3.8	11.0
	2	Vertical Expansion	23.9	10.6	7.0	5.2	3.8	11.5
	3	Staggered Vertical Expansion	30.3	14.7	9.9	7.4	5.5	15.3
5	1	Horizontal Expansion	29.2	14.3	9.3	7.3	5.4	14.8

7	2	Vertical Expansion	22.4	10.9	7.0	5.5	4.2	11.3
	3	Staggered Vertical Expansion	23.9	10.6	7.0	5.2		12.2
	1	Horizontal Expansion	25.9	12.4	8.2	6.3	4.8	12.9
	2	Vertical Expansion	30.3	14.7	9.9	7.4		16.2
	3	Staggered Vertical Expansion	22.4	10.9	7.0	5.5		11.9

Notes: Quintiles are based on pre-transfer income per adult equivalent. Results as a percentage of disposable income. Only recipient individuals; individual weights used.

Source: Own elaboration of SILC data

Table C12 CA simulation results: Total expenditure and number of beneficiaries

Scenario	Option	Name	Total expenditure	N. of beneficiaries
		Old CA Benefit	4,695,093	14,059
1	1	Horizontal Expansion	21,912,306	53,768
2	1	Horizontal Expansion	43,172,286	119,923
	2	Vertical Expansion	63,319,353	119,923
	3	Staggered Vertical Expansion	53,676,942	119,923
3	1	Horizontal Expansion	40,694,019	113,039
	2	Vertical Expansion	59,684,562	113,039
	3	Staggered Vertical Expansion	50,454,162	113,039
4	1	Horizontal Expansion	37,243,026	103,453
	2	Vertical Expansion	54,623,104	103,453
	3	Staggered Vertical Expansion	46,024,238	103,453
5	1	Horizontal Expansion	52,905,402	146,959
	2	Vertical Expansion	77,594,589	146,959
	3	Staggered Vertical Expansion	53,511,278	146,959
6	1	Horizontal Expansion	49,909,769	138,638
	2	Vertical Expansion	73,200,994	138,638
	3	Staggered Vertical Expansion	50,288,499	138,638
7	1	Horizontal Expansion	45,841,459	127,337
	2	Vertical Expansion	67,234,139	127,337
	3	Staggered Vertical Expansion	45,858,575	127,337

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C13 CA simulation results: poverty headcount and poverty gap rate

Scenario	Option	Name	Poverty headcount			Poverty gap rate		
			EUROSTAT poverty line	Minimum basket poverty line	Absolute poverty line	EUROSTAT poverty line	Minimum basket poverty line	Absolute poverty line
		Old CA Benefit	24.8	48.4	27.1	9.1	19.5	10.0
1	1	Horizontal Expansion	23.7	47.6	25.7	8.2	18.7	9.1
2	1	Horizontal Expansion	21.7	46.3	24.6	7.6	17.8	8.4
	2	Vertical Expansion	21.7	46.3	24.6	7.6	17.8	8.4
	3	Staggered Vertical Expansion	20.0	45.6	22.4	7.0	17.0	7.7
3	1	Horizontal Expansion	20.0	45.6	22.4	7.0	17.0	7.7
	2	Vertical Expansion	20.7	45.9	24.0	7.3	17.4	8.1
	3	Staggered Vertical Expansion	21.2	45.9	24.0	7.2	17.4	8.0
4	1	Horizontal Expansion	20.7	45.9	24.0	7.3	17.4	8.1
	2	Vertical Expansion	19.3	45.0	21.6	6.5	16.4	7.2
	3	Staggered Vertical Expansion	20.8	45.9	24.0	7.3	17.5	8.1
5	1	Horizontal Expansion	21.7	46.3	24.6	7.6	17.8	8.4
	2	Vertical Expansion	21.2	45.9	24.0	7.2	17.4	8.0
	3	Staggered Vertical Expansion	19.3	45.0	21.6	6.5	16.4	7.2
6	1	Horizontal Expansion	20.0	45.6	22.4	7.0	17.0	7.7
	2	Vertical Expansion	20.8	45.9	24.0	7.3	17.5	8.1
	3	Staggered Vertical Expansion	21.2	45.9	24.0	7.2	17.4	8.0
7	1	Horizontal Expansion	20.7	45.9	24.0	7.3	17.4	8.1
	2	Vertical Expansion	19.3	45.0	21.6	6.5	16.4	7.2
	3	Staggered Vertical Expansion	20.8	45.9	24.0	7.3	17.5	8.1

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Scenario	Option	Name	Poverty Reduction Difference, percentage points	Poverty Reduction %	Cost of 1% Poverty Reduction in millions	Poverty Headcount After Transfer	Poverty Gap Difference, percentage points	Poverty Gap Reduction %	Cost of 1% Poverty Gap Reduction in millions	Cost of 1 EURO Poverty Gap Reduction	Poverty Gap Rate After Transfer
		Old CA Benefit	0.2	0.7	28.4	24.8	0.3	3.5	14.1	1.0	9.1
1	1	Horizontal Expansion	1.3	5.1	17.4	23.7	1.2	12.7	18.4	1.3	8.2

2	1	Horizontal Expansion	3.2	13.0	13.3	21.7	1.8	19.3	23.7	1.7	7.6
	2	Vertical Expansion	5.0	20.0	12.7	20.0	2.5	26.1	25.7	1.8	7.6
	3	Staggered Vertical Expansion	4.3	17.2	12.5	20.7	2.1	22.4	25.5	1.8	7.6
3	1	Horizontal Expansion	3.2	13.0	12.5	21.7	1.8	19.3	22.3	1.6	7.2
	2	Vertical Expansion	5.0	20.0	12.0	20.0	2.5	26.1	24.3	1.7	7.2
	3	Staggered Vertical Expansion	4.3	17.2	11.7	20.7	2.1	22.4	23.9	1.7	7.2
4	1	Horizontal Expansion	3.2	13.0	11.5	21.7	1.8	19.3	20.4	1.4	7.0
	2	Vertical Expansion	5.0	20.0	11.0	20.0	2.5	26.1	22.2	1.6	7.3
	3	Staggered Vertical Expansion	4.3	17.2	10.7	20.7	2.1	22.4	21.8	1.5	7.0
5	1	Horizontal Expansion	3.8	15.1	14.1	21.2	2.2	23.3	24.1	1.7	7.3
	2	Vertical Expansion	5.7	22.8	13.7	19.3	3.0	31.6	26.1	1.8	7.0
	3	Staggered Vertical Expansion	4.2	16.8	12.8	20.8	2.1	22.1	25.7	1.8	7.3
6	1	Horizontal Expansion	3.8	15.1	13.3	21.2	2.2	23.3	22.7	1.6	6.4
	2	Vertical Expansion	5.7	22.8	12.9	19.3	3.0	31.6	24.6	1.7	7.3
	3	Staggered Vertical Expansion	4.2	16.8	12.0	20.8	2.1	22.1	24.1	1.7	6.4
7	1	Horizontal Expansion	3.8	15.1	12.2	21.2	2.2	23.3	20.9	1.5	7.3
	2	Vertical Expansion	5.7	22.8	11.8	19.3	3.0	31.6	22.6	1.6	6.4
	3	Staggered Vertical Expansion	4.2	16.8	10.9	20.8	2.1	22.1	22.0	1.5	7.3

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C15 Tax simulation results: Gini coefficients under different tax scenarios

		MNE	ALB	SVN	HRV
Total household gross income		39.43			
Total disposable household income	No Tax Exemption	35.54	34.72	33.26	33.94
Total disposable household income	With Tax Exemption	35.46	34.65	33.21	33.86

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C16 Tax simulation results: Tax Burden, personal income taxes as percentage of total household gross income

	Q1	Q2	Q3	Q4	Q5	Total
MNE (simulated)	1.9	3.5	5.6	7.7	8.7	5.6
MNE + Tax exemption	0.2	1.6	3.2	5.1	6.8	3.5
HRV	2.1	5.4	9.2	13.3	15.8	9.5
ALB	2.0	4.2	6.8	9.5	11.4	7.0
SVN	2.0	4.9	8.5	12.7	16.8	9.4
HRV + Tax exemption	0.5	3.5	6.8	10.8	13.9	7.4
ALB + Tax exemption	0.3	2.3	4.4	7.0	9.4	4.9
SVN + Tax exemption	0.4	3.0	6.1	10.2	14.9	7.3

Notes: Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data

Table C17 Tax simulation results: Personal income tax to GDP share.

	MNE	ALB	SVN	HRV
Full tax compliance, no tax exemption	4.96	6.50	9.06	8.82
Imputed informality, no tax exemption	3.62	4.74	6.61	6.44
Full tax compliance + tax exemption	3.56	5.10	7.66	7.42
Imputed informality + tax exemption	2.60	3.72	5.59	5.42

Notes: PIT as percentage of 2018 GDP. Quintiles are based on pre-transfer income after pensions per adult equivalent; individual weights used

Source: Own elaboration of SILC data