



# Supporting Families and Children Beyond COVID-19

Social protection in Southern and Eastern Europe  
and Central Asia

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Skopje, Republic of North Macedonia, 25 March 2020: A mother helps her twins with learning activities as she holds their sister. They are the family of UNICEF photographer Gjorgi Klincarov who agreed to be part of a UNICEF initiative to capture footage of how children in North Macedonia are learning at home during school and kindergarten closures due to COVID-19.

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# Supporting Families and Children Beyond COVID-19:

## Social protection in Southern and Eastern Europe and Central Asia

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## KEYWORDS

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## EXECUTIVE SUMMARY

Discussions around the effects of the COVID-19 crisis and its impacts and costs are moving swiftly from health concerns to economic and social concerns. The ways in which countries are dealing with COVID-19 itself, through social lockdowns and school closures, are expected to have wide-ranging social and economic costs and governments have responded with rapid implementation of fiscal stimulus and social protection reforms.

COVID-19 is a global health crisis, with severe economic consequences, impacting countries and continents in waves, and therefore is – with the exception of the Spanish Flu in 1918 – without a recent comparator. Necessarily this means that experience with, and evidence for, dealing with such a crisis is limited.

Acknowledging that health, economic, and social crises can rapidly become a crisis for children, this paper seeks to contribute evidence to understanding what the crisis means for children and for families with children in the countries of Southern and Eastern Europe and Central Asia (from here on referred to simply as ECA countries). In particular, what governments and stakeholders should be looking for when seeking to protect children from the worst outcomes of the crisis. In doing so, this paper asks: through which mechanisms can COVID-19 affect children in the region; what can we learn from previous crises about the potential effects on children and those who care for children; how is vulnerability to poverty and child well-being likely to be affected; are initial government responses to the crisis likely to worsen or mitigate risks to children's well-being; and, how might future public policies be optimised in the short and medium term to protect child outcomes?

The story of this crisis, like all economic and social crises, is one of inequality. Pre-existing inequality will determine who suffers most in these times. Inequality in the initial responses to the crisis will further exacerbate underlying inequalities. When exiting the crisis, policies designed to help societies recover, like stimulus and austerity, can also be unequal due to the huge private and public costs that follow. At the time of writing, many states in ECA countries can still manage the crisis recovery in ways that do not exacerbate inequalities for children and families while protecting their futures. The timing of this report, aimed at better understanding regarding the management of global and national public policy action to protect children and help develop future public policy for children based on equity and sustainability, is critical.

No one group in society better represents the future than the child population. Therefore, child-sensitive approaches to crisis recovery – ensuring that children are protected from harm, that their services are ring-fenced, and they are seen as a priority group in the response – are not simply driven by good intentions but should be seen as a key part of ensuring future generations avoid crises such as COVID-19.

The main findings of this report are as follows:

- Based on the experience of the Global Financial Crisis (GFC), gross domestic product (GDP) per-capita is likely to fall in the region – and be protracted in some cases. GDP is strongly associated with many of the child-focussed Sustainable Development Goals (SDGs) in the region, including poverty, child mortality, and youth activation.
- Multiple child poverty and vulnerability indicators will worsen within the first year following a decline in economic conditions – if not immediately.

- Based on GDP per capita trends after 2008, the downturn lasted at least two years for the majority of countries and for many, the recovery to pre-2008 levels took as long as 8 to 10 years. This indicates medium- and long-term risks to families and children; risks lasting until the 2030 SDG deadline.
- Evidence also suggests that the effect of falling incomes in the region will influence families and children unequally, with vulnerable people more affected than the average population; in particular, those at risk of extreme poverty and undernourishment, and young people in the labour market.
- Other economic and social preconditions are also determinants of poverty and well-being in the region and will moderate the effects of the crisis in some countries such as lower income inequality, higher employment rates (including rates of labour formalisation), and the size of the service sector. These will be affected by the crisis and therefore, will also require monitoring and stabilising.
- Evidence shows that children's health outcomes are associated with rates of out-of-pocket costs and on some occasions, healthcare service capacity. The overburdening of health systems related to COVID-19 will have repercussions for child and infant mortality unless mitigating policies are put in place.
- Children's individual risks, together with the needs of the families of those children, will be, to a large part, determined by the child's characteristics, including age and gender. Specifically, younger children are at a higher risk of poverty as parents are less attached to the labour market and this age group often receives less public investment in normal times. Evidence shows COVID-19 social protection responses rarely take an age- or development-informed approach.
- Evidence clearly suggests that rates of expenditure and staffing in health services are insufficient on their own to monitor and/or predict success for children. Issues of quality of services and conditions of investment matter and should be accounted for at a country level.
- By mitigating the effects of economic contraction, the scope of social protection policies influencing the SDG outcomes studied here is shown to be significant. Even in cases where worsening economic conditions are not directly associated with the SDG outcome at hand (e.g., suicide), moderating factors such as employment rates and dependency ratios are meaningful for all measures in the longer-term.
- At the time of writing, 21 ECA countries are in national lockdown and schools are closed in 20 of those. Sixty-one social protection policies have been implemented, alongside 48 fiscal stimulus policies, and reported COVID caseloads range from fewer than 100 in Tajikistan to more than 1 million in the Russian Federation and Turkey. Regarding COVID-19 responses:
  - Policies presently being mapped are almost always targeted based on social demographics, means, or employment status. Universal responses are most commonly in the form of utility cost waivers. Pensions and family benefits make up one third of overall responses, employment related payments make up another one-third, and anti-poverty social assistance benefits, around one-sixth.
  - The universal coverage of COVID-19 social protection benefits, with additional supports for those at greatest risk, is not being achieved in any of these countries. Although economic stimulus may be seen as a 'population-wide' response, it will not directly benefit the poorest groups. Where short-term or one-off cash transfers are provided for the poorest groups, these are not equivalent.

- In the majority of these countries, public interventions have favoured stimulation of business, providing more investment to fiscal stimulus packages, and delivering these directly to businesses through loans, offsetting business taxes, or providing wage subsidies.
- SDG principles of ‘leave no-one behind’ are not being met in the design of social protection or fiscal stimulus responses in the region. Targeting and formal labour market attachment requirements dominate. Where benefits to families are universal, these amount to one-off payments in just three ECA countries.
- Given the lessons of the persistence and depth of the post-GFC economic downturn in the region, one-off payments or benefits that exclude informal workers and the most poor and vulnerable, or which identify need based on existing vulnerabilities, will be wholly inadequate to address the needs of families and children in the short, medium and long term.
- Families and children need long-term support in times of health and economic crisis. Evidence from previous crises presented in this report shows that social protection responses to crisis have contributed to protecting children from the worst effects, and that austerity has resulted in the closure of key child services, reduction in parental caregiving (and subsequent increase in children sent to care services), homelessness, crime, mental health problems and more concerning, further infectious disease outbreaks. Austerity is not inevitable and should be entirely avoided in ways that put social development goals for children – and their related investments – at risk.
- Relatively high levels of investment in fiscal stimulus supporting business in general or by sector, plus the length of time allowed for interventions and the lack of clear conditionality in the majority of cases, is in contrast to social protection overall. Indeed, in the case of families with children, an argument should be made that equivalent investment and universality in access to support should replicate fiscal stimulus at minimum. Greater regulation, means-testing, and shorter windows of support could instead be applied to stimulus conditions for businesses.

This study provides evidence of the national experiences of COVID-19 and compares this across ECA countries. It is only the start of what is required when building evidence for children during COVID-19. National studies are also needed to represent the variation of experiences of children within a country: urban and rural; by gender; by age; and by migrant children, disabled children, and those in institutions. This is true to the message of the SDGs, and helps countries better understand which children receive adequate support when social protection is provided to families, at what levels, and under what conditions.

What is clear from this study is that the COVID-19 crisis is engulfing entire societies across ECA countries, and will therefore inevitably impact family and child poverty and well-being in profound and long-lasting ways. Without strengthening initial responses with co-ordinated and adequate action for all children, COVID-19 will leave deep scars on a whole generation in the region.

## 1. WHY LOOK AT HOW COVID-19 AFFECTS FAMILIES AND CHILDREN IN SOUTHERN AND EASTERN EUROPE AND CENTRAL ASIA?

Discussion of the effects of the COVID-19 crisis, and the impacts and costs of the crisis, are moving swiftly from health concerns to economic and social concerns. Specifically, in recognition of countries' public policy responses to dealing with COVID-19 – through lockdowns, travel restrictions, business and school closures – which will have wide-ranging social and economic costs. Government action across 23 ECA countries<sup>1</sup> has underlined the potential health and economic consequences of COVID-19. At the time of writing, 21 ECA countries are in national lockdown, schools are closed in 20 countries, and 61 social protection policies have been implemented alongside 48 fiscal stimulus policies (see *Tables 4 and 5*).

But why focus on the impacts of children in ECA countries? This section answers this question from three perspectives: families with children as part of society; children who were among the most affected by previous crises; and the need to maintain focus on the longer-term goals and targets for children as part of the SDGs – which are at risk of stalling or, at worst, going into reverse in the coming years.

### ***Families with children as a part of society, the economy, and the world***

The predicted economic fallout from COVID-19 is based on a new reality where, in the most affected countries, most businesses and schools are being temporarily closed, and parents cannot work – other than from home. Together, these conditions will lead to: falls in productivity and consumption, businesses failing; poverty increasing; and an accumulation of debt defaults putting the entire financial system at risk of repeating the 2008 GFC. This in turn will lead to austerity and long-term scarring of social protection systems, and on children themselves.

Both the pandemic and the government responses to it have social costs; not solely in terms of poverty and the risk to living standards, but through social isolation when mental ill health, for example, can occur.

As members of society, families and children will not escape the repercussions. Inevitably, some will experience these social costs differently. Large families living in cramped conditions, children living in households where interpersonal violence occurs or where parents have addictions, or children separated from their parents or other family members are examples. Intergenerational families with the stress of increased risk to elderly relatives, and families who will experience the emotional toll of bereavement need also to be considered. Finally, there are cases where children will be subjected to a combination of these factors.

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<sup>1</sup> In this report the term Southern and Eastern European and Central Asian countries covers: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, the Republic of Moldova, Montenegro, North Macedonia, Romania, the Russian Federation, Serbia, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan.

### ***Children's experiences of repercussions from previous health and economic crises***

Evidence from the literature over the past two decades following crises and changes to the policies upon which children rely – social protection, education, and care services and health services – have been reformed and adapted. When these changes are made, and how they are made, have had meaningful impact on the children themselves and the world around them. Section 2.2 of this report summarizes the findings of a rapid review of evidence on the effects of the crisis on social protection and health, and related direct and indirect outcomes on children. Evidence clearly shows that the way governments respond to a crisis (whether nominally for children or not) has serious implications for child and family poverty, parental care, child mortality, health and nutrition, learning outcomes, parental labour market attachment, gender equality, parental mental health and suicide, homelessness, and more.

Emerging evidence predicting the short- and medium-term outcomes of the crisis, particularly around poverty risks (Sumner et al, 2020), confirms COVID-19 will be no different, and indeed will be more severe than the GFC, and children and young people will inevitably be affected, along with everyone else.

### ***Children's rights and SDGs: Informing the decisions of policy makers and other stakeholders***

The final reason to focus on the impact of the COVID-19 crisis on children is the need to maintain focus on the longer-term social goals and targets for children as part of the SDGs. No group in society better represents the future than the child population. Therefore, child-sensitive approaches to crisis recovery – ensuring that children are protected from harm, that their services are ringfenced, and they are seen as a priority group in the response – are not simply driven by good intentions, but should be seen as a critical part of ensuring future generations avoid crises such as COVID-19. SDG goals are at risk should responses to the current crisis not fully account for the impact that public policy decisions will have on children.

The lifelong impact on individual children will constrain opportunity and create dependency, weakening social development and increasing the likelihood of future crises.

At the time of writing, many states in ECA countries can still manage recovery from the crisis in ways that do not exacerbate inequalities affecting children and families and in doing so, protect their futures.

## **1.1 COVID-19 responses for families and children in ECA: Research questions**

To understand the ways in which COVID-19 affects families with children in ECA countries, and therefore how governments and other stakeholders can manage social policy responses that protect children from the negative repercussions of the crisis, the following research questions will be addressed:

1. Through which mechanisms can COVID-19 affect children in the region?
2. What can we learn about the potential effects on children and those who care for children from previous crises?
3. How is child well-being and vulnerability to poverty likely to be affected?

4. Are initial government social protection responses to the crisis likely to accentuate or mitigate risks to the well-being of children?
5. How might future public social policies be optimised, in the short- and medium-term, to protect children's outcomes?

To address each question, the remainder of this report will be organized into five substantive sections.

Section 2 will elaborate on how COVID-19 is affecting children, introducing a conceptual framework together with evidence from previous crises relevant to the ECA region, and the pathways through which selected child-focussed sustainable development goals are likely to be affected. This section will address research questions 1 and 2.

Together, sections three, four, and five will address research question 3. Section three explores the preconditions likely to determine how detrimental the effects of the COVID-19 crisis and early responses – mapped by social protection, fiscal stimulus and closures, lockdowns and travel bans – will be on children and families in ECA countries through an exploration of economic, social, and demographic preconditions; child well-being outcomes; and COVID-19 caseloads. Section four undertakes empirical analysis of the preconditions in the region, relating them to trends in child outcomes as measured by child-relevant targets across seven SDGs in the areas of: poverty; nutrition; infant health; education; youth employment; and violence against children. Section five provides recommendations for monitoring key statistics based on these findings using data and findings from sections three and four.

Finally, section six assesses if social protection and fiscal responses to the crisis have been fit for purpose, and where this is not the case, what social protection policies might work to protect all children from harm post-COVID-19. Research questions 4 and 5 are answered – drawing on evidence from the literature, the data and the empirical analysis in previous sections – and assess the role of social protection in preventing/ treating, social and economic risks at household and national levels following the COVID-19 pandemic. Also noted are issues such as: crisis effects on service delivery and in-kind benefits (healthcare utilization, food parcels); the need for fiscal stimulus (how and to whom); the need for mortgage, rent and tax relief, or loans (families or business); and the need for cash benefits in their various forms.

## 2. HOW IS COVID-19 AFFECTING CHILDREN?

This section introduces a conceptual framework for understanding the following: how crises like COVID-19 can influence children; evidence from previous crises relevant to the ECA region and public policy responses; and the child-focused sustainable development goals that are likely to be affected by the crises.

### 2.1 A conceptual frame for understanding how COVID-19 affects children

Although children have so far largely been spared the direct health effects of COVID-19, they are not immune from economic crises and are often among the hardest hit. Moreover, the response to controlling the spread of COVID-19 in most countries – including social lockdowns, and school and work closures – will mean the impacts of the crisis will extend far beyond economics. The physical health, mental well-being, education, and personal safety of children living in deprived conditions and disadvantaged settings is at risk.

In the simplest of terms, COVID-19 will affect children directly and indirectly in three ways: the impact of the virus itself, the impact of immediate responses to the virus (including lockdowns), and the economic repercussions of the crisis and the response measures.

#### ***The direct and indirect effects of the virus***

Some children will be directly affected by either contracting the disease or by being witness to others contracting it; some will experience the loss of one or more family members and will need support. Even without experiencing such a loss, the fear of the disease and the worry about its possible impact on family members can have a deep psychological impact on many children.

The disease will also affect them indirectly in numerous ways. For example, the loss of a family member will place a strain on household income and resources. Children will experience deprivations and may also be expected to take on new responsibilities such as caring for others. This will affect their own activities and could, for example, damage their educational engagement and progress. The disease, and its burden on health systems, will also have impacts placing a strain on services for children. This may affect some children more severely than others – for example, children who have chronic health conditions may not receive the medical care that they need.

#### ***The effects of measures taken in response to the virus***

Measures taken by governments to attempt to contain the spread of the disease will affect children in various ways beyond obvious economic ones. The experience of lockdowns will also affect them according to their developmental stage; younger children will experience restrictions in opportunities to play outside, adolescents may be particularly affected by loss of peer networks. Children of all ages may suffer the physical effects of reduced activity. These psychological and physical effects will be particularly pronounced in poorer households living in cramped conditions and lacking access to their own outside space. The shut-down of school systems will clearly affect children's educational progress and this will inevitably affect children unequally. Children who live in households lacking resources – including material ones such as an internet connection, books and stationery, and human resources such as parents with the time, skills and educational background to support learning – will fare much worse than children in more privileged circumstances.

In households experiencing drug addictions, alcohol abuse, and/or interpersonal violence, children are at a greater risk of harm during lockdown than at other times.

### ***The economic repercussions of COVID-19***

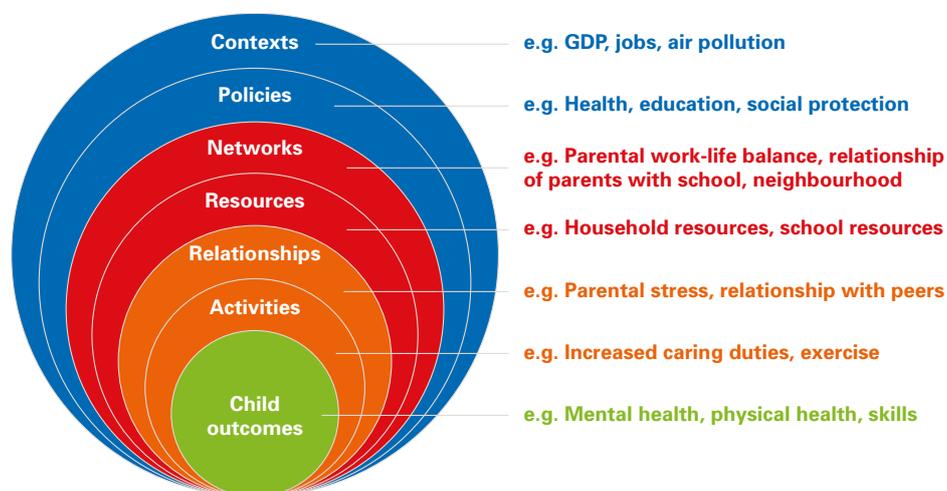
The economic repercussions of COVID-19 will inevitably have a major impact on children's well-being, as was seen from the last global financial crisis (UNICEF, 2014). Resources will be squeezed at the national, regional, community, and household levels. Financial constraints and international markets, coupled with internal travel restrictions, will result in the economic stress of one country influencing conditions in other countries. For example, households that are dependent on remittances from family members abroad – as is the case in many ECA countries – may suffer substantial losses in income if those family members are unable to earn. Deprivation can lead to children's physical health suffering through increases in malnutrition for example, and future opportunities become more constrained.

### ***An ecological model of COVID-19 influences on child well-being***

To inform and facilitate such action, systematically analysing the full range of mechanisms through which COVID-19 will impact children is vital to determining the best forms of social protection support for households with children, and to developing a suite of complementary services to meet the complex and acute needs described above. An ecological framework can conceptualise mechanisms through which COVID-19 will impact on children.

UNICEF Innocenti has developed a framework to link macro-economic and social conditions to child well-being, based on a validated ecological model (Bronfenbrenner, 1979). The framework can help understanding of how factors related to COVID-19 at different levels – from families to broad societal contexts – affect children, often through a cascading sequence of effects (*see Figure 1*). The framework has the advantage of explaining and highlighting how COVID-19 can have unequal impacts on children living in the same societal conditions but with different community and family contexts and identifying mechanisms for reducing such inequalities.

Figure 1: A multi-level framework for cascading influences on child well-being



Source: Rees & Gromada (2020).

Figure 1 illustrates the influences around a child in the universal context and recognises children as part of the society in which we all live – breathing the same air, clean or dirty, and living with the same policies and rules in the same system. Within these contexts, policies, social networks, resources, relationships, and activities in their various forms can mitigate or accentuate the benefits or risks experienced in context.

The example of literacy achievement illustrates how connections between layers of the ecological model can combine to influence a child's outcomes. School closures (policy) will impact children differently according to the material and human resources at home. Children who do not have access to the internet, books or a quiet place to study (resources), and who also lack parents with the time, skills and educational background to support learning (relationships), will fare worse than children whose home environment supports their educational progress. At the same time, the direct impact of the disease on families and the economic repercussions (contexts), may mean that children are expected to take on additional responsibilities at home (networks). This will reduce their time to spend on schoolwork (activities). Necessary interventions in cases such as school closure would therefore seek to address inequalities in resources at home as well as considering the facilitation of flexible work for parents and providing guidelines or supports for parents' home-schooling strategies.<sup>2</sup>

## 2.2 Evidence from the literature on crisis and children

As dependents, children and young people are often among the most vulnerable to the effects of crisis. In the case of COVID-19, vulnerability to health consequences is mostly with the elderly, but the social and economic effects will be felt by all. This section summarises key findings from a recent review of global evidence on the nature and direct and indirect effects of public policy responses to previous health and economic crises on families and children (Tirivayi et al, 2020). The review has covered health crisis, economic crisis and natural disasters for two reasons: to better understand the repercussions of both health and economic crisis in line with the COVID-19 experience; and to include learning from natural disasters which “were ‘rapid’ in onset, [with] wide-ranging geographical reach, and resulted in disruption of social services and economic sectors without affecting the governance systems” (ibid).

The research summarises two streams of findings: a summary of the public policy responses in terms of social protection and economic stimulus, and the impacts and response to the crises on child and family outcomes.

### ***A summary of economic stimulus and social protection responses in crisis contexts***

The evidence from Tirivayi et al (2020) highlights the role of economic stimulus and social protection responses in various crisis contexts. While evidence on public policy responses to virus pandemics (apart from HIV/AIDS) is scant, documentation of policy responses to economic crises is extensive, particularly for the 2008 global financial crisis. Table 1 summarizes the key findings and evidence of various social protection responses, specifically cash transfers.

<sup>2</sup> Dreesen et al. (2020).

Table 1: Public policy responses to health and economic crises and natural disasters<sup>3</sup>

Crisis	Responses	Examples
<b>Pandemics and health emergencies</b>	<ul style="list-style-type: none"> <li>■ Scant evidence of macro-economic policy responses, possibly because scale of economic impacts was not as large as COVID-19.</li> <li>■ Public policy responses to previous pandemics has not directly addressed the needs of children.</li> <li>■ Social protection responses to 2013 West Africa EVD outbreak were limited in coverage.</li> </ul>	<ul style="list-style-type: none"> <li>■ Social protection responses to 2013 Ebola outbreak included short-term non-statutory social assistance programmes e.g., cash transfers, in-kind transfers, jobs, cash-plus skills training in Sierra Leone.</li> <li>■ Social protection responses to HIV/AIDS pandemic target infected individuals, and those at risk of infection or vulnerable to the impacts (orphans and family members). They include cash and food transfers often combined with treatment and care services.</li> </ul>
<b>2008 global financial crisis</b>	<ul style="list-style-type: none"> <li>■ Initial short phase of expansionary fiscal and social protection responses followed by a longer phase of austerity measures.</li> </ul> <p data-bbox="416 1099 560 1126"><i>Initial Phase</i></p> <ul style="list-style-type: none"> <li>■ Economic stimulus packages widespread across regions: generally small in South East Asia, with larger packages in the US, and Europe (more in the US than in Europe).</li> <li>■ Pre-existing statutory social protection programmes or plans used for rapid response in HICs as well as South Asia and Latin America (legacy from previous regional financial crises). Fewer countries introduced new social protection schemes. Expansion in sub-Saharan Africa hampered by weak social protection systems, low pre-existing coverage and decreased revenues.</li> </ul> <p data-bbox="416 1666 580 1693"><i>Second phase</i></p> <ul style="list-style-type: none"> <li>■ Austerity measures reduced public spending including funding of social protection measures. Initial social protection responses were phased out or terminated in developing countries.</li> </ul>	<ul style="list-style-type: none"> <li>■ HICs and MICs provided pension reforms, unemployment benefits, active labour market policies, parental leave, social transfers, child benefits, school feeding and education subsidies, tax breaks for families.</li> <li>■ A few HICs and MICs extended coverage of unemployment benefits, pensions to informal workers e.g., USA, Germany, Japan, Argentina and Malaysia</li> <li>■ Cash transfers were widely expanded in MICs; mostly in Asia and Latin America.</li> <li>■ Reforms of CCTs in Latin America and the Caribbean included top-ups and buffers for crises.</li> <li>■ Schemes in Sub-Saharan Africa mostly donor funded e.g., food or fuel subsidies, food cards, school feeding schemes, and public works.</li> <li>■ Gender-blind/discriminatory responses in some countries (e.g. in Sweden) were more favourable towards sectors dominated by men (e.g., heavy industries) or exclusion of young men in social assistance and unemployment benefits in the US.</li> </ul>

<sup>3</sup> To simplify and make ECA specific where possible.

Crisis	Responses	Examples
<b>Natural disasters</b>	<ul style="list-style-type: none"> <li>■ Both one-off and pre-existing social protection programmes used in crisis response.</li> <li>■ Emergency cash transfers followed by transitions of beneficiaries to permanent statutory schemes (e.g., China).</li> <li>■ Inter-governmental agency competition and lack of collaboration, duplication, poor MIS and weak compliance monitoring, lack of community participation weakened post-disaster cash responses.</li> </ul>	<ul style="list-style-type: none"> <li>■ Emergency cash transfers a popular response to the Indian Ocean tsunami and earthquakes.</li> <li>■ Gender-sensitive programming included micro-credit programmes for women and engagement of women in relief and recovery processes as active agents.</li> <li>■ Drought responses often include cash transfers, micro-insurance and micro-credit programme</li> </ul>

Source: Tirivayi et al, 2020.

### ***Macroeconomic and social protection responses have various impacts on children and families***

In terms of children's outcomes, the review has focussed on both direct and indirect effects (in line with the ecological model (see Table 1) to cover: economic security; health and health care services; children's education; gender equality; family formation; and gender-based violence (Tirivayi, 2020: 2). The evidence showed that macroeconomic and social protection responses had various impacts on children and families, and the appropriateness of a policy response depended on the type of shock.

Table 2 summarizes the evidence on child and family outcomes related to public policy responses to crises. Results show that economic stimulus, cash transfers, and social services have direct positive effects on children, especially child health and health care utilization, school attendance, poverty reduction and child mortality reduction. Similarly, most social protection responses have indirect positive effects on children such as the protection of family income, adult unemployment, job retention, adult suicides, adult physical and mental health, food security, assets, agricultural productivity, livelihoods and psychosocial health.

Austerity has direct negative effects on childcare and parental caregiving, while labour market programmes that target school-going children increase dropout, and cash transfers sometimes fail to improve child nutrition. Indirect negative effects include gender inequality from gender-biased economic stimulus packages; austerity-driven infectious disease outbreaks, homelessness, crime, poor mental health and suicides; long term unemployment from unemployment benefits; a reduction in school finances and quality of services from waivers; and elite capture in scholarships.

Table 2: The direct and indirect impacts of public policy responses to crises on children and families

Public policy response	Direct impacts on children	Indirect impacts on children
<b>Economic stimulus (e.g., bailout, monetary, increased budgets)</b>		Poverty reduction Increased family income Gender inequality from favouring predominantly male sectors e.g., heavy industries
<b>Austerity</b>	Reductions in childcare service coverage, parental caregiving (children given to care services)	Infectious disease outbreaks <i>Homelessness, crime, adult mental health, suicides</i>
<b>Health insurance</b>	Greater health care utilization by families	
<b>Unemployment benefits</b>	Poverty reduction	Increased job search by adults Increases in long-term unemployment No change in individual employment
<b>Weather insurance</b>		Increases in asset ownership and agricultural productivity
<b>Cash transfers</b>	Poverty reduction Increased school attendance, health care utilization Mixed results in child nutritional status	Increases in food security, livelihoods, and psychosocial health <i>Modality matters: targeting, coverage, transfer value and duration</i>
<b>Food transfers</b>	Improved child nutrition	Improved food security
<b>School and health subsidies (waivers, scholarships)</b>	Improved school attendance	Reduction in school finances, quality of services Increases in unequal access (elite capture)
<b>School feeding</b>	Improved child nutrition, cognitive development, and school attendance	
<b>Labour market programmes</b>	Poverty reduction Increases in school dropout (if targeted to school-going children)	Increases in family income, adult employment, job retention, adult physical and mental health Reduction in adult suicides
<b>Social services</b>	Improvements in child mortality, and child education	

Note: Tirivayi et al (2020) distinguish between the timelines of effects, by short- medium- and long-term outcomes.

Source: Adapted from Tirivayi et al, 2020.

### 2.3 COVID-19, Sustainable Development Goals, and children

With 10 years to achieve the sustainable development goals<sup>4</sup>, a dual health and financial crisis puts recent gains in terms of child-focused indicators within this framework at risk of stalling or at worst, reversing. Key indicators that matter for children in this framework include poverty, nutrition, health, education, youth employment, and mental health and violence. This report deliberately selects key indicators from the SDG framework in order to highlight the importance of keeping these goals on track for children, whatever challenges the COVID-19 crisis brings.

Table 3 below, outlines eight such indicators, all derived from the United Nations' global SDG database. Each indicator has been selected to represent a goal in the SDG framework and to align to key concerns related to the COVID-19 crisis. For each child well-being measure, countries have been colour-coded, with orange representing higher performing countries on each of the indicators, relative to the group (at least half of a standard deviation above the unweighted group average), and blue denoting countries where performance is low relative to the group. Red shows the group of countries that are around the average for the ECA group.

The proportion of the population living below the national poverty line is target 1.2.1 under Goal 1: End Poverty in all its forms. Early indications from the COVID-19 crisis finds that closure of schools and workplaces is severely restricting the earning capacity of millions of families, resulting in increased debt, payment arrears, lower levels of consumption, and/or the depreciation of savings and as such, poverty risks are expected to increase. The results for this indicator, based on the different methods for calculating national poverty rates, are reported relative to the 10-year average for each country. Scores above 1 show that poverty is on the increase relative to the last decade while scores below 1 show progress is being made. For instance, Ukraine and Kazakhstan have seen substantial falls in poverty in the past decade (*see Figure 15*), whereas the most recent data for the Russian Federation is reporting poverty risks around 10 per cent higher than average for the last 10 years.

Children under the age of five who are moderately or severely wasted (percentage) is Target 2.2.2 under Goal 2 to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture. Linked to poverty and lack of nutrition, wasting is one way to indicate the most severe forms of deprivation experienced by children. As above with poverty, lockdowns of schools and care centres where many children can access food supports, together with the closure of workplaces upon which parents are reliant for employment, are likely to exacerbate rates of wasting among children. School feeding programmes in particular have been severely limited in coverage as the crisis hits. Unfortunately, recent data on wasting for all countries in ECA is hard to find; one third of countries have no data, or no data since 2012. The highest reported rates of wasting in ECA are in Bulgaria and Tajikistan where around 1 in 20 children are affected, and the lowest rates are seen in Albania and Georgia, where numbers are lower than 1 in 50 children.

There is no shortage of concern related to the delivery of health services during COVID-19. Specifically regarding the high demand on health services from people with the virus and the resulting effects on shortages of PPE and other medical supplies required to treat COVID-19 and other illnesses. Moreover, the concern struggling healthcare systems are having in postponing preventative treatments, or non-essential interventions, while prioritizing COVID-19 caseloads, is likely to increase overall rates of morbidity and mortality. Finally, there is a risk that families seeking medical help will

<sup>4</sup> <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

avoid clinics and hospitals for fear of contracting COVID-9, thus delaying necessary diagnoses and treatment and resulting in further health concerns.

Table 3: Country performance on seven child-focussed SDGs

	Population living below the national poverty line compared to 10-year average (ratio)	Children under five years who are moderately or severely wasted (%)	Under-five mortality rate, (deaths per 1,000 live births)	Neonatal (<1 month) mortality rate (deaths per 1,000 live births)	Youth (15-24 yrs) not in education, employment or training, (%)	Children achieving a minimum proficiency level in reading (%)	Suicide rates (15-19 yrs) per 100,000 of the 15-19-yo population	Intentional homicide rates (0-14 yrs) per 100,000 of the 0-14-yo population
<i>SDG targets</i>	<b>1.2.1</b>	<b>2.2.2</b>	<b>3.2.2</b>	<b>3.2.1</b>	<b>8.6.1</b>	<b>4.1.1</b>	<b>3.4.2</b>	<b>16.1.1</b>
Albania		1.6	8.8	6.5		47.8		
Armenia	0.84	4.4	12.4	6.5	36.6		0.6	0.0
Azerbaijan		3.2	21.5	11.2				
Belarus	1.00		3.4	1.3		76.6		
Bosnia and Herzegovina	0.96	2.3	5.8	4.1	21.2	46.3	2.1	0.0
Bulgaria	1.07	6.3	7.1	3.6	15.0	52.9	3.3	0.1
Croatia	0.97		4.7	2.6	13.6	78.4	6.4	0.5
Estonia			2.6	1.2	9.9	88.9	8.7	0.0
Georgia	0.74	1.6	9.8	5.9	26.9	35.6	3.1	0.1
Kazakhstan	0.44	3.1	9.9	5.6		35.8	13.5	0.3
Kyrgyzstan	0.79	2.0	18.9	13.2	20.5		7.7	0.1
Latvia	1.03		3.9	2.0	7.8	77.6	6.9	0.3
Moldova, Rep. of	0.51	1.9	15.8	11.9	27.8	57.0	6.8	0.5
Montenegro	0.98	2.8	2.5	1.7	16.2	55.6		
North Macedonia	0.93	1.8	9.9	7.4	24.1	44.9	2.8	0.0
Romania	1.00		7.3	3.4	14.5	59.2	5.3	0.3
Russian Federation	1.06		7.2	3.2	12.4	77.9		
Serbia	1.01	3.5	5.5	3.4	17.0	62.3	1.9	0.4
Tajikistan	0.96	5.6	34.8	15.0			3.3	0.0
Turkey	0.86	1.7	10.6	5.5	24.4	73.9	2.3	0.2
Turkmenistan		4.2	45.8	21.0				
Ukraine	0.33		8.7	5.2	16.5	74.1		
Uzbekistan		1.8	21.4	11.6			14.9	0.2

Note: Most recent data for all indicators is as follows: Population living below the national poverty line, 2017 except Bulgaria, Romania, Serbia (2016), Bosnia and Herzegovina, Croatia, Montenegro, the Republic of Moldova, Tajikistan (2015), and Latvia (2014); children under age five moderately or severely wasted, 2017 except Turkey (2018), Armenia, Georgia, North Macedonia (2016), Kazakhstan, Turkmenistan (2015), Bulgaria, Serbia (2014), Azerbaijan, Montenegro, (2013), and Bosnia and Herzegovina, the Republic of Moldova (2012); under-five mortality rate (deaths per 1,000 live births), 2018; neonatal (<1 month) mortality rate (deaths per 1,000 live births), 2018; youth not in education, employment or training, 2018 except Bosnia and Herzegovina (2019), Armenia, Ukraine (2017), Russian Federation (2016), the Republic of Moldova (2015); children achieving a minimum proficiency level in reading (%), 2018; suicide rates, 2016 except Kazakhstan, the Republic of Moldova and Romania (2017), Bulgaria, Georgia and Latvia (2015) and Bosnia and Herzegovina (2014) and North Macedonia (2013); homicide rates, 2016 except Kazakhstan, the Republic of Moldova and Romania (2017), Bulgaria, Georgia and Latvia (2015). Indicators are colour-coded to show countries half a standard deviation above or below the unweighted country average. Blue represents countries with reported 'worse' than average outcomes, countries with orange colour report 'better' than average outcomes. Categories will be used in the Qualitative Comparative Analysis in Section 4.

Source: See Annex 1.

Two indicators, the under-five mortality rate (3.2.1) and the neonatal mortality rate (Target 3.2.2) are reported under Goal 3 to ensure healthy lives and promote well-being for all at all ages. The former indicator is likely to be sensitive to changes in primary healthcare and preventative treatments for pre-school children, including immunizations; the latter is more likely to be more sensitive to maternal health, hospital care and health system performance around the time of birth. Belarus, Bosnia and Herzegovina, Croatia, Estonia, Montenegro and Serbia are all relatively high performers in the ECA region across both measures. Azerbaijan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan are in the lower-performing group for both measures.

The proportion of youth aged 15 to 24 not in education, employment or training is target 8.6.1 under Goal 8, to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. The COVID-19 crisis has already served to shut schools and workplaces in the majority of countries in the region – with no clear plans for reopening at time of writing. Evidence from the GFC showed that in terms of employment, the crisis in Europe and the Organisation for Economic Co-operation and Development (OECD) disproportionately affected youth (Scarpetta, 2010). Unlike the GFC, which 'only' saw economic slowdown disproportionately affecting youth employment, COVID-19 has also led to the closure of academic centres, meaning that young people staying on in school or higher education may be less ready to pick up the slack of inactivity and unemployment than in previous crises. In ECA there are larger differences in the experiences of youth; in Estonia and Latvia fewer than 1 in 10 young people are NEET, whereas in Armenia it is slightly more than one in three.

Children achieving a minimum proficiency level in reading (percentage) is target 4.1.1 in Goal 4, to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. How school closures and differences in home learning conditions and availability of online learning will affect children's reading and literature during COVID-19, both in terms of average rates and equity in outcomes, is yet to be seen. Results for this measure in ECA countries for 2018 show that around three in every five children of lower secondary school age have minimum reading proficiency, with the highest rates seen in Estonia, and the lowest rates seen in Georgia.

Looking again to Goal 3 – ensuring healthy lives and promoting well-being for all at all ages – suicide rates per 100,000 of the 15–19-year-old population is part of the reporting towards target 3.4.2. This measure is included to reflect the mental health concerns related to COVID-19 lockdown and the experience – for some children – of stress or grief related to illness and death within the family. Understanding additional social and economic pressures on this measure, and the approaches to COVID-19 that mitigate or accentuate these pressures may be important to achieving this goal in the next decade. According to the most recently available data by country, around 1 in 20,000 older

adolescents is a victim of suicide in the region, ranging from Armenia where the risk is around 10 per cent of this average to Uzbekistan, where suicide risks are three times the ECA average.

The final child outcome indicator included in this report is the rate of intentional homicide in the zero to fourteen-year-old population, data included as part of reporting to SDG target 16.1.1. The inclusion of this indicator is to allow for a closer study of the social and economic pressures on violence against children that may be worsened during the COVID-19 crisis. Multiple reports of an increase in the incidence of domestic violence during social lockdown<sup>5</sup> indicates a greater risk of children experiencing and/or witnessing violence. Although an imperfect measure of the prevalence of violence in all its forms, homicide data is more widely available. It is indicative of the severe consequences of violence against a person and is used to infer a failure of state prevention and intervention in acute cases. The highest rate of intentional homicide in the zero to 14-year-old population is seen in the most recently reported data for Croatia, Moldova, and Serbia – where one in 200,000 children is the victim of intentional homicide. The lowest rates are in Armenia, Bosnia and Herzegovina, North Macedonia and Tajikistan where no intentional homicides were reported in the most recent data.

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5 Provide examples here. NPR (2020) for instance.

### 3. COVID-19 AND KEY ECONOMIC, SOCIAL, AND POLICY CONDITIONS THAT MATTER FOR CHILDREN

Initial public policy responses by country have varied on the basis of existing governance, available information, and the extent to which the country has been affected by the virus. This section will therefore present: 1) a range of descriptions and statistics covering national contexts related to initial response (e.g., health care systems, governance); 2) a timeline for the emergence of new information (including the role of international organizations in providing information and other responses); and 3) patterns of COVID-19 growth at the national level (building on the global timeline introduced above).

This section will also present a selection of statistics related to national preconditions that increase or lessen the susceptibility to health, economic or social shocks (e.g., numbers of intergenerational households, rate of informal labour, rates of acute respiratory infections, growth rates and other economic conditions (government debts and current account deficits), poverty and other social statistics related to mental health, intimate partner violence, and so on.

Data are presented for a selection of variable trends and other trend data where the majority of countries that reveal stable patterns over the last 12 to 14 years are not shown here but are available from the authors on request (*See Annex 1, Table 1*).

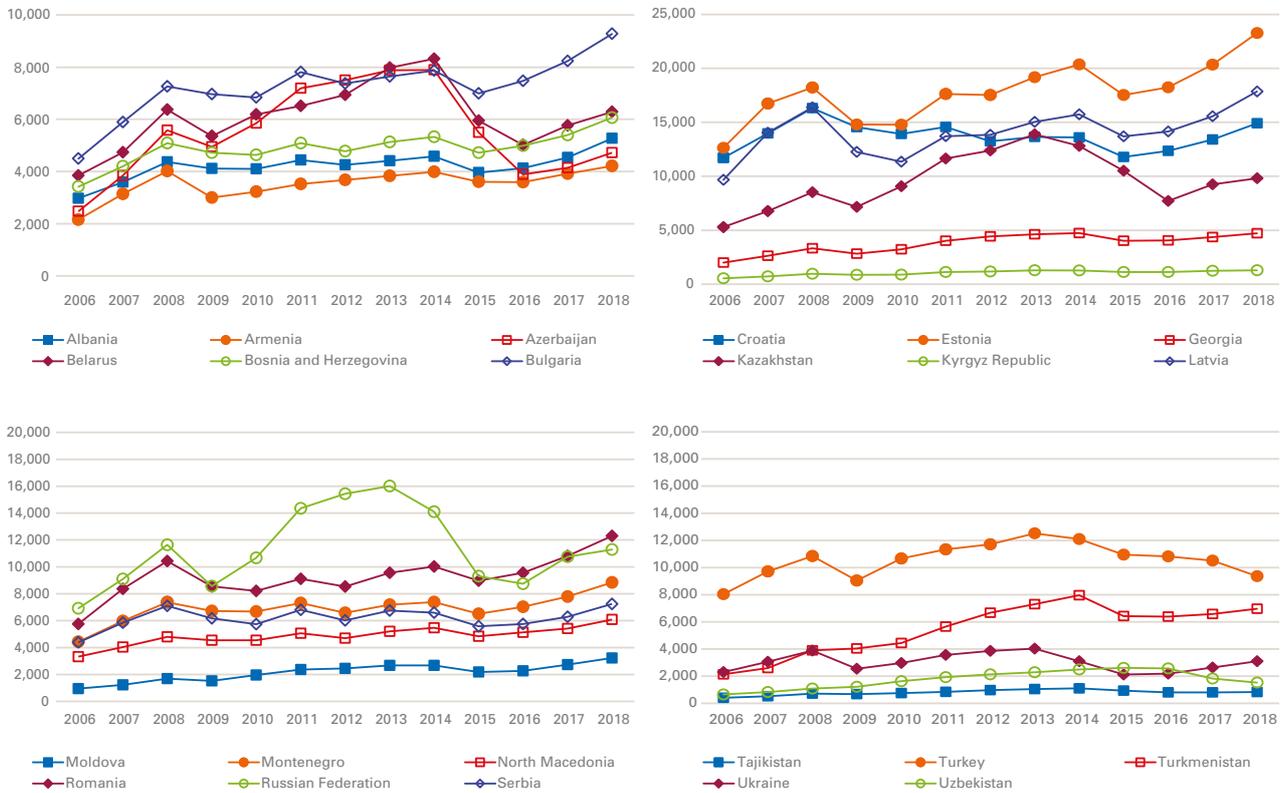
#### 3.1 What economic preconditions matter for children?

The wealth of a nation determines the extent to which it can provide for the needs of its population and specifically, the welfare of dependent groups such as the elderly and children. Wealth is represented by GDP per capita (*see Figure 2*) and mapped from two years before the GFC (2006) to the latest available data (the same timeline will follow in all trend comparisons). Per capita GDP growth indicates economic development, and in social protection for families and children, this can mean greater fiscal space for development of 'investment-orientated' social programmes. Either through inclusive growth or redistribution, GDP per capita growth is a foundation for poverty reduction. Contractions in per capita GDP can limit the fiscal space for public interventions while simultaneously increasing demand for them. This may result in austerity and specifically, greater restriction to benefit coverage, more stringent conditions on receipt, and a weakening of adequacy (Richardson, 2010).

Falls in GDP around the period of the GFC and again in 2014–5 are evident in wealthier countries of the region, and slight but noticeable in the lower-income group (*see Figure 2*). This maps to a time of a Russian financial crisis and a devaluation of the Ruble. The GFC led to contractions in growth, evident in the per capita measures and underlying population trends do not contribute to these fluctuations. Following the dip in 2009, all countries recovered to original trends, peaking between 2013-14 before a second round of contraction. By 2018, Azerbaijan, Belarus and Turkey had not fully recovered from the 2015 dip, despite it being of a smaller magnitude to that seen in 2009.

Figure 2: Falls in per capita GDP are most evidence in the richer ECA countries in 2009 and 2015

GDP per capita (current US\$)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. GDP per capita is gross domestic product divided by mid-year population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data is in current US dollars.

Source: World Bank national accounts data, World Bank, 2020.

Regarding periods of recovery, in both 2009 and 2015 there are examples of countries in the region where recovery was three to five years following the dip in GDP per capita. Among these countries are Armenia, Montenegro, Serbia and Romania and more notably, Croatia where small dips in per capita GDP in 2009 were followed by a stalling recovery – albeit a recovery – over the following 10 years.

Figure 3 looks behind the GDP per capita figures to map the growth rates in the economies of ECA countries from 2006 to 2018. Growth rates indicate an economy is in recession, and productivity, so more broadly, opportunities for earnings fall. With the exception of Azerbaijan (which in 2006 and 2007 reports growth rates of 34.5 per cent and 25.5 per cent respectively), annual growth rates in the region have not exceeded 15 per cent in any given country. Likewise, in recent years, in all countries,

they have not exceeded around 5 per cent. Recent stability in growth rates is a good sign for countries in the region as steady growth provides jobs and opportunities without risking a cycle of boom and bust. Notable in the picture is that around 2008 and 2009, most ECA countries saw significant downturns in economic growth, with contractions as high as 15 per cent. As with GDP per capita, a more minor dip is seen in growth rate trends around 2015. The contractions in Ukraine are notable and are likely to have been influenced by conflict there.

Figure 3: Most ECA countries saw GDP growth fall around 2009, with several in minus figures

GDP growth (annual %)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. To read the downturns at a glance: the quickest short term or one-year recoveries can be seen to have a 'V-shape' (e.g., Armenia), medium-term or two-to three-year recoveries have a more distinguished 'U-shape' (e.g., Ukraine from 2013), and the slower, longer-term recovery, is best described as having an 'L-shape' (e.g., Serbia). Data for Azerbaijan in 2006 and 2007 reports growth rates of 34.5 per cent and 25.5 per cent respectively; these are not included to allow the y-axis range to be readable across all charts. Annual percentage growth rate of GDP at market prices is based on constant local currency. Aggregates are based on constant 2010 US dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

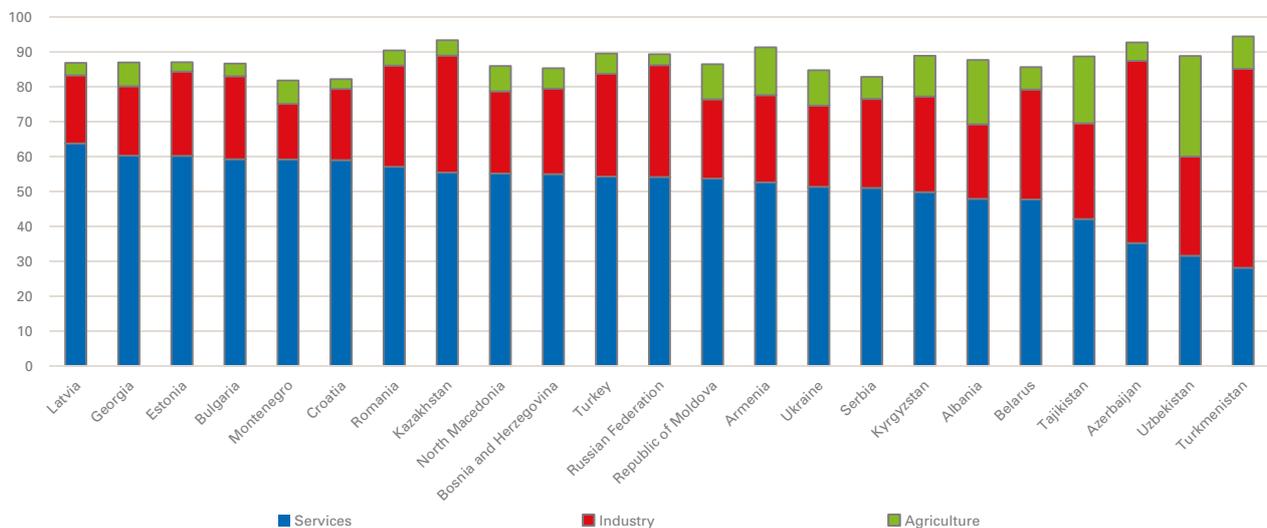
Source: World Bank national accounts data, World Bank, 2020.

Concerning for some countries is the amount of time taken to recover to positive economic growth. Belarus, Croatia (most severely), Estonia, Latvia, and Romania, all spent two or more consecutive years in negative growth following the 2008 GFC.

Both Figures 2 and 3 illustrate historic trends while Figure 4 provides an indication of how each sector – services, industry and agriculture – contribute to the gross domestic product in each country in order to assess future trends. Specifically, including this measure will help infer how various lockdowns and closures might affect workforces. Work that requires manual labour, or a person to be physically at a factory or a farm, is likely to suffer more from lockdowns than work that can be undertaken at home. The size of the services sector will therefore give an indication of the extent to which work can continue through lockdown (if a similar proportion of this in each country can be undertaken remotely – excepting travel and tourism).

Results from Figure 4 show that most countries in the region rely on the service sector to generate 50 per cent or more of wealth in the economy. However, industry continues to make significant contributions, particularly in Azerbaijan, Kazakhstan and Turkmenistan. Uzbekistan is most reliant on productivity from agriculture, where forestry, hunting, fishing, and farming contribute equivalent value to both industry and the service sector.

Figure 4: Services contribute half of the GDP in 17 of the ECA countries  
Value added to the economy by each sector, as a percentage of GDP.



Notes: Countries are ordered left to right by size of the value added by the service sector. Value added is the net output of a sector after adding up all outputs and subtracting intermediate inputs. It is calculated without making deductions for depreciation of fabricated assets or depletion and degradation of natural resources. Services correspond to wholesale and retail trade (including hotels and restaurants), transport, and government, financial, professional, and personal services such as education, health care, and real estate services. Also included are imputed bank service charges, import duties. Industry includes mining, manufacturing, construction, electricity, water, and gas. Agriculture includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production.

Source: World Development Indicators database, World Bank, 2020.

Of note is that four of the top seven countries in terms of value added by the service sector – Croatia, Estonia, Latvia, and Romania – are also countries that saw the most prolonged downturns in the region at the time of the GFC (*see Figure 4*).

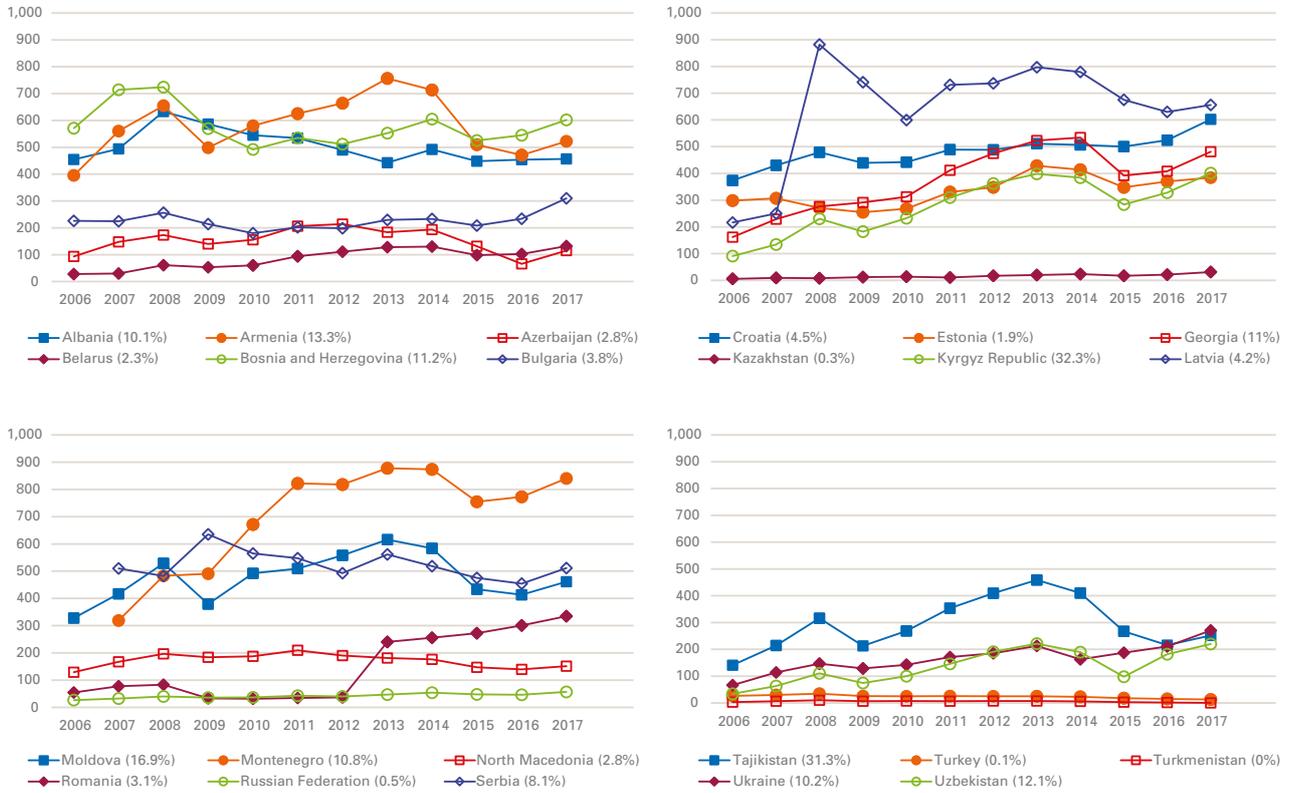
Another economic factor relevant to the ECA region, certainly in terms of protecting livelihoods, is the receipt of remittances. Figure 5 maps the receipt of remittances in ECA countries per capita. Results show that the dips in remittance trends mirrors, in some countries, GDP per capita falls in 2009 and 2015. In some countries, remittances were largely unaffected by economic downturns in 2008 and 2015, which may be explained by the type of sectors in which earnings underlying remittances were made.

Remittances as a proportion of GDP per capita in 2017 are reported in parentheses following country names (*see Figure 5*). In Kyrgyzstan and Tajikistan remittances are received at rates equivalent to more than 30 per cent of GDP per capita. In Albania, Armenia, Bosnia and Herzegovina, Georgia, the Republic of Moldova, Montenegro, Ukraine, and Uzbekistan remittances are equivalent to 10 per cent of GDP per capita.

Several other indicators were collected to reflect the economic situation in ECA countries and may be included in the analysis in Sections 3 and 4. However, they are not presented and discussed due to limited data coverage for trends analysis across the group. Annex Table 1.3 provides the additional data on central government debt, net overseas development aid received per capita, and the balance of trade in ECA countries as a percentage of GDP for 2018.

Figure 5: Two dips in remittances are visible around 2009 and 2015, to varying extents

Personal remittances per capita, received (current US\$)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Remittances include 1) personal and current transfers in cash or in kind between resident and non-resident individuals, independent of the source of income of the sender and the relationship between the households; and 2) compensation of employees which refers to the income of boarder, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by non-resident entities. Compensation of employees represents gross earnings in cash and in-kind.

Source: World Development Indicators database, World Bank, 2020.

### 3.2 What social and demographic conditions matter for children?

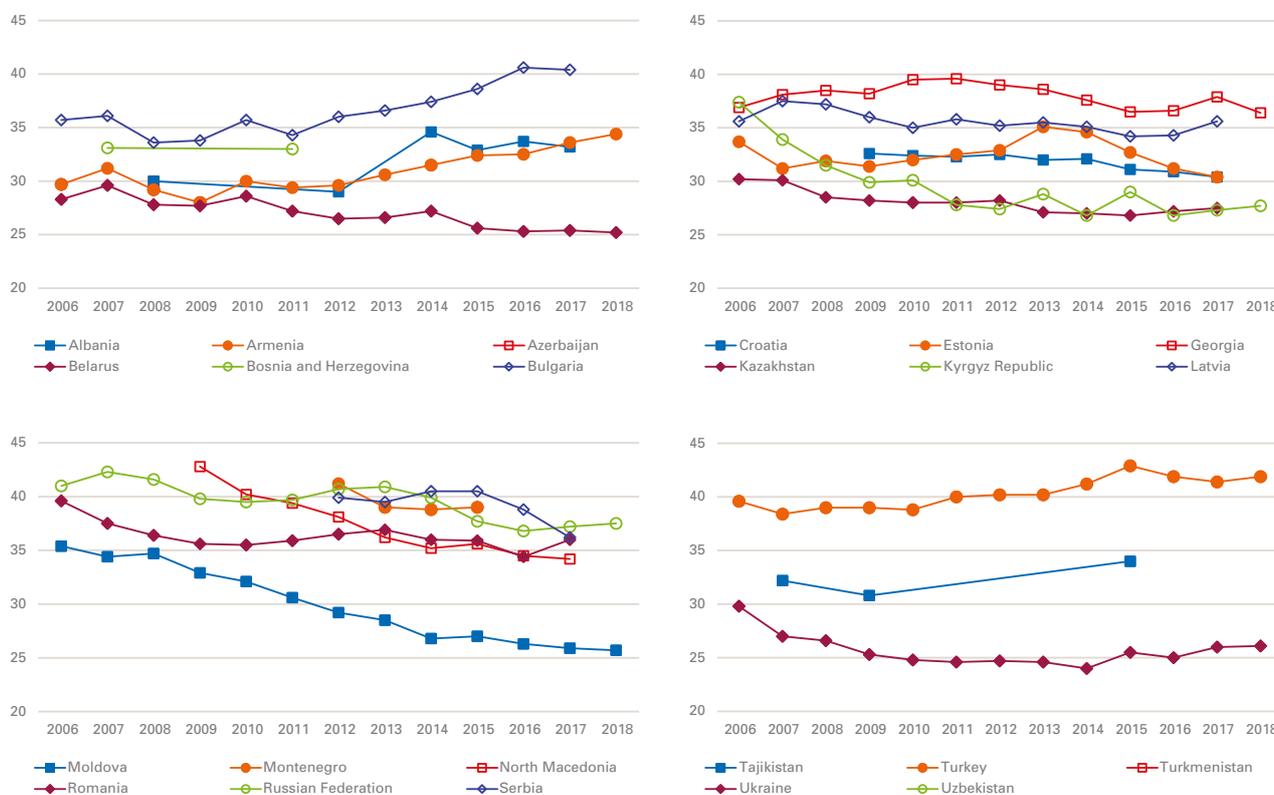
Complementing economic conditions, the social conditions of a nation will determine how prepared they are to respond to the COVID-19 crisis, and how interventions for responding might be designed. This section includes information about: income inequality; social protection expenditure; adequacy and coverage; employment statistics; rates of malnutrition; health expenditure; out-of-school populations and education expenditures; violence in the population (homicide rates); and the age-distribution of the population itself.

Figure 6 presents data on income inequality in the countries of ECA between 2006 and 2018 using the Gini index. Countries with higher levels of income inequality commonly have greater challenges in meeting the needs of the entire population with single universal interventions. Moreover, inequality is commonly found in parallel with higher rates of relative income poverty and related costs to

individuals and society. Inequality is a barrier to intergenerational mobility between income groups and as such, acts as a drag on social development.

Across all the countries trends lie between a Gini Index of around 25 and just under 45. These are all below a threshold of high levels of inequality (50) and on occasion fall below the threshold for low levels of income inequality (30). The majority of countries show relatively consistent trends in inequality, with increases seen in the cases of Albania, Armenia, Bulgaria and Turkey, and falls seen in Belarus, Kyrgyzstan, North Macedonia, the Russian Federation, and most notably, the Republic of Moldova.

Figure 6: Income inequality in ECA is falling or stable in the majority of countries  
GINI index (World Bank estimate)



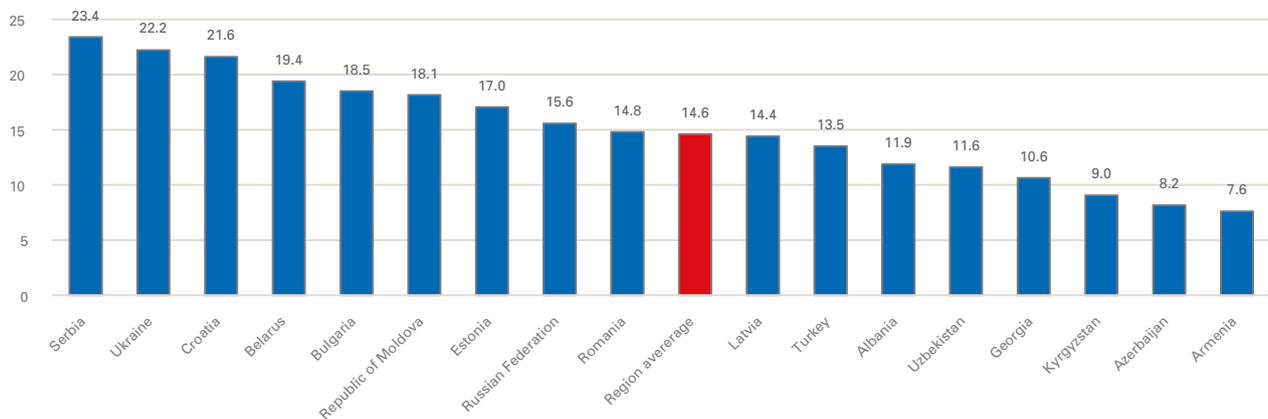
Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Gini index measures the extent to which the distribution of income (or in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Source: World Development Indicators database, World Bank, 2020.

Figure 7 reports the social expenditure in ECA countries, based on most recent available data. The social protection data includes data on unemployment benefits, pensions, social assistance payments, social insurance contributions, and benefits paid for the purpose of child raising. Across the region around 15 per cent of GDP on average is spent in social protection, ranging from just on 8 per cent in Armenia to almost 23 per cent in Serbia. Total social protection expenditure indicates the fiscal space for existing interventions and to a lesser degree, the political economy for social protection response. Naturally, the level of expenditure in social protection also gives an indication of the strength of the social protection system and therefore, how well it is likely to mitigate shocks related to COVID-19.

Figure 7: Social protection spending in ECA countries accounts for approximately 15 per cent of GDP on average

Public social protection expenditure, 1995 to latest available year (percentage of GDP)



Note: for some countries, e.g., EU member states, disaggregated data is available through ESSPROS.

Source: World Social Protection Report, 2017-2019.

What is notable is the aggregated nature of social protection expenditure and limited data availability (see Figure 8). The scarcity of data on social protection expenditure in ECA countries is replicated for data on the coverage of social transfers and the adequacy of cash transfers (see Annex Table 1.3). Again, the data on social transfer coverage and adequacy does not cover all countries and does not differentiate between benefits, which are directly delivered to families raising children or to children themselves. Instead, these data refer to all forms of social transfers, irrespective of the modality of payment, eligibility criteria, or rate of payment. More specific data on the types of social expenditures to different sociodemographic groups in the ECA region is needed to assess which types of social protection portfolios are most effective at meeting the needs of families with children.

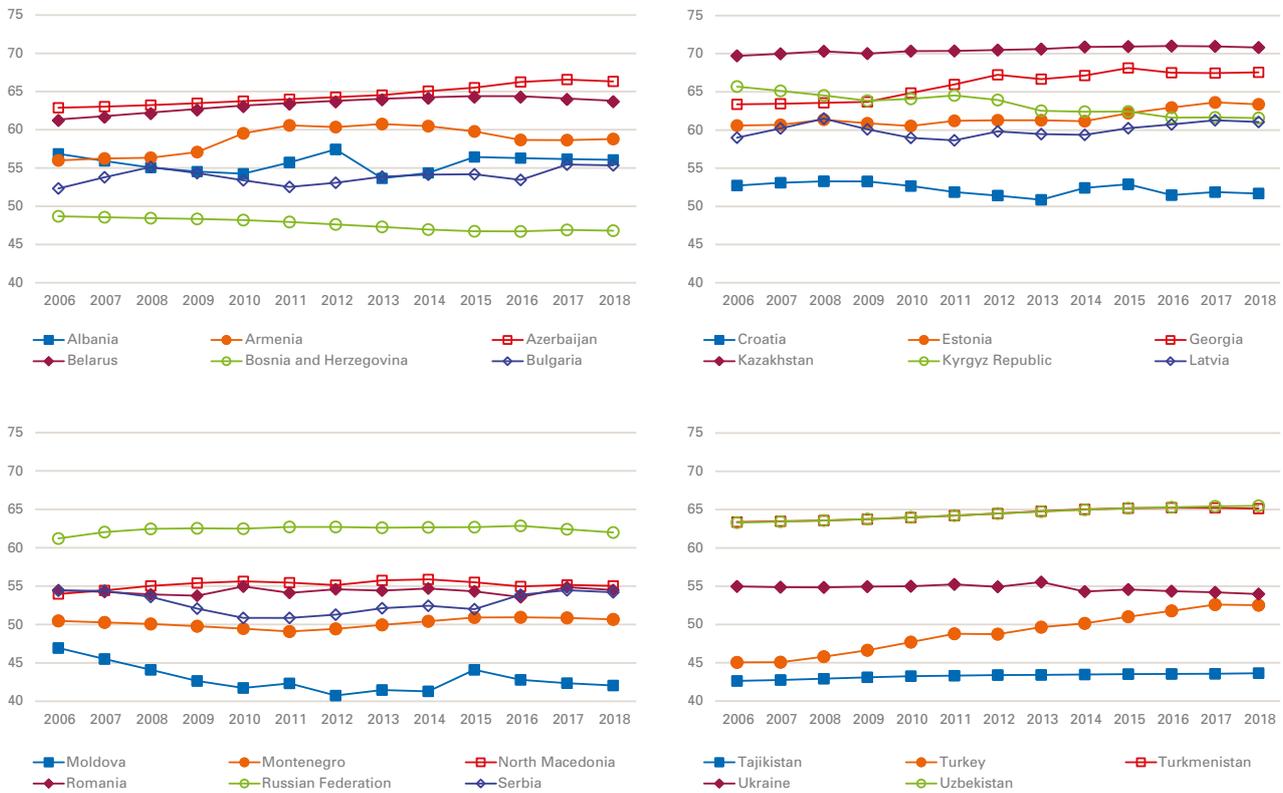
Figures 8 and 9 cover labour force participation and youth labour force participation to provide context on the potential impact of the lockdowns on family poverty and youth not in employment, education or training (NEET) rates. There is a great deal of consistency in labour force participation rates in the adult population between 2006 and 2018 in most countries (see Figure 8). The most notable fluctuations are visible in Albania and Moldova, and the most notable increase is seen in

Turkey. The highest rates of labour force participation in the region are in Latvia, at around 70 per cent of the total population aged 15 and older, and the lowest rates are in countries with rates consistently below 50 per cent, including Bosnia Herzegovina, the Republic of Moldova, and Tajikistan.

Efforts to collect data on informal labour were undertaken to compare with labour force participation rates. Data is only available for three countries: Armenia, 24.7 per cent; Bosnia and Herzegovina, 19.1 per cent; and, Serbia 16.1 per cent (*see Annex Table 1.3*). Informal labour market participation results in workers being outside of official systems for social insurance, for the payment of taxes, and on occasion social assistance. High rates of informality, lower tax inflows, and social insurance contributions at the aggregate level, mean the sustainability of fiscal stimulus and social protection related to the COVID-19 response will be diminished. Moreover, countries with lower income tax inflow rely more on consumption taxes and other forms of transaction taxes. At times of lower consumption, this type of tax inflow to fund public policies is also likely to be diminished. Finally, low rates of labour formality will mean social protection responses directed at official employment having lower coverage rates overall. Universal coverage is a prerequisite for the more progressive forms of social protection, particularly when the most vulnerable groups – such as people in informal and insecure employment – are outside the recipient group.

Figure 8: Except in Turkey, ECA labour force participation rates are largely unchanged since 2006

Labor force participation rate, total (% of total population ages 15+)



Notes: Labour force participation rate is the proportion of the population aged 15 and older who are economically active – all people who supply labour for the production of goods and services during a specified period.<sup>7</sup>

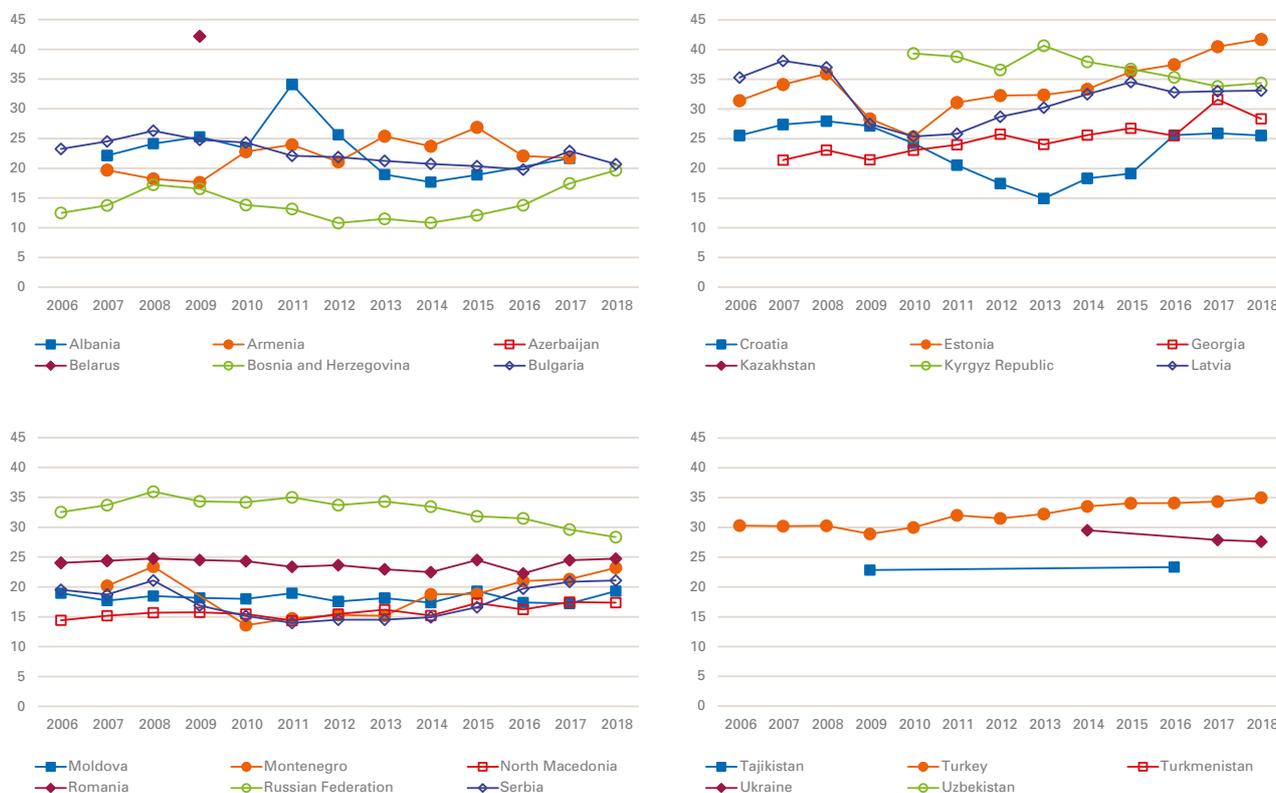
Source: World Development Indicators database, World Bank, 2020.

What is notable from Figure 9, which maps the trends in youth labour force participation, is a lack of consistency in country trends. Moreover, labour force data for this age group has more gaps than data reported for the adult population. Trends in youth labour force participation in ECA countries does not consistently mirror growth trends or contraction around the 2008 GFC or the economic downturn in 2015, although in Croatia, Estonia, Latvia, the Republic of Moldova, and Serbia downturns in youth labour market participation were seen in 2009 or 2010. Similar downturns are not immediately evident in the adult population labour force participation trends (see Figure 8).

7 Eco, not health, crisis – informal labour.

Figure 9: In most countries of ECA, youth employment is stable or increasing modestly

Employment to population ratio, ages 15-24, total (%) (national estimate)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Employment-to-population ratio is the proportion of a country’s population who are employed. Employment is defined as persons of working age who, during a short reference period, were engaged in any activity to produce goods or provide services for pay or profit, whether at work during the reference period (i.e., who worked in a job for at least one hour) or not at work due to temporary absence from a job, or to working-time arrangements. Ages 15-24 years are generally considered the youth population.

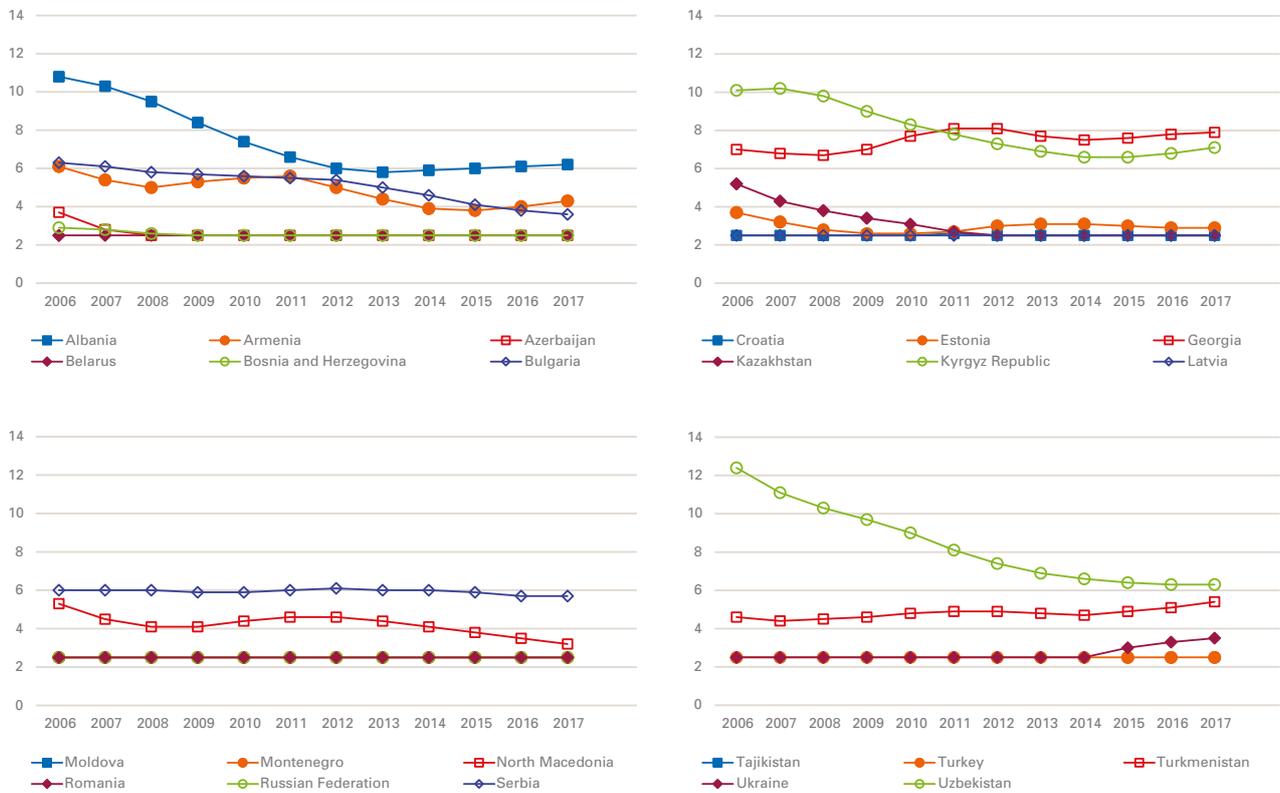
Source: World Development Indicators database, World Bank, 2020.

Looking at malnutrition in the general population, there is a series of downward trends across most ECA countries in data from 2006 onwards (see Figure 10). Undernourishment is ‘the percentage of the population whose food intake is insufficient to meet dietary energy requirements continuously’ (WDI, 2020) and is one way to indicate the extent to which poverty in the population is translated into deprivation and poor nutrition.

In recent years ECA countries’ trends in undernourishment have been converging. With rates falling from above 10 per cent of the total population, Albania, Kyrgyzstan, and Uzbekistan have begun to catch up with the rest of the region. A number of countries such as Armenia, Georgia and Serbia, where undernourishment affects as many as one in 20, have seen no real gains in relative risk of being undernourished. In the remaining countries, fewer than one in 30 experience undernourishment, but no country is yet to fully eradicate this condition in their population.

Figure 10: Although undernutrition is falling in ECA countries, on average a few countries have seen increases

Prevalence of undernourishment (% of population)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Population below minimum level of dietary energy consumption (also referred to as prevalence of undernourishment) shows the percentage of the population whose food intake is insufficient to meet dietary energy requirements continuously.

Source: World Development Indicators database, World Bank, 2020.

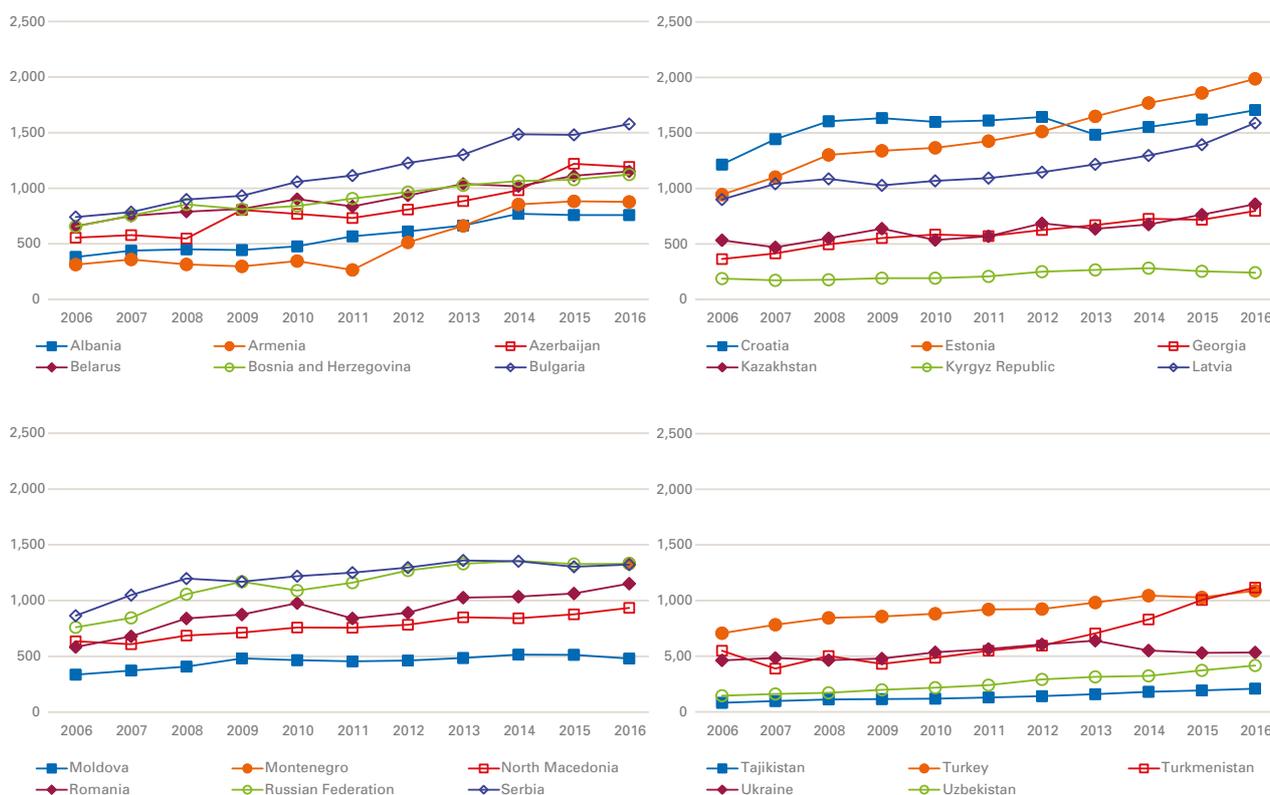
Similar to social protection expenditure (*see Figure 10*), public expenditure on health can be used to indicate the extent to which public systems are prepared to respond to health crises, and the health repercussions of economic crisis. Figure 11 reports trends in current health expenditure in per capita terms in sea countries since 2006. Across ECA countries, per capita health expenditure increased in real terms in the decade between 2006 and 2016. Expenditures have at least doubled in several countries, including Armenia, Azerbaijan, Bulgaria, Estonia, Georgia, Tajikistan, Turkmenistan, and Uzbekistan. The most modest increases were observed in Croatia, Kyrgyzstan, and the Ukraine.

To complement the public investment in health services, families also regularly invest in health care needs from their own accounts. The level of out-of-pocket costs on health services is commonly considered to be a bigger barrier to accessing healthcare the higher the level becomes. Any disincentive to accessing healthcare services is a major concern as COVID-19 spreads. Out-of-pocket costs will be used to as a determinant in analysis of health outcomes for children in Sections 3 and 4 with the most recent data presented in Annex Table 1.4. All countries have data for out-of-pocket

health expenditure, and trends in expenditure have been relatively consistent over time. In 2018, out-of-pocket health costs in ECA countries ranged from 15 per cent of total health expenditure in Croatia, to 81 per cent in Armenia. The average per person spend on out-of-pocket health costs in ECA countries is 45 per cent of total health care costs (World Development Indicators (WDI), 2020).

Figure 11: Current health expenditure in per capita terms has increased in ECA countries since 2006

Current health expenditure per capita, PPP (current international \$)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Health expenditure estimates have been prepared by the World Health Organization under the framework of the System of Health Accounts 2011. SHA 2011 tracks all health spending in a given country over a defined period of time, regardless of the entity or institution that financed and managed that spending.

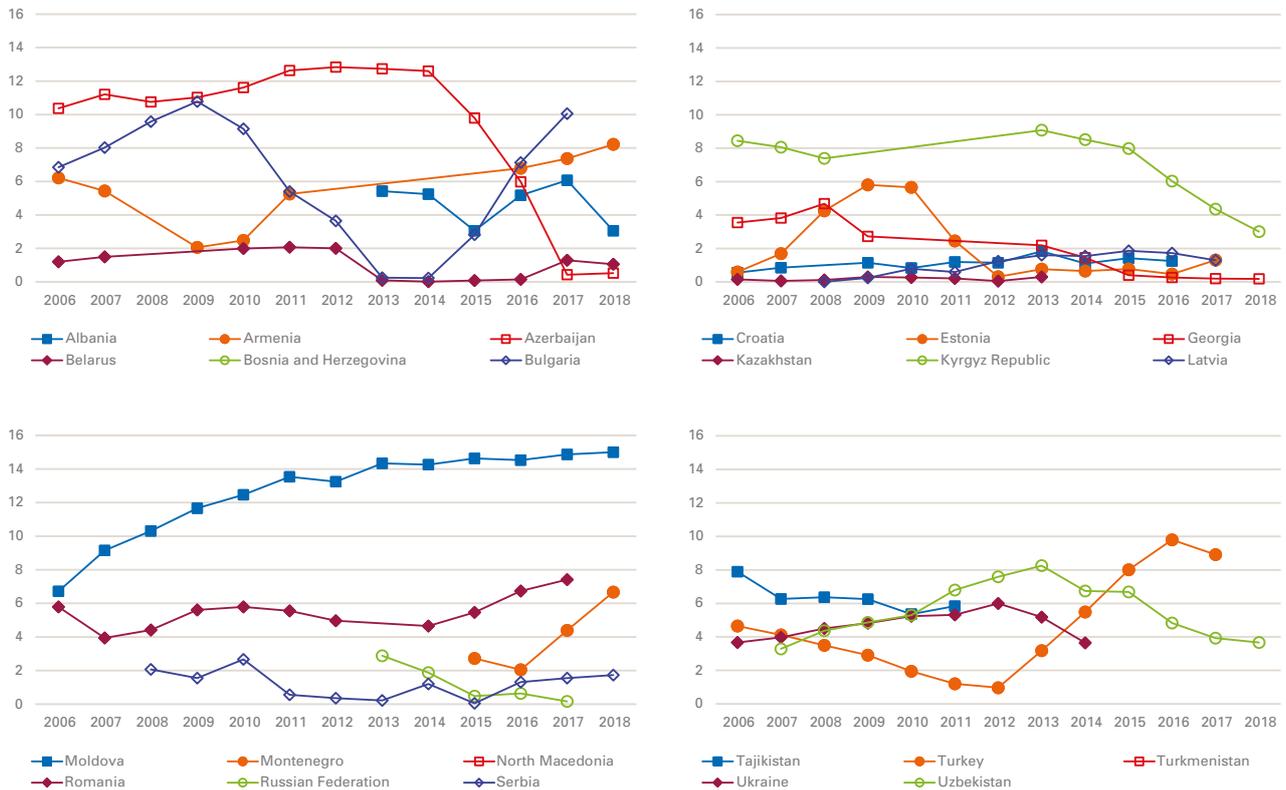
Source: World Development Indicators database, World Bank, 2020.

Education is another important social condition to consider in times of health and economic crisis. Later in this report, education data will be used to study the effects of economic and social conditions on children’s reading proficiency; a key determinant of learning outcome is school attendance. Figure 12 reports the proportion of adolescents of secondary school age in the region who are out of school. Aside from predicting literacy rates, knowing what proportion of children are out of school provides vital information for understanding the extent to which COVID-19-related school-based interventions will be able to address the needs of all children in a country.

The results show a great deal of volatility across countries in out-of-school populations (see Figure 12). In Azerbaijan since 2014 for instance, the number of adolescents out of school fell by 10 percentage points over a four-year period. Similar success was seen in Bulgaria in the years leading up to 2013, however this was not sustained, and rates of out-of-school children returned to around 10 per cent of total. An opposite pattern to Bulgaria is seen in Estonia, where the out-of-school population increased and then fell back to low levels. More consistent gains in school attendance can be seen in both Kyrgyzstan and Georgia. Remaining countries in the region have seen relatively stable patterns, except the Republic of Moldova and Turkey where, since 2006, rates of out-of-school children have doubled from 6 to 12 per cent, and from around 4 to around 8 per cent in each country respectively.

Figure 12: Across ECA the trend changes in out-of-school adolescents are irregular, rising in some cases

Adolescents out of school (% of lower secondary school age)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported.

Source: World Development Indicators database, World Bank, 2020.

Another social outcome trend in the analysis is intentional homicide rate in the population. This indicator is the focus of SDG 16, target 16.1.1. Homicide rates are introduced in this study to indicate the extent to which violence is experienced in each country, the extent to which the most extreme forms of physical violence are experienced in the region, and to understand whether violence of this form can predict experiences of violence in childhood. Moreover, this study will assess whether economic pressures brought on by the crisis, such as job loss, income poverty, and social isolation (e.g., due to stress, a lack of space, or an inability to escape immediate threats) imposed as response to the health crisis, might result in a spike in violence.

Results show that, with a few exceptions, there were declining trends of homicide rates in the total population in ECA countries (*see Figure 13*). Trend declines are stable, with the exception of Albania, Kyrgyzstan and to a lesser degree, Ukraine (this is likely to be partially explained by current conflict). For some countries, trend data on homicides in the population is sparse and needs updating. For instance, trends in Turkey and Tajikistan, and a single data point for Turkmenistan, all represent experiences prior to the start of SDG monitoring.

Figure 13: With a few exceptions, ECA countries are seeing a declining trend in homicide rates

Intentional homicides (per 100,000 people)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Intentional homicides are estimates of unlawful homicides purposely inflicted as a result of domestic disputes, interpersonal violence, violent conflicts over land resources, intergang violence over turf or control, and predatory violence and killing by armed groups.

Source: World Development Indicators database, World Bank, 2020.

The last set of data to be introduced in this section is demographic data and more specifically, population pyramids mapping the population in each country according to age and gender (charts, for reference, are in Annex 2 of this document).

The population pyramids can be broadly categorized into three groups:

- The first set have triangular shapes with large population bases around the preschool and primary school-age groups, tapering upwards in a fairly standard pattern to a point where the smallest population is aged 85 and over. Countries in this category include Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.
- The second set display a more-rounded pyramid where the size of age cohorts diminishes more slowly as cohorts get older. This is seen in Turkey, giving the pyramid a round-edged look, with no irregularities in the population changes by age cohort. Similar round-edged shapes can be seen in countries such as Bosnian Herzegovina, Montenegro, Romania, and Serbia (although the younger cohorts are less populated than the adolescent and the working-age cohorts, creating a bulge in the working population age groups). Rounder pyramids have fewer young dependents overall, relative to the more 'triangular' pyramids.
- A third category may be described as 'tree-shaped', where from working age upwards, a triangle is formed as elderly cohorts are less populated, and below working age, where childhood and adolescence generally have smaller populations and their own pyramid shape. In these countries, a period of low fertility followed by recovery over the past two decades means higher dependency ratios, and challenges for welfare sustainability as the present workforce enters retirement. Countries with this shape include Azerbaijan, Belarus, Latvia, the Republic of Moldova, the Russian Federation, and Ukraine.

A number of countries fall between two categories. Kazakhstan for instance has a very distinguished triangle shape with smaller populations in the adolescent years. Albania, Armenia, Bulgaria, Estonia, and Georgia have a rounded, smoothed population pyramid but also have attributes similar to irregularities of the 'tree' pattern.

It is important to note that on a few occasions, gender differences are evident either side of the pyramid. For instance, among the older group in Croatia, Estonia, and Latvia, the population of females is much larger than that of males. This too is the case for the Russian Federation and the Ukraine, but differences in these countries are also evident starting from around age 55. Gender differences in pensionable age groups have consequences for poverty risks in households (including intergenerational households) where pensions rights have historically been built on social contributions related to employment – and mostly for men.

Demographic data is important when assessing the public policy response to COVID-19. Such data informs the dependency ratios in a population, and therefore welfare affordability and sustainability. The population pyramids will therefore be referenced as part of the assessment and recommendations for social protection and public policy responses in Sections 5 and 6. Alongside this data, separate data has been collected on dependency ratios, and this series will be included in analyses.

### 3.3 How have COVID-19 caseloads affected countries in Southern and Eastern Europe and Central Asia?

Building on the economic and social background of countries in the ECA region, this section introduces evidence on COVID-19 caseloads by country and compares the onset of caseloads and deaths to approaches to the lockdown. These data are important for understanding the timing of the social and economic effects on families with children relative to the onset of the virus and its death toll. Together, these give an indication of: the extent of the time missing from the labour market and from school; the length of time families with children have been in physical isolation; and the severity of, and trends changes in, the virus caseload by country and how this might lead to longer or shorter lockdowns overall.

Figure 14 presents a series of timelines by country, mapping the onset of COVID-19 records, and overlays the timing of closure and decrees related to physical distancing/isolation (r), international travel (i), school closures (s), workplace closures (w), and the cessation of public events (p). Recovery rates are available from the same source but are not presented here.

To read the charts, take for example Albania. The left-hand axis reports the daily counts of cases and deaths (running from 0 to 40), the right-hand axis reports the cumulative counts of cases and deaths from 30 January (the day the first response measure was implemented in the region – when the Russian Federation closed its borders to Chinese visitors) to 30 April inclusive (running from 0 to 1,000). Total cases to the end of April are reported under the country name in each chart (773 cases, 31 deaths). Both trend lines higher in the chart are counting cases, the lines lower in the chart both count deaths. For both cases and deaths, the lines for daily counts are more easily distinguished by their volatility and this is the same for all countries. On 9 March 2020, Albania implemented the full set of lockdowns and closures reported by these charts – these are flagged using the letters i, r, p, w, and s.

To interpret the full set of results, countries with similar responses are reported in groups. The first set of groupings refers to the speed at which lockdown measures were implemented, and the manner in which they were coordinated. Of all of the countries, only Albania implemented a full set of measures, all on the same day (9 March). Montenegro and Armenia also implemented all measures on the same days – the 13 and 16 of March respectively – but both countries have not implemented workplace closures.

Bosnia and Herzegovina, Latvia, and Ukraine implemented a full set of measures within a week. North Macedonia implemented all lockdowns in a week, but no evidence has been found to suggest either workplaces or public events have yet closed down. Uzbekistan implemented all lockdowns in eight days. In each country's case, these lockdowns started in mid-March.

The remaining countries, with more than one decree in place, implemented lockdowns and closures in a different order over different periods of time. The earliest lockdowns were implemented by the Russian Federation (see above), Turkey on 6 February (banned entry to visitors from high-risk countries), and Romania, whereas from 11 February visitors from China have been required to quarantine for two weeks. In each of these countries the remaining decrees were implemented in March ranging from 10 days in Turkey (12 Mar [r] to 22 Mar [w]), to 23 days in Romania (8 Mar [p] to 31 Mar [r,w]), and 25 days in the Russian Federation (5 Mar [r] to 30 Mar [w]).

The remaining countries with multiple lockdowns – Azerbaijan, Bulgaria, Croatia, Estonia, Georgia, Kazakhstan, the Republic of Moldova and Serbia – actioned either four or five decrees in approximately 10 to 20 days. In all cases, school closures, public events, or international travel were the earliest interventions. Lockdowns and workplace closures were more commonly postponed. There are no examples in the countries with stepped closures where schools were closed last.

So far, Tajikistan has implemented just one decree, on physical distancing and isolation on 15 March. Belarus had not implemented any decrees or lockdowns by the end of April. There is no data for Turkmenistan.

Figure 14: Daily (left-axis) and cumulative (right-axis) deaths and caseloads by country with lockdowns

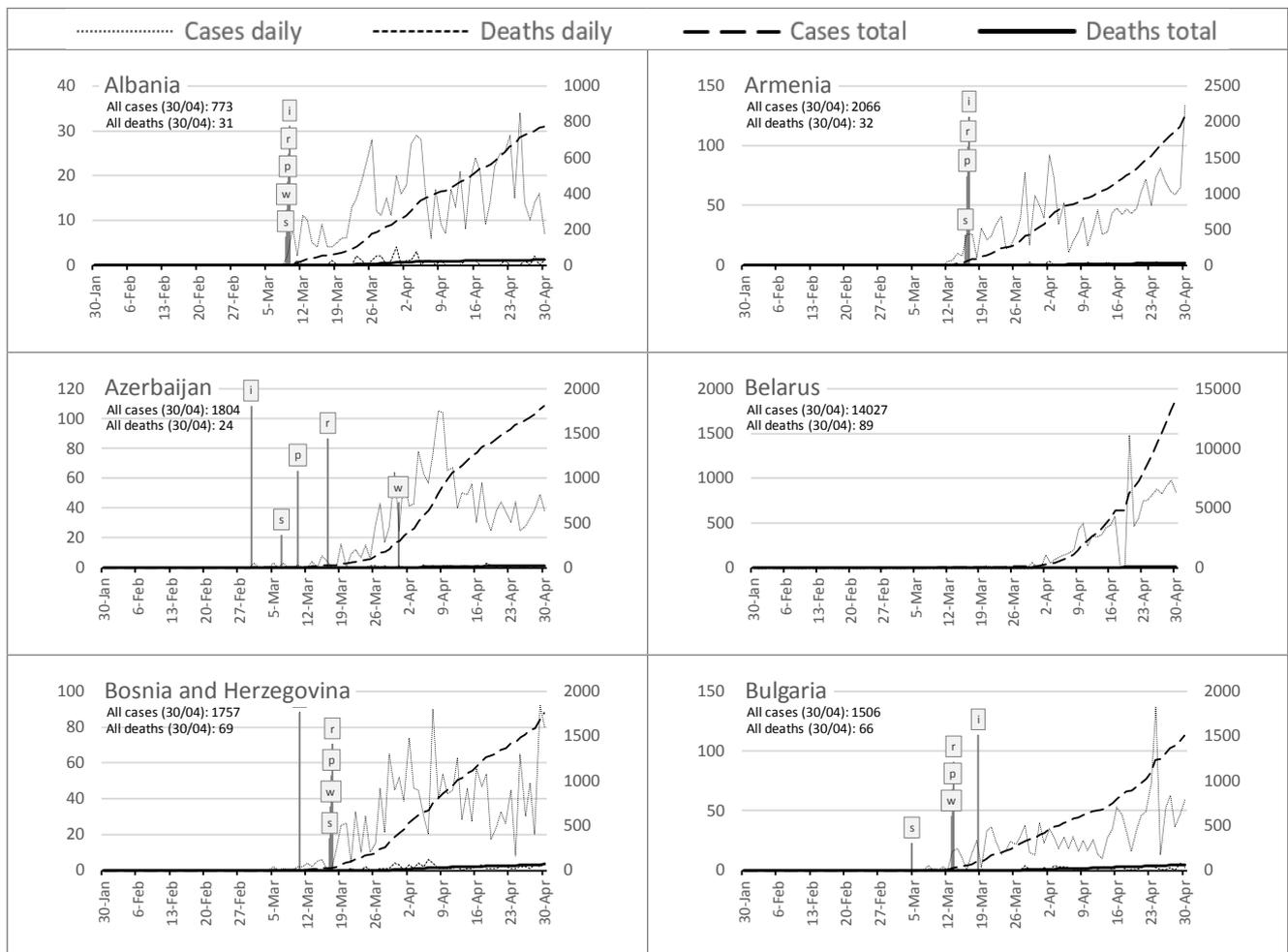


Figure 14: Daily (left-axis) and cumulative (right-axis) deaths and caseloads by country with lockdowns

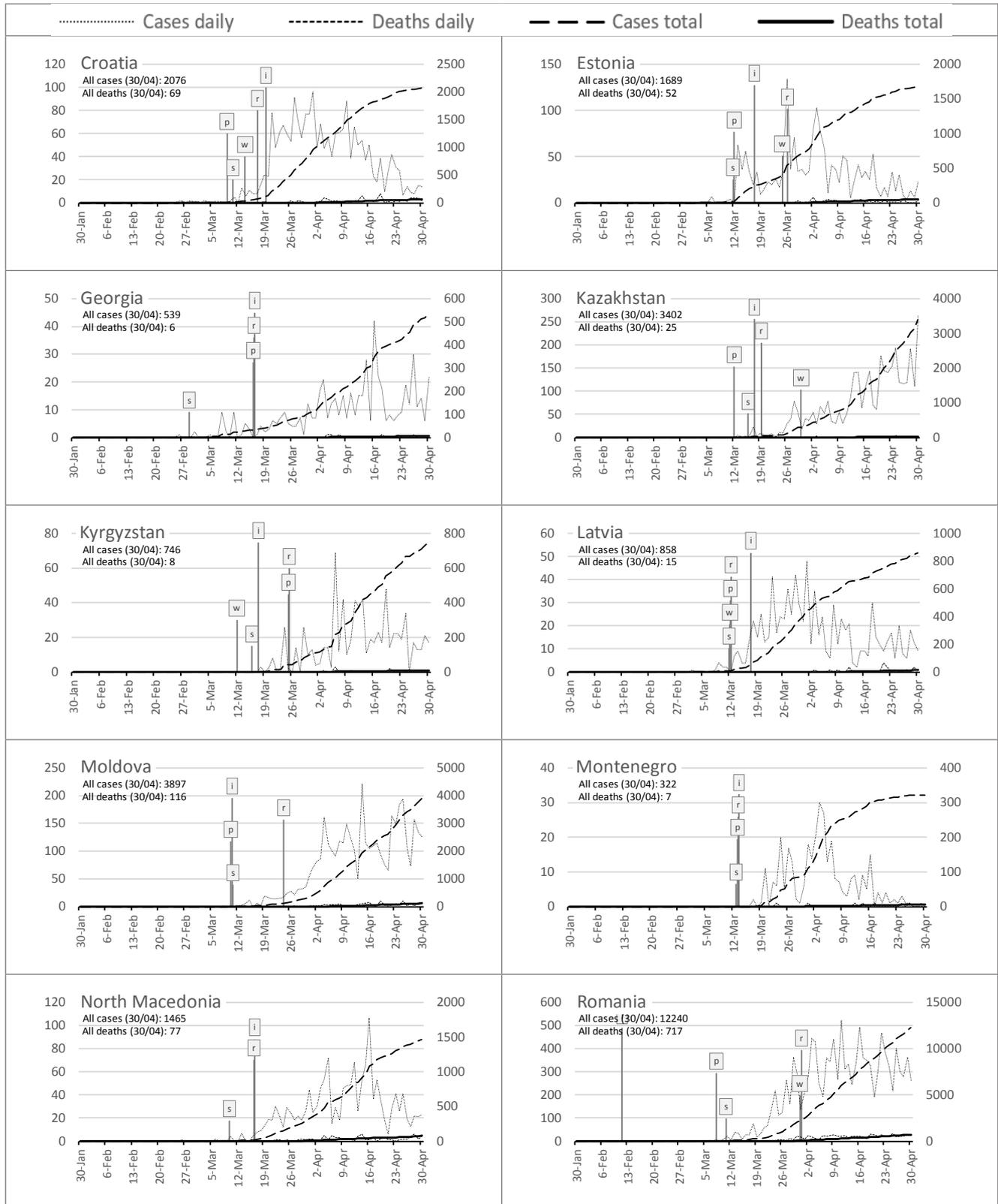
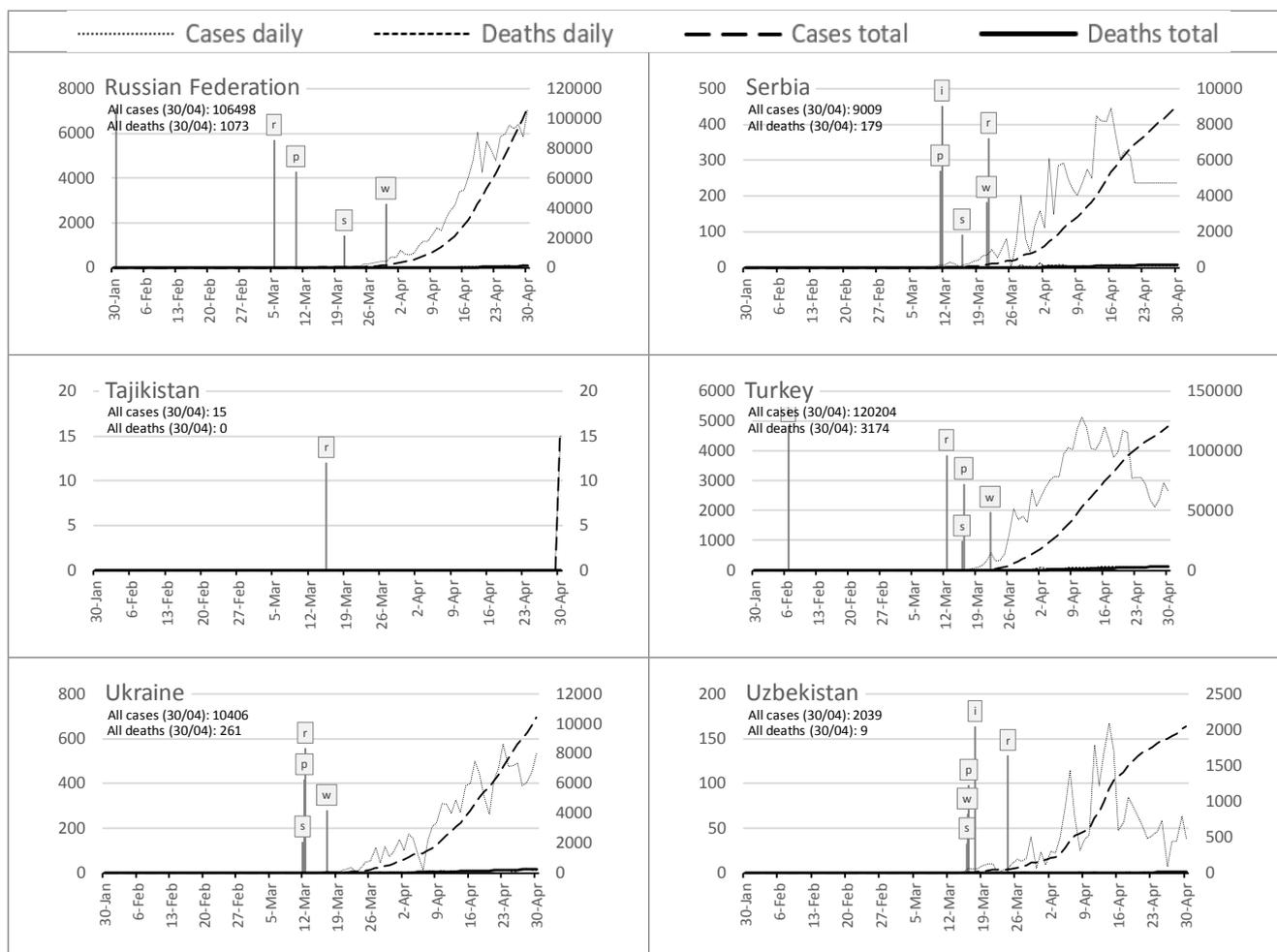


Figure 14: Daily (left-axis) and cumulative (right-axis) deaths and caseloads by country with lockdowns



Note: There is no data for Turkmenistan. Data for Serbia was unreported between 21 April and 29 April – data for 30 April has been smoothed. Key: ‘i’ = international travel ban, ‘r’ = restrictions on personal movement (lockdown), ‘w’ = workplace closures, ‘s’ = school closures, ‘p’ = ban on public events.

Source: Johns Hopkins, 2020 ([COVID-19 data](#)); Oxford University [Coronavirus Government Response Tracker](#), 2020 (closures).

The second way to review the country groupings by COVID-19 caseloads and responses is by looking at the shape and onset of caseloads of COVID-19 and the deaths, relative to the implementation of social decrees.

A number of countries seem to be reporting declining daily caseloads over time. These include Azerbaijan, Croatia, Estonia, Georgia, Kyrgyzstan, Latvia, Montenegro, North Macedonia, and Uzbekistan. In most of these countries, except for Georgia and Kyrgyzstan, the beginnings of a ‘flattening’ of the curve in the cumulative caseloads is visible. Among this group of countries only Georgia, North Macedonia, and Montenegro have not closed workplaces. North Macedonia has also not banned public events. In most cases, the timing of the closures is closely clustered around

mid-March, however Estonia and Georgia have larger gaps and responded with later closures after caseloads had begun to noticeably increase.

In contrast, another group of countries reported the highest daily caseload around 30 April, including Armenia, Bosnia and Herzegovina, Kazakhstan, the Russian Federation, and Ukraine. High daily caseloads reported at the end of April would suggest that these countries are yet to reach the peak of the COVID-19 health crisis. In regard to the timing of closures for this group of countries, workplaces were closed as late as 30 March, or were not closed, with the exception of Bosnia Herzegovina and Ukraine where, despite closure patterns similar to most countries, caseloads are still on the rise.

The two countries with the highest caseloads and deaths are among the most populous countries in the region: Turkey and the Russian Federation, where cumulative caseloads in both countries exceeded the 1 million mark by 30 April. Deaths in these countries are higher than 3,000 and 1,000 respectively by end April, and have since continued to climb. The countries with the lowest caseloads in the region are Montenegro and Georgia, in these countries total deaths are 6 and 7 and caseloads are around 300 and 500 respectively.

Tajikistan is a unique case, with just 15 reported infections identified by the end of April, no deaths reported, and one social decree. Belarus, where no social decrees of any form were reported by 30 April, in contrast to Azerbaijan (a country of a similar population size – around 9.5 million) is reporting caseloads 7 times higher, with the cumulative caseloads displaying a steeper upward trend.

### **3.4 Public policy response to COVID-19 in Southern and Eastern Europe and Central Asia**

What has been the response of governments to the COVID-19 crisis in ECA countries? Tables 3 and 4 map the social protection and fiscal stimulus responses in the 23 countries. Each table describes: the type of social protection policy or fiscal stimulus; the individuals or recipients of the intervention; the coverage in terms of numbers of recipients (social protection only); the payment details and costs related to the intervention; whether the intervention is national or universal in scope; and the length of time over which it will be implemented.

Tables 4 and 5 are for reference, primarily in the sections that assess these responses; for this reason they will not be detailed in the text beyond a few headline facts.

From Table 4, in terms of social protection, by 28 April:

- Sixty-one policies have been implemented in the ECA region, 23 of these built upon existing social protection systems, the remainder new. Armenia (9), the Russian Federation (7) and Turkey (5) are the most active countries in the region in terms of social protection reforms. Evidence of reforms in Azerbaijan, Belarus, Latvia and the Republic of Moldova have not been found.
- Whether a reform has insurance contribution conditions, has work incentives or conditions, or is provided by the state, and whether it is built upon an existing social protection policy or not, will determine its coverage, effect, administration cost and sustainability (or chances of being formalized). Amongst the benefits, 42 are social assistance benefits, available without insurance conditions and paid through tax revenues. Only 14 of these are expansions of existing programmes. Eleven social protection reforms are social insurance benefits, eight of which are expansions of existing programmes. Eight policies are labour market-related, with only one – in Bosnia and Herzegovina – being an extension of an existing programme.

- Of all the reforms covered in Table 4, only one is a permanent reform – expansion of an existing social assistance cash transfer in North Macedonia. Forty-one are temporary measures, and 14 are one-off payments, a number of which are food parcels. Five reforms have no information on this condition.
- Fifty-six of the reforms are national reforms, covering the whole country in each case. Five reforms are local, three of which are in the Russian Federation – the abolition of capital renew contributions (SA), a utility waiver (SA), and unemployment benefits (SI) – in each case a short-term temporary measure. Bosnia and Herzegovina and Kyrgyzstan also have local reforms in place.
- Where data on the numbers of recipients are available – 13 cases in total – the largest and smallest reforms in terms of coverage are both family cash benefits; in the Russian Federation (2 million cases) and Armenia (20,000 families registered in the family benefit programmes but not yet receiving).
- By the end of April, 11 of the 63 COVID-related social protection benefits were explicitly defined as family and child benefits, three of which are focusing specifically on the maternity and pre-school period. These early-year benefits included one in Armenia and two in the Russia Federation. In May, the Russian Federation also introduced a childcare policy (Gentilini et al, 2020).
- Regarding global costs, the Russian Federation’s COVID-19-related family allowance payment has the highest total costs, at 105 billion in national currency units (NCU). At the other end of the scale, the localized benefit for low-income elderly in Bosnia and Herzegovina will cost around US\$250,000. Data is available in only 18 cases, which limits an assessment of the effect on government debt and inferences about the need for future austerity.
- The size of cash transfer, or the type of service delivered, is available for most reforms (39 in total). Among the one-off cash payments, the largest are seen in Armenia (around US\$200), in support of children under 14, pregnant women, and private sector employees. The lowest one-off payment of US\$35 is in Turkmenistan for the low-income elderly.
- Information was sought on the duration of temporary benefits. Twenty-one of 41 countries have data, with the shortest being one month (Bulgaria, Kazakhstan, and Montenegro) and the longest being implemented for 12 months (Bosnia and Herzegovina, Kyrgyzstan).

Table 4: Social protection responses to COVID-19 in Southern and Eastern Europe and Central Asia

	Policy type: Social Assistance (SA) Social Insurance (SI), Labour Market policy (LM); Expansion of pre-existing policy (Y/N)	Who is eligible?	Coverage (persons)	Payment details	Global cost in NCU / EUR / USD (% of GDP)	National or local policy (N/L)	One-off (O), Temporary (T), Permanent (P)	Duration in months
<b>Albania</b>	Cash transfers, (SA), (Y).	Recipients of <i>Ndihma Ekonomike</i>		2 X Amount <i>Ndihma Ekonomike</i>		N	T	
	Cash transfers (new), (SA), (N).	Self-employed		State-set monthly salary		N	T	
	Unemployment benefit, (SI), (Y).			2 X Unemployment benefit		N	T	
	Humanitarian Relief (IMF), (SA), (N).	Most vulnerable			2bln NCU/ 17.5USD	N	O	
<b>Armenia</b>	Cash transfers, (SA), (Y).	Households registered in family benefit programme (but not receiving it)	20k		60mln US	N	T	3
	Cash transfers (new), (SA), (N).	Laid off / mandatory leave employees	70k			N	T	
	Cash transfers, (SA), (N).	Households with children under 14		201 USD per child	300mln USD, (0.02)	N	O	
	Cash transfers, (SA), (N).	Employees in formal sectors released from work (earning <1000US\$)		Monthly minimum wage		N	T	
	Cash transfers, (SA), (N).	Pregnant women with husbands who have lost their jobs		201 USD Lump sum		N	O	
	Cash transfers, (SA), (N).	Private sector employees		137-274 USD Lump sum		N	O	
	In-kind food/voucher scheme, (SA), (N).	Elderly, disabled	1,4k	Between one and three food and hygiene packages		N	O	

	Policy type: Social Assistance (SA) Social Insurance (SI), Labour Market policy (LM); Expansion of pre-existing policy (Y/N)	Who is eligible?	Coverage (persons)	Payment details	Global cost in NCU / EUR / USD (% of GDP)	National or local policy (N/L)	One-off (O), Temporary (T), Permanent (P)	Duration in months
<b>Armenia</b>	In-kind food/voucher scheme, (SA), (N).	Households (including 50+ year-old unemployed and people with disabilities)	90k	Food packages and other protective measures		N	T	2
	Utility and financial obligation support (waiver/postponement), (SA), (N).	All		Delayed utility payments		N	T	
<b>Bosnia and Herzegovina</b>	Cash transfer, (SA), (N).	Low income and elderly			250k USD	L	T	
	Unemployment benefits, (SI), (Y).				5.5mIn EUR	N	T	12
	Activation (training) measures, (LM), (Y).				33mIn EUR	N	T	12
<b>Bulgaria</b>	In-kind food/voucher scheme, (SA), (Y).	Elderly, disabled, poor	50k	Individual food packages and hot meals		N	O	
	Unemployment benefits, (SI), (Y).	Employees from sectors hit by COVI-19 crisis		60% of previous income		N	T	1
	Pensions / disability pensions, (SI), (Y).	Pensioners/ Disability pensioners	258k / 75k	Pensions recalculated / Renewed Certificates		N	T	
	Wage Subsidies, (LM), (N).	Workers		60% of wage	1bIn NCU, (0.012)	N	T	
<b>Croatia</b>	Wage subsidies, (LM), (N).	Workers	400k	up to 4,000 NCU		N	T	3
	Health and Pension, (LM), (N).	Workers	400k	up to 1,460 NCU		N	T	
<b>Estonia</b>	Wage Subsidies, (LM), (N).	Workers without work / wage cut		70% of Average wage up to 1.000 EUR	250mIn EUR	N	T	
	Activation (training) measures, (LM), (N).	Unemployed		Online job search counselling and intermediation		N	T	

	Policy type: Social Assistance (SA) Social insurance (SI), Labour Market policy (LM); Expansion of pre-existing policy (Y/N)	Who is eligible?	Coverage (persons)	Payment details	Global cost in NCU / EUR / USD (% of GDP)	National or local policy (N/L)	One-off (O), Temporary (T), Permanent (P)	Duration in months
<b>Georgia</b>	Utility and Financial obligation support (waiver/postponement), (SA), (N).	All citizens		Large Support package: Subsidize utility fees	3bln NCU, (0.04)	N	T	3
	Utility and Financial obligation support (waiver/postponement), (SA), (N).	All citizens		Large Support package: Subsidy for out of pocket co-payments for COVID-related expenditures		N	T	
	Unemployment benefits, (SI), (N).	Formal wage workers laid off				N	T	
<b>Kazakhstan</b>	Cash transfers (new), (SA), (N).	Formal wage workers laid off	1,5mln	100 USD		N	O	1
	In-kind food/vouchers schemes, (SA), (N).	Large families with children, persons with disability and other vulnerable				N	T	1
	Pensions / social benefits (IMF), (SA), (N).	Pensioners/ disability pensioners		+10% increase in pension amount		N	T	
<b>Kyrgyzstan</b>	In-kind food/vouchers, (SA), (N).	Low-income families with children, children and adults with disabilities		Food, medical supplies, financial assistance		L (Bishkek, Osh)	O	
	Cash transfer (admin/adaptability), (SA), (Y).	Beneficiaries of poverty-targeted cash transfer; Categorical Cash Transfer to persons with disabilities		1-year extension previous CT		N	T	12
<b>Montenegro</b>	Cash transfer, (SA), (N).	Low-income pensioners		50 €	1mln EUR	N	O	1
	Wage increase, (LM), (N).	Healthcare workers		15% increase of wages	500k EUR	N	O	1
<b>North Macedonia</b>	Cash transfer, (SA), (Y).	Unemployed and informal workers	50k	US\$ 124		N	P	
	Unemployment benefits, (LM), (N).	Covid-19-induced unemployment		50% of net monthly wage		N	T	

	Policy type: Social Assistance (SA) Social insurance (SI), Labour Market policy (LM); Expansion of pre-existing policy (Y/N)	Who is eligible?	Coverage (persons)	Payment details	Global cost in NCU / EUR / USD (% of GDP)	National or local policy (N/L)	One-off (O), Temporary (T), Permanent (P)	Duration in months
<b>Romania</b>	Cash transfer, (SA), (Y).	Delivery adaptation				N		
	Cash transfer, (SA), (N).	Self-employed		US\$ 1,180	(0.02)	N	T	
	Unemployment benefits, (SI), (N).	Employees		US\$ 1,180		N	T	
	Paid sick leave, (SI), (N).	Parents of children under 12yrs		US\$ 1,180		N	T	
<b>Russian Federation</b>	Delivery adaptation, (SA), (N).	Citizens aged 60 and above	40k			N		
	Cash transfer, (SA), (Y).	Families with children aged 3-7 with income below subsistence level	2mln		105bln NCU	N	T	
	Cash transfer, (SA), (Y).	Maternity grants for families		US\$ 63 (per each child under 3yrs)		N	T	3
	Social pensions, (SA), (Y).	Abolition of capital renew contributions				L	T	3
	Utility waiver, (SA), (Y).	Extension of transport cards				L	T	1
	Unemployment benefits, (SI), (Y).	Unemployed people		US\$ 250		L	T	6
	Paid sick leave, (SI), (Y).	Quarantined citizens		US\$ 152		N	T	4
<b>Serbia</b>	Cash transfer, (SA), (Y).	Extension of beneficiaries to cash transfer				N	T	3
	Cash transfer, (SA), (N).	18+ years of age		100 EUR	70bln NCU	N	O	
	Pensions, (SI), (N).	All pensioners		35 EUR	7bln NCU	N	O	
<b>Tajikistan</b>	Cash transfer, (SA), (N).	Vertical expansion for low-income families				N	T	3

	Policy type: Social Assistance (SA) Social insurance (SI), Labour Market policy (LM); Expansion of pre-existing policy (Y/N)	Who is eligible?	Coverage (persons)	Payment details	Global cost in NCU / EUR / USD (% of GDP)	National or local policy (N/L)	One-off (O), Temporary (T), Permanent (P)	Duration in months
<b>Turkey</b>	Cash transfer, (SA), (Y).	Low-income families			306mln USD	N	T	
	Cash transfer, (SA), (N).	Workers affected by COVID-19		US\$ 271		N	T	3
	Financial obligations postponement, (SA), (N).	65+yrs with chronic conditions				N	T	
	In-kind support, (SA), (N).	PPE, housing, and transportation for seasonal agricultural workers				N	T	
	Pensions, (SI), (Y).	Minimum pension increased		US\$ 230		N		
<b>Turkmenistan</b>	Cash transfer, (SA), (N).	Seniors with low income		US\$ 35		N	O	
<b>Ukraine</b>	Cash transfer, (SA), (N).	Children with disability				N	O	
<b>Uzbekistan</b>	Cash transfer, (SA), (Y).	Horizontal expansion of cash transfer	60k			N		
	Public works, (SA), (Y).	Expansion of PWP			21mln USD	N		
	Cash transfer, (SA), (Y).	Vertical expansion for low-income families			60mln USD	N	T	6

Note: No data for Azerbaijan, Belarus, Latvia, and the Republic of Moldova.

Source: Gentilini et al. (2020), IMF (2020), UNESCO (2020).

From Table 5, in terms of fiscal stimulus, by 28 April:

- Forty-eight fiscal stimulus policies were reported by ECA countries. Fifteen cases involved delayed payments or exemptions of tax payments (Croatia implemented both), social security contributions, or import duty exemptions of medical supplies (the Russian Federation, Ukraine). Thirteen cases of stimulus in the form of facilitating credit lines to businesses are seen; Bulgaria, Estonia and Kazakhstan extend credit lines to individuals also. Thirteen cases of wage subsidies are noted – in Albania and Armenia, more than one form of wage subsidy is in action. Seven are general stimulus/business supports, detail on the exact modalities not being clear in all cases although these can be restricted to sectors affected by COVID-19, or other sectors such as agriculture in Latvia.
- There is no available information on fiscal stimulus packages in five countries: Belarus, Kyrgyzstan, the Republic of Moldova, Tajikistan and Turkmenistan. For countries with data, all but three – Azerbaijan, Romania, and Uzbekistan – are employing more than one stimulus policy.
- In the 34 cases where data is available, 25 of the fiscal stimulus policies are universal in coverage, with the remainder being sector specific. Agriculture (Estonia, Latvia), tourism (Georgia) and COVID-19-affected sectors (Montenegro, North Macedonia, and the Russian Federation) are all subject to direct stimulus packages.
- The global cost of stimulus packages is commonly in the billions and as such, dwarfs the costs of social protection interventions and in some cases, reaching costs equivalent to 3 and 6 per cent of GDP (Kazakhstan, Latvia).<sup>8</sup>
- Time constraints on fiscal stimulus plans are less clear than for social protection policies and are missing for 38 of the 48 policies. The shortest stimulus plan is set for a month (wages subsidies in Bosnia and Herzegovina), the longest plan is set for three years (tax exemptions in Latvia).

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<sup>8</sup> Need to standardize all global costs in terms of GDP.

Table 5: Fiscal stimuli in response to COVID-19 in Southern and Eastern Europe and Central Asia

	Type of stimulus (business loans, fees waivers, etc.)	Who is eligible (numbers covered)?	Payment details	How much does it cost in total (NCU or GDP)	Sector specific or universal	Duration in months
<b>Albania</b>	Wage subsidy	SME/self-employed	Minimum wage for self-employed	6.5bln NCU (0.2%)	U	
	Wage subsidy	Firms	Support for wage payments	11bln NCU	U	3
<b>Armenia</b>	Wage subsidy	Firms	Support for wage payments	30mln USD		
	Wage subsidy	Workers	Minimum wage	68k NCU	U	
	Credit lines	Firms	Subsidized govt-sponsored loans	400mln USD		
	Wage subsidy	Firms/workers	Direct labour subsidies			
	General stimulus / business support	Firms	"Strategic support"			
<b>Azerbaijan</b>	General stimulus / business support	Firms		2.5mln NCU		
<b>Bosnia and Herzegovina</b>	Waivers and exemptions	Workers (40k)	Delayed tax payment	50mln NCU	S	3
	Wage subsidy	Workers (40k)	Minimum wage	40mln NCU	S	1
	General stimulus / business support	Firms	Economy-wide support	1bln NCU	U	
<b>Bulgaria</b>	Credit lines	Workers on unpaid leave	Up to 760 EUR	200mln NCU	U	
	Waivers and exemptions	Firms	Corporate tax payment deferred		U	4
<b>Croatia</b>	Credit lines	Workers			U	
	Waivers and exemptions	Firms	Tax Delay		U	
	Waivers and exemptions	Workers (400k)	Tax exemption, those experiencing a 20-50% decline in revenue		U	

	Type of stimulus (business loans, fees waivers, etc.)	Who is eligible (numbers covered)?	Payment details	How much does it cost in total (NCU or GDP)	Sector specific or universal	Duration in months
<b>Estonia</b>	Wage subsidy	Workers	Support to unemployment insurance fund support, to cover for wage reduction	250mln EUR	U	
	Credit lines	Rural companies	Business loans	200mln EUR	S	
	Credit lines	Individuals/firms	Guarantees/ collateral for bank loans	1bln EUR	U	
	Credit lines	Firms	Investment loans and liquidity support	550mln EUR	U	
<b>Georgia</b>	Waivers and exemptions	Firms	Property and income tax delay; interest subsidy,	3bln NCU	S (Tourism)	9
	Waivers and exemptions	Firms	VAT refunds, credit guarantee scheme		U	
<b>Kazakhstan</b>	Credit lines	SME/self-employed/wage	Subsidized lending	2.3bln USD		
	Credit lines	SME	Finance working capital	1.4bln USD		
	Wage subsidy	SME/self-employed/wage	Economy-wide	4.2bln USD (2.9%)		
<b>Latvia</b>	Wage subsidy	Workers	75% of wage up to 700 EUR	2bln EUR (6.0%)	U	
	Waivers and exemptions	All taxpayers	Tax payment delay		U	36
	General stimulus / business support	Firms (Agriculture)		45mln EUR	S	
<b>Montenegro</b>	Wage subsidy	Firms	70% of minimum wage		S (COVID affected)	6
	General stimulus / business support	Firms	Economy-wide support	120mln EUR		
<b>North Macedonia</b>	General stimulus / business support	Firms	Economy-wide support	(0.2%)	S (COVID affected)	
	Wage subsidy	Workers	Economy-wide support	(1.0%)		
<b>Romania</b>	Credit lines	Firms	Loan guarantee	10bln NCU (1.0%)	U	

	Type of stimulus (business loans, fees waivers, etc.)	Who is eligible (numbers covered)?	Payment details	How much does it cost in total (NCU or GDP)	Sector specific or universal	Duration in months
<b>Russian Federation</b>	Wage subsidy	Workers	Wage increases for healthcare workers			
	Credit lines	Firms	Interest rate subsidies for SMEs		U	
	Waivers and exemptions	Firms	Tax deferrals		U	
	Waivers and exemptions	Firms	Social contribution deferrals for SMEs		U	
	Waivers and exemptions	Firms	Deferrals of SMEs rent payments to the government		U	
	Waivers and exemptions	Firms	Zero import duties for pharmaceuticals and medical supplies		U	
	Credit lines	Firms	Loan guarantee		S (COVID-19-affected)	
<b>Serbia</b>	Waivers and exemptions	Firms	Deferrals of labour taxes and SSC contribution	140bln NCU	U	3
	Wage subsidy	Workers		93bln NCU	U	3
<b>Turkey</b>	Waivers and exemptions	Firms	Postponement for VAT and SS insurance		S	3
	General stimulus / business support	Firms and workers	General fiscal measures that include social protection	11.6bln USD (1.5%)	U	
	Credit lines	Firms	Credit guarantee fund	3.8bln USD (0.5%)	U	
<b>Ukraine</b>	Waivers and exemptions	Firms	Import duties exempted for medicines			
	Credit lines	Firms	Credit guarantee			
<b>Uzbekistan</b>	Waivers and exemptions	Firms	Interest subsidy and reduction in SSC			

Source: Gentilini et al., (2020), IMF (2020), UNESCO (2020).

## 4. MAKING SENSE OF MANY FACTORS: LINKING THE EVIDENCE TO UNDERSTAND THE EFFECTS ON CHILDREN

In order to make sense of the multiple and complex factors of a health epidemic, social lockdown and the potential for a major economic crisis, this section of the report undertakes two types of empirical analyses. The first set of tests seeks to understand which categories of countries, by key determinants of child poverty and wellbeing, are more likely to be at risk of better or worse child well-being outcomes. This will allow countries in the region to understand how the 'pre-COVID-19' baseline results – reported in Table 3 – are aligned to key social and economic determinants such as GDP per capita or health expenditure and therefore, help predict their vulnerability to poorer outcomes following COVID-19. The second set of empirical tests estimates the elasticity of child poverty and well-being indicators according to changes in key social and economic determinants using pooled series data. This set of tests will provide more details on how the indicators themselves will change on average across countries in response to COVID-19.

Together the two tests will allow countries to identify then predict and track changes to key economic and social determinants, based on priority areas (national vulnerabilities) and the sensitivity of child poverty and well-being outcomes to COVID-19 in the ECA region. Country-specific findings from these tests are the reference point to which the suitability of response to COVID-19 in each country is to be assessed.

### 4.1 Predictors of child well-being before the COVID-19 crisis in Southern and Eastern Europe and Central Asia

This section of the report is divided into seven subsections, each of which looks at one of the indicators of child well-being presented and rationalized in Section 2. Specifically, it uses a novel methodological approach – the Qualitative Comparative Analysis (QCA) and its fuzzy-set technique – to identify the 'necessary' and 'sufficient' economic and social conditions at the country level that explain the risk of better or worse outcomes on each of the child poverty and well-being indicators. This is the first time QCA methodology is being employed to look at the configurational logic of selected conditions to explain multiple child well-being outcomes in countries of Southern and Eastern Europe and Central Asia. The fuzzy-set QCA revolves around the concept of subset relations and presents the findings in terms of necessary and sufficient conditions and their configurational interlinkages (Cebotari and Vink, 2013). Based on the logic of sub-set relations, the status of being a necessary condition implies that the score in the outcome ( $Y_i$ ) is consistently lower to the score of the condition ( $X_i$ ) in the pool of cases (i.e.,  $Y_i$  is a subset of  $X_i$ ). Subsequently, the status of being a sufficient condition implies that the score of the condition ( $X_i$ ) is lower than the score in the outcome ( $Y_i$ ) among cases in the sample (i.e., the  $X_i$  is a subset of  $Y_i$ ). For a detailed description of the QCA methodology see Annex 3 of this document.

Before going on to analyse each indicator in turn, Table 6 lists the selected child poverty and well-being indicators alongside: indicators of economic context; employment; social context; service coverage; public expenditure; and household expenditure determinants. The conditions are selected based on alignment to the outcomes at hand and availability of most recent data. They will be used to assess the extent to which these outcomes are the result of economic and social factors, and how the indicators of child poverty and vulnerability might be expected to react to the COVID-19 crisis. Each of the conditions and outcomes has been presented and discussed in the section above. Where the condition is presented in italics, there is insufficient data to include it in the QCA analysis that follows.

Table 6: Selected conditions by child-focussed SDGs: Economic, social and public policy contexts

	Economic context			Employment	Social context			Service coverage	Public expenditure	Household expenditure
<b>Proportion of population living below the national poverty line (%)</b>	GDP per capita (current US\$)	GINI index (World Bank estimate)	Personal remittances, received (current US\$) per capita	Labour force participation rate, total (% of total population 15+)				<i>Coverage (%) - Cash Transfer</i>	Public social protection expenditure, 1995 to latest available year (% GDP)	<i>Adequacy of benefits (%) - Cash transfer</i>
<b>Proportion of children moderately or severely wasted (%) under 5</b>	GDP per capita (current US\$)	GINI index (World Bank estimate)			Prevalence of under-nourishment (% of population)			Nurses and midwives (per 1,000 people)	Current health expenditure per capita, PPP (current USD)	Out-of-pocket expenditure (% of current health expenditure)
<b>Under-five mortality rate, by sex (deaths per 1,000 live births)</b>	GDP per capita (current US\$)	GINI index (World Bank estimate)			<i>People using safely managed sanitation services (% of population)</i>			Nurses and midwives (per 1,000 people)	Current health expenditure per capita, PPP (current USD)	Out-of-pocket expenditure (% of current health expenditure)
<b>Neonatal (under one month) mortality rate (deaths per 1,000 live births)</b>	GDP per capita (current US\$)				Fertility rate, total (births per woman)	People using safely-managed sanitation services (% of population)		Nurses and midwives (per 1,000 people)	Current health expenditure per capita, PPP (current USD)	Out-of-pocket expenditure (% of current health expenditure)

	Economic context			Employment	Social context			Service coverage	Public expenditure	Household expenditure
<b>Proportion of children achieving a minimum proficiency level in reading (%)</b>	GDP per capita (current US\$)	GINI index (World Bank estimate)	Services, value added (% of GDP)		Children out of school (% of primary school age)	Adolescents out of school (% of lower secondary school age)			<i>Government expenditure on secondary education as % of GDP</i>	
<b>Proportion of youth not in education, employment or training, 15-24</b>	GDP per capita (current US\$)	GDP growth (annual %)	Services, value-added (% of GDP)	Labour force participation rate, total (% of total population 15+)	Adolescents out of school (% of lower secondary school age)				<i>Government expenditure on secondary education as % of GDP</i>	
<b>Intentional homicide rates (0-14 yrs) per 100,000 of the 0-14 yrs population</b>	GDP per capita (current US\$)	GINI index (World Bank estimate)		Labour force participation rate, total (% of total population 15+)	Intentional homicides (per 100,000 people)	Population living in slums	Population density (people per sq. km of land area)			
<b>Suicide Rates (15-19 yrs) per 100,000 of the 15-19 yrs population</b>	GDP per capita (current US\$)	GINI index (World Bank estimate)		<i>Employment to population ratio, ages 15-24, total (%) (national estimate)</i>	Adolescents out of school (% of lower secondary school age)			Hospital beds (per 1,000 people)	Current health expenditure per capita, PPP (current USD)	

Note: Labour force participation rate is a modelled International Labour Organization estimate. Conditions in italics had insufficient observations to be included in the analysis. Most recent data used in the QCA models are reported in Annex Table 1.4.

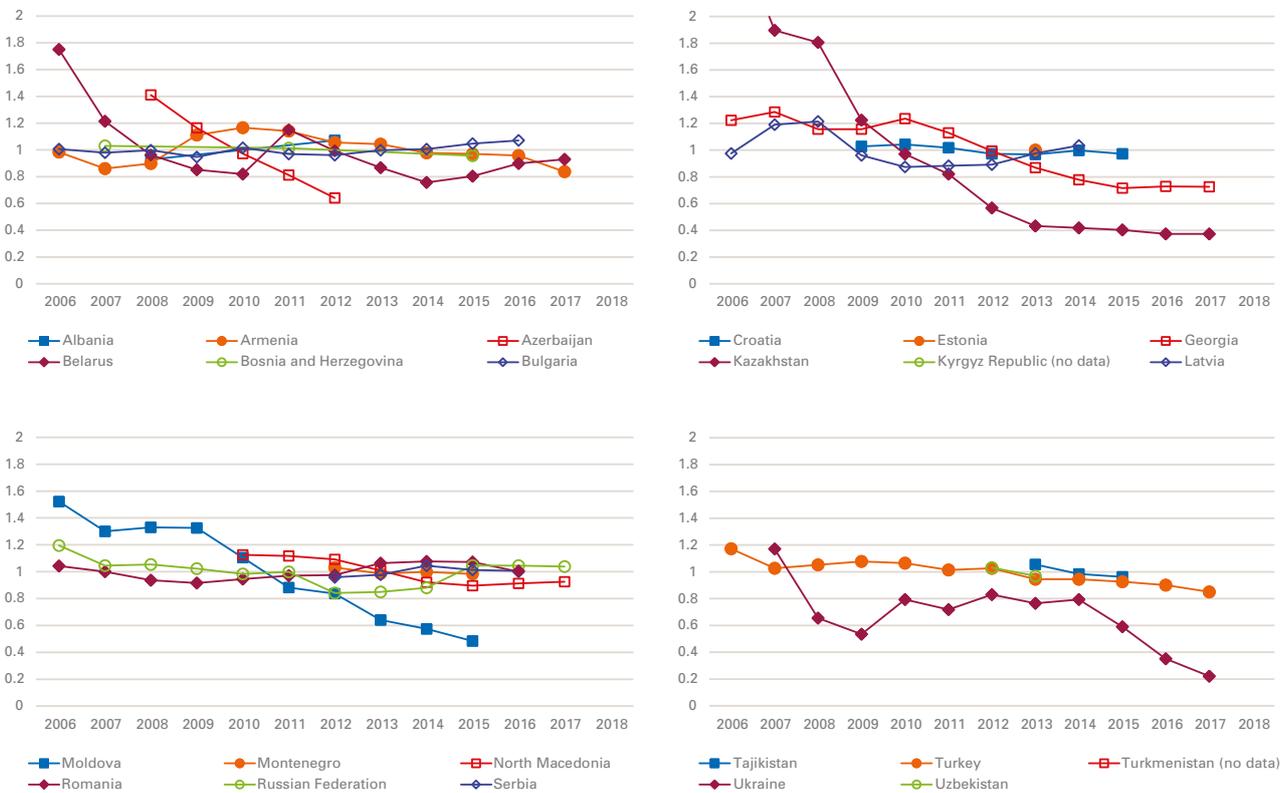
Source: Annex Table 1.1.

### 4.1.1 National poverty rates

The first set of results of the QCA are for poverty; specifically, the poverty risk in the population relative to the 10-year average (using the national poverty lines). Due to the lack of comparative data available for the ECA countries, the national poverty rate measures have been normalized. The results presented are a ratio of the poverty rate in a given year as a ratio of the average poverty rate in that country as recorded in the last decade. Countries reporting poverty ratios below 1 are reporting a fall in national poverty rates according to national measures. Countries reporting scores above 1 are reporting poverty rates on the increase (see Figure 15).

Figure 15: On-average national poverty rates in ECA countries were falling prior to the crisis

Proportion of population living below the national poverty line (%)



Notes: Results for each country report a ratio of the national poverty rate, in a given year, over the average for the period 2006 to 2017. Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Data for Kazakhstan in 2006 was 2.7 – removed for readability of the charts.

Source: World Development Indicators database, World Bank, 2020.

The conditions analysed as part of the QCA are reported in Table 6 and include measures of inequality, wealth, personal remittances, employment, and public social protection expenditure.

For the analysis, countries were split into three groups: those with poverty rates 10 per cent higher than the decade average; those with poverty rates around the average; and countries with poverty rates 10 per cent lower than the 10-year average. These groups were then compared with country groupings for the conditions above (for details of group membership and grouping methods see Table 3 for outcomes and Annex Table 1.4 for determinants).

The results show there is one condition to meet criteria for higher levels of poverty in most ECA countries – a higher Gini index (more inequality), with a consistency score of 0.85.<sup>9</sup> There are two outliers in this test – Belarus and Croatia – where both countries have comparatively higher scores in poverty rates than scores in the Gini index and thus, the Gini Index condition does not apply in their case. Yet, because neither of these countries are ‘extreme’ outliers, higher inequality in ECA can be considered as quasi-necessary for higher poverty rates.

Moreover, in the ECA countries, higher levels of GDP tend to fit within the status of necessity when explaining higher poverty (in QCA this measure has a relatively high consistency score of 0.83). Again, there are outliers, and therefore, also indicative of poverty risks in the region, it is not a necessary condition – rather a sufficient indicator of risk. Notwithstanding, the result may reflect that with increased wealth, there is also increased poverty in the country, a process that may also include an unequal distribution of wealth in society. Policy responses aimed at mitigating the effects of inequality, for example through investments in education, more progressive taxation, and increasing the minimum wage, may also trigger changes in poverty rates in the region.

The reverse analysis seeking to assess necessary conditions for countries with lower levels of poverty resulted in no necessary conditions, meaning none of the conditions – high or low Gini, high or low levels of remittances, high or low GDP, and so on – were consistent (at 0.80 or higher) with the logic of being a necessary condition for lower poverty rates.

Turning to the analysis of sufficient conditions, which describe the configuration of conditions that lead to higher or lower poverty risks, two paths are sufficient to explain higher poverty in the pool of countries:

- Higher employment, higher GDP, and higher inequality (the Russian Federation, Latvia); or
- Higher social protection expenditure, lower remittances, higher GDP, and higher inequality (Bulgaria).

The consistency score of the formula encompassing both paths is 0.89, which indicates that the status of sufficiency is largely supported by empirical evidence. For each configuration of sufficient conditions a coverage score is also produced, in this case it is 0.64, which indicates that both combinations of sufficient conditions explain 64 per cent of the country cases higher poverty rates are reported.

<sup>9</sup> A consistency score approximates the alignment of subsets, with higher scores reflecting greater alignment between subsets (e.g. the high poverty rates group being closely aligned to the high Gini Index group). Higher consistency values are used to assess the status of a condition (high or low grouping on an indicator) as being necessary or sufficient condition in the pool of cases for explain an outcome. A consistency score of 0.80 is generally seen as the minimum accepted value for determining sufficient conditions in combination. For the identification in this analysis of singular necessary condition, a minimum accepted consistency threshold is 0.80 (see Annex 3).

The configuration of conditions leading to higher poverty rates applies to the national contexts mentioned in the solution in that each context is specific in the way higher poverty is embedded in the configuration of sufficient conditions. For instance, in countries such as the Russian Federation and Latvia, high poverty rates exist despite a relatively high GDP, high employment rates, and higher inequality.

For better poverty conditions (lower rates of poverty relative to the 10-year average), three paths of conditions are sufficient to explain this outcome in ECA countries:

- Lower labour force and lower Gini (the Republic of Moldova, Croatia, Ukraine and Bosnia and Herzegovina);
- Low total social protection expenditure and lower GDP (Kyrgyzstan, Armenia, Georgia, North Macedonia, Tajikistan);
- Higher GDP and more equality (Croatia, Kazakhstan).

With a consistency score of 0.97 and a coverage score of 0.71, these conditions together are sufficient to explain more than 70 per cent of the low poverty grouping in countries with data. It should be cautioned at this point that although these combinations of conditions were found to be sufficient for predicting poverty risks in the ECA countries using most recent data, other combinations of sufficient conditions may also exist.

One path of sufficient conditions shows that limited social protection spending in poorer countries may lead to reduced poverty rates, as is the case in the Republic of Moldova, Croatia, Ukraine, and Bosnia and Herzegovina. This path of sufficiency appeals to efficiency of social protection spending in poorer settings.

Another path of sufficient conditions shows that more equal wealth distribution can have efficiency gains in poverty reduction, even in labour markets with lower participation rates, as is the case in countries such as the Republic of Moldova, Croatia, Ukraine, and Bosnia and Herzegovina.

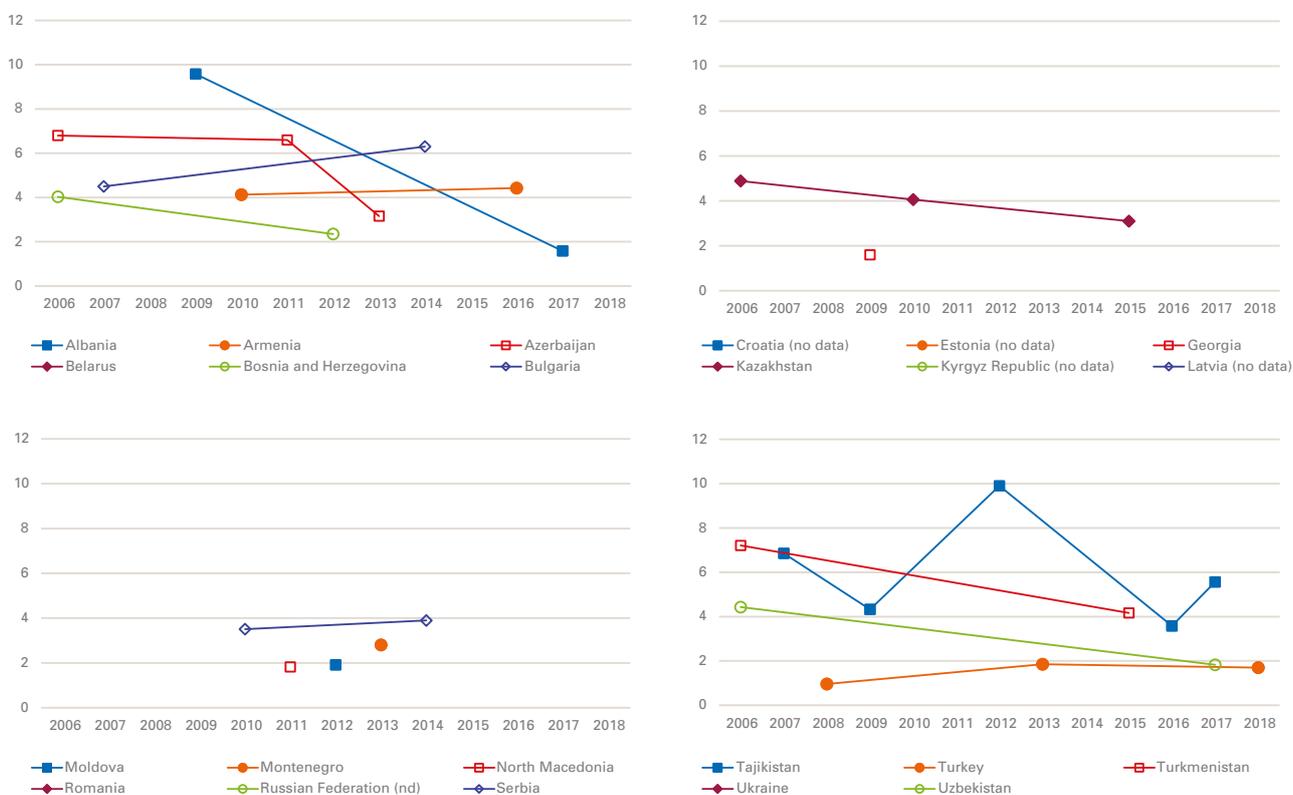
#### **4.1.2 Children under the of age five who are moderately or severely wasted (per cent)**

The second set of results show which countries are more at risk of increases in moderate and severe wasting in the under-five-years-old population. Figure 16 maps the available data by countries in trends and shows that child-specific information on nutrition in the region is scarce and where more than one point of data is available, the results are mixed.

The conditions analysed as part of the QCA are reported in Table 6 and include: measures of inequality; wealth; nurses and midwives (per 1,000 people); out-of-pocket health expenditure; current total health expenditure per person; and undernourishment in the population. For the analysis, countries were split into three groups by relative risk of wasting, as colour-coded in Table 1.

Figure 16: Data on wasting in children under five years is scant and progress is mixed

Proportion of children moderately or severely wasted (%) Under 5



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported.

Source: UNStats, SDG indicators (2020)

There are no necessary conditions to fulfil the criteria for higher and lower rates of wasting in ECA countries. The closest that comes to a necessary condition for higher rates of wasting is lower undernourishment in the population, with a consistency score of 0.64 (it needs to be a minimum of 0.80).

Based on the analysis of sufficient conditions, three paths are sufficient to explain higher wasting in the pool of countries:

- More out-of-pocket health expenditure and more health expenditure (Azerbaijan and Turkmenistan);
- Higher inequality, more nurses, and more health expenditure (Serbia);
- More nurses, less out-of-pocket health expenditure, and less expenditure on health (Kazakhstan).

The consistency score of the formula encompassing the three paths is 0.75, indicating that the status of sufficiency is largely supported by empirical evidence. The coverage score of 0.64 indicates that the combination of conditions explains roughly 64 per cent of the country cases where higher rates of wasting are present.

The finding that more out-of-pocket and health expenditure are sufficient conditions explaining higher wasting in Azerbaijan and Turkmenistan may relate to the efficiency and coverage of the health system in the two contexts. Moreover, a context characterized by a higher health expenditure, with more nurses but higher inequality, may still result in higher child-wasting rates, as it is the case of Serbia.

Two combinations of conditions are sufficient to explain less wasting in ECA countries:

- Lower GDP and less out-of-pocket health expenditure (the Republic of Moldova);
- Lower inequality, less out-of-pocket health expenditure and more health expenditure (Bosnia and Herzegovina).

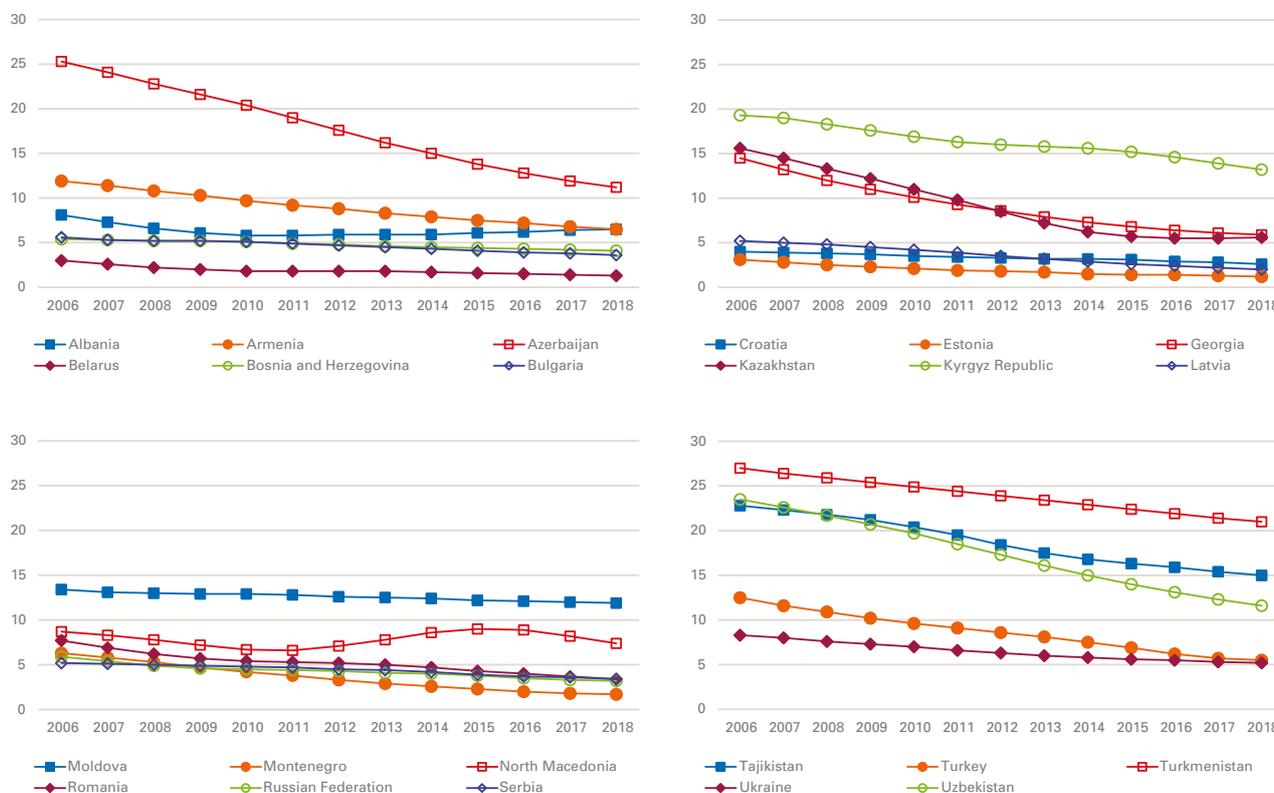
The solution consistency for these conditions is 0.99, however only 33 per cent of the outcome is explained under these conditions (coverage 0.33).

The two paths of conditions explaining lower levels of child wasting are intuitive and inherent to the two country contexts they explain. Although explanatory, there may be other combinations of conditions that could explain the outcome in the region.

#### **4.1.3 Neonatal mortality rates**

Over the years, trends in neonatal mortality rates have been falling in all countries (*see Figure 17*). Only one country shows any increase over the period; between 2011 and 2015 North Macedonia observed increases in the neonatal mortality rate but has since seen rates return to a downward trend.

Figure 17: Neonatal mortality rates are falling in all ECA countries  
 Neonatal (under 1 month) mortality rate (deaths per 1,000 live births)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. United Nations Inter-Agency Group for Child Mortality Estimation (UN IGME), 2019.

Source: UNStats, SDG indicators (2020).

Three conditions are found to be necessary for higher neonatal mortality:

- Lower GDP (consistency, 0.94): when we have countries with lower GDP, there are always higher rates of neonatal mortality;
- More out-of-pocket expenditure (consistency, 0.81): when we see more out-of-pocket expenditure, there are higher rates of neonatal mortality; and,
- Less health expenditure per capita (consistency, 0.81): when there is less expenditure, there are always higher rates of neonatal mortality.

Each of the three conditions that fulfil the necessity criteria are self-explanatory in relation to the outcome in that when each condition is present, the outcome is present as well. The three conditions have an average consistency score and can be considered as quasi-necessary for higher neonatal mortality. However, they provide a powerful statement, in that there is no high neonatal mortality among countries in the region without these conditions present.

One condition quasi-necessary for lower levels of neonatal mortality is lower levels of fertility. When we see lower levels of fertility, we also see lower levels of neonatal mortality – perhaps a logical link reflecting demand on health services.

Two combinations of conditions are sufficient to explain higher neonatal mortality in the pool of countries (consistency, 0.82; coverage, 0.75):

- More out-of-pocket expenditure and higher fertility (Tajikistan, Turkmenistan, Kyrgyzstan, Uzbekistan, Georgia). This path reflects the access to a health care provider for a higher pool of children in target countries.
- Lower numbers of nurses, less out-of-pocket health expenditure and less health expenditure (North Macedonia). The logical link of this path includes a lower level of out-of-pocket expenditure in a context characterised by a limited number of nurses and a reduced health expenditure.

Four combinations of conditions are sufficient to explain lower neonatal mortality in the pool of countries (consistency, 0.94; coverage, 0.85):

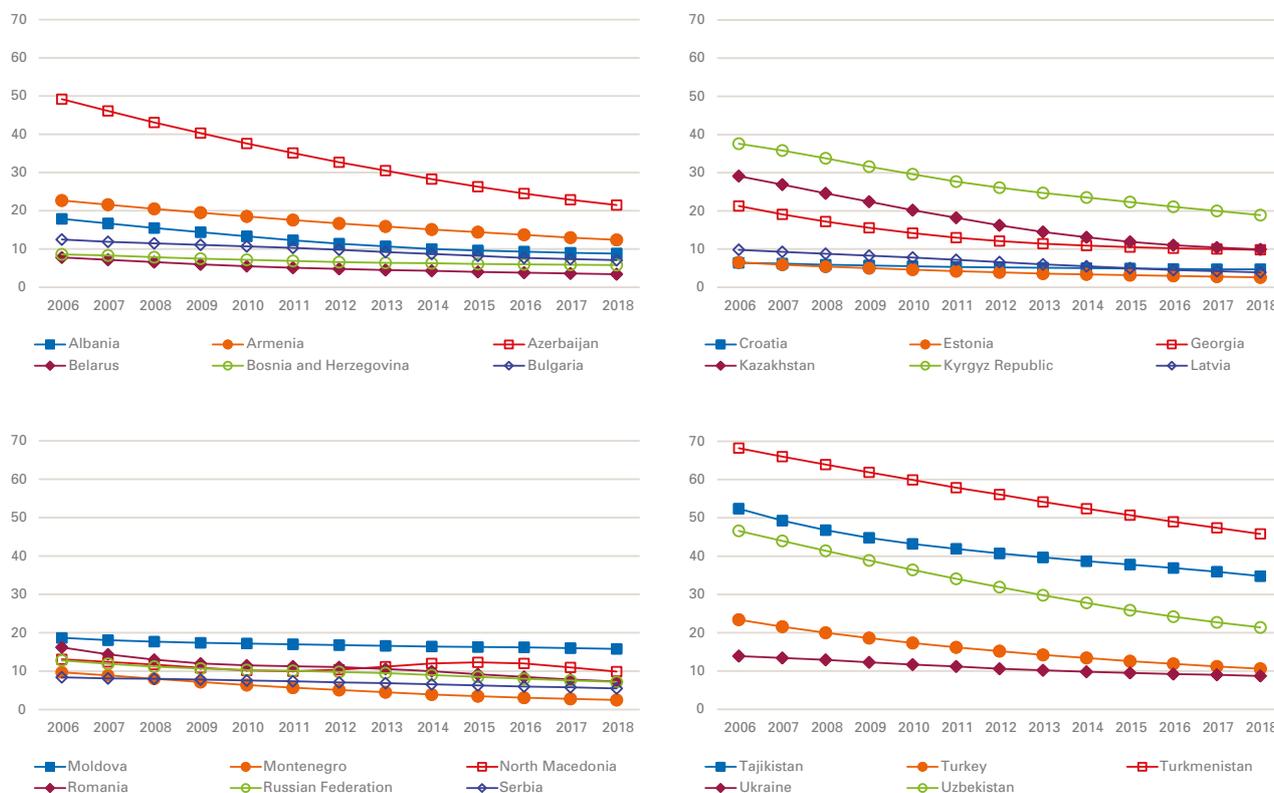
- A higher proportion of nurses, less health expenditure, and lower fertility (Ukraine);
- Higher GDP (Croatia, Estonia, Latvia, Romania, the Russian Federation, Kazakhstan, Turkey, Bulgaria, Montenegro);
- Lower out-of-pocket health expenditure, and higher health expenditure (Estonia, Montenegro, Bulgaria, Romania, the Russian Federation, Serbia, Bosnia and Herzegovina, Turkey, Latvia);
- A higher proportion of nurses and midwives and less out-of-pocket health expenditure (Croatia, Bulgaria, Kazakhstan, The Russian Federation, Estonia, Bosnia and Herzegovina).

These paths explaining lower neonatal mortality provide logical combinations of conditions for the region's countries. Notably, high GDP alone is a sufficient condition for the outcome in nine countries in the region. Similarly, a high health expenditure combined with lower out-of-pocket payments also leads to lower neonatal mortality in nine ECA countries.

#### **4.1.4 Under-five mortality rates**

As with neonatal mortality, mortality rates in children under five years are improving across the region (see *Figure 18*). Downward trends are different in terms of 'speed' and most countries seem to plateau at rates around 10 deaths per 1,000 live births. Unsurprisingly – given the neonatal results – a small bump in North Macedonian trends is seen with the under-five child mortality rate. Geographically, the countries further east, Tajikistan, Kazakhstan, Uzbekistan, Kyrgyzstan, Turkmenistan and Azerbaijan, all see trends run notably higher than the rest of the country group for both mortality indicators.

Figure 18: All countries have seen falls in the under-five mortality rate since 2006  
Mortality rate, under-5 (per 1,000 live births)



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported.

Source: UNStats, SDG indicators (2020).

The QCA analysis for under-five child mortality rates includes five conditions: the Gini index, GDP per capita (current US\$), nurses and midwives per 1,000 persons in the population, out-of-pocket health expenditure, and current total health expenditure per capita (see Table 6).

Two conditions are found to be necessary for higher under-five mortality: a lower level of GDP per capita (consistency, 0.91; coverage, 0.53), and more out-of-pocket expenditure (consistency, 0.86; coverage, 0.61). In the pool of countries, having either lower GDP or higher out-of-pocket expenditure warrants higher under-five mortality rates.

No conditions were found necessary in achieving lower under-five child mortality.

Three combinations of conditions are sufficient to explain higher under-five child mortality in the pool of countries (consistency, 0.68; coverage, 0.65):

- Lower inequality and fewer nurses and midwives in the population (the Republic of Moldova, Albania). This path may reflect a scarce medical environment despite overall low inequality rates in the two contexts;

- Lower GDP per capita, more out-of-pocket expenditure, and higher health expenditure (Azerbaijan, Turkmenistan). In the two contexts, more out-of-pocket expenditure may reflect unequal access to medical services, despite a higher health expenditure;
- Higher inequality, more nurses in the population, and more out-of-pocket health expenditure (Uzbekistan). Higher inequality rates combined with higher levels of out-of-pocket health expenditure may outbalance the relatively high number of nurses in the country when explaining higher under-five child mortality.

Two configurational paths, each of one condition, are sufficient to explain lower under-five child mortality in the pool of countries:

- Less out-of-pocket expenditure (Estonia, Romania, Montenegro, Turkey, Bosnia and Herzegovina, Belarus, Kazakhstan, North Macedonia, Serbia, the Russian Federation, Latvia);
- Higher GDP per capita (Estonia, Latvia, Romania, the Russian Federation, Kazakhstan Turkey, Bulgaria, and Montenegro).

The overall solution consistency, that includes the these paths for explaining lower rates of under-five child mortality is high (0.89) as is the coverage score (0.79) suggesting that the solutions above cover 79 per cent of country cases with lower under-five mortality rates.

#### **4.1.5 Youth not in education, employment or training (15-24) - NEET**

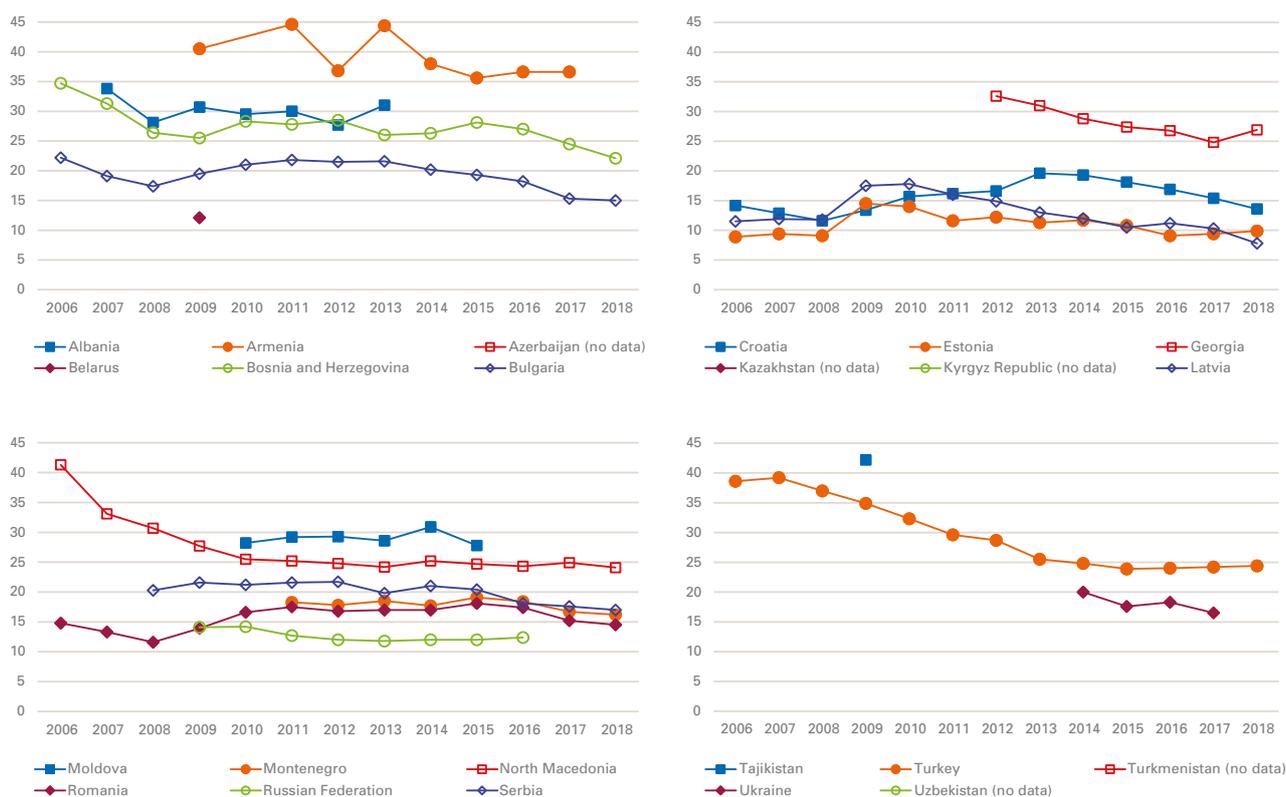
Following the GFC in 2008, a body of literature seeking to understand the effects of the economic downturn on youth unemployment indicated that young people were among the hardest hit following the crisis (Scarpetta et al, 2010). Although trends shown in Figure 19 do show, on a few occasions, a decline in youth employment, education, and training around 2008, where dips are seen these are neither deep nor persistent and as such, give little indication of the crisis' effects on youth. However, the composite nature of the NEET indicator may be the reason for a lack of visible crisis effect. In cases where children leaving the labour market move back into school or training, this indicator is unlikely to map that shift. Indeed, the general pattern across the region shows persistently stubborn rates of youth inactivity, crisis or no crisis, with only a few countries such as Georgia, North Macedonia, and Turkey showing meaningful gains in youth activity since 2006.

The QCA analysis for the NEET outcome involves five conditions: GDP per capita (current USD), GDP growth (annual percentage), services value-added (percentage of GDP), labour force participation rate (percentage of total population aged 15+), and adolescents out of school (percentage of lower secondary school age).

Calibration of the outcome and conditions followed the methodological procedure mentioned in Annex 3, in that it used the average values as a middle-level threshold, and the half-standard deviation below and above the mean to pinpoint the lower- and upper-level thresholds respectively for set memberships.

For lower NEET, no condition fulfils the necessary criteria of consistency. However, with a consistency score of 0.90, it was found that lower GDP is a necessary condition for high NEET. It means that lower GDP always triggers a higher proportion of youth not in education, employment, or training. Since the condition does not have a perfect consistency score of 1, it is considered as quasi-necessary. Of all cases in the sample, Turkey is an outlier where the condition of necessity does not apply.

Figure 19: In the worst-affected areas of ECA, more than 1 in 4 youth are inactive  
Youth not in education, employment or training, (%) 15-24



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. ILO-modelled estimates, November 2019. For the specific sources by country and the estimation methodology refer to ILOSTAT directly.

Source: ILOSTAT (2020).

One remark is warranted in the context of the analysis of the necessary conditions. While lower GDP is found to be a necessary condition for higher NEET, the opposite is not the case, in that higher GDP does not guarantee lower NEET. This causal asymmetry is rarely observed in the analysis of social phenomena, hence the importance of conducting separate analyses for the presence and absence of the outcome.

The analysis of sufficient conditions for higher NEET (i.e., a higher proportion of youth not in education, employment, or training) results in a parsimonious formula with two logical combinations of conditions that are sufficient to explain the outcome:

- Lower GDP and a higher proportion of services (Georgia, Bosnia and Herzegovina). A higher proportion of services in a lower income (GDP) context may reflect on productivity and inefficiency of human capital formation;
- Lower proportion of services and a higher proportion of adolescents out of school (Tajikistan, Armenia, Moldova, and Turkey). The combination of two conditions reflects poor educational and economic outcomes that explain higher NEET in the target countries.

The solution consistency is high (0.86), which reflects a high inclusion of empirical evidence in the formula. Similarly, the coverage is good (0.68), meaning that the formula explains 68 per cent of cases with higher NEET when this outcome is present.

The analysis of sufficient conditions for lower NEET (i.e., a lower proportion of youth not in education, employment, or training) uses the same five conditions. The parsimonious formula indicates there are two paths providing a straightforward explanation of the outcome:

- High GDP and lower proportions of adolescents out of school (Croatia, Estonia, Latvia, the Russian Federation, Kazakhstan);
- High GDP growth and high GDP (Estonia, Latvia, Montenegro, Kazakhstan).

Cases can have membership in both paths, as it is the case of Estonia, Latvia and Kazakhstan, because the set membership often overlaps. The overall solution consistency is excellent (0.99) suggesting that the claim of sufficiency is fully covered empirically. The coverage score of 0.57 suggests that the configurations explain 57 per cent of country cases that have lower NEET.

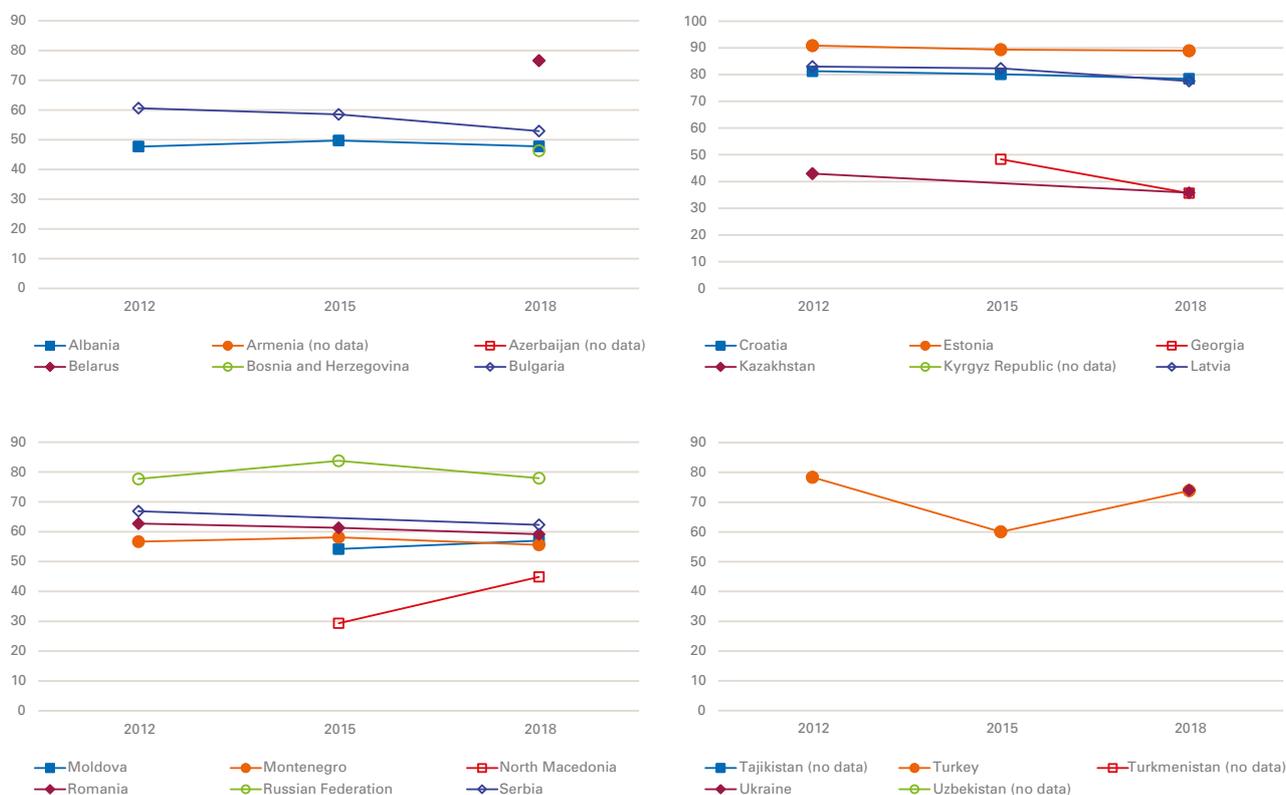
Notably, the condition of labour force participation rate (percentage of total population aged 15+) is not part of the sufficient formulas for the presence or absence of the outcome. It indicates that this condition is less important to explaining the two sides of the outcome in the pool of countries.

#### **4.1.6 Children achieving a minimum proficiency level in reading**

Reading proficiency data in the region is limited to three points in time (*see Figure 20*). Starting in 2012, the data on reading proficiency shows that on average in the region, around two-thirds of children are meeting reading proficiency levels in lower secondary school, a trend that persists for the following six years into 2018. Only on a few occasions can we see improvements or declines in trends of reading proficiency. Where increases in reading proficiency are seen, these are not continuous across the three points or are shown with only two points of data. Upwardly trending countries include the Republic of Moldova, North Macedonia, and Turkey; countries seeing falls include Bulgaria, Georgia and to a lesser extent, the Russian Federation. Despite the observable consistency of these trends, the time between each data point means it is difficult to infer whether crises have had any effect on reading proficiency as presently reported in the SDGs.

Figure 20: Since 2012 there have been few changes to rates of reading proficiency in ECA countries

Proportion of children and young people achieving a minimum proficiency level in reading (%) Lower Secondary



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported. Data is reporting National Learning Assessment (NLA): Monitoring Trends in Educational Growth (MTEG) assessment, Grade 6, minimum proficiency level: 10.

Source: UNStats, SDG indicators (2020).

Five conditions are employed in the QCA analysis to explain the literacy outcome. These are: GDP per capita (current USD), Gini index, services value-added (percentage of GDP), children out of school (percentage of primary school age, and adolescents out of school (percentage of lower secondary school age).

Data has been calibrated in-line with the methodological note in Annex 3. Average values were used to define the middle-level threshold for set membership of the outcome and conditions. In addition, the half- standard deviation above and below the mean was used to define the upper- (high literacy) and lower-level threshold (low literacy) for set membership in outcome and conditions.

The analysis of necessity finds no condition meeting the required consistency threshold of a minimum 0.80 or higher to be a necessary condition for higher or lower literacy rates. It means that no condition alone warrants the occurrence of higher and lower literacy rates in the pool of cases.

The analysis of sufficiency is performed by employing the configurational logic of all conditions and linking them to higher or lower rates of literacy. The parsimonious solution finds three configurations of conditions explaining lower literacy rates. These configurations are:

- Lower GDP, and higher rates of services value-added (Georgia, Montenegro, and Bulgaria);
- Lower proportions of out-of-school primary children and higher proportions of adolescents out of school (North Macedonia, and Montenegro);
- Higher GDP, lower Gini, and lower rates of services value-added (Kazakhstan).

In the four paths, the specifics linked to lower GDP, higher proportion of out-of-school children, and lower rates of services value-added define the way configurations explain the lower literacy rates. However, more evidence is needed to fully explain the effects of these conditions on the measured outcome.

The consistency score of the overall solution formula that includes the three paths is 0.92, meaning that the claim that these configurations are sufficient for lower literacy to occur is highly supported by empirical evidence. The coverage score of 0.54 indicates that altogether the configurations explain 54 per cent of lower literacy in countries where this outcome is present. Montenegro has membership in two configurations because the membership in configuration of sets often overlaps.

The analysis of sufficient conditions for higher literacy rates employs the same set of conditions and results in a parsimonious formula with four paths of configurations:

- Higher proportions of out-of-school primary children and lower proportions of adolescents out of school (Ukraine);
- Higher Gini, lower rates of services value-added and higher proportions of out-of-school primary children (Turkey);
- Higher GDP, higher rates of services value-added and lower proportions of out-of-school primary children (Croatia, Latvia, and Estonia);
- Higher GDP, higher Gini and lower proportions of out-of-school primary children (Latvia, and the Russian Federation).

The overall solution consistency for the four paths is high (0.86) and the coverage is good (0.70). The case of Latvia is covered by two configurations of conditions because the set membership overlaps.

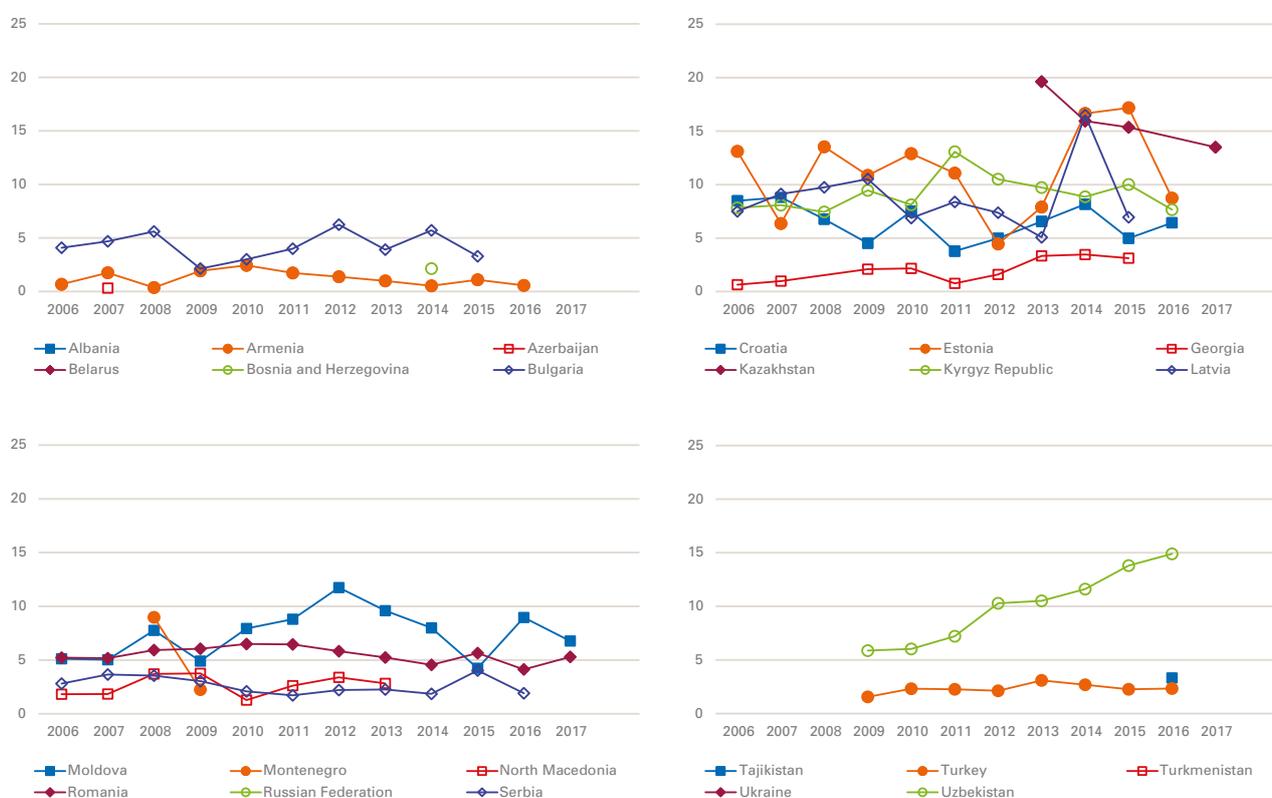
The four paths engage with a number of conditions that, in combination with other conditions, explain the higher literacy rates in specific contexts. The defining conditions are: lower proportions of out-of-school children; higher GDP rates; and higher rates of services value-added. More research is needed to fully explore the range of involvement of employed conditions with the explained outcome.

### 4.1.7 Suicide rates in older adolescents aged 15-19

Figure 21 maps trends in suicide rates in the ECA region and shows that a number of countries are without data or trend data for the period 2006 to 2017. Also notable from the graph is that the rate of suicide in the region is very volatile: Croatia, Estonia, Kyrgyzstan, and Latvia all contribute to a very inconsistent trend picture in the top right-hand chart (see Figure 21). There is no indication of an uptick in adolescent suicide rates on or near the years related to the financial crises in 2008 or 2015 across the trends.

Figure 21: Suicide rate trends show volatility in Estonia and Croatia and a steady increase in Uzbekistan

Suicide rates through intentional injury per 100,000 children aged 15-19



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported.

Source: WHO mortality database, 2020.

For the QCA analysis of suicide rates among children, the following conditions are employed: GDP per capita (current USD), the Gini index, adolescents out of school (percentage of lower secondary school age), hospital beds (per 1,000 people), and current health expenditure per capita, PPP (current international USD).

For the analysis of necessary conditions linked to higher and lower suicide rates, no condition meets a consistency threshold that is high enough to meet the criteria for necessity. The conclusion is that in the pool of countries, no condition alone warrants the presence or absence of the outcome.

The analysis of sufficient conditions outlines all logical combinations of conditions that may lead to higher or lower suicide rates. The parsimonious solution for higher suicide rates shows one combination of conditions that is sufficient for the outcome:

- Higher GDP, and lower inequality (Gini) (Croatia, Estonia, Kazakhstan). In these specific contexts, cultural and age-specific determinants may compromise children's mental health, which would result in relatively higher suicide rates for the region.

The overall solution consistency is high (0.86), which shows that the configurational path of conditions is well-embedded in the empirical evidence and the coverage is good (0.81). The solution coverage score of 0.40 indicates that the combination of conditions explains 40 per cent of cases where relatively higher suicide rates are present.

The analysis of sufficient conditions for lower suicide rates employs the same five causal conditions as for higher suicide rates. On the basis of available cases (i.e., those cases with lower suicide rates based on the established middle-level threshold), the analysis indicates there are two sufficient combinations linked to lower suicide rates:

- Higher GDP and higher current health expenditure (Bosnia and Herzegovina, and Serbia);
- Higher equality (Gini) and higher proportions of adolescents out of school (Bulgaria, Turkey, Romania, Armenia, North Macedonia, and Tajikistan).

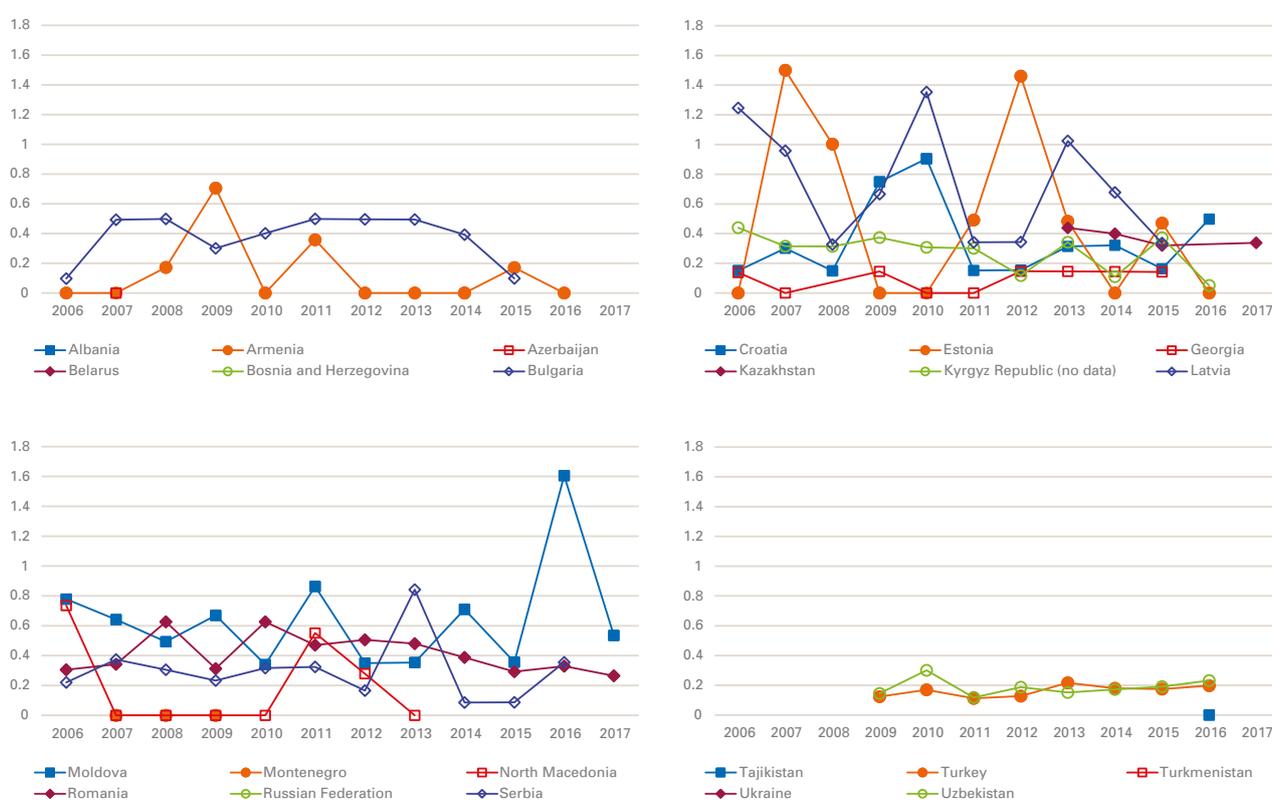
The formula of sufficient conditions for lower suicide rates has a high consistency score (0.90) and the coverage is good (0.68). The analysis demonstrated that no condition was individually sufficient for lower suicide rates; only in conjunction with one other causal condition specified above does a condition explain lower suicide rates. These paths emphasize the leading role of higher health expenditure and the lower inequality that, in combination with other conditions, leads to relatively lower rates of suicide among children. Interestingly, the condition that provides data on the number of hospital beds (per 1,000 people) is not present in any configuration of sufficient conditions for either the presence or absence of the outcome. Considering the complex mechanisms at work influencing suicide rates among children, further research is warranted to engage with more conditions in order to fully understand this outcome in the region.

### 4.1.8 Intentional homicide rates in children aged 0-14 years

The final child-focused SDG outcome to be analysed using QCA is the intentional homicide rate among the 0-14 age group. Figure 22 below shows the trends from 2006 for ECA countries. The trends show a great deal of volatility in most cases and overall, indicate that the latest figure reported in Table 3 is low in comparison to recent years but is not a safe indication of an overall downward trend.

Figure 22: In all countries since 2006, the homicide rate rarely peaks above 1 in 100,000 children

Death rates through intentional injury per 100,000 children aged 0 to 14



Notes: Trend lines run from the first to the last observed data points; markers represent years with observed data. For years with no markers, no data for that country was reported.

Source: WHO mortality database, 2020.

Conditions employed in the QCA analysis of intentional homicide rates in children (0-14 years old) are the Gini index, GDP per capita (current US\$), labour force participation rate, total (percentage of total population aged 15+), population density (people per sq. km of land area), and intentional homicides (per 100,000 people).

Outcome and conditions were calibrated into partial set membership scores using middle-, upper-, and lower-level thresholds. For the middle-level threshold, average values were used while for upper- and

lower-level thresholds, the half-standard deviation above and below the mean were used respectively to define the respective set membership scores (*see Annex 3 for the full methodological note*).

An analysis of necessary conditions has been conducted for both the presence (higher homicide rates) and absence (lower homicide rates) of the outcome. There is no condition fulfilling the criteria of necessary for either higher or lower levels of homicide rates among children in the pool of countries. In other words, no condition alone guarantees the occurrence of higher or lower homicide rates in the sample of cases.

The analysis of sufficient conditions assesses which combination of conditions leads to higher or lower homicide rates among children. For higher child homicide rates, two combinations of conditions are sufficient to explain this outcome in the pool of countries:

- Lower inequality (Gini) and higher population density (the Republic of Moldova, Croatia);
- Higher inequality (Gini), higher rates of intentional homicide and lower population density (Latvia, Montenegro).

The consistency score of the formula, encompassing both solutions, is 0.70 which indicates that the status of sufficiency is largely supported by empirical evidence. The coverage score of 0.44 indicates that both combinations of conditions explain roughly 44 per cent of cases where relatively higher homicide rates are present.

The two paths reflect a role for the population density; higher inequality and higher rates of intentional homicide which, in combination with other factors, lead to higher rates of child homicide in the pool of ECA countries.

Analysis of sufficient conditions for lower homicide 0-14 rates indicates there are three paths sufficient to explain the outcome:

- Higher labour force participation, lower rates of intentional homicide and lower population density (Estonia, Georgia);
- Lower inequality (Gini), lower rates of intentional homicide and lower population density (Estonia, Bosnia and Herzegovina);
- Lower GDP, higher labour force participation and higher rates of intentional homicide (Kyrgyzstan, Armenia).

Four conditions stand out as meaningful for lower homicide rates in the 0-14 year old population the three paths above: higher labour force participation; lower rates of homicide; lower population density; and lower inequality. However, only in combination with other conditions they lead to the outcome, and reflects the complexity of conditions that explain a complex outcome. A high consistency score (0.91) supports the status of sufficiency. The coverage score of 0.51 indicates that more than half of cases with lower 0-14 homicide rates are explained by one of these three combinations.

## 4.2 Economic trends and the elasticity of child poverty, nourishment, and well-being in Southern and Eastern Europe and Central Asia

This section looks at the elasticity of poverty and child well-being indicators in relation to the economic and social determinants, using macro-pooled time series from 2006 to 2018. The QCA analysis complements the elasticity analysis in that it looks at children's well-being from a configurational logic, as per interlinkages of conditions leading to the presence and absence of the outcome. The methods for generating these elasticities are available for review in Annex 3.2 of this document. Figure 23 reports two sets of coefficients for nine well-being outcomes aligned to those reviewed in this paper (limited data for nutrition and proficiency data resulted in the use of proxies). The first bar for each outcome in the figure represents the association to GDP per capita (log)<sup>10</sup> in the year before the outcome measure, pre-controls. The second bar runs the same test, including controls. The blue bars report negative associations between outcomes and increases in GDP per capita, the red bars report positive associations. Each bar has an effect size reported at the top and where effect sizes are in boxes, these are significant results.

In each case, the effect size is interpreted in relation to a percentage point increase related to a 1 per cent change in GDP per capita (not statistical elasticities, these measures are interpreted in relation to real value changes). However, poverty measures and undernourishment are log values of these SDG indicators and therefore should be interpreted as elasticity measures (the percent change for a 1 per cent change in GDP per capita – see Annex table 3.1).

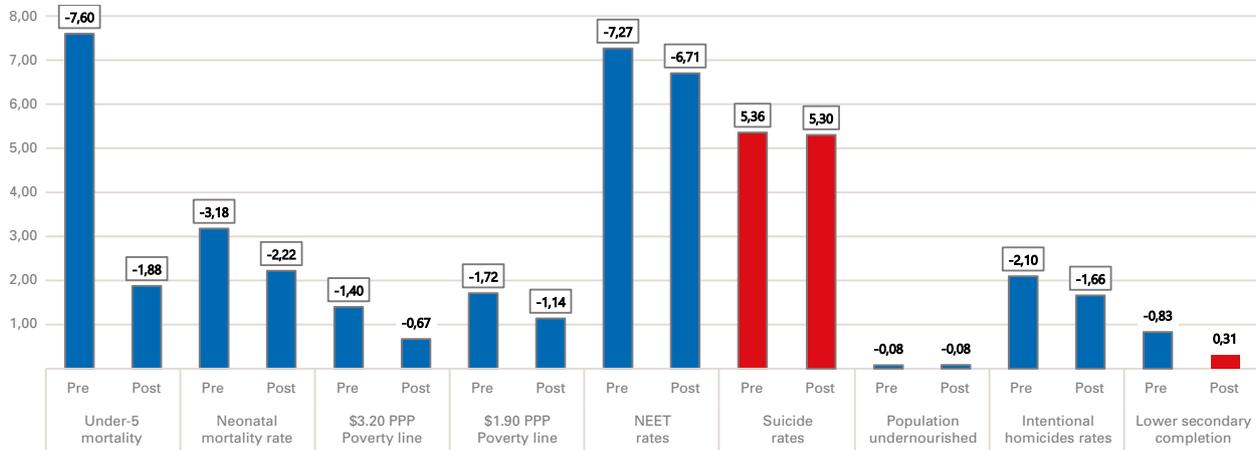
### ***Findings for poverty measurement and undernourishment (SDGs 1 and 2)***

The effect sizes reported for the higher poverty threshold of US\$3.20 per day show that following the inclusion of controls, the significant association between a 1 per cent change in GDP per capita and the percent change in persons under the poverty rate was not significant. Controls included population density, the age dependency ratio, the Gini index, and numbers of employed persons (all logged). The latter two variables did report a significant relationship with the percentage point change in persons living below the US\$3.20 per day threshold – both in expected directions – with a higher Gini index associating to higher poverty, and lower employment to higher poverty.

<sup>10</sup> Simple explanation of the logarithm here.

## Figure 23: GDP per capita retains significant effects on most key SDG indicators following controls

Elasticity effect sizes: GDP per capita effects on SDG outcomes in ECA countries (2006-2016)



Source: Author's calculations of data. Sources reported in Annex Table 1.1, series from 2006 to 2018 where data is available. Full data, including lists of control variables, and associated test statistics are reported in Annex Table 3.1.

Regarding the more extreme poverty threshold of US\$1.90 per day (extreme poverty), and following the inclusion of controls, the 1 per cent change in GDP per capita remained a significant predictor of elasticity in the extreme poverty rate. Results show that a 1 per cent change in GDP per capita is associated with 1.1 per cent change in extreme poverty in the ECA region. Unlike the US\$3.20 threshold, neither the employment nor remittance controls were significant associates to extreme poverty. However, the Gini index was again significant in the expected direction. The elasticity of extreme poverty to GDP per capita, above 1 per cent indicates that the extreme poor in ECA countries have a higher sensitivity to economic growth and contraction than the population on average. This is a significant finding, considering the contractions in economic growth expected following COVID-19 lockdowns.

Undernourishment in the population, measured in terms of individual daily consumption, was included as a proxy measure for child and family nutritional conditions in the absence of sufficient data for wasting and stunting for comparisons in the region. Results for undernourishment show very weak associations with changes in GDP per capita. In neither model was the GDP predictor significant. Among controls in the post-test however, indicators for food supply and age dependency were both significant and in expected directions: a 1 per cent change in the food supply – measured in terms of the total supply of calories per person, per day – is reported alongside a 2.3 per cent increase in undernourishment. This is indicative of an unequal supply of food across countries in the region on average and as such, indicates that falls in food supply are an indicator of malnutrition risk in ECA countries.

**Findings for other child well-being measures (SDGs 3, 4, 8, and 16)**

To interpret the coefficients for associations not reporting statistical elasticities, take the case of under-five child mortality. For this measure's pre-controls, the effect size -7.6 refers to an estimated 7.6 percentage point fall in the under-five mortality rates for a 1 per cent increase in GDP per capita. This fall is relative to the regional average over the period (16.4 deaths per 1,000). In real terms, this -7.6-percentage point fall can be reported as 1.25 deaths per 1,000 children under five ( $(16.4/100) * 7.6 = 1.25$ ). This means, across the ECA region since 2006, an increase of 1 per cent of GDP per capita is associated with a -1.9-percentage point fall in under-five child mortality rates, or in other words, 0.33 fewer deaths per 1,000 children under the age of five.

Controls include: public and private health care costs; life expectancy; immunization; primary school completion; population density; age-dependency; and numbers of physicians per 1,000 people.

For neonatal mortality rates, a 1 per cent change in GDP per capita is a significant correlate after controls for life expectancy, immunizations, primary school completion, population density, and the age-dependency ratio. In the case of neonatal mortality, physicians in the population were replaced with the number of nurses and midwives per 1,000 people. The controlled model reports a -2.2-percentage point fall in the number of neonatal deaths for a reported 1 per cent increase in GDP per capita. As the average rate of neonatal mortality in the region since 2006 is 8.7 per cent, this effect size is equivalent to 0.2 fewer deaths per 1,000 infants per 1 per cent change in GDP per capita.

Due to the lack of data available on reading proficiency by country, it was not possible to include this learning outcome in the macro-pooled time series analysis. As a replacement, or a proxy for learning outcomes, tests have been run to estimate the association of the change in lagged GDP per capita with the lower secondary school completion rate in ECA. In both models, pre- and post-controls, the association between GDP per capita and lower secondary school completion is insignificant. Better data in the region is required for both learning outcomes and education expenditures in order for future research to provide better indications of macroeconomic and public policy effects on children's educational outcomes.

Results for NEET rates show that: inclusion in the model of primary school completion; overall labour force participation in the population; the level of remittances; population density; and the age-dependency ratio all do little to reduce the association between a 1 per cent change in GDP per capita and the percentage point change in the average NEET rate in the region. Indeed, for every 1 per cent increase in GDP per capita, a percentage point change in the NEET rate is -6.7. For those countries with data, since 2006 the average NEET rate has stood at 21.5 per cent – around one in five youth – meaning that a 1 per cent change in GDP per capita in the region is associated with a 1.4 per cent fall in NEET rates on average.

A complex picture is seen in adolescent suicide in the ECA region. The association between a 1 per cent increase in GDP per capita and suicide is positive and significant, both before and after controls (including labour force participation population density and the age-dependency ratio). The coefficient shows that this accounts for around 5.3 percentage points on the suicide scale. Since 2006, across the region suicide rates have averaged 5.8 per 100,000 of the 15-to-19-year-old population. This means this coefficient is equivalent to a 0.33 increase in deaths by suicide in the 15-to-19-year-old population reported, on average, for every 1 per cent increase in GDP per capita. As with the QCA study, the association between traditionally positive macroeconomic indicators and increased suicide is difficult to explain and may be due to a lack of complete data on suicide

reporting practices, or a lack of power in the statistical modelling. Nevertheless, it is worth considering that income and wealth, as operationalized using GDP per capita, may not be a protective factor against suicide, and may instead be indicative of conditions in which some children and youth feel isolated from the benefits of growth and wealth, for various reasons, to the detriment of their mental health.

In the case of intentional homicides in the total population, this figure has been included in the absence of sufficient data on intentional homicides in the child population over the period 2006 to 2018, and in the absence of other suitable comparative child or youth-focused violence statistics for the region. Results show that a 1 per cent change in the GDP per capita in ECA is associated with a 1.7 percentage point fall in the number of homicides per 100,000 of the population. In the region since 2006 the average annual homicide rate was reported to be 0.39 deaths per 100,000 of the population. This means that a post-control coefficient of 0.39 is equivalent to 0.06 fewer deaths per 100,000 people in the ECA region for each 1 per cent change in GDP per capita. The controls in this test included: political stability; the rule of law; percentage changes in overall labour force participation; population density; and the age-dependency ratio.

## 5. DISCUSSION OF THE FINDINGS: WHAT ARE THE COVID-19 RISKS FOR CHILD WELL-BEING IN THE SHORT AND MEDIUM TERM?

This section of the report brings together the findings of predictors of poverty and child well-being across the previous sections. It provides recommendations of which indicators can be used in macro-level situation analysis and monitoring in countries in ECA as the COVID-19 crisis unfolds. Country stakeholders should read this section with reference to SDG indicators in Table 3 and the trend data reported throughout this paper. Based on this trend data and COVID-19 caseload data, short- and medium-term effects will also be discussed.

### 5.1 Recommendations for the monitoring of child well-being and economic indicators

Table 7 summarizes the findings of the analysis undertaken in Section 4. The economic, social, and health conditions most closely associated with child poverty and well-being in the region are mapped. The column reporting sufficient conditions shows the combinations of factors from the QCA shown to increase the likelihood of reporting better or worse outcomes by child indicators.

Increases to national poverty rates, and extreme poverty rates, are closely associated to income inequality. In the case of the most poor (under US\$1.90 per day), the expected fall in economic productivity and GDP per capita is likely to result in worsening conditions for in comparison to average persons in ECA countries. In both poverty measures, social determinants are also at play. Reductions in employment in a country and restrictions to earnings (and therefore remittances) outside a country are also shown to have significant independent associations with poverty risk. Higher unemployment increases the rate of dependency in a country which can compound age dependency effects, another correlate with extreme poverty. The GDP per capita measure is lagged by one year in every case, to that end, there is more confidence that a fall in GDP per capita in a given year is associated to increases in extreme forms of income poverty in the following year. Alongside general monitoring for GDP contractions, countries in the region with high income inequality, low employment rates, and high dependency ratios should be particularly attentive (*see Table 3*). This set of findings from the elasticity tests is supported by sufficient conditions for increasing and decreasing rates of national poverty risk in the region.

Nutrition indicators included in each test were different. The wasting data analysed using the QCA analysis showed that in several countries, sets of conditions were linked to a higher risk of wasting. The conditions were mixed in all cases, with at least one of the factors listed being counter-intuitive. In these cases, the results are interpreted as being robust (*see Section 4 and Annex 3*) and are an indication that contrary positive conditions are insufficient to protect a country from poor outcomes when reported together. The opposite is true when better outcomes are being reported. In the case of high risk of wasting, for instance, higher total health expenditures overall are a sufficient condition, in combination with higher inequality and higher rate of household out-of-pocket costs for healthcare. To this end, high rates of total health expenditure in and of themselves are not a protective factor against wasting when relative personal health costs and inequality are high.

Moreover, in certain conditions (including where Gini and total health expenditures are high, or where total health expenditure is simply low) having more than the average number of nurses and midwives per 1,000 people is not enough to protect children under five from a higher risk of wasting.

Because contrasting conditions are found in the explanations for low risk of wasting (lower inequality, lower out of pocket costs, alongside high total health expenditure) a message for ECA countries – apart from ‘inequality being an important condition for determining extreme conditions like wasting’ – is that health expenditure, and the manner in which it is invested (targeted or distributed), would need to be studied in more detail to understand why higher levels of expenditure are not consistently linked with better outcomes. Several possible explanations could include: higher spending due to higher need in a population, less effective spending in some countries where demand is comparable, or time lags. .

Due to data limitations, undernourishment rates in the population were used in elasticity tests in place of wasting. Food supply and dependency ratios were both significantly associated and in each case, are subject to fluctuations in employment and productivity. As noted, with falls in food supply having a larger relative effect on rates of undernourishment, countries should seek to protect employment, stimulate food supply sectors, and promote progressive interventions.

Measures on infant mortality have consistently reported findings across both analytical methods in relation to effects of the protective factors of GDP per capita. At present, GDP per capita is both a necessary condition for low neonatal and under-five child mortality and a significant lagged associate with percentage changes in GDP per capita. Every country in the region, particularly those with high rates of child mortality, those with lower-than-average GDP per capita, or those that experienced periods of recovery in 2008 and 2015, should closely monitor the effect of economic contraction on child survival. Other evidence for the studies suggests that within the group of countries, further risks to child mortality include higher rates of health expenditure by households. This measure, with other measures of health expenditure in the model (specifically lower public expenditure), and the role of preventative interventions (immunization rates), is indicative of the health risk that may follow from under-resourced health systems. Aside from the immediate indication that the strength of a health system is a key variable for monitoring in ECA during COVID-19, this finding implies that COVID-19 can affect chances of child survival through: overburdening of the health system, and a higher reliance on private health care in the general population, and failing to maintain standard public health services (e.g. immunizations).

As with nutrition, the sufficient conditions coming from the QCA provide an indication of the combination of factors producing high or low risk to child mortality and on occasion, where certain ‘positive’ measures do not function as protective factors. Again, the effects of GDP per capita, in combination with low out-of-pocket health costs and other factors, are mostly intuitive. Evidence for an independent protective effect of nurse and midwife numbers or higher total health expenditure, in the absence of other conditions, is not evident.

Table 7: Summary of the empirical findings: Economic, social and health conditions related to poverty and child well-being

Outcome area	Indicator	Economic measures	Social measures	Health measures	Sufficient conditions (for country details, see Section 4)
Poverty risks	National poverty increasing	Gini Index (h);			Gini (h), GDP pc (h), employment (h) / remittance (l);
	National poverty falling				Gini (l), employment (l); social protection (l), GDP (l); GDP pc (h), Gini (l); Gini (l), social protection (l).
	3.2 dollar	% increase Gini index;	% fall employment; % fall remittances		
	1.9 dollar	% fall GDP pc; % increase Gini;	% increase dependency ratio		
Nutrition	Wasting: high risk				Out-of-pocket health expenditure (h), total health expenditure (h); Gini (h), nurses and midwives (h), total health expenditure (h); nurses and midwives (h), out-of-pocket health expenditure (l), total health expenditure (l).
	Wasting: low risk				GDP pc (l), out-of-pocket health expenditure (l); Gini (l), out-of-pocket health expenditure (l), total health expenditure (h).
	Undernourishment		% fall in overall food supply, % fall in the age dependency ratio		

Outcome area	Indicator	Economic measures	Social measures	Health measures	Sufficient conditions (for country details, see Section 4)
Health	Under-5 mortality: high risk	GDP pc (l)		Out of pocket health expenditure (h)	Gini (l), nurse and midwives (l); GDP pc (l), out of pocket expenditure (h), total health expenditure (h); • Gini (h), nurse and midwives (h), GDP pc (l)/out of pocket health expenditure (h) / total health expenditure (l).
	Under-5 mortality: low risk	% increase GDP pc	% increase in population density; % primary completion rates	% increase in private health expenditure pc; % increase in immunization;	Out-of-pocket expenditures (l); GDP pc (h).
	Neonatal mortality: high risk	GDP pc (l)		Out of pocket health expenditure (h) Health expenditure per capita (l)	Out-of-pocket expenditure (h), fertility (h); nurse and midwives (h), out-of-pocket health spend (l), total health expenditure (l).
	Neonatal mortality: low risk	% increase GDP pc	Lower levels of fertility; % increase in population density;	% increase in immunization; % increase in nurse and midwives	Nurses and midwives (h), total health expenditure (l), lower fertility (l); GDP pc (h); out-of-pocket health expenditure (l) total health expenditure (h); nurses and midwives (h), out-of-pocket health expenditure (l); nurses and midwives (l), total health expenditure health (l), fertility (l).
	Suicide: high risk	% increase GDP pc			GDP per capita (h) Gini (l)
	Suicide: low risk				GDP pc (h), total health expenditure (h); Gini (h), adolescents OOS (h)
	Education	Proficiency rates: high			
Proficiency rates: low					GDP pc (l), services value-added (h); OOSC (l), adolescents OOS (h); GDP pc (h), Gini index (l), services value-added (l)
Lower secondary completion			% age dependency ratio; % increase in population density;		

Outcome area	Indicator	Economic measures	Social measures	Health measures	Sufficient conditions (for country details, see Section 4)
Youth employment	NEET rates: high risk	GDP pc (l)			Lower GDP pc (l); services value-added (h); services value-added (l), adolescents OOS (h).
	NEET rates: low risk	% increase GDP pc	Increase in labour force participation (all)		GDP growth (h); adolescents OOS (l); GDP growth (h), GDP pc (h).
Violence	Intentional mortality in total population		% increase in political stability index; % dependency ratio; % increase in population density;		
	Intentional mortality in children: high risk				Gini index (l), population density (h); Gini index (h), intentional homicide (all) (h), population density (l)
	Intentional mortality in children: low risk				Labour force participation (h), intentional homicide (all) (l), population density (l); Gini index (l) intentional homicide (l), population density (l); GDP pc (l), labour force participation (h), intentional homicide (all) (h)

Notes: (h) = higher groups, (l) lower groups as reported in Table 3 and applied in the Qualitative Comparative Analysis.

Source: See Section 4.

Results for high suicide risk are consistent across tests and explained above. Results of the QCA for lower suicide risk provide an indication that total health care expenditure can act as a protective factor as GDP per capita increases. Not 'being in school', in cases where income inequality is high, may also be protective – a finding which may be partly explained both by low overall numbers of suicide and by school as a place where bullying can occur. Such findings are counterintuitive when considering the impacts of poverty and related stressors so it is hard to place this factor in the realm of 'social and economic costs' of COVID-19. Rather, countries with higher suicide rates should instead seek to understand children's personal experiences of COVID-19 as a priority and specifically in light of the pressures of lockdown on mental health.

Like nutrition indicators, indicators of education used in both empirical tests were different. This was due to a lack of proficiency data in the region over recent years. In macro-pooled time series tests, completion of lower secondary school was used as a next-best proxy for learning outcomes. In QCA results, no necessary conditions were found. Sufficient conditions provided mixed results overall, where only two sets of conditions – GDP per capita and high proficiency, and Gini (counterintuitively) in cases of both high and low proficiency – were consistent in terms of their contribution to sets of sufficient conditions defining literacy proficiency score grouping. This does not mean countries can disregard effects of the economic crisis on learning and education but rather, should seek to understand it in national contexts and acknowledge the conditions most likely to emerge during COVID-19 that will accentuate or mitigate negative effects – such as adolescents being out of school or low demand from sectors employing younger workers. Moreover, these data do not account for school closures of the type seen during COVID-19.

Youth activation results across the two studies show very consistent findings, both in terms of higher risk of NEET rates and in conditions required to keep NEET rates low. Lower levels of GDP per capita are a necessary condition for high NEET rates, meaning more young people are not in employment, or when GDP per capita is lower. Changes in GDP per capita in the years before NEET rates are measured are significantly negatively associated. Overall labour market participation, service sector size, GDP growth, and numbers of adolescents out of school are meaningful contributors under various conditions. Countries should be aware of which labour market sectors have a higher demand for younger workers and recognise the lessons from the GFC, where general downturns in overall labour market participation disproportionately affected youth (Scarpetta et al, 2010). This calls for a monitoring of labour market participation by sector and of barriers to school entry in countries where service sector employment is low.

Evidence on violence suggest that in the ECA region, overall rates of intentional homicide are significantly associated with social conditions such as political stability, an increase in population density, and age dependency ratios, where each condition is associated with lower rates of general violence. For the effect directly on the child population, only QCA is possible, with overall higher rates of intentional homicide a co-condition of higher inequality and lower population density. Lower inequality and higher population density also predict higher child mortality in some countries where overall homicide is not part of the sufficient conditions. Sufficient conditions for a lower rate of child homicide show that higher labour market participation, lower population density, lower inequality, and lower homicide overall play a role. In the case where higher homicide rates overall are a part of sufficient conditions for lower child homicides, countries have a lower GDP per capita, and higher labour force participation. Measures of social cohesion, stressors related to inequality, and isolation are promising areas for monitoring both overall rates of violence and in turn, the potential for these to disproportionately affect children.

## 5.2 Indications of the medium- and longer-term impacts

All of the evidence in the section above speaks most directly to short-term effects based on year lags in the GDP data and extrapolating immediate reactions to changes in economic and social conditions during the crisis. To provide an indication of the medium- and long-term effects of the crisis, some basic approaches to reading the data are recommended.

First, based on trends related to the protracted nature and depth of economic contraction following the GFC and the Russian economic crisis of 2014-15, some indication of longer-term effects can be gleaned. Referring to Figure 2 and to trends in GDP per capita since 2008, evidence from across the region finds that only two countries show no fall in GDP per capita in 2009 (Turkmenistan and Uzbekistan); in Azerbaijan, Kazakhstan, the Republic of Moldova and Tajikistan the dip lasted just one year. Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Georgia, North Macedonia, the Russian Federation, and Turkey saw a two-year dip. The remaining countries – with the exception of Estonia with a four-year dip – of Armenia, Croatia, Latvia, Romania, and Serbia did not see GDP per capita recover to 2008 levels until 2016, 2017 or 2018 and in some cases, influenced by the second crisis. Using elasticity statistics, which are better measures for understanding cumulative effects of contraction, and information on the actual falls in GDP per capita terms, countries can begin to indicate the depth and persistence of poverty risk over the next few years, should COVID-19 trends replicate the GFC.

For a more elaborate set of predictions, a review the COVID-19 caseloads, trends, and lockdowns shown in Figure 14 could be informed using examples from the European Union and East Asia in terms of the timing of lockdown to estimate the length of time countries may be closed and the implications for economic contraction. These can be compared in a set of projections, including a GFC scenario as outlined above, or in various contraction estimates based on a range of lockdown scenarios.

A second way to infer the medium- to long-term effects is based upon connections between short-term effects on certain economic and social outcomes and how these outcomes are likely to affect other poverty and well-being outcomes in the future. One example is the link between dependency ratios and child and family outcomes (see Table 7 linking this with poverty, nutrition, education, and violence). Another is the potential increase in ‘effective’ dependency in a population brought about by high-end service needs (e.g., secondary health care), and more basic needs such as unemployment benefits or supports. In both cases, due to the health crisis and economic contraction, these conditions are to be expected (or are presently seen) and will increase pressures on social welfare budgets before predicted austerity (see reference to effect of stimulus and austerity in the GFC period in Table 1). Altogether the present response to COVID-19 and the lessons from the GFC indicate that a series of knock on effects from the initial economic downturn (and a balancing of budgets following stimulus packages) will compound risks to family and children well-being over time.

An additional examination of population structure country by country (see Annex 2 and Section 3.2), and future dependency ratios, is a reasonable way to estimate future needs and resource constraints relevant to achieving child and family goals in country.

## 6. RECOMMENDATIONS FOR PUBLIC POLICIES TO PROTECT CHILDREN POST-COVID-19

The final section of this report compares evidence of the mitigating effects of social protection policies in previous crises (*see Table 2*) with the predicted risk to poverty and well-being in families and children in the ECA region (*see Section 4*), and the COVID-19-related social protection and fiscal policies in ECA (*see Tables 4 and 5*) to assess if these policies will effectively protect children and families from income poverty risks and vulnerability to poor well-being outcomes. Where evidence suggests that policies may be less effective or ineffective, recommendations on the type of public policies needed to protect families and children in ECA countries from ill-effects of the crisis will be offered in Section 6.2. This section concludes with summary remarks.

### 6.1 Are existing post-COVID-19 social protection and fiscal stimulus policies fit for purpose?

#### *COVID-19 and Social Protection Policies in ECA countries*

The literature review reported in Table 2 shows that income poverty in childhood can be mitigated during crises through the provision of cash transfers, unemployment benefits to parents, active labour market policies or public works programmes, and fiscal stimulus. In contrast, austerity following the GFC had the effect of increasing poverty risks and during crises, unemployment benefits have in some cases led to extended periods of unemployment. More specifically, evidence shows that the modality of cash transfers, even during periods of crisis (as in normal times), and the detail of the payment criteria are important factors for determining the effect of the benefit in both poverty reduction and outcomes such as gender equality.

In ECA countries, evidence from the tests above suggests that effective anti-poverty policies – for both national thresholds and absolute poverty measures – work in tandem with lower overall income inequality. This inevitably means those policies need to reach the poorest and most vulnerable, irrespective of their employment status (certainly as workplaces close and economic contraction further reduces employment opportunities) and eligibility related to social contributions. Benefits should also be adequate in amounts, raising whole families – regardless of size, structure, and circumstance – above minimum income levels of national poverty thresholds. This requires increments related to family size, family structure, child age (when care responsibilities can crowd out work) and for children with disabilities. In short, such benefits should meet the standards of progressive universalism, where payments are available to all families with children and additional payments are available in cases of families with higher need.

Moreover, in ECA countries, employment, GDP per capita, and the level of remittances were also significant drivers of poverty, and therefore successful public policy responses to COVID-19 will need to address some of these issues directly – including through the application of fiscal stimulus.

Evidence from Table 4 shows that the majority of countries have implemented social assistance benefits, with the exception of utility waivers and the Bosnia and Herzegovina active labour market policy. These benefits are targeted on subgroups of the population or are means-tested, or both. However, almost one-third, are linked to employment – past or present – through furloughing schemes (emergency unemployment payments) or changes to existing social insurance unemployment schemes. Additionally, recipient numbers covered can also be very modest (where data is available).

Although each of these benefits will undoubtedly do some good (e.g., social insurance to address short-term unemployment in the formal sector is a reasonable reform), when not in combination or undertaken for sufficient periods of time at sufficient level of payment, they will be inadequate to meet the needs of the entire population (at a time of universal effects), even before details of their mitigation of various risks to poverty and well-being are fully understood.

A caution on the effectiveness of means-tested benefits and stringent targeting: at present, benefits are allocated on the basis of existing definitions and conditions related to poverty or vulnerability. This means, people who are 'near-poor' in ECA countries, e.g. people who are likely to be pushed into poverty groups as a consequence of the COVID-19 crisis, will not be receiving support now and are likely to miss out of COVID-19 related supports, but yet experience the following poverty risks and austerity risks. Countries need to monitor and respond to these cases.

The second major concern in regard to the COVID-19 social protection response is how temporary the schemes are in all cases where data is available. Of all the reforms covered in Table 4, only one is a permanent reform – expansion of an existing social assistance cash transfer in North Macedonia. The remainder are one-off and last between one and four months (17), or 6 to 12 months (4). Section 5.2 shows that only six countries in the ECA region experienced the GFC contraction in the short term (one year or less). The majority saw the effects in the medium term or longer, with at least four countries experiencing GDP per capita rates at a sub-2008 level for up to a decade.

Along with the two issues of coverage and timing of benefits, countries will have to review levels of payment to determine if these are adequate for need in country. Within-country variations in household costs and consumption (including changes in out-of-pocket costs for health and education services) and in inflation need to be considered in the first instance and tracked over time. In order for benefits paid regularly, the indexing of these benefits to retail or consumer price indexes, in comparison to flat rates, will need to be known if adequacy over time is to be appropriately assessed with a view to household consumption and costs and market fluctuations.

Where local social protection benefits are favoured over national responses, countries need to address the effects on within-country inequality and in turn, how this inequality influences poverty risks and other child and family outcomes (e.g., as in the Russian Federation and Kazakhstan).

### ***COVID-19 policies for better nutrition***

Table 2 shows that food parcels are an effective way of preventing malnutrition among children. The review also made clear the role of school feeding programmes in meeting the nutritional needs of children; however, until the majority of children return to school, such interventions will have a limited impact. Cash transfers, although shown to increase food security among households, have mixed results when evaluated for nutritional outcomes in children, which may partly explain the lack of direct association with economic conditions in tests. Although results for the social and economic conditions tests affecting wasting and nutrition are only found in combinations of factors, the rate of undernourishment in the general population was significantly associated by food supply in a country at a level which indicated an inequality in the distribution of foodstuffs.

The literature review and tests together indicate that an effective response to COVID-19 in protecting child nutrition would seek to manage vulnerable families' access to quality food, primarily through stimulating the food supply chain and delivering food parcels. The mechanism of protecting families from undernourishment using cash benefits is less evident. Moreover, given that undernourishment

increases disproportionately in relation to falls in the food supply, stimulus packages towards agriculture or food services could include conditions regarding price regulation and distribution methods that mitigate inequality in nutrition. In countries where school feeding programmes were in place before lockdown, policymakers may wish to consider re-orientating that capacity and investment to the provision of food parcels to children at home.

Among 14 one-off benefits were three food parcel interventions; two more food parcel interventions were short term: Armenia (one month) and Kazakhstan (two months). Of the five, only two focused specifically on families with children. Stimulus packages aimed at agriculture did not stipulate conditions suitable to equitable or progressive supply in the region.

### ***COVID-19 policies that promote child health***

Successful policies to promote child health from previous crises include the provision of health insurance to families and access to cash transfers, increasing health care utilization. Evidence for the provision of health services also shows these can be effective in reducing child mortality. In contrast, the provision of labour market supports can increase parental stress and mental ill health. This is also true for periods of austerity, which can also lead to increases in suicide. Following crises, the provision of cash transfers has, on occasion, been shown to improve adult mental health conditions.

The social economic analysis suggested the crisis will increase risks of child mortality, put a burden on the accessibility of health care utilization and in turn, an increase in out-of-pocket spending, as well as have counterintuitive effects on older adolescent suicide rates. These differences in the determinants of infant and under-five child mortality and suicide, will determine the types of policy responses required. As noted above, overall health expenditure, the size of the health workforce, and GDP per capita are consistent conditions for achieving positive outcomes across these health indicators – most likely influenced by demand for standardized birth services in contrast to mental health supports. Differences in demand for public health services requires a multi-pronged response; GDP per capita needs to remain as high as possible and preventative and protective health care services need to be bolstered. Personal out-of-pocket costs for health care need to be avoided as this links directly to income poverty risks. Public health investment needs to remain high, and for longer term protective reasons efforts to increase education achievement and completion rates need to be maintained.

Evidence from Tables 4 and 5, beyond the cash transfer approaches discussed, shows a limited health services response. Croatia is providing support for health insurance and Montenegro and the Russian Federation are increasing the wages of health workers. Other initiatives include fiscal stimulus responses related to wages subsidies, business support, and loans in COVID-19-affected sectors in three countries (limiting coverage to sectors of which the private health care sector is part), and the exemption of import duties on medical supplies and pharmaceuticals (the Russian Federation and Ukraine). In each case, the health responses are likely to benefit the mortality goals more directly (where pharmaceutical and secondary health care intervention is more prevalent), unless the provision of private counselling services is also stimulated.

### ***COVID-19 policies in support of education***

The literature review summary in Table 2 shows that school waivers and subsidies during crises have worked to improve school attendance, reduce out-of-pocket costs for parents, and so benefit household disposable incomes. School feeding programmes and social services for children delivered at times of health or economic crisis also have positive direct effects on school enrolment and attendance, as well as cognitive development (school feeding also benefits nutrition, but the same caveat related to school closures applies). In contrast, post-GFC austerity led to a reduction in childcare services – an important precondition to school readiness – linked to the education outcomes of many children. Evidence from the review also points to labour market programmes where targeting school-aged children led to school dropout.

In tests undertaken for this report, the economic conditions for learning outcomes were only reported in terms of sufficient conditions and were GDP per capita for higher proficiency and Gini (counter-intuitively) in high and low proficiency. Completion of lower secondary was significantly associated to two conditions in the region: the age dependency ratio and the percentage increase in population density.

Aside from school closures, food parcels (which may be adapted during school closures to pick up for extra demand due to fewer school meals being provided), cash transfers, and employment policies already discussed, no further social protection or stimulus is being offered (or withdrawn) as reported in Tables 4 and 5. School fee waivers or supports with other costs related to attendance of school (travel, food, offsetting child earnings), as schools reopen, are shown to be effective policies for both children's educational outcomes and family poverty risks.

### ***COVID-19 policies that prevent youth NEET rates***

There is no evidence of the effect of social protection and fiscal stimulus interventions or austerity policies directly influencing youth activation, with the exception of the attendance effects reported in the education policies. As noted, economic downturns have been shown to affect youth activation but evidence on the mitigating effects of social protection in these circumstances is scant.

In the economic and social conditions tests, GDP per capita is significantly associated with NEET rate: when GDP per capita is low, NEET rates are high; when GDP per capita is falling, NEET rates are increasing. NEET rates also track to overall labour market participation, service sector size, GDP growth, and numbers of adolescents out of school – all meaningful contributors in combination with conditions (*see Section 4.1*). Policies related to these factors in terms of cash payments to the unemployed, family cash supports, labour market activation policies, and stimulus to business will all have an indirect effect on youth activation, as will opening schools, providing youth-tailored labour market policies and scholarships, and training opportunities.

There is no reference to specific interventions for youth, or consideration of conditions specific to youth in general policies in the ECA mapping of social protection and fiscal stimulus responses to COVID-19 (*see Tables 4 and 5*). This is a missed opportunity, given the prevalence of labour market and employment interventions and learning on youth following the GFC.

### **COVID-19 Policies for preventing violence**

Similar to youth activation, there are no findings reported in Table 2 for the effect of crisis-response social protection on violence, although indirect stressors related to experiences of interpersonal violence include: income poverty; crime; homelessness; poor mental health; and reductions in parental caregiving.

The economic and social conditions analysis showed that intentional homicides are significantly associated to social conditions, such as political stability, increase in population density, and age dependency ratios – where each condition is associated with lower rates of general violence. For child mortality risks, only QCA tests were undertaken and no necessary conditions multiple complex co-conditions exist (*see Section 4.1*).

The prevention of violence in ECA countries, as supported through social protection interventions and fiscal stimulus, is unclear. Maintaining social cohesion is facilitated with fair and universal response to national crises so universality in the accessibility of general support is needed. Reflections here speak more to universal approaches to social protection and stimulus and the protection of the most vulnerable in austerity. So far, it is unclear how present social protection policies can protect all people in the long term, how stimulus will reach the poorest and most marginalised, and how austerity will unfold with the potential risk of weakening social cohesion and mental health (*see Table 2*).

### **COVID-19 and fiscal stimulus / austerity**

Alongside social protection policies, this paper has mapped fiscal stimulus undertaken in the ECA region to 28 April 2020. Fiscal stimulus policies are designed to help sectors of the economy survive economic downturns through stimulating productivity and growth and by supporting business with costs and credit lines.

Evidence reports in Table 2 map the observed effect stimulus interventions can have, directly and indirectly, on children alongside the consequences of austerity. Tirivayi et al (2020) found that fiscal stimulus could have an indirect effect on children in the short-and medium-term (one year, or two to three years) through reductions in poverty rates and increases in income and real GDP. No direct effects on children were found in the short, medium, or long term (three plus years). The authors also found that fiscal stimulus could have indirect influence on gender inequality when favouring predominantly male sectors.

In the case of COVID-19, fiscal stimulus has focussed on the business sector and employment support. Employment support and labour market programmes are shown to help increase family incomes, adult employment, job retention, and adult physical and mental health (*see Table 2*). To this end, there are potential routes by which well-applied fiscal stimuli can improve the well-being of children through families, employment, markets and so on (*see the ecological framework in Section 2*).

When austerity follows a crisis, Tirivayi et al., (2020) report serious and direct consequences for children and their services in the medium-term (two or three years following the crisis). These include, reductions in childcare services and benefits and, of serious concern to the ECA region, an increase in the number of children losing parental care and being given over to child services. Indirect negative effects such as homelessness, increased crime rates, poor adult mental health, and increased suicide rates were also seen. Along with these worsening social outcomes, a serious and

concerning health effect were reports that austerity led, in some cases, to a re-emergence of infectious disease outbreaks.

Table 5 shows a range of fiscal stimulus approaches including: delayed payments or exemptions of tax payments, social security contributions, or import duty exemptions of medical supplies; the facilitation of credit lines to businesses; payment in the form of wage subsidies are noted; and general stimulus/business supports.

In all cases, details of the exact modalities of stimulus payments were not clear in the source material. This needs to be followed up at a country level although on occasion the stimulus packages are restricted to sectors affected by COVID, or other sectors such as agriculture in Latvia. What is clearer is that countries are employing multiple fiscal policies which have high global costs in comparison to social protection, fewer details provided regarding timelines, and slightly longer timelines (the modal case is three months compared to one for social protection). There are also fewer conditions on receipt of stimulus than on social protection, meaning less regulation.

Stimulus in ECA countries is mostly directed towards private markets with no evidence on specific social service stimulus beyond health. Demand for social services related to child mental health and well-being, to violence and abuse, lack of socialization, lost learning, sedentary behaviours, and poor nutrition for some (based on school feeding effects), all point to an opportunity for governments to meet stimulus and social goals. One major opportunity is by bolstering educational investment as schools reopen, following the lockdown through additional funding or through education subsidies for parents or fee waivers. In ECA countries with mixed and unstable records on out-of-school populations, supports with school costs that reduce household costs directly and indirectly are shown to have positive effects on school enrolment and should be considered as a stimulus option (social market stimulus) when schools reopen. This will also serve to reduce inequality on exit.

## **6.2 Summary recommendations for COVID-19 social protection responses in ECA countries**

Given the expected depth and persistence of the economic downturn, the impact of this on unequal poverty risks in ECA countries, and the expectation that the near-poor population will soon become poor populations, social protection benefits in the region should:

- Maximize the chance of meeting the SDG goals, despite the crisis, – recognizing the both the pervasive impact of COVID-19, as well as existing inequality – by meeting the standards of progressive universalism in COVID-19 benefits, where payments are available to all families with children and with increments paid in cases of families with higher need related to size, disabilities, health, employment status etc. The benefits should be indexed to allow for fluctuation in inflation and living costs, preferably to a retail price index.
- Recognize that existing social protection systems already exclude the most vulnerable due to various conditions of eligibility. Building on existing systems needs to include expansion of coverage to the most vulnerable group if this is to avoid entrenching the most extreme forms of poverty.
- Implement COVID-19 reforms that learn from GFC trends and which adapted to COVID-19 lockdowns. Let social protection responses reflect the reality of the recovery timeline and shape

(V-shape, U-shape or L-shape) in the country. This requires setting out longer-term plans for social protection, setting payment schedules accordingly.

- Pay benefits at adequate amounts, raising whole families – regardless of size and structure and circumstance – above minimum income levels of the national poverty threshold. This requires increments related to family size, family structure, for children with disabilities and importantly, by child age (when care responsibilities can crowd out work, and development stages would benefit from higher overall rates of investment).
- Recognize that existing definitions of poverty and vulnerability are not COVID-19-proof so benefits targeted and costed to the caseloads defined by poverty ‘pre-COVID’ will need to be flexible to expansion in the short- and medium-term. In short, new policies need to account for the ‘new poor’ as a result of the COVID-19 crisis.
- Ensure social protection benefits are complementary to employment supports and include active labour market conditions that are not punitive to maximize the economic recovery without imposing stresses on families, leading to poorer family functioning and health consequences. Families are not responsible for the economic downturn and are not responsible for its recovery. Under present conditions, they are also not provided with the resources to stimulate the recovery. Stronger regulations and responsibilities should be put on businesses while fiscal stimulus options are available to them.
- Provide food parcels to help families who have recently relied on school feeding programmes, among many others, particularly in light of the realities of social lockdown. In cases where agriculture is stimulated to bolster food supply, and if food supply is at risk, ECA countries could benefit from regulation to maximize equitable supply of nutrition.
- Recognize that health access is improved by cash transfers but also by supports for health insurance and fees waivers. So far these types of interventions are underutilized in ECA countries and could be supported. Out-of-pocket health costs are a determinant of SDG health outcomes in the region, as is poverty.
- In future iterations of COVID-19 reforms, acknowledge the consequences of social protection and stimulus or austerity reforms in the areas of child protection, education and youth activation. Goals in each area have the potential to be influenced by social protection and fiscal stimulus policies. Recognizing complementarity in policy goals is the first step towards improving effectiveness and efficiency in public responses for children (OECD, 2015).
- Entirely avoid austerity in ways that put social development goals for children, and their related investments, at risk. Should fiscal stimulus lead to austerity there will be serious impacts on families and children.

Where countries need to find costs to undertake the necessary expansions, a rebalancing of present fiscal stimulus and social protection options would be the consideration. The added benefit to strengthening the social system in a time of crisis is the potential it has to outlive the crisis and further strengthen social development priorities, specifically anti-poverty measures, in countries across ECA.

However, in regard to costing and how it might inform the social protection response assessment and the risk of austerity responses in the short- or medium-term, it must be noted that less than half of COVID-19 social policies were costed and in no cases is it clear the amount of global cost transferred (as opposed to being spent on administration of the benefit).

Work is needed to better understand the global costs of these benefits at the national level. Costs are important for understanding the impact on sustainability and affordability of social protection benefits and overall government debt. Both will partly dictate calls of austerity and how cuts will impact on social protection policies. In 2016, government debts as a proportion of GDP in ECA ranged from 14.2 per cent in the Russian Federation to 80.7 per cent in Albania – around 42 per cent on average for 10 countries with data in 2016 (*see Annex Table 1.3*). For comparison, following the GFC and beginning in 2010 when the United Kingdom undertook a comprehensive austerity drive, including major cuts to benefits directly and indirectly affecting families and children, government debt in the country stood at 81.7 per cent, despite cuts (in 2016 debt was 115 percent of GDP, Richardson 2010).

Following the collection of better data on global costs, the value of understanding the amount of global cost transferred is important for two assessment reasons: firstly, to more accurately assess what the social impact will be; secondly, to assess whether new reforms are more cost effective than reforms built on existing social protection programmes. Thorough research on global gross and net cost effectiveness would add vital information to decision-making about crisis reforms, as well as decisions regarding justification for establishing stronger social protection infrastructure in normal times.

With no COVID-19 vaccine in sight, continued physical distancing, and existing changes to work patterns, schooling, and travel are all likely to continue. Who people see, where and how they source goods and services, where they work, where they take leisure may all change. This will lead to innovation in how business is done, how markets are managed, and which work becomes essential. Fundamental changes to living conditions (relationships, resources, family functioning, work) imposed by the pandemic will inevitably trigger discourse on how national governments plan their public policies and social protection policies. This may include austerity but equally, may be an opportunity to strengthen social protection schemes – and other important social sectors of education and health – for the benefit of children, families and society as a whole. Advocates for children need to be prepared for this discourse.

### **6.3 Final remarks: COVID-19 and the future**

As countries in the ECA region seek to maintain their ambition to achieve the SDGs by 2030, responses in relation to public policy and specifically, social protection, on exiting the COVID-19 crisis should be sensitive to the needs of future generations, not only in terms of maintaining basic incomes and living standards, but in dealing with the multiple and complex risks that a once-in-a-lifetime crisis brings to their economies, societies, communities, families, and children.

The evidence presented in this report has shown that COVID-19 represents a serious challenge for ECA countries. Social protection of fiscal stimulus policies, although clearly aligned to ensure income supports in the short term and maintain productivity, are not fully equipped to address the multiple needs of families and children, and the present needs of families and children are likely to be accentuated by inevitable economic downturn and expectations for austerity – both of which may be protracted.

The story of this crisis, like all economic and social crises, is one of inequality. Pre-existing inequality determines who suffers most in these times. Inequality in the initial responses to the crisis will further exacerbate underlying inequalities. When exiting the crisis and designing policies to help societies recover, stimulus and austerity can be unequal too, with huge private and public costs to follow. Today, many states in ECA can still manage the recovery from the crisis in ways that do not exacerbate inequalities for children and families, in turn protecting their futures and the futures of the region's economies and societies.

As it stands, across ECA countries the social protection benefits offered to families with children in the majority of cases are designed to fill a short-term gap in need, as if the long-term consequences of the economic downturn can be addressed later. In other words, although the short-term benefits are needed to help families through a period of low income, related to job insecurity and lockdown, for those in most need these will not constitute an opportunity to save or invest in family or children. They are providing the basics for survival and as important as this is, it stands to reason that long-term shocks related to economic downturn experienced by families will not be averted by these responses. Instead, governments are relying on fiscal stimulus to protect themselves from the long-term downturns, despite the lessons of the GFC and the inequality in the reach of fiscal stimulus. With these points in mind, a case may be made to strengthen social protection through longer payment schedules, additional services support (social stimulus), and the introduction of greater regulations, with an expectation of private sector stimulus in the next round of reforms.

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## ANNEX 1: SUPPORTING CHARTS AND TABLES

Annex Table 1.1: Indicators used in the Analysis, Outcomes Determinants and Contexts (2006 – 2018)

Category	Indicator description	Source	Outcome	Outcome determinant	Context trend
<b>Child outcomes</b>	Proportion of population living below the national poverty line (%)	World Development Indicators	y		
	Proportion of children moderately or severely wasted (%) under 5	World Development Indicators	y		
	Under-five mortality rate, by sex (deaths per 1,000 live births)	World Development Indicators	y		
	Neonatal (under 1 month) mortality rate (deaths per 1,000 live births)	World Development Indicators	y		
	Proportion of children and young people achieving a minimum proficiency level in reading (%) Lower Secondary	World Development Indicators	y		
	Proportion of youth not in education, employment or training, by sex and age (%) 15-24	World Development Indicators	y		
	Intentional Homicide rates (0-19)	World Development Indicators	y		
	Suicide Rates (15-19)	World Development Indicators			y
<b>Demo-graphics</b>	Population pyramids (see Annex 2)	Populationpyramid.net			y
	Age dependency ratio (% of working age population)	World Development Indicators			y
	Age dependency ratio, young (% of working age population)	World Development Indicators		y	
	Fertility rate, total (births per woman)	World Development Indicators			y
	International migrant stock (% of population)	World Development Indicators		y	
	Population density (people per sq. km of land area)	World Development Indicators			y
	Refugee population by country or territory of asylum	World Development Indicators			

Category	Indicator description	Source	Outcome	Outcome determinant	Context trend
<b>Demo-graphics</b>	Urban population growth (annual %)	World Development Indicators			y
	Population living in slums	World Development Indicators			
<b>Economic indicators</b>	GDP per capita (current US\$)	World Development Indicators		y	
	GDP growth (annual %)	World Development Indicators		y	
	Central government debt, total (% of GDP)	World Development Indicators			y
	Net ODA received per capita (current US\$)	World Development Indicators			y
	Merchandise trade (% of GDP)	World Development Indicators			y
	Industry value added (% of GDP)	World Development Indicators			y
	Agriculture, value added (% of GDP)	World Development Indicators			y
	Services, value added (% of GDP)	World Development Indicators		y	y
	External balance on goods and services (current US\$)	World Development Indicators			y
<b>Expenditures</b>	Public social protection expenditure, 1995 to latest available year (percentage of GDP)	ILO		y	y
	Current health expenditure per capita, PPP (current international US\$)	WHO		y	y
	Domestic general government health expenditure per capita, PPP (current international US\$)	WHO			y
	Domestic private health expenditure per capita, PPP (current international US\$)	WHO			y
	External health expenditure per capita, PPP (current international US\$)	WHO			y
	Out-of-pocket expenditure (% of current health expenditure)	WHO		y	
	Government expenditure on secondary education as % of GDP (%)	UNESCO		y	

Category	Indicator description	Source	Outcome	Outcome determinant	Context trend
<b>Cash transfer benefits</b>	Adequacy of benefits (%) - Cash transfer	World Development Indicators		y	
	Average per capita transfer - Cash transfer	World Development Indicators			y
	Coverage (%) - Cash transfer	World Development Indicators		y	y
<b>Services and service access</b>	Physicians (per 1,000 people)	World Development Indicators		y	
	Nurses and midwives (per 1,000 people)	World Development Indicators		y	
	Hospital beds (per 1,000 people)	World Development Indicators		y	
	People using safely managed sanitation services (% of population)	World Development Indicators		y	
	Children out of school (% of primary school age)	World Development Indicators			y
	Adolescents out of school (% of lower secondary school age)	World Development Indicators		y	y
	Food supply (kcal/capita/day)	FAOSTAT		y	

Category	Indicator description	Source	Outcome	Outcome determinant	Context trend
<b>Social context</b>	Prevalence of undernourishment (% of population)	World Development Indicators		y	
	Mortality rate attributed to household and ambient air pollution, age-standardized (per 100,000 population)	WHO			y
	Labour force participation rate, total (% of total population ages 15+) (modelled ILO estimate)	ILO		y	y
	Self-employed, total (% of total employment) (modelled ILO estimate)	ILO			y
	Employment to population ratio, ages 15-24, total (%) (national estimate)	World Development Indicators		y	
	GINI index (World Bank estimate)	World Development Indicators		y	
	Intentional homicides (per 100,000 people)	World Development Indicators		y	
	Personal remittances, received (current US\$)	World Development Indicators		y	
	Political Stability and Absence of Violence/Terrorism	World Governance Indicators		y	
	Rule of Law	World Governance Indicators		y	

Annex Table 1.2: Lockdowns by date in response to COVID-19 in Southern and Eastern Europe and Central Asia

	Schools	Workplaces	Public events	Restrictions on internal movement	International travel controls
<b>Albania</b>	9-Mar	9-Mar	9-Mar	9-Mar	9-Mar
<b>Armenia</b>	16-Mar		16-Mar	16-Mar	16-Mar <sup>4</sup>
<b>Azerbaijan</b>	7-Mar	31-Mar	10-Mar	16-Mar	29-Feb
<b>Belarus</b>					
<b>Bosnia and Herzegovina</b>	17-Mar	17-Mar	17-Mar	17-Mar	10-Mar <sup>4</sup>
<b>Bulgaria</b>	5-Mar	13-Mar	13-Mar	13-Mar	18-Mar
<b>Croatia</b>	11-Mar	14-Mar	9-Mar	17-Mar	19-Mar
<b>Estonia</b>	12-Mar	25-Mar	12-Mar	26-Mar	17-Mar
<b>Georgia</b>	29-Feb	NA	16-Mar	16-Mar	16-Mar
<b>Kazakhstan</b>	16-Mar	30-Mar	12-Mar	19-Mar <sup>1</sup>	17-Mar
<b>Kyrgyzstan</b>	16-Mar	12-Mar	25-Mar	25-Mar <sup>2</sup>	17-Mar
<b>Latvia</b>	12-Mar	12-Mar	12-Mar	12-Mar	17-Mar
<b>Moldova, the Republic of</b>	11-Mar		10-Mar	24-Mar	10-Mar
<b>Montenegro</b>	13-Mar		13-Mar	13-Mar	13-Mar
<b>North Macedonia</b>	10-Mar		NA	16-Mar	16-Mar
<b>Romania</b>	11-Mar	31-Mar	8-Mar	31-Mar (T) <sup>3</sup>	11-Feb <sup>5</sup>
<b>Russian Federation</b>	21-Mar	30-Mar	10-Mar	5-Mar	30-Jan <sup>6</sup>
<b>Serbia</b>	16-Mar	21-Mar	11-Mar	21-Mar	11-Mar <sup>4</sup>
<b>Tajikistan</b>				15-Mar	
<b>Turkey</b>	16-Mar	22-Mar	16-Mar	12-Mar	6-Feb <sup>4</sup>
<b>Turkmenistan</b>					
<b>Ukraine</b>	12-Mar	17-Mar	12-Mar	12-Mar	
<b>Uzbekistan</b>	16-Mar	16-Mar	16-Mar	24-Mar (T)	17-Mar <sup>4</sup>

Notes: <sup>1</sup>Nur-Sultan and Almaty under quarantine. <sup>2</sup>Main cities. <sup>3</sup>Night Curfew. 'T' denotes closure of public transport. <sup>4</sup>Bans from high-risk countries or regions. <sup>5</sup>Quarantine for arrivals from China. <sup>6</sup>Bans from Germany, Italy, France, and Spain.

Source: Oxford Blavatnik School of Governance, 2020.

Annex Table 1.3: Additional reference statistics: economic and social context

	Net ODA as % of GDP per capita	Central govt debt	Balance of trade	Rate of informal labour market	Adequacy of benefits (%) - Cash Transfer	Coverage (%) - Cash Transfer	Government expenditure on primary education GDP (%)
Albania	2.3%	80.7	-13.7%		9.0	9.8	2.1
Armenia	1.1%		-15.7%	24.8	19.6	14.3	0.5
Azerbaijan	0.2%		16.6%		0.1	11.3	
Belarus	0.2%	40.0	1.1%		81.2	27.3	
Bosnia & Herzegovina	1.7%	52.9	-15.2%	17.1	8.8	5.1	
Bulgaria			2.6%				0.8
Croatia			-0.8%				
Estonia			3.5%				1.3
Georgia	3.3%	42.1	-10.6%			17.4	
Kazakhstan	0.0%	16.8	12.2%		7.6	16.6	0.0
Kyrgyzstan	5.1%	60.5	-35.7%		11.2	6.5	
Latvia			-0.2%				1.5
Moldova, the Rep. of	2.0%	31.9	-25.7%		11.4	12.5	1.3
Montenegro	2.8%		-23.9%		23.6	6.5	

	Net ODA as % of GDP per capita	Central govt debt	Balance of trade	Rate of informal labour market	Adequacy of benefits (%) - Cash Transfer	Coverage (%) - Cash Transfer	Government expenditure on primary education GDP (%)
North Macedonia	1.3%		-12.6%				
Romania			-3.2%		7.9	52.6	0.4
Russian Federation		14.2	10.1%		6.0	57.7	
Serbia	2.1%		-8.5%	14.0	18.9	11.6	1.7
Tajikistan	5.3%					1.0	
Turkey	0.2%	31.9	-1.1%		5.7	7.0	
Turkmenistan	0.0%		10.2%				
Ukraine	0.9%	71.8	-8.1%		13.9	23.1	1.2
Uzbekistan	1.1%		-9.6%				
<b>Average</b>	<b>2%</b>	<b>44.3</b>	<b>-5.8%</b>	<b>18.6</b>	<b>16.1</b>	<b>17.5</b>	<b>1.1</b>
<b>responses</b>	<b>17</b>	<b>10.0</b>	<b>22</b>	<b>3.0</b>	<b>14.0</b>	<b>16.0</b>	<b>10.0</b>
<b>Maximum</b>	<b>5%</b>	<b>80.7</b>	<b>16.6%</b>	<b>24.8</b>	<b>81.2</b>	<b>57.7</b>	<b>2.1</b>
<b>Minimum</b>	<b>0%</b>	<b>14.2</b>	<b>-35.7%</b>	<b>14.0</b>	<b>0.1</b>	<b>1.0</b>	<b>0.0</b>

Annex Table 1.4: group Categories for the Qualitative Comparative Analysis

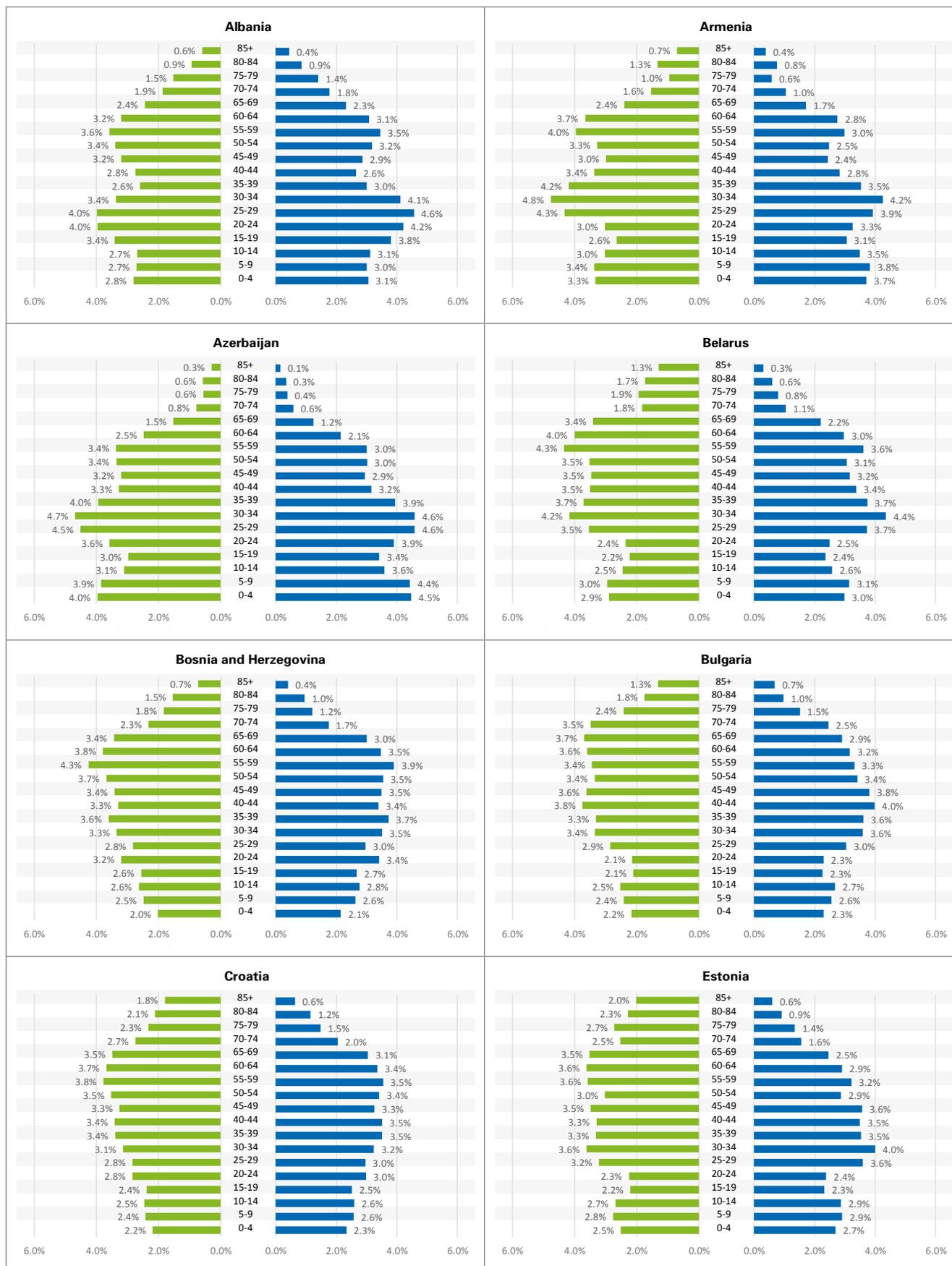
Country	GDP per capita (current US\$)	GINI index (World Bank estimate)	Personal remittances, received (current US\$) per capita	Services, value added (% of GDP)	Labour force participation rate, total (% of total population ages 15+) (modelled ILO estimate)	Employment to population ratio, ages 15-24, total (%) (national estimate)	Fertility rate, total (births per woman)	Prevalence of undernourishment (% of population)	People using safely managed sanitation services (% of population)	Population living in slums	Population density (people per sq. km of land area)	Intentional homicides (per 100,000 people)	Children out of school (% of primary school age)	Adolescents out of school (% of lower secondary school age)	Nurses and midwives (per 1,000 people)	Hospital beds (per 1,000 people)	Public social protection expenditure, 1995 to latest available year (% GDP)	Coverage (%) - Cash Transfer	Adequacy of benefits (%) - Cash Transfer	Current health expenditure per capita, PPP (current international \$)	Out-of-pocket expenditure (% of current health expenditure)	Government expenditure on secondary education as % of GDP	GDP growth (annual %)
Albania	5268.8	33.2	508.7	47.9	55.9	21.6	1.6	6.2	39.9		104.6	2.3	2.6	3.1	3.6	2.9	11.9	9.8	9.0	759.7	58.0	0.8	4.1
Armenia	4212.1	34.4	494.0	52.6	58.9	21.7	1.8	4.3	48.2	9.3	103.7	2.4	6.9	8.2	5.6	4.2	7.6	14.3	19.6	876.9	80.6	1.3	5.2
Azerbaijan	4721.2		146.7	35.2	66.1		1.9	2.5			120.3	2.0	3.9	0.5	7.0	4.7	8.2	11.3	0.1	1193.1	78.9		1.4
Belarus	6289.9	25.2	153.7	47.7	63.3		1.5	2.5	80.5	45.2	46.7	3.6	1.3	1.1	11.4	11.0	19.4	27.3	81.2	1151.4	35.8	2.4	3.0
Bosnia and Herzegovina	6065.7		438.7	55.0	46.7	23.1	1.3	2.5	21.6	7.6	64.9	1.2			6.3	3.5		5.1	8.8	1123.4	28.7	3.4	3.6
Bulgaria	9272.6	40.4	207.6	59.2	55.2	20.7	1.5	3.6	64.4		64.7	1.5	11.7	10.1	5.3	6.8	18.5			1577.9	48.0	1.6	3.1
Croatia	14909.7	30.4	356.6	59.0	51.5	25.6	1.4	2.5	58.5		73.1	1.1	1.4	1.3	8.1	5.6	21.6			1705.2	15.4		2.6
Estonia	23266.3	30.4	1104.0	60.2	63.1	41.7	1.6	2.9	97.4		30.4	2.2	2.4	1.3	6.5	5.0	17.0			1987.7	22.7	1.3	4.8
Georgia	4717.1	36.4	390.8	60.3	67.6	28.3	2.1	7.9	27.2	34.1	65.3	1.0	0.8	0.2	4.1	2.6	10.6	17.4		797.2	55.6		4.8
Kazakhstan	9812.6	27.5	79.8	55.5	70.5		2.7	2.5	99.0		6.8	5.0	1.0			6.7	5.4	16.6	7.6	858.8	35.6	2.0	4.1
Kyrgyzstan	1281.4	27.7	230.9	49.8	61.4	34.4	3.0	7.1		9.7	32.9	4.2	0.3	3.0		4.5	9.0	6.5	11.2	240.2	57.6		3.5
Latvia	17860.6	35.6	756.9	63.8	60.7	33.1	1.7	2.5	85.8		31.0	4.2	1.5	1.3	4.8	5.8	14.4			1589.7	44.6	1.6	4.6

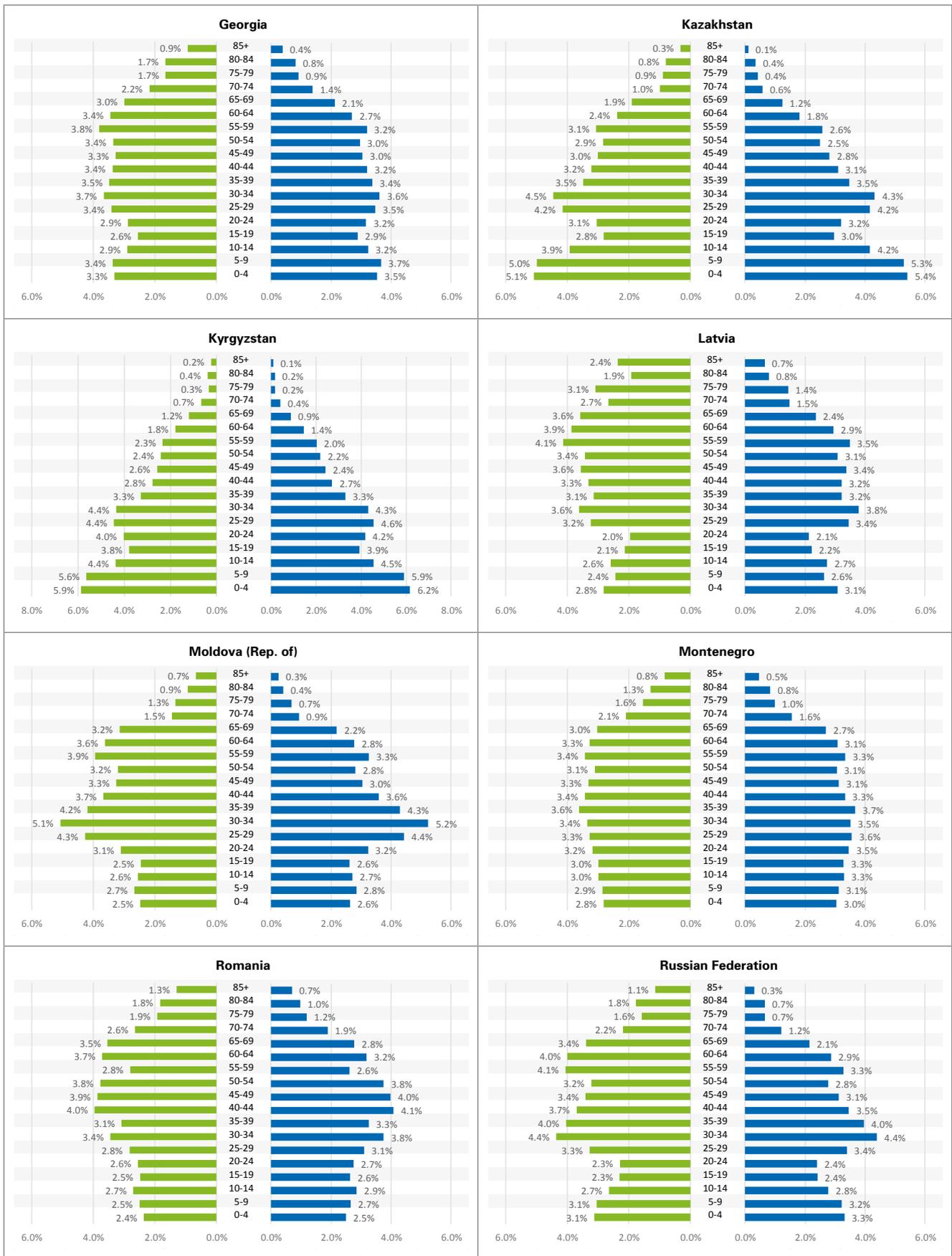
Country	GDP per capita (current US\$)	GINI index (World Bank estimate)	Personal remittances, received (current US\$) per capita	Services, value added (% of GDP)	Labour force participation rate, total (% of total population ages 15+) (modelled ILO estimate)	Employment to population ratio, ages 15-24, total (%) (national estimate)	Fertility rate, total (births per woman)	Prevalence of undernourishment (% of population)	People using safely managed sanitation services (% of population)	Population living in slums	Population density (people per sq. km of land area)	Intentional homicides (per 100,000 people)	Children out of school (% of primary school age)	Adolescents out of school (% of lower secondary school age)	Nurses and midwives (per 1,000 people)	Hospital beds (per 1,000 people)	Public social protection expenditure, 1995 to latest available year (% GDP)	Coverage (%) - Cash Transfer	Adequacy of benefits (%) - Cash Transfer	Current health expenditure per capita, PPP (current international \$)	Out-of-pocket expenditure (% of current health expenditure)	Government expenditure on secondary education as % of GDP	GDP growth (annual %)
Moldova, the Republic of	3227.3	25.7	411.2	53.7	41.7	19.3	1.3			63.5	123.5	3.2	9.0	15.0	4.5	5.8	18.1	12.5	11.4	480.4	46.3	2.0	3.4
Montenegro	8844.2	39.0	2343.1	59.2	50.5	23.2	1.7	2.5		27.1	46.3	2.4	2.0	6.7	5.7	4.0		6.5	23.6	1333.9	24.1		5.1
North Macedonia	6083.7	34.2	700.1	55.1	54.9	17.4	1.5	3.2	16.6	8.3	82.6	1.5	0.9		3.8	4.4				934.6	35.4		2.7
Romania	12301.2	36.0	74.9	57.1	54.1	24.7	1.6	2.5	76.5	14.4	84.6	1.5	11.6	7.4	6.1	6.3	14.8	52.6	7.9	1152.2	20.7	1.2	4.0
Russian Federation	11288.9	37.5	10.1	54.1	61.6	28.3	1.8	2.5	61.3		8.8	9.2	0.1	0.2	8.6	8.2	15.6	57.7	6.0	1329.3	40.5		2.3
Serbia	7246.7	36.2	208.9	51.0	53.9	21.1	1.5	5.7	24.7	3.6	79.8	1.1	1.4	1.7	6.1	5.7	23.4	11.6	18.9	1322.6	40.5	0.9	4.4
Tajikistan	826.6	34.0	160.2	42.1	43.6	23.3	3.6			26.0	65.6		0.5		5.2	4.8		1.0		208.5	66.1		7.3
Turkey	9370.2	41.9	17.7	54.3	52.4	35.0	2.1	2.5	65.2	8.1	107.0		5.1	8.9	2.6	2.7	13.5	7.0	5.7	1089.2	16.5		2.8
Turkmenistan	6966.6		249.2		65.0		2.8	5.4	100.0		12.5				4.6	7.4				1116.9	76.2		6.2
Ukraine	3095.2	26.1	32.7	51.3	53.7	27.6	1.4	3.5	68.5	19.0	77.0	6.2	8.0	3.6	7.1	8.8	22.2	23.1	13.9	534.2	54.3	1.7	3.3
Uzbekistan	1532.4		44.2	31.6	65.5		2.5	6.3		52.2	77.5	1.1	0.7	3.7	12.1	4.0	11.6			416.9	52.2		5.1

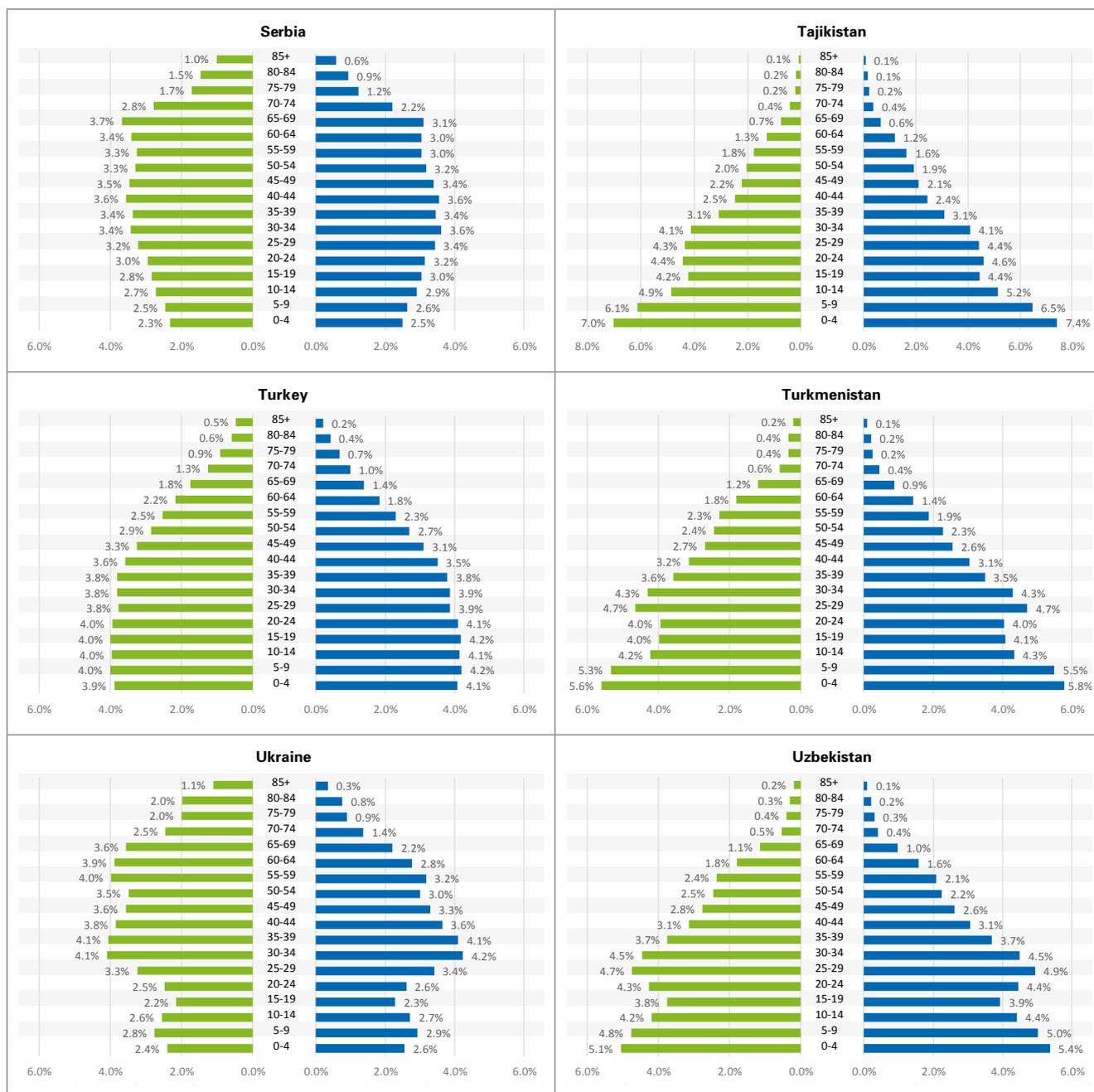
Country	GDP per capita (current US\$)	GINI index (World Bank estimate)	Personal remittances, received (current US\$) per capita	Services, value added (% of GDP)	Labour force participation rate, total (% of total population ages 15+) (modelled ILO estimate)	Employment to population ratio, ages 15-24, total (%) (national estimate)	Fertility rate, total (births per woman)	Prevalence of undernourishment (% of population)	People using safely managed sanitation services (% of population)	Population living in slums	Population density (people per sq. km of land area)	Intentional homicides (per 100,000 people)	Children out of school (% of primary school age)	Adolescents out of school (% of lower secondary school age)	Nurses and midwives (per 1,000 people)	Hospital beds (per 1,000 people)	Public social protection expenditure, 1995 to latest available year (% GDP)	Coverage (%) - Cash Transfer	Adequacy of benefits (%) - Cash Transfer	Current health expenditure per capita, PPP (current international \$)	Out-of-pocket expenditure (% of current health expenditure)	Government expenditure on secondary education as % of GDP	GDP growth (annual %)
Average	7759.2	33.3	396.6	52.5	57.3	26.1	1.9	3.9	60.9	23.4	65.6	2.8	3.5	4.3	6.2	5.5	14.6	17.5	16.1	1033.9	45.0	1.7	4.0
High condition threshold	10485.5	35.8	648.5	56.5	61.1	29.3	2.2	4.8	74.7	32.9	82.8	3.9	5.4	6.4	7.3	6.5	17.3	25.6	25.9	1266.0	54.6	2.0	4.6
Low condition threshold	5032.9	30.7	144.6	48.6	53.5	22.9	1.6	3.0	47.1	14.0	48.5	1.8	1.6	2.2	5.0	4.4	11.9	9.4	6.2	801.8	35.3	1.3	3.3

Source: Annex Table 1.1.

## ANNEX 2: DEMOGRAPHIC PYRAMIDS, 2019







Notes: No data for North Macedonia.

Source: populationpyramid.net, 2020.

## ANNEX 3: METHODOLOGICAL NOTES

### A3.1 For fuzzy-set Qualitative Comparative Analysis (QCA)

The analytical tool of this study employs a fuzzy-set analysis, a relatively novel technique within the broader Qualitative Comparative Analysis (QCA) methodology (Cebotari and Vink, 2013; Ragin 2009; Schneider and Wagemann, 2012). The QCA methodology is geared towards capturing the configurational nature of complex phenomena, such as those linked to vulnerabilities experienced by children in different contexts.

In contrast to traditional quantitative analyses oriented towards capturing the empirical relevance of independent variables, the QCA does not make such assumption of independence. Instead, the QCA uses mathematical algorithms of the Boolean logic to assume conjunctural causation and aims to analyse how individual conditions alone, or in combination with each other, explain weaker or stronger values of an outcome. By analysing both sides of an outcome, the QCA takes into account the asymmetrical nature of complex phenomena. This unique feature of QCA sets it apart from other methodologies and is the first time this type of analysis is being employed to inform the evidence base of an agency within the United Nations.

The QCA is suitable for small and medium N-samples normally ranging between 15 and 50 cases. It employs a case-oriented approach, in that a good knowledge of cases in the sample is essential to select relevant conditions and to explain interlinkages between theory and findings. Cases can be any unit that fits the contextual logic of the analysis. Similarly, the outcome and conditions can employ data at micro-, meso-, and macro-level. The ability to include and analyse data at different levels is one major advantage of the QCA methodology.

The QCA's fuzzy-set analysis is based on defining and analysing subset relations of necessary and sufficient conditions leading to the presence or absence of the outcome. The analysis employs three steps, as follows:

1. The conceptual, empirical and theoretical evidence feeds in *raw data* composed of an outcome and conditions for the pool of cases. The raw data is collected using available statistics, or gathered using in-depth knowledge of each case.
2. The raw values of data for the outcome and conditions are *calibrated* into partial set membership scores using middle-, upper-, and lower-level thresholds informed by evidence or data characteristics.

For the analysis of this study, the calibration used the average values as a middle-level threshold when defining the set membership in the outcome and conditions for the pool of countries. Then, the  $\frac{1}{2}$  standard deviation values above the mean were used as the upper-level threshold, while the  $\frac{1}{2}$  standard deviation values below the mean were used as the lower-level threshold to define the set membership. One exception was the calibration of poverty outcome, where the value of 1 was used as the middle-level threshold, with the  $\frac{1}{2}$  standard deviation above and below the mean as thresholds for the upper-level and lower-level set membership, respectively. This exception in calibration was motivated by the structure of the poverty outcome, for whom the average values

cannot be calculated. Instead, the poverty outcome includes ratio of the poverty rate in a given year as a ration of the average poverty rate in a country as recorded in the last decade. The value of 1 is the natural threshold, and value below and above 1 represent a fall or an increase in national poverty rates, respectively, according to national measures.

The calibration using the three thresholds leads to fuzzy-set membership scores for the outcome and conditions that are included in the interval between [0] (non-membership) and [1] (full membership). The calibration process is sensitive to variations in the use of cut-off points. The current study pays particular attention to the standardized nature of establishing the cut-off thresholds as described above.

3. The calibrated scores are used to analyse the configuration of necessary and sufficient conditions leading to the presence and the absence of the outcome. The status of being a *necessary* condition is fulfilled when the outcome is consistently a subset of a condition in the pool of cases. In other words, the fuzzy-set scores of the outcome are lower or equal to the fuzzy-set scores of the condition ( $Y_i \leq X_i$ ) if to meet the necessity criteria. Inversely, the status of being a sufficient condition is when the condition is a subset of the outcome, where the fuzzy set scores of the condition are lower or equal to the fuzzy-set score of the outcome ( $X_i \leq Y_i$ ).

For the analysis of sufficient conditions, the parsimonious solution is retained to present the results of this study. The parsimonious solution allows for the use of the entire spectrum of configurations that are covered by cases or not to explain the outcome.

The analyses of necessary and sufficient conditions employs two parameters of fit. One parameter is 'consistency' and indicates the degree to which the subset relation is approximated. Higher consistency values indicate a better subset relation and a better fit with the status of being a necessary or sufficient condition in the pool of cases. A consistency score of 0.80 is generally seen as the minimum accepted value for being a sufficient condition. For the analysis of necessary conditions, a minimum accepted consistency threshold is 0.80 but a consistency threshold of 0.85 and higher is advised.

The second parameter of fit is 'coverage', which indicates the relation in size between the condition set and the outcome set. For the analysis of sufficient conditions, the coverage shows the proportion of cases covered by a condition or combination of conditions. For the analysis of necessity, the coverage indicates the relevance and trivialness of the condition.

### A3.2 For elasticity of child well-being measures

To assess how short-term shocks to aggregate income affect children and young person's welfare in ECA, the first step is to build a database of macro-economic and macro-social indicators from 2006 to 2018 covering all countries. As detailed in table A1.1. data is obtained from different sources.<sup>11</sup> Some of the indicators presented gaps in the time series. Missing values were imputed as follows. For those countries having less than five years of missing data points, we replaced missing values with plausible values calculated as the moving average of the last three years (if missing were at the end of the series) or as the moving average of the following three periods (if missing were at the beginning of the series). In the presence of a gap in the middle of the series we took the average of the year before and after and substituted the value accordingly. Countries with more than five years of missing values in any of the indicators within each specification were dropped from the analysis.

With this data, the within transformation estimation procedure is used to analyse the relationship between aggregate income and the outcome variables (see Annex Table 3.1). The advantages of the within transformation estimation procedure are that it can allow the individual-and/or time-specific effects to be correlated with the explanatory variables. Time-fixed effects that control for global or region-wide shocks affecting all countries, and country-fixed effects that control for unobserved country specific characteristics that do not vary over time, are included to reduce concerns about the exclusion restriction.

The aim of the analysis is not to infer causality but rather, to evaluate the extent to which fluctuations in aggregate income are associated with children and young people outcomes. To analyse the relationship between aggregate income on children and young people outcome, regressions of the following specification form are run:

$$Y_{ct} = \beta \log GDP_{ct-1} + \alpha_c + \delta_t + \varepsilon_{ct}$$

where  $Y_{ct}$  is the outcome variable for country  $c$  at time  $t$ ;  $\log GDP_{ct-1}$  is the lagged natural logarithm of per capita GDP;  $\alpha_c$  is a set of country fixed effects;  $\delta_t$  is a set of time fixed effects; and  $\varepsilon_{ct}$  is the error term. Whenever possible, the outcome variable  $Y_{ct}$  is transformed into natural logarithm. In this case, the log/log regression model can be interpreted as elasticity of variations in GDP per capita with respect to the outcome variable.

The relationship between the outcome variable and aggregate income can be mediated by other indicators thus violating the independence between aggregate income and the error term. To resolve this, the baseline regressions are augmented to estimate the following specification:

$$Y_{ct} = \beta \log GDP_{ct-1} + \lambda X_{ct-1} + \alpha_c + \delta_t + \varepsilon_{ct}$$

where  $\lambda X_{ct-1}$  is a series of lagged control variables, which include population density; age dependency ratio; income inequality; health systems and expenditure; labour force participation and employment rate; education level completion rate; and food supply and governance indicators.

11 Further information on data coverage is available for each indicator from the trend charts reported in chapter 3 or upon direct request to the authors.

One limitation of this approach is the potential reverse causality occurring between GDP per capita and the outcome variable. From a methodological standpoint, the presence of reverse causality might bias upwards the FE estimate of the impact of GDP. However, to mitigate the issue of endogeneity of GDP on the outcome variables, the value of GDP is lagged. Lagged explanatory variables are a common strategy used in response to endogeneity concerns and simultaneity bias (Vergara, 2010; Clemens et al., 2012) although recently subjected to several critics (Reed, 2014; Bellemare, 2017). The argument is that although current values of GDP might be endogenous to SDG outcomes, it is unlikely that past values of GDP are subject to the same problem. A natural development of such analysis would be to understand the causal linkages between GDP and the outcome variables by instrumenting GDP within an instrumental variable setting. Coefficients produced using a level-log model have been standardised using the average for the set by dependent variable in the main text.

Annex Table 3.1: Full statistical tables for elasticity analysis and regression analysis

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Persons under 3.20 PPP Poverty line	Persons under 3.20 PPP Poverty line	Persons under 1.90 PPP Poverty line	Persons under 1.90 PPP Poverty line
Log GDP per capita (t-1)	-7.599*** (1.300)	-2.095** (1.011)	-2.120** (1.012)	-1.878* (1.024)	-3.179*** (0.691)	-1.222** (0.590)	-2.220** (0.929)	-1.401*** (0.431)	-0.672 (0.490)	-1.715*** (0.370)	-1.140*** (0.325)
Domestic general government health expenditure per capita PPP (current USD) (t-1)				0.154 (0.737)							
Domestic private health expenditure per capita, PPP (current international \$)(t-1)				-3.794*** (0.702)							
Population density (people per sq. km of land area) (t-1)		-39.17*** (3.570)	-39.09*** (3.567)	-38.34*** (3.675)		-20.89*** (2.262)	-15.18*** (5.199)		1.806 (1.895)		-0.382 (1.456)
Age dependency ratio (% of working-age population) (t-1)		0.0398 (0.0589)	0.0398 (0.0590)	0.0312 (0.0787)		-0.0224 (0.0427)	0.0537 (0.0951)		0.0441 (0.0276)		0.0591** (0.0231)
Primary completion rate, total (% of relevant age group) (t-1)		-0.0863*** (0.0277)	-0.0863*** (0.0279)	-0.100*** (0.0307)		-0.0512*** (0.0189)	-0.0441 (0.0279)				

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Persons under 3.20 PPP Poverty line	Persons under 3.20 PPP Poverty line	Persons under 1.90 PPP Poverty line	Persons under 1.90 PPP Poverty line
Immunization, measles (% of children ages 12-23 months)		-0.0603*** (0.0194)	-0.0606*** (0.0195)	-0.0633** (0.0283)		-0.0333*** (0.0126)	-0.0499** (0.0212)				
€Life expectancy at birth		0.0940 (0.364)	0.0474 (0.378)	0.155 (0.404)		-0.0394 (0.235)	0.121 (0.259)				
€Physicians (per 1,000 people)			0.174 (0.315)								
€Nurses and midwives (per 1,000 people)							-0.531*** (0.183)				
GINI index (World Bank estimate) (t-1)									0.0683*** (0.0257)		0.0527*** (0.0141)
Number of persons employed (t-1)									-2.398** (1.120)		-0.658 (0.517)
Log remittances (t-1)									-0.506** (0.242)		0.0977 (0.0799)
Constant	80.65*** (11.11)	201.2*** (13.74)	201.1*** (13.78)	218.3*** (16.05)	35.58*** (5.910)	111.2*** (9.550)	93.70*** (25.50)	28.91*** (3.742)	49.75*** (11.56)	30.45*** (3.181)	31.65*** (9.163)
Observations	276	252	252	228	276	252	121	184	175	148	139
R-squared	0.978	0.985	0.985	0.986	0.969	0.978	0.991	0.880	0.894	0.947	0.967
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Mortality rate under-5 (per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Neonatal mortality rate (deaths per 1 000 live births)	Persons under 3.20 PPP Poverty line	Persons under 3.20 PPP Poverty line	Persons under 1.90 PPP Poverty line	Persons under 1.90 PPP Poverty line
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Within R2	0.228	0.634	0.634	0.690	0.143	0.544	0.556	0.0449	0.133	0.218	0.434
Number of Countries	23	21	21	19	23	21	20	16	16	13	13

Source: Author's calculations of data reported in Annex Table 1.1.

Annex Table 3.1: Full statistical tables for elasticity analysis and regression analysis

Independent variables	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
	youth not in education employment or training (%)	youth not in education employment or training (%)	Suicide Rates (15-19) per 100,000 of the 15-19 population	Suicide Rates (15-19) per 100,000 of the 15-19 population	Log # of Persons under-nourished	Log # of Persons under-nourished	Log # of Persons under-nourished	Intentional homicides (per 100 000 people)	Intentional homicides (per 100 000 people)	Intentional homicides (per 100 000 people)	Lower secondary completion rate total (% of age group)	Lower secondary completion rate total (% of age group)
Log GDP per capita (t-1)	-7.268*** (2.690)	-6.705*** (2.404)	5.358*** (1.012)	5.303*** (1.109)	-0.0805 (0.0605)	0.0484 (0.0483)	-0.0847 (0.0547)	-2.097*** (0.618)	-2.015*** (0.598)	-1.661*** (0.483)	-0.833 (2.941)	0.313 (3.144)
Domestic general government health expenditure per capita PPP (current USD) (t-1)							0.0711 (0.0447)					
Domestic private health expenditure per capita, PPP (current international \$) (t-1)							-0.0246 (0.0429)					
Population density (people per sq. km of land area) (t-1)		-15.54 (19.00)		2.549 (5.531)			0.141 (0.224)			-17.11*** (3.651)		39.81*** (11.11)
Age dependency ratio (% of working-age population) (t-1)		0.141 (0.246)		0.0281 (0.127)			-0.0150*** (0.00561)			-0.242*** (0.0488)		1.049*** (0.273)
Primary completion rate, total (% of relevant age group) (t-1)		0.0498 (0.0493)										
Log Remittances (t-1)		0.901 (0.611)										

Independent variables	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
	youth not in education employment or training (%)	youth not in education employment or training (%)	Suicide Rates (15-19) per 100,000 of the 15-19 population	Suicide Rates (15-19) per 100,000 of the 15-19 population	Log # of Persons under-nourished	Log # of Persons under-nourished	Log # of Persons under-nourished	Intentional homicides (per 100 000 people)	Intentional homicides (per 100 000 people)	Intentional homicides (per 100 000 people)	Lower secondary completion rate total (% of age group)	Lower secondary completion rate total (% of age group)
Labour force participation rate, total (% of total population ages 15+) (t-1)		-0.682**		0.120						-0.0562		-0.401
		(0.272)		(0.0876)						(0.0629)		(0.443)
Log food supply (kcal/capita/day) (t-1)						-2.223***	-2.296***					
						(0.263)	(0.292)					
Political stability and absence of violence/terrorism									-0.626**	-0.990***		
									(0.278)	(0.231)		
Rule of Law									-0.530	1.345		
									(1.266)	(1.016)		
Constant	85.93***	164.6*	-40.14***	-58.48**	17.79***	34.53***	36.30***	21.99***	21.10***	100.8***	101.8***	-93.76*
	(24.28)	(83.35)	(8.665)	(29.00)	(0.524)	(1.930)	(2.565)	(5.369)	(5.085)	(16.39)	(24.57)	(54.67)
Observations	131	119	156	156	231	231	209	215	215	215	178	178
R-squared	0.923	0.945	0.809	0.811	0.995	0.997	0.997	0.866	0.870	0.900	0.543	0.590
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Within R2	0.0519	0.345	0.146	0.154	0.0153	0.318	0.337	0.0460	0.0741	0.288	0.000382	0.103
Number of Countries	12	11	13	13	21	21	19	18	18	18	17	17

t statistics in brackets \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Robust standard errors applied.

Source: Author's calculations of data reported in Annex Table 1.1.

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