Distributional Impacts of Taxes and Benefits in Post-Soviet Countries

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Abstract

This study compares the distributional impacts of the main tax and social spending programs in eight countries of the former Soviet Union (Armenia, Belarus, Georgia, Kyrgyzstan, Moldova, the Russian Federation, Tajikistan, and Ukraine) by applying a state-of-the-art fiscal incidence analysis based on the Commitment to Equity methodology. The region is highly interesting due to a unique combination of strong elements of path dependency (socialist legacies) with radical liberalization and welfare state retrenchment. The study examines the actual outcomes in terms of inequality and poverty and assesses the extent to which these outcomes can be attributed to various welfare state policies in these countries. It examines the extent to which taxes and social spending are progressive (whether the average transfer declines with income) and equalizing (whether they reduce inequality). In contrast to the majority of fiscal incidence studies, which are typically limited to the assessment of the impact of direct taxes and transfers, the study estimates the cumulative impact of the tax-benefit system as a whole, including direct and indirect taxes, cash transfers, and transfers in kind such as public education and health care.

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Distributional Impacts of Taxes and Benefits in Post-Soviet Countries

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1. Introduction

Most research on the redistributive impacts of public policies has been conducted on the established welfare states – the members of the European Union (EU) or high-income members of the Organisation for Economic Co-operation and Development (OECD) (for instance, see Gornick and Smeeding (2018), Bussolo, Krolage et al. (2019), OECD (2015), Paulus and Tasseva (2020)). The research tools and methods recently developed by the Commitment to Equity (CEQ) Institute 1 allowed similar analysis to be undertaken for a number of low- and middle-income countries across the world (Lustig 2016, 2017, 2018). As far as the Former Soviet Union countries are concerned, apart from the Baltic countries, there are few comparative studies available (most recent studies include World_Bank (2005), Weigand and Grosh (2008)). The region, however, is highly interesting due to a unique combination of strong elements of path dependency (socialist legacies) with radical liberalization and welfare state retrenchment in the 1990s.

This paper discusses the role that tax and benefit policies play in reducing inequality and poverty in eight post-Soviet countries (Armenia, Belarus, Georgia, Kyrgyzstan, Moldova, the Russian Federation, Tajikistan and Ukraine) circa 2015 and evaluates their performance in a comparative way. Analysis is based on the incidence analysis under the Commitment to Equity (CEQ) framework that assesses the distributional impact of a country’s taxes and transfers (Lustig 2018). Data comes from the existing CEQ analyses conducted by the World Bank separately for each country. First, to provide context for the subsequent analysis of the tax-benefit policies, we look at the trends in growth, inequality and poverty in these countries over the past three decades. Second, we quantify the impact of the tax-benefit systems on inequality and poverty and compare it across the eight countries. Third, we examine in detail the extent to which taxes and social spending in these countries are progressive (i.e., whether the average transfer declines with income) and equalizing (whether they reduce inequality and poverty). We conclude with a discussion as regards to how the redistributive capacity of the systems can be enhanced.

The contributions of this paper are four-fold. First, we examine actual outcomes in terms of inequality and poverty and assess the extent to which these outcomes can be attributed to various welfare state policies. This is in contrast with other studies on the post-Soviet welfare states which focused on the analysis of institutional indicators (Manning and Tikhonova 2004, Cook 2007, Cerami 2009, Cook 2010, Cook 2010). Second, we estimate the cumulative impact of the whole tax-benefit system (including direct and indirect taxes, cash transfers and transfers in kind such as public education and health care). Most studies of the redistribution in rich countries and beyond focused on the impact assessment of cash transfers and direct taxes (e.g. Gornick and Smeeding (2018), Bussolo, Krolage et al. (2019), OECD (2015), Paulus and Tasseva (2020)), leaving substantial parts of the welfare state out of scope of the analysis. Third, since all the country studies used in this paper applied the CEQ approach, the results are fully comparable across the countries. Fourth, the existing cross-country studies using the CEQ methodology has not yet covered countries of this region (Lustig 2016, 2017, 2018).

The remainder of the paper is organized as follows. Section 2 provides an overview of the trends in growth, poverty and inequality over the past decades. Section 3 describes the methodology and data. Section 4 presents the results of the analysis, by looking at the similarities and differences in the design and efficiencies of tax and spending policies in the eight countries under study. In the final section we discuss the findings and options for the reform of expenditure and tax policies in these countries to help achieve distributive objectives in an efficient manner, that are consistent with fiscal sustainability and longer term goals.

2. Trends in Growth, Inequality and Poverty in Post-Soviet Countries

Figure 1 highlights the wide heterogeneity across countries at the onset of the Soviet collapse, with significant gap between the Russian Federation and the rest of the former Soviet Republics. The GDP per
GDP per capita in Russia was more than twice as high as Ukraine, the country with the second highest income in 1991. After the tough transition period in the early 1990s, most of the countries picked up the pace of economic growth in the late 1990s and early 2000s, albeit with varying speed. From the mid-late 1990s, GDP per capita increased in all countries, but more dramatically in Russia and Belarus, widening the gap with the rest of the countries.

Russia experienced uninterrupted growth since 1998 – except in 2009 and 2014 due to the global financial crisis and oil price shock, respectively – driven by increasing exports associated with favorable external environment, strong macroeconomic fundamentals, and reforms and structural changes launched during the transition period (Lopez-Calva, Lustig et al. 2017, Popova, Matytsin et al. 2018). The parallel growth path in Belarus was a natural consequence of its strong political and economic relationship with Russia – through favorable energy trade policy and capital flows from the Russian Federation (Bornukova, Shymanovich et al. 2017). Georgia lost its access to cheap energy from Russia after independence, which led to the drastic decline in economic growth in the early 1990s, in addition to factors such as civil war and governance challenges. The 2004 Rose Revolution and armed conflict with Russia and the global financial crisis in 2008 had some impact, but the economy has been growing steadily (Cancho and Bondarenko 2017). The Armenian economy grew steadily over the past two decades, following the sharp drop in GDP per capita and ceasefire with Azerbaijan in 1994 and in 2009 as the country closely follows the development in Russia (World Bank 2016). The Ukrainian economy picked up the pace but still finds itself considerably below potential due to a history of deep structural bottlenecks and governance challenges and serious shocks from political, security and economic challenges in the 2000s (Bornukova, Leshchenko et al. 2019). The level of GDP per capita in 2018 in Ukraine is still below its level in the 1990s. Despite the recovery starting in the early 2000s, Moldova remains one of the poorest in the region (Cojocaru, Matytsin et al. 2019), together with two central Asian countries – Kyrgyzstan and Tajikistan. Both are characterized by high informality, low productivity in the private sector and high reliance on remittances (Ismailakhunova, Shymanovich et al. 2019, Benicio, Seitz et al. 2021).

**Figure 1:** Changes in the GDP per capita

Source: World Integrated Trade Solution, The World Bank. See: https://wits.worldbank.org/CountryProfile/en/country/bycountry/startyear/LTST/endyear/LTST/indicator/NY-GDP-PCAP-PP-KD#
Figure 2 shows that poverty (measured as percentage of the population with incomes below $3.2 PPP a day) has been declining over the past two decades after the sharp rise following the dissolution of the Soviet Union in December 1991, which reflects the pattern of economic growth shown in Figure 1. All countries experienced a peak in poverty between 1996 and 2001. The declining poverty rates have been associated with economic growth, reflected in the substantial increase in real GDP per capita over the same period. Based on the most recent data in 2018, countries can be sorted into two groups based on the magnitude of absolute poverty rates: Armenia, Georgia, Kyrgyzstan and Tajikistan are countries with relatively high poverty rates, while in Moldova, Ukraine, Belarus, and the Russian Federation poverty headcounts at $3.2 PPP are close to zero, despite the fact that the GDP per capita in Moldova and Ukraine is below that of Armenia and Georgia.

![Poverty Trend](image)

**Figure 2: Poverty Trend**

Source: PovcalNet (online analysis tool), The World Bank. See: [http://iresearch.worldbank.org/PovcalNet/](http://iresearch.worldbank.org/PovcalNet/).

Notes: Poverty headcount is measured as the percentage of the population with disposable incomes below $3.2 USD per day in PPP terms. For Moldova, due to the break in data series around 2005, figures before and after the peak observed in 2005 are not comparable (illustrated by dotted line).

In contrast, inequality (measured by Gini coefficient for disposable income) has not declined as drastically as the poverty rate in the 2000s (Figure 3). Moreover, some countries have seen a reverse trend in recent years – most strikingly in Armenia. Based on the latest available data in 2018, again, countries fall in two clusters with respect to the current levels of inequality: the Russian Federation, Georgia, Armenia and Tajikistan are associated with relatively high inequality among the countries analyzed, while Kyrgyzstan, Ukraine, Moldova, and Belarus have relatively low levels of inequality.
As shown in Panel A of Figure 4, four countries in our sample are currently classified as upper middle-income countries (Armenia, Belarus, Georgia and Russian), with Russia having been classified as a high-income country in 2012-2014. Tajikistan remains a low-income country, while Kyrgyzstan, Moldova and Ukraine are classified as lower middle-income economies. With respect to their current poverty rate and inequality, the countries in our sample fall into the four categories shown in Panel B of Figure 4. Shaded in darker blue in the table, Georgia, Armenia and Tajikistan are countries associated with both relatively high poverty and inequality in 2018; Ukraine, Moldova and Belarus have low poverty and low inequality, the Russian Federation has high inequality but low poverty; Kyrgyzstan has low inequality but high poverty headcount.

**Figure 4**: Country’s classification according to GDP per capita, poverty and inequality

Notes: Panel B - Poverty headcount is measured as the percentage of the population with disposable incomes below $3.2 USD per day in PPP terms.
The FSU countries are characterized by high demand for redistribution (Figure 5). Moreover, the higher income inequality is accompanied by higher public demand for redistribution. For example, in Armenia where inequality was relatively high and increasing, the population shows the strongest support for redistribution. On the other hand, in Belarus, which has relatively low inequality, we observe much more moderate levels of support for redistribution. This is consistent with the findings from 57 advanced and developing countries, showing that public support for redistributive policies has been growing strongly especially in countries where inequality had increased over the course of past two decades (IMF 2014).

Figure 5: Public Support for Equality
Source: Authors’ calculations based on Life in Transition Survey (LITS III), 2016.
Note: Countries are sorted by the percent of individuals who agreed or strongly agreed with the above statement.

3. Methodology, Data and Assumptions

The role of the welfare state in redistributing market income is one of the key policy concerns in contemporary market economies. This paper evaluates the effect of the welfare state policies on poverty and inequality in eight post-Soviet countries using the CEQ framework. This methodology allocates taxes and benefits (both cash and in-kind) to individuals in the household survey so that one can compare incomes before taxes and transfers with incomes after taxes and transfers (see Lustig (2018) for more details).

We are using the following income concepts. Our starting point is market income, i.e. household income before any tax-benefit interventions have taken place. It comprises income from all forms of employment, capital income (rent and dividends) and private transfers. By subtracting direct taxes and social insurance contributions and adding direct cash transfers (pensions and other social benefits) we arrive at disposable income. Typically, analysis stops here. In our case, we compute two more income concepts. By subtracting
indirect taxes (value added tax or VAT and excises) and adding subsidies, we arrive at post-fiscal or consumable income which reflects the actual amount of market goods and services consumed by households. Our final income includes the cash equivalent of the cost of public health and education services consumed by households.

This paper analyzes the redistributive and poverty-reducing effect of the tax-benefit system under the assumption that pensions are treated as direct transfers, while contributions to the pension system are subtracted from gross income. This is based on the nature of the pension system in many of the countries considered for the analysis. In particular, the PAYG system formed in the Soviet Union has undergone reforms in the 2000s aimed at adding contributory pillars. This resulted in a divergent mix of pension systems in the region, but with one common feature — the weak link between contributions and actual pensions payments (Grishchenko 2016). Thus, it is more natural to consider pensions as transfers similarly to other contributory programs (such as unemployment benefits).

The analysis used here is point-in-time and does not incorporate behavioral or general equilibrium effects. The analysis is based on economic rather than statutory tax incidence. For example, it is assumed that personal income taxes and contributions by employees and employers are borne by labor in the formal sector. Individuals who are not contributing to social security are assumed to pay neither direct taxes nor contributions. Consumption taxes are fully shifted forward to consumers. According to the common practice adopted in the region, the welfare indicator used is income per capita. Finally, it is worth noticing that CEQ analysis relies as much as possible on information about social transfers and taxes reported in the survey. Therefore, corporation taxes cannot be included in the analysis. If the survey does not include questions on certain items, the values are either simulated or imputed. Because the survey data is being used for the assessment of taxes and benefits, the annual amounts of tax revenues and social spending do not necessarily coincide with those found in other sources, in particular National Accounts.

We focus on the redistributive role of tax and benefit policies as one of the underlying forces behind the disparities in poverty and inequality rates across the FSU countries. Poverty is measured using the Lower-Middle-Income Class Poverty Line of the World Bank. Depending on the year in which a CEQ study for each country was conducted it is equal to either $2.5 or $3.2 per person per day at 2011 PPP values. Inequality is measured using the Gini coefficient. The distributive impact of a tax or a transfer is measured as the marginal reduction in inequality/poverty due to a tax or a transfer, i.e. the absolute change in Gini index/poverty headcount due to a removal of the transfer or the tax from household income (Reynolds and Smolensky 1977). Therefore, a positive value indicates that a tax or a transfer contributes to a decline in inequality/poverty, and otherwise. The extent of fiscal redistribution depends on the size of taxes and social spending (as share of the GDP) and on their progressivity. Progressivity refers to the degree to which tax burdens and benefit entitlements rise or fall with household income. The summary measure of progressivity is the Kakwani index (Kakwani 1977). The Kakwani index is equal to the difference between the Gini index for a tax/transfer, and the Gini index for incomes before application of the tax/transfer. Theoretically, the Kakwani index can vary between -1 to 1; the larger the index is, the more progressive is the expenditure or tax.

The data for comparative analysis comes from the CEQ analyses for separate countries produced by country teams at the World Bank that were available at the time of writing: Armenia (World_Bank 2016), Belarus (Bornukova, Shymanovich et al. 2017), Georgia (Cancho and Bondarenko 2017), Kyrgyzstan (Ismailakhunova, Shymanovich et al. 2019), Moldova (Cojocaru, Matytsin et al. 2019), Russian Federation a Wherever possible, the analysis relies on the results from the CEQ based on household surveys from respective countries. When estimates are unavailable from the CEQ results, the analysis depends on other sources, such as national accounts reported in publicly available sources. b Size of taxes and social spending is derived either from CEQ results or from national accounts available from publicly available sources.
4. Impact of the Fiscal System on Poverty and Inequality – Redistribution through Fiscal Policies

The design and appropriate mix of instruments will depend on the country context – its administrative capacity, options available given the fiscal space and instruments, as well as on society’s preferences for redistribution. This section examines the overall redistributive effort of the welfare systems in the eight FSU countries circa 2015, the size and composition of tax revenues and social spending, as well as progressivity and redistributive impact of taxes and transfers.

4.1 Distributional Impact of Taxes and Social Transfers

Figure 6 shows how inequality and poverty in the eight post-Soviet countries change due to the combined impact of taxes and social transfers. The inequality impact is measured by comparing the Gini index for market income and Gini indices for disposable, consumable income and final income. The poverty impact is measured as the difference in poverty headcounts at market income and poverty headcounts at disposable and consumable income. The final income is not being used in case of poverty because the monetary poverty lines applied in this study do not account for in-kind benefits.

Figure 6: Impact of Tax-Benefit systems on Inequality and Poverty

Source: Authors’ calculations using CEQ Master Workbooks (MWBs). The underlying data can be found in Table A1.
Notes: Here and below the following country acronyms are used: ARM – Armenia; BLR – Belarus; GEO – Georgia; KYG – Kyrgyzstan; MDA – Moldova; RUS – Russia; TJK – Tajikistan; UKR – Ukraine.
Income reference period of each CEQ country study is shown in brackets next to country acronyms.
Countries are ranked in the ascending order of the market income Gini indices and poverty headcounts.
Poverty line used in each country is shown in brackets: ARM (National Upper poverty line ~=$3.2 PPP); BLR ($2.5 PPP); GEO ($2.5 PPP); KYG ($3.2 PPP); MDA ($3.2 PPP); RUS ($2.5 PPP); TJK ($3.2 PPP); UKR ($3.2 PPP).
Impact of the tax-benefit systems on inequality at consumable income varies from 3pp in Tajikistan to around 10 pp in Georgia, Armenia and Kyrgyzstan, and to 14-16 pp in Belarus, Russia and Moldova. In Russia, out of all the countries, significant additional reduction in inequality is achieved through the provision of in-kind benefits. Overall, the most considerable redistributive effort is undertaken by Ukraine, where inequality between market and consumable income is reduced by 18pp.

Absolute poverty at consumable income is negligible in Belarus, Russia and Ukraine. In Kyrgyzstan and Moldova, it remains at around 10% of the population. Poverty headcounts at consumable income remain at an extremely high level (25% and more) in Armenia, Georgia and Tajikistan. In all these countries poverty headcounts for consumable income are higher than those for disposable income, indicating fiscal impoverishment due to consumption taxes on basic goods paid by the poor (Higgins and Lustig 2016). Armenia and Tajikistan appear to be clear outsiders in terms of poverty reduction. In particular, in Tajikistan poverty headcount at consumable income is even higher than market income poverty headcount.

4.2 Government Revenues

This section looks at how inequality and poverty in the eight countries is being affected by government revenues. Figure 7 shows that total tax revenue as well as total revenue as a percentage of GDP are low in Armenia, Kyrgyzstan and Georgia, with total revenue not exceeding 30% of the GDP. In Belarus, Russia, Ukraine and Moldova, general government revenue (expressed as total revenue in red in Figure 7) exceeds 35% of GDP. According to the IMF, the average tax ratios for advanced economies exceed 30% of GDP, while tax ratios in developing economies (excluding emerging Europe) generally fall in the range of 15–20% of GDP (IMF 2014). The causes of low tax revenues are related to the structure of the economy, for example, size of public sector, large share of jobs in informal sector, weak institutions and to sociological and cultural factors such as a poor norm for compliance (Besley and Persson 2014).©

© In addition, some countries keep their tax burdens low intentionally to increase attractiveness to domestic and foreign investors.
Not only overall tax revenues but also tax structures vary significantly across the eight countries, reflecting different stages of development of the fiscal system and administrative capacities. Fiscal revenue relies heavily on personal taxes in all countries apart from Russia, where the gap between total revenue and revenue from personal taxes is attributable to sizable corporate taxes and oil revenue (Popova, Matytsin et al. 2018). Indirect taxes are dominant source of revenue in Armenia, Kyrgyzstan, Georgia and especially in Tajikistan where they constitute over 75% of total tax revenues. In Moldova and Ukraine, a major part of tax revenues comes from personal direct taxes.

As demonstrated by Figure 8, direct taxes are progressive and indirect taxes are regressive in all countries with the exception of Armenia, where indirect taxes are neutral and direct taxes appear to be regressive. Georgia, Kyrgyzstan, Moldova, Tajikistan and Ukraine have relatively more progressive direct taxes and contributions, in comparison to the rest of the countries. However, Kyrgyzstan is the only country in the sample where the tax system as a whole can be considered progressive. In all other FSU countries, the tax systems are regressive.

Personal income tax (PIT) is typically the most progressive component of direct taxation. There are, however, important structural differences across the FSU countries, namely, flat rates are applied in all countries except for Armenia and Moldova. The rates vary from 10% in Kyrgyzstan, to 13% in Russia, Belarus and Tajikistan, 18% in Ukraine and 20% in Georgia. Literature suggests that in general, flat PIT is not the best structure to enhance the redistributive impact but combined with exemption for low-income earners, PIT is progressive in all countries which adopt flat rates (Keen, Kim et al. 2008). Low progressivity of direct taxes in Armenia, Russia and Belarus is low due to lack of exemptions for low-income earners.
Figure 8: Progressivity of Personal Taxes at Consumable income

Source: Authors’ calculations using CEQ Master Workbooks (MWBs).

Note: Negative value of Kakwani index means that a tax is regressive, positive value means a tax is progressive. The larger the index is, the more progressive/regressive is the tax. Countries are ranked in the ascending order of the Kakwani index for all taxes and contributions.

Figure 9 shows the sizes of direct and indirect personal taxes in the GDP and their distributional impacts on inequality and poverty. The following patterns are observed. Firstly, direct taxes are inequality reducing in Kyrgyzstan, Georgia, Russia, Moldova, Belarus and Ukraine and have no impact on inequality in Tajikistan and Armenia. The impact of direct taxes on poverty is either neutral or negative. Secondly, despite lower progressivity of direct taxes in Ukraine compared, for instance, to Kyrgyzstan, their impact on inequality is as high in Ukraine due to the large share of revenue received through direct taxes in Ukraine. Third, indirect taxes are poverty increasing in all countries for which the data are available, with the exception of Russia, and are either neutral or inequality increasing in all countries. The largest negative impact of indirect taxes on poverty is observed in Belarus, Tajikistan, Ukraine and Kyrgyzstan, due to a high share of indirect taxes in the GDP in these countries.
Figure 9: Size of Revenue and Effectiveness of Taxes at Consumable income

*Source:* Authors’ calculations using CEQ Master Workbooks (MWBs). Marginal contributions of taxes to poverty reduction are missing for direct and indirect taxes in Armenia and indirect taxes for Georgia.

*Notes:* Countries are ranked in the ascending order of the share of taxes as percent of the GDP.

The distributional impact of taxes is defined as the marginal change in Gini index/poverty headcount for consumable income when a tax is removed, expressed as a percentage of consumable income Gini or poverty headcount. A negative value indicates that a tax is inequality/poverty increasing, and otherwise.

4.3 Government Spending

Figure 10 shows the share of direct public transfers (including contributory pensions and other cash or near-cash benefits) and indirect transfers (public education and health care programs and indirect subsidies) in the GDP. As a result of low revenue in Georgia, Tajikistan, Armenia and Kyrgyzstan, spending on transfers are also low compared to the rest of FSU countries (ranging from 11 to 16% of the GDP). Russia’s spending on transfers (19.5% of the GDP) is lower than it could have been given the total government expenditure. The share of government spending allocated to public transfers in Moldova, Ukraine and Belarus is equivalent to the average of advanced economies at around 25 percent of GDP in the early 2010s (IMF 2014).

Spending on contributory pensions and in-kind transfers dominates spending on transfers in all the countries included in the study. Only two countries out of eight, Armenia and Ukraine, allocate a significant share of their transfer spending (39 and 37%, respectively) to cash benefits. In case of Tajikistan, spending on cash benefits accounts for 1% of the total spending on social transfers.
Figure 10: Spending on Direct and Indirect Transfers in the GDP

Source: Authors’ calculations using CEQ Master Workbooks (MWBs).

Note: Figures in black bold are governments’ total spending on transfers. Countries are sorted in the ascending order of the total government spending.

As shown in Figure 11, all types of transfers are distributed in a progressive way in all the countries, but direct transfers are more so compared to indirect transfers. Among the FSU countries, Armenia appears to have the least progressive direct transfers, while Kyrgyzstan has the least progressive indirect transfers. Ukraine, Russia and Moldova, on the other hand, have highly progressive system of direct transfers and therefore are leaders in terms of progressivity of transfers overall.
Direct transfers reduce poverty and inequality in all countries where estimates are available (Figure 12). However, the magnitude varies widely across the countries and is not necessarily correlated with the size of spending or its progressivity. The highest inequality reducing impact of direct transfers in observed in Russia, while Kyrgyzstan is a leader in poverty reduction through direct transfers. Due to smaller size of spending on and lower progressivity of indirect transfers, their impact on poverty and inequality is either slightly positive or non-existent. Belarus and Moldova are the only two countries with a sizeable impact of indirect transfers on poverty reduction and also higher spending on indirect transfers in the GDP. Impact of indirect transfers on the Gini index is negligible across all countries where estimates are available and is negative in Kyrgyzstan (which means that indirect transfers are inequality increasing).

5. Discussion and Conclusions

This paper has analyzed the role that tax and benefit policies played in reducing inequality and poverty in eight post-Soviet countries (Armenia, Belarus, Georgia, Kyrgyzstan, Moldova, Russia, Tajikistan and Ukraine) circa 2015 and evaluated their performance in a comparative way. The study is based on incidence analysis under the Commitment to Equity (CEQ) framework that assesses the distributional impacts of a country’s taxes and transfers (Lustig 2018). Data comes from the existing CEQ analyses conducted by the World Bank separately for each country.
Our analysis points at the wide heterogeneity across the eight countries at the onset of the Soviet collapse, with significant gaps between Russia and the rest of the former Soviet Republics in terms of the GDP per capita. Common economic trends across all economies have been the drastic surge in poverty and inequality followed by economic growth and declining trend in poverty over time, not necessarily accompanied by a reduction in inequality. With respect to their current poverty rates (measured at $3.2 dollars a day) and inequality levels, the eight countries can be classified into four groups: Armenia, Georgia and Tajikistan are countries associated with both relatively high poverty and inequality; Russia – with high inequality but with low poverty; Kyrgyzstan – with low inequality but high poverty; Ukraine, Moldova and Belarus – with relatively low poverty and low inequality.

The cross-country variation in the impacts of tax-benefit systems on inequality and poverty is very large. The welfare systems of Ukraine, Belarus, Russia and Moldova appear to perform better in terms of inequality reduction, compared to the other four countries, with the smallest impact being observed in Tajikistan. In terms of poverty reduction, the countries can be divided into three clusters, with Armenia, Georgia and Tajikistan being the outsiders, Moldova and Kyrgyzstan achieving moderate poverty reduction, and Belarus, Russia and Ukraine reducing absolute poverty to negligible levels.

The size of revenue from personal taxes is moderate except for Belarus, where it exceeds the average for advanced economies. Among tax revenues, reliance on indirect taxes is high on average. However, tax structures vary significantly across the countries, reflecting different stages of development of the fiscal system and administrative capacities. Despite huge differences in the magnitude of the effects, as expected, direct taxes are overall progressive and inequality/poverty reducing and indirect taxes are regressive and inequality/poverty increasing. In all countries, except for Kyrgyzstan, the tax systems are regressive due to the flat PIT rates and high share of revenues from indirect taxes.

All the countries included in this study have a scope to scale up the redistributive impact of their tax-benefit systems by increasing the government revenues and spending. Countries with high debt or fiscal deficits must first generate fiscal space to scale up redistribution through the fiscal system. Successful fiscal adjustments are also beneficial in creating the fiscal space for countercyclical policy responses to unforeseen shocks such as the Covid-19 pandemic.

Options for enhancing the redistributive impacts of taxes and benefits in post-Soviet countries through the design of policies include: (i) increasing spending on direct non-pension transfers, with a gradual phasing out of benefits as incomes rise to avoid adverse effects on employment; (ii) raising retirement ages in pension systems; (iii) improving the access of lower-income groups to higher education; (iv) expanding

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\[d\] It should be noted that in principle, spending decisions in resource rich countries like Russia may not be linked directly to revenues in the current period, as some revenues need to be saved for inter-generational solidarity and to reduce volatility.

\[e\] The average additional spending required for emerging market economies to achieve progress on the Sustainable Development Goals (SDGs) endorsed by the United Nations is estimated at around 4 percentage points of GDP (Gaspar, Amaglobeli et al. 2019).
coverage of the personal income tax and implementing progressive PIT rate structures;\(^6\) (v) reducing regressive tax exemptions; and (vi) greater use of taxes on property. However, the optimal level of redistributive spending would differ by country which shall be consistent with fiscal sustainability in the long run.

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\(^6\) In countries with a large informal sector or in which tax avoidance is pervasive, the priority may be to simplify the tax system. Low-income deductions may also be effective to increase the tax base, especially to activate vulnerable groups, such as the long-term unemployed and youth.
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### Annex

**Table A1: The redistributive impact of taxes and transfers**

|                        | Market Income | Disposable Income (+ net direct taxes) | Consumable Income (+ net indirect taxes) | Final Income (+ in-kind transfers) |
|------------------------|---------------|----------------------------------------|------------------------------------------|-----------------------------------|
| **Armenia, 2014**      |               |                                        |                                          |                                   |
| Gini index             | 0.3780        | 0.2750                                 | 0.2752                                   | 0.2640                            |
| absolute change wrt market income | --            | -0.10                                 | -0.10                                    | -0.11                             |
| % change wrt market income | --            | -21.2%                                | -21.2%                                   | -23.5%                            |
| Poverty headcount      | 0.3257        | 0.2900                                 | 0.3020                                   | --                                |
| absolute change wrt market income | --            | -0.04                                 | -0.02                                    | --                                |
| % change wrt market income | --            | -7.4%                                  | -4.9%                                    | --                                |
| **Belarus, 2015**      |               |                                        |                                          |                                   |
| Gini index             | 0.4068        | 0.2673                                 | 0.2716                                   | 0.2276                            |
| absolute change wrt market income | --            | -0.14                                 | -0.14                                    | -0.18                             |
| % change wrt market income | --            | -89.7%                                 | -27.9%                                   | -36.9%                            |
| Poverty headcount      | 0.0830        | 0.0000                                 | 0.0001                                   | --                                |
| absolute change wrt market income | --            | -0.08                                 | -0.08                                    | --                                |
| % change wrt market income | --            | -53.4%                                 | -17.1%                                   | --                                |
| **Georgia, 2013**      |               |                                        |                                          |                                   |
| Gini index             | 0.5074        | 0.3950                                 | 0.4113                                   | 0.3830                            |
| absolute change wrt market income | --            | -0.11                                 | -0.10                                    | -0.12                             |
| % change wrt market income | --            | -23.2%                                 | -19.8%                                   | -25.6%                            |
| Poverty headcount      | 0.3919        | 0.2330                                 | 0.3004                                   | --                                |
| absolute change wrt market income | --            | -0.16                                 | -0.09                                    | --                                |
| % change wrt market income | --            | -32.8%                                 | -18.9%                                   | --                                |
| **Kyrgyzstan, 2016**   |               |                                        |                                          |                                   |
| Gini index             | 0.3163        | 0.2140                                 | 0.2188                                   | 0.2110                            |
| absolute change wrt market income | --            | -0.10                                 | -0.10                                    | -0.11                             |
| % change wrt market income | --            | -21.1%                                 | -20.1%                                   | -21.7%                            |
| Poverty headcount      | 0.2588        | 0.1060                                 | 0.1169                                   | --                                |
| absolute change wrt market income | --            | -0.15                                 | -0.14                                    | --                                |
| % change wrt market income | --            | -31.5%                                 | -29.3%                                   | --                                |
| **Moldova, 2017**      |               |                                        |                                          |                                   |
| Gini index             | 0.4801        | 0.3049                                 | 0.3195                                   | 0.2963                            |
| absolute change wrt market income | --            | -0.18                                 | -0.16                                    | -0.18                             |
| % change wrt market income | --            | -36.1%                                 | -33.1%                                   | -37.9%                            |
| Poverty headcount      | 0.2804        | 0.0599                                 | 0.0991                                   | --                                |
| absolute change wrt market income | --            | -0.22                                 | -0.18                                    | --                                |
| % change wrt market income | --            | -45.5%                                 | -37.4%                                   | --                                |
| Gini index | 0.4850 | 0.3340 | 0.3370 | 0.3000 |
| absolute change wrt market income | -- | -0.15 | -0.15 | -0.19 |
| % change wrt market income | -- | -31.1% | -30.5% | -38.1% |
| Poverty headcount ($2.5 PPP a day) | 0.1554 | 0.0106 | 0.0122 | -- |
| absolute change wrt market income | -- | -0.14 | -0.14 | -- |
| % change wrt market income | -- | -93.2% | -92.2% | -- |

| Gini index | 0.3627 | 0.3400 | 0.3304 | 0.3237 |
| absolute change wrt market income | -- | -0.02 | -0.03 | -0.04 |
| % change wrt market income | -- | -4.7% | -6.7% | -8.0% |
| Poverty headcount | 0.2260 | 0.2027 | 0.2601 | -- |
| absolute change wrt market income | -- | -0.02 | 0.03 | -- |
| % change wrt market income | -- | -4.8% | 7.0% | -- |

| Gini index | 0.4333 | 0.2409 | 0.2468 | 0.2232 |
| absolute change wrt market income | -- | -0.19 | -0.19 | -0.21 |
| % change wrt market income | -- | -39.7% | -38.5% | -43.3% |
| Poverty headcount | 0.2001 | 0.0058 | 0.0145 | -- |
| absolute change wrt market income | -- | -0.19 | -0.19 | -- |
| % change wrt market income | -- | -40.1% | -38.3% | -- |

Source: Authors’ calculations using CEQ Master Workbooks (MWBs).

Notes: Poverty line used in each country is shown in brackets: ARM (National Upper poverty line ~=$3.2PPP); BLR ($2.5 PPP); GEO ($2.5 PPP); KYG ($3.2 PPP); MDA ($3.2 PPP); RUS ($2.5 PPP); TJK ($3.2 PPP); UKR ($3.2 PPP).

1 Commitment to Equity (CEQ) – a database of the studies of the impact of taxation and social spending on inequality and poverty for low- and middle-income countries developed by the CEQ Institute. See: www.commitmentoequity.org

2 This is due to an update in the World Bank methodology of measuring the Lower-Middle-Income Class Poverty Line, which resulted in an increase of the cost of the $2.5 poverty line to $3.2.

3 In Armenia, three-tier PIT rates were simplified into a single flat rate of 23 percent in 2020. Similarly in Moldova, the PIT was a progressive two-tier system until October 1, 2018, which was simplified into flat rate of 12 percent.