



Chapter 12

Inequality and Welfare

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Abstract The chapter summarizes recent trends in inequality in the Emerging European Economies (EEE) since the Great Financial Crisis (GFC) of 2008-2009 and analyses potential effects of the Covid crisis on income distribution in these societies. Inequality paths diverged between 2009 and 2019: while disposable income inequality markedly increased in Bulgaria and, to a lesser extent, in Hungary, in Poland the Gini index declined, and in other countries income inequality remained stable. The relative at-risk-of-poverty rate showed fluctuations in 2009-2019, while absolute poverty – measured by the indicator of severe material deprivation – declined, mirroring economic growth and the general convergence process of the EEE. The second part of the chapter describes the inequality impacts of the Covid crisis. As data on the income distribution of the relevant years (2020, 2021) are not yet available, analyses of inequality simulate impacts using various methods. Studies that focus on the inequality of disposable income consider both labour market effects of lockdowns and the effect of various policy measures (including the usual measures and new policies such as wage compensation schemes). Studies based on actual employment changes during the first wave of the pandemic have found that among the EEE, Bulgaria and Hungary showed increases in the at-risk-of-poverty rate higher than the EU average. The chapter also warns that the success in building prosperous and inclusive societies largely depends on the portfolio of institutions, values, and behaviours. Full-fledged effects of the Covid crisis will depend on the way policies are changed both in labour markets and in the health sectors.

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12.1 Introduction

In this chapter the aim is to summarize recent trends in inequality in the Emerging European Economies (EEE) since the Great Financial Crisis (GFC) of 2008-2009 and to analyse the potential effect of the Covid crisis on income distribution in their societies. Empirical evidence shows increasing income inequality in many regions of the world since the 1980s (see [OECD, 2015](#) and [Alvaredo, Chancel, Piketty, Saez & Zucman, 2018](#)). Rising inequality has attracted policy makers' attention as it has been increasingly recognized that inequality may lead to a range of policy problems, including rising poverty, stalled social mobility, a weakening of social cohesion, increased rates of crime and violence, a decline in the functioning of representative democracy, and a slowdown in economic growth.

The EEE share important similarities in their recent socio-economic development. After decades of socialism, around 1990, the countries of the region transformed their political and economic system and adopted capitalism and democracy. Following the painful years of the transitional recession (see Chapter 1), these countries went through an institutional adaptation process during the accession to the European Union, by adopting the 'acquis communautaire'. The Visegrad countries (Czechia, Hungary, Poland, and Slovakia), and Slovenia joined the EU in 2004, while Bulgaria and Romania became members in 2007, and Croatia in 2011. After the transitional recession, economic growth resumed in these countries, and they managed to narrow the gap to the EU average, despite a slowdown in some countries of the process during the 2008-2009 Great Financial Crisis (GFC).

Notwithstanding these similarities, significant differences have also shaped the countries' trajectories. There are old historical differences between their economic structure and development that precede the socialist era. Countries in the region are different in the composition of their population in terms of demographics, ethnic diversity, and educational composition. They also differ in the strategies adopted during the transition process (e.g., speed of reforms, privatization strategies, etc.) and in the economic and social policies they applied in the decades following the transition ([Myant & Drahekoupil, 2010](#); [Bohle & Greskovits, 2012](#); [Cerami & Vanhuysse, 2009](#)).

[Bohle and Greskovits \(2012\)](#) identify four types of capitalism in post-socialist countries. Slovenia is an example of a 'neo-corporatist' system, with strong employee representation and an extensive welfare system, achieving a high degree of redistribution. The Baltic states follow a 'neoliberal approach', where both employment protection and the welfare state are relatively weak. The Visegrad countries represent cases of 'embedded neoliberalism', as they have a medium level of welfare services and employee representation. The fourth type (defined as a 'nonregime') includes Romania and Bulgaria, where the characteristics of the system are less crystallized and the social and political system is more insecure.

The GFC halted temporarily the convergence process of the EEE. The only country that was able to grow during (and after) these GFC years was Poland, while countries like Czechia and Slovenia suffered a more severe setback. In the decade following the GFC, convergence in GDP per capita continued in all countries, except

Slovakia (Gyórfy, 2021). Countries of the region are now searching for a way to escape the ‘middle income trap’, when the factors of production costs are no longer low enough to provide competitiveness, but innovation is not yet sufficiently developed to fuel economic growth. At the same time, the institutional development trajectory of some of the EEE started to deviate from the general European path. The first example was Hungary, where the early 2010s the government started restricting the system of political checks and balances, the freedom of the media, and the independence of the judiciary (Kornai, 2015). Indicators of rule of law started to decline in Poland after 2015, while Bulgaria, Croatia, and Romania also show relatively low values despite some improvement over the past decade (Gyórfy, 2021).

This is the general setting in which we describe the development of income inequality in the region. Following a brief review of developments of income inequality after transition, first we offer a detailed overview of the trends in inequality and poverty during the decade after the economic crisis between 2009 and 2019. In the second half of the chapter, we present results regarding the effect of the Covid crisis on income distribution in the EEE.

12.2 Income Distribution before 2009: Literature Review

This section reviews income inequality¹ trends in the EEE between their transition to market economy around 1990 and the GFC.² According to Atkinson and Micklewright (1992), pre-transition income inequality in the EEE stood at levels similar to those of the Scandinavian countries, the least unequal in Western Europe. In the early 1990s, due to their transitional recession, the EEE suffered a significant decline in GDP, while income inequality was increasing (Flemming & Micklewright, 2000). The main components of this growing income inequality were the increasing inequality in the distribution of labour incomes, the heightened significance of capital income, and the decline in the redistributive effect of welfare state programs. Milanovic (1999) argues that the increasing inequality of earnings was the main driving force behind rising income inequality in Eastern European countries.

The increasing inequality of labour income was partly related to a drop in employment. The employment-to-population ratio declined radically in all countries, falling from pre-transition levels of 75-87 per cent to the 55-70 per cent range by the end of the nineties (UNICEF Europe and Central Asia Regional Office, 2021). The decline of employment affected more people with low levels of education and those living in less developed regions, where economic activity was unable to counterbalance the collapse of socialist mega-enterprises.

At the same time, the distribution of earnings among those in employment was also becoming more unequal during the 1990s (Flemming & Micklewright, 2000;

¹ On the measurement of income inequality see discussion in Section 2.2.

² For more complete reviews, see e.g., Heyns (2005); Bandelj and Mahutga (2010); Perugini and Pompei (2015); Medgyesi and Tóth (2021).

Rutkowski, 2001). The main factor in the rise in earnings inequalities was the increase in differences in earnings by levels of education (Orazem & Vodopivec, 1997; Vecernik, 2001; Kertesi & Köllő, 2002). Economic restructuring and the modernization of production technologies led to more demand for skilled labour and a devaluation of work experience obtained in the socialist economy (Kertesi & Köllő, 2002).

Parallel to the decline of the share of wages in the national income, the emergence of the private sector resulted in the greater significance of profits and other capital income (Podkaminer, 2013). Privatization of formerly state-owned companies and the emergence of self-employment and small entrepreneurship were the driving forces behind these changes. These trends added to the overall income inequality in transition countries, as capital income is more unequally distributed than labour income. At the same time, many of the countries were implementing cutbacks in welfare state programs and occupational welfare, which reduced their inequality mitigating impact. In addition, changes in the distribution of social transfers (a reduction in the pro-poorness of transfers) in some cases contributed to an increase in inequality. For example, in Hungary and Poland the changing distribution of social transfers, especially of pensions,³ contributed to growing inequalities during the years of regime change (Milanovic, 1999).

Overall, inequality in the distribution of household income increased during the decade following transition in the EEE, but not to the same extent. By the time these countries joined the EU in the mid-2000s, they were as heterogeneous in terms of inequality and poverty as the EU15 (Tóth & Medgyesi, 2011). Before joining the EU, the countries studied could be divided into three groups. The first included Czechia, Slovakia, Slovenia, with inequality below the EU15 average, which is roughly in line with the level of the Nordic countries. The second group was composed of Hungary, Poland and Croatia, with a level of inequality close to the average of the EU member states, while the third group included Bulgaria and Romania, which showed inequalities similar to the most unequal states in the EU.

Despite significant economic growth and convergence in the EEE after the transitional recession, there are still major sources of inequality. Most of the countries are characterized by a dual economic structure, where a developed sector dominated by multinationals and significant levels of FDI coexists with an underdeveloped SME sector.⁴ Regional disparities are also notable, with developed capital regions but underdeveloped remote areas (Alcidi, Núñez Ferrer, Di Salvo, Pilati & Musmeci, 2018). A significant factor of differentiation is education level: in the EEE income differences by education are an important component of household income inequality (Medgyesi, 2014).

Inequality along ethnic lines is also characteristic of some of the EEE. There is a sizeable Roma minority living in Bulgaria, Czechia, Hungary, Romania, and Slovakia. The problematic labour market integration of the Roma (see e.g., Fundamental Rights Agency (2016)) is partly explained by their lower educational attainment

³ Details of pension systems in the region are provided in Chapter 9.

⁴ More on firm size characteristics and trends in Chapter 3.

and lower regional development levels, but in some countries evidence of labour market discrimination has also been detected (see e.g., [Kertesi and Kézdi \(2011\)](#) in the case of Hungary). As a result, poverty rates among the Roma tend to be much higher compared to the national average in the EEE. Despite increasing inequality in general, and also between certain subgroups of society, the gender wage gap tended to decline during transition ([Brainerd, 2000](#); [Newell & Reilly, 2001](#); [Lovász, 2008](#)).

During the years of the GFC between 2008 and 2012, [Brzezinski \(2018\)](#) found that the inequality of disposable incomes increased in Bulgaria, Hungary, and Slovenia. The rise in income inequality in Bulgaria and Hungary was, however, not related to the growing inequality of labour or capital income during the economic crisis; instead, it was related to policy changes rendering the tax and benefit system less redistributive. In Czechia, Poland, Romania, and Slovakia there was no significant change in inequality during these years.⁵

12.3 Changes in Income Inequality since the GFC

In this section, the evolution of income inequality in the EEE will be described since the financial crisis in 2008. The main income concept used in the discussion is equivalised household disposable income. Disposable income is the revenue of a household that can be spent on consumption or can be saved,⁶ which is adjusted for differences in household size and composition by use of the so-called OECD II equivalence scale.⁷

Figure [12.1](#) shows the evolution of the Gini index of the distribution of equivalised household income in the EEE since the GFC. The Gini index measures relative inequality in the distribution of income. It can have values between 0 and 1, zero indicating an equal distribution of incomes, while 1 indicates the maximum level of inequality (when one person gets all income in a society). In 2019, the country with the highest inequality level in the EEE is Bulgaria (Gini index equal to 0.41) and the second is Romania, which has a Gini index of 0.35. The group of countries

⁵ Croatia was not covered by the study. Also, in some other places in this chapter data on Croatia is painfully missing (mostly because the country is not properly covered in comparable Eurostat source databases prior to the GFC).

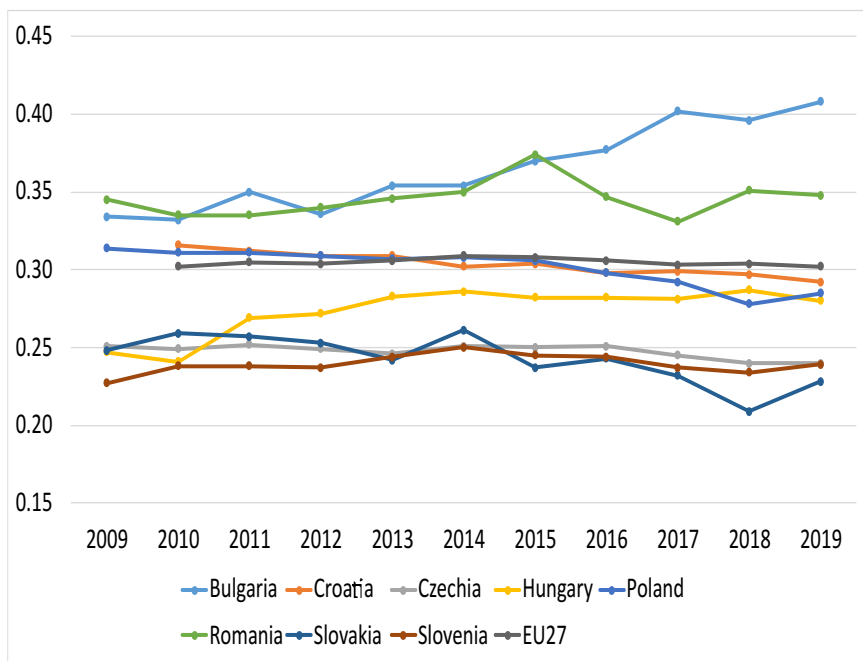
⁶ Disposable income is obtained from gross household market income (which includes all labour and capital income of household members) after considering the effect of government redistribution. Direct taxes (income taxes, wealth taxes, and compulsory social insurance contributions paid by the individual) are deducted and social transfers – including social insurance benefits (e.g., unemployment benefits, pensions) and other social benefits (e.g., family benefits, minimum-income benefits, or housing benefits) are added.

⁷ Equivalence scales are used in inequality research to adjust household incomes for differences in household size, taking account of economies of scale in consumption and differences in household composition. Most often researchers adopt a widely used equivalence scale, such as the scales advocated by the OECD. In this analysis, we use the so-called OECD II scale, which assigns a value of 1 to the first adult in the household, 0.5 to additional members over the age of 14, and 0.3 to children under 14. The equivalised income, calculated as the ratio of household income and the number of adult equivalents in the household, is then assigned to each household member.

with middle-level values of the index are Croatia, Hungary, and Poland, who have Gini indices between 0.28 and 0.30. They are close to the EU27 average of the Gini index. Countries like Czechia, Slovakia, and Slovenia have Gini levels around 0.23 and 0.24, so they are characterized by lower levels of income inequality.

Between 2009 and 2019, the increase of disposable income inequality was the largest in Bulgaria, especially during the 2014–2019 period, when it increased from 0.35 to 0.41. The Gini index also increased in Hungary, where it went from 0.25 observed in the years preceding the economic crisis to 0.29–0.30 in the last years of the period. In contrast to these countries, in Poland the Gini index declined from 0.33 in 2006 to 0.29 in 2019. In the other countries, the level of the Gini index is similar at the beginning and the end of the period, albeit with some fluctuations in between. For example, in Romania after an initial decline of inequality after 2009, it increased to 0.37 in 2015, then it dropped back to pre-GFC levels.

Fig. 12.1: Gini coefficient of equivalised disposable income
Data: Eurostat (2021c)

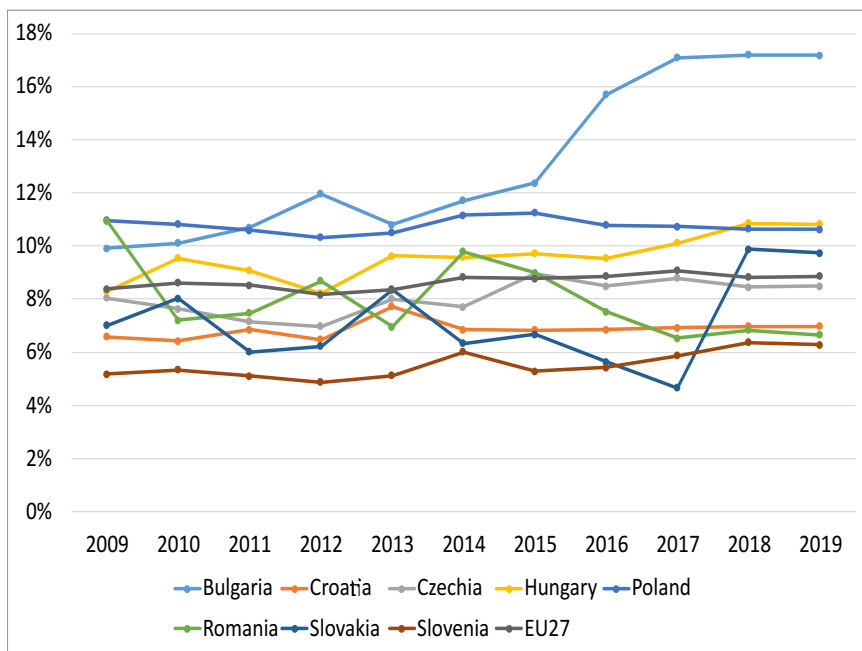


Survey-based measurement of income inequality can be criticized on the grounds that household surveys generally have great difficulty to accurately estimate incomes of the poorest and the richest segments of society due to nonresponse and under-reporting of incomes among high-income earners. Consequently, survey-based studies tend to underestimate inequality. One way to correct for nonresponse and underreporting among those with high incomes is to use information from external

sources – usually from administrative data (tax records, administrative income registers) – to improve the income estimates of the rich. This approach is adopted, for example, in the World Inequality Database,⁸ where survey data are also adjusted to national accounts to ensure comparability between countries and coherence with the data on macroeconomic growth. More precise estimates of incomes at the upper part of the distribution allow for the use of inequality measures that focus on the top of the distribution (such as the income share of the richest one per cent of society) instead of using aggregate indices such as the Gini coefficient (for a recent attempt, see Carranza, Morgan & Nolan, 2021). Figure 12.2 shows the evolution of the income share of the richest one per cent of society in the EEE. These data also reflect a sharp rise in inequality in Bulgaria, where the top one per cent income share increases from 10 to 17 per cent. A smaller increase (from 8 to almost 11 per cent) in the share of the top one per cent is recorded in Hungary. In some countries, the trends are different from those seen before: in Slovakia, the share of the top one per cent is slightly increasing, while Romania recorded a decline in the income share of the richest one per cent.

Fig. 12.2: The evolution of the income share of the top one per cent (individual distribution of post-tax income, above 20 years of age)

Data: World Inequality Database (2021)



⁸ This database has been built by the World Inequality Lab (led by the French economist Thomas Piketty) applying the ‘Distributional National Accounts’ methodology. An example of studies using these data for Europe is Blanchet, Chancel and Gethin (2019).

The two main components of disposable income are the gross market income of households and government redistribution through taxes and transfers, which greatly modifies the distribution of income on the labour market and the capital market. In order to better understand the main driving forces of changes in disposable income inequality, we look at the evolution of market income inequality and the redistributive role of government taxes and transfers. We focus the analysis on those of working age (between 16 and 64 years of age) as market income (largely labour income) is mainly concentrated in this age group. First, we look at the distribution of market income. Similarly to the analysis of disposable income, we look at the distribution of equivalised household market income, which is calculated by adding all market incomes of household members and dividing the sum by the number of adult equivalents in the household. We use the Baltic states and selected EU15 countries (Germany, Portugal, and Sweden) for comparison.

Table 12.1: Gini index of equivalised household market income inequality (16-64 age group)

Data: own calculation based on [Eurostat \(2021b\)](#)

Note: Households with no or negative market income are represented as having zero income

	2008	2011	2014	2019	Change 2008-2011	Change 2011-2019
Bulgaria	0.44	0.43	0.44	0.47	-0.01	0.04
Croatia		0.44	0.41			
Czechia	0.39	0.39	0.39	0.33	0.00	-0.06
Hungary	0.46	0.46	0.46	0.39	-0.01	-0.06
Poland	0.45	0.43	0.43	0.41	-0.02	-0.03
Romania	0.49	0.47	0.47	0.46	-0.02	-0.01
Slovakia	0.36	0.38	0.37	0.33	0.02	-0.06
Slovenia	0.38	0.39	0.41	0.37	0.02	-0.03
Selected EU15 countries						
Germany	0.44	0.42	0.42	0.39	-0.01	-0.04
Portugal	0.47	0.47	0.50	0.44	0.00	-0.03
Sweden	0.36	0.35	0.36	0.39	0.00	0.04
Baltic states						
Estonia	0.38	0.43	0.45	0.37	0.04	-0.06
Latvia	0.44	0.48	0.45	0.42	0.04	-0.06
Lithuania	0.42	0.47	0.45	0.43	0.05	-0.04

As Table 12.1 shows, the increase in market income inequality was not an important factor boosting income inequality in the EEE during the period following the economic crisis. These countries recorded stagnating or declining levels of market income inequality during the period studied. The only exception is Bulgaria, where the Gini index of market income inequality increased from 0.43 to 0.47 between 2011 and 2019, and this was more marked than the small decline observed during the crisis years between 2008 and 2011. Looking at the crisis years, only Slovakia and Slovenia show a slight increase in market income inequality, but this was counterbalanced by the decline of inequality during the recovery years. In Czechia, Hungary, Poland, and Romania, market income inequality stagnated or fell during both the GFC and the recovery years. Stagnating or declining inequality of market income is consistent with similar findings for wage distribution in the EEE, as described by [Pereira and Galego \(2019\)](#) and [\(Magda, Gromadzki & Moriconi, 2021\)](#).

These changes in inequality of market income partly reflect changes in employment (as those with zero household market income were included in the distribution). The decline of employment during the GFC was moderate in Czechia, Hungary, Poland, and Romania, and somewhat more significant in Bulgaria, Slovakia, and Slovenia, while during the recovery years all countries saw increasing employment. But similar conclusions can be drawn if inequality among those with positive market income is studied. Table 12.1 also shows that the rise in market income inequality during the crisis years was more significant in the Baltic states, partly due to their larger employment loss during the crisis years, and partly to an increase in market income among those with positive market income.

It is customary to study the redistributive role of government taxes and transfers by comparing the Gini index of market income inequality and that of disposable income. Table 12.2 shows the percentage reduction of the Gini index when we move from the distribution of market income to the distribution of disposable income.

Before the GFC, clearly, Hungary had the most redistributive tax and transfer system in the EEE, as government taxes and transfers reduced market income inequality by 44.5 per cent, while the smallest redistribution was observed in Bulgaria (19.9 per cent). The inequality reducing effect of taxes and transfers in Czechia, Hungary, Slovakia, and Slovenia exceeded levels observed in other EU countries, like Germany, Portugal, or Sweden. In addition, in all countries, except Bulgaria, redistribution had a stronger inequality-reducing effect compared to the Baltic states.

During the decade following the economic crisis, government taxes and transfers in the EEE had a lesser inequality-reducing effect. The sharpest fall was observed in Hungary, where the inequality-reducing effect of government policies had declined by 17 points, dropping to 27.7 per cent by 2019. The redistributive effect of taxes and transfers declined in Bulgaria, Czechia, and Slovakia by 5-6 percentage points, while Romania and Slovenia recorded a smaller reduction of the effect. The only exception is Poland, where the redistributive effect of government taxes and transfers increased slightly during the period. As a result, in 2019 the country with the strongest redistributive effect in the region was Slovenia, where 36.7 per cent of inequality was eliminated by the tax and transfer system, while Bulgaria continued to be the least redistributive. In 2019, only Slovenia continued to have an inequality reducing

Table 12.2: Redistributive effect of government taxes and transfers: Percentage reduction in the Gini index due to government taxes and transfers (16-64 age group)
Data: own calculation based on Eurostat (2021b)

	2008	2011	2014	2019	Change 2008-2011 (% points)	Change 2011-2019 (% points)
Bulgaria	19.9	18.9	17.7	13.5	-1.1	-5.3
Croatia			32.5	30.1		
Czechia	36.8	34.6	34.6	30.3	-2.1	-4.3
Hungary	44.5	39.8	35.8	27.7	-4.7	-12.1
Poland	28.3	27.6	27.4	30.3	-0.8	2.7
Romania	26.6	28.2	25.8	23.8	1.6	-4.4
Slovenia	39.3	40.7	39.5	36.7	1.4	-4.0
Slovakia	34.8	32.7	28.7	29.8	-2.1	-2.9
Selected EU15 countries						
Germany	31.1	32.1	29.2	28.0	1.0	-4.1
Portugal	24.6	27.4	31.3	29.3	2.7	1.9
Sweden	34.9	33.6	31.2	31.1	-1.3	-2.5
Baltic states						
Estonia	22.4	25.0	22.1	22.5	2.7	-2.5
Latvia	16.6	25.9	22.8	20.8	9.3	-5.0
Lithuania	21.6	30.5	22.1	20.6	8.9	-9.9

effect larger than the selected EU15 countries, while the region (except Bulgaria) still had inequality reduction above the levels typical in the Baltic states.

This weakening of the redistributive effect of government taxes and transfers was also observed in other countries during the recovery period (OECD, 2015). This may be due to the weakening effect of automatic stabilizers (e.g., unemployment benefit or minimum income schemes) as European countries were recovering from the crisis, and also of the phasing out of fiscal stimulus measures implemented in the early phase of the recession. In addition, weaker redistribution might also be associated with the introduction of fiscal consolidation measures.

In sum, the rise in disposable income inequality in Bulgaria is partly the consequence of rising market income inequality and a decline of the inequality-reducing effect of government taxes and transfers. The case of Hungary is different, as the increase in inequality of disposable income is due solely to the weakening redistributive role of the government. This decline is the result of measures implemented by the Orbán government, which introduced a flat rate personal income tax system,

reduced the generosity of guaranteed minimum incomes and unemployment benefits, and increased expenditure on less targeted benefits like tax allowance for families (Szikra, 2014). As a summary, we can contrast the level of market income inequalities on the one hand, and the strength of redistribution in the various countries on the other hand, as shown in Table 12.3.

Table 12.3: A taxonomy of the EEE by the level of market inequalities and the strength of their redistributive systems in 2019

Note: The taxonomy is based on the most recent year for which data are available

		Redistributive effect of taxes and transfers (percentage reduction in market income inequality)		
		high (30% or higher)	medium	low (25% or lower)
Gini index of market income (%)	high (>45)			BG, RO
	medium	HR, PL, SI	HU	
	low (<35)	CZ, SK		

In two countries (Czechia and Slovakia), the low ‘original’ inequality of equivalised market incomes is coupled by the fairly strong redistributive effects of government taxes and transfers, while in two other countries (Bulgaria and Romania) the level of market income inequality is high, and the redistributive capacity is the lowest in the EEE. In countries with medium levels of inequalities (Gini measured between 0.35 and 0.45), there are ones with strong (Croatia, Poland, and Slovenia) and medium (Hungary) levels of redistributive capacities. We will come back to this categorization when assessing the potential effects of Covid-related restrictions on income inequalities.

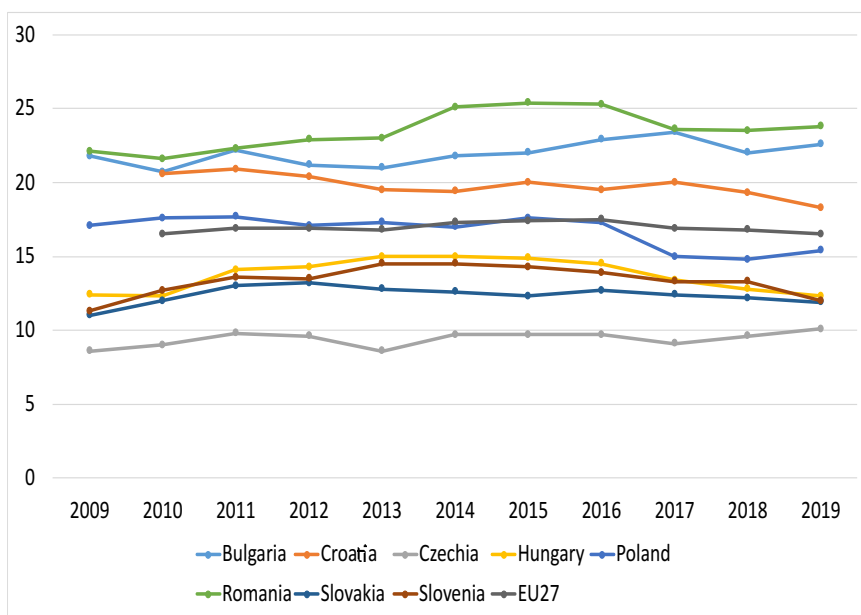
12.4 Development of Poverty Indicators since the Great Financial Crisis

In this section, income distribution will be analysed from the point of view of lower incomes, by reviewing trends in poverty indicators. First, the evolution of the extent of relative income poverty will be studied by looking at changes in the at-risk-of-poverty rate. The at-risk-of-poverty rate (also shortened to ‘poverty rate’) shows the proportion of people with an equivalised disposable income below the at-risk-of-poverty threshold, which is conventionally set at 60 per cent of the national median equivalised disposable income after social transfers and direct taxes.

As the poverty threshold is set in terms of the national median income in the given year, the exact value of the threshold varies with countries and years, resulting in a

Fig. 12.3: At-risk-of-poverty rate percentage; cut-off point: 60 per cent of median equivalised income after social transfers

Data: Eurostat (2021a)



relative index of poverty. Our second indicator, the relative poverty gap, measures the depth of relative income poverty, showing (in percentage terms) how far the average income of the poor is from the poverty threshold.

In 2019, countries with the highest at-risk-of-poverty rate in the region were Bulgaria and Romania, with poverty rates of 23-24 per cent (see Figure 12.3). Croatia also recorded at-risk-of-poverty rate above the EU27 average (16 per cent), while the rest of the countries in the region have below average poverty rate levels. In 2019, Poland recorded an at-risk-of-poverty rate of 15 per cent, Hungary, Slovakia, and Slovenia had values around 12 per cent, while the lowest rate was observed in Czechia (10 per cent). Regarding trends in the 2009-2019 period, in Hungary, Romania, Slovakia, and Slovenia, the poverty rate increased during the crisis years, but declined during the recovery years. Similarly to the trend in income inequality, Bulgaria recorded a slight increase of the indicator after 2013, while Croatia and Poland showed a declining trend.

Comparisons of relative poverty rates at the national level might hide the huge differences we can observe when making cross country comparisons by poverty thresholds defined by external benchmarks. In their recent analysis, Gábos et al. (2021) demonstrate that poverty thresholds derived from a pan-European income distribution (i.e., by taking 60 per cent of the all-European income median) show a strikingly different picture of inequalities in Europe. Their comparison of national-

Table 12.4: National and pan-European at-risk-of-poverty rates in 2017 (percentage, ordered by Pan-European rates within country groupings)
 Data: Figure 6 of [Gábos, Tomka and Tóth \(2021\)](#), based on [EU-SILC \(2019\)](#) data

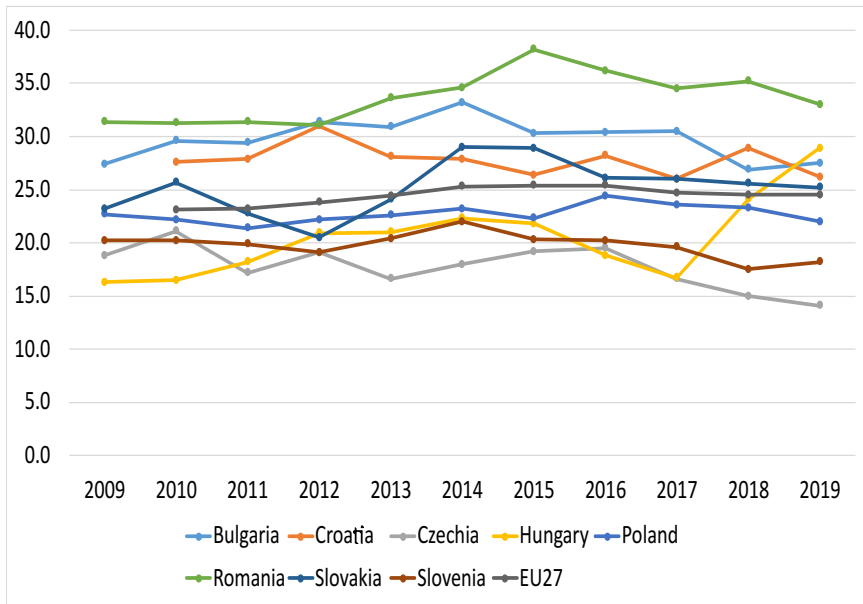
	National at-risk-of-poverty rates	Pan-European at-risk-of-poverty rates
Slovenia	13.3	17.8
Czechia	9.1	21.2
Poland	15.0	39.1
Croatia	20.0	51.8
Slovakia	12.4	52.5
Bulgaria	23.4	73.7
Hungary	13.4	78.5
Romania	23.3	96.1
Selected EU15 countries		
Germany	15.9	6.4
Sweden	15.8	9.0
Portugal	18.3	39.2
Baltic states		
Estonia	21.0	45.8
Lithuania	22.9	55.3
Latvia	22.1	67.2

level and EU-level poverty rates show that while the share of people who live on incomes below the EU poverty threshold is occasionally well below 5 percent in EU countries like Luxemburg, and Denmark, and 6 per cent in Germany, the EEE are situated in the bottom league (Table 12.4, for other countries not in the table: [Gábos et al. \(2021\)](#), Figure 6). Slovenia is the ‘best’ among them with a pan-European poverty rate lower than in Southern European countries such as Portugal. Czech poverty rates are also lower, while the Polish rates are roughly at the level observed in Portugal. In many members of the EEE, pan-European poverty rates are lower than the Greek level, although it is only in Bulgaria, Hungary, and Romania where the situation is worse than it is in Greece. While variance in the pan-European poverty rates is mostly related to differences in living standards (as shown, among others, by differential GDP levels), the cross-country variance of EU poverty rates is even larger than that of the GDP ([Gábos et al., 2021](#)) also within the EEE.

According to national poverty standards, poverty is the deepest in Romania, where the poor have on average 33 per cent lower incomes than the poverty threshold (see Figure 12.4). The second largest poverty gap is observed in Bulgaria and Hungary, where the value of the indicator is 28-29 per cent. In Croatia, it is 26 per cent, and Slovakia also has a poverty gap that is slightly higher than the EU27 average. Only

Fig. 12.4: Relative poverty gap percentage; cut-off point: 60 per cent of median equivalised income)

Data: Eurostat (2021e)



Poland (22 per cent), Slovenia (18 per cent), and Czechia (14 per cent) have values below the EU average. In Bulgaria, Hungary, Poland, Romania, and Slovakia, the poverty gap increased after 2008, peaked in the 2014-2016 period, and then declined. Interestingly, in Hungary the poverty gap bounced back after 2017, increasing from 17 to 29 per cent within two years. In Czechia, the value of the indicator declined during this period, while Croatia and Slovenia recorded stagnating values.

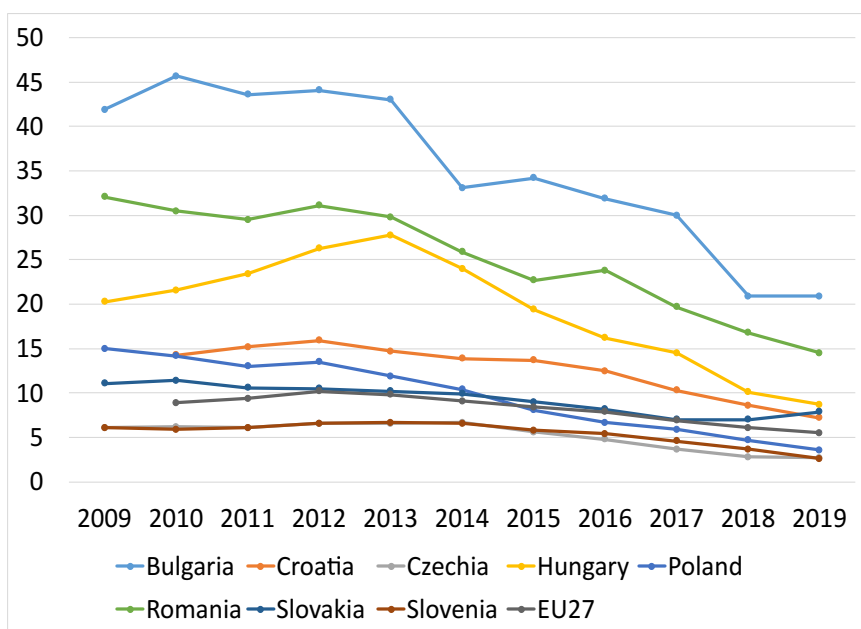
In addition to these relative indicators of poverty, it is useful to look at poverty from an absolute perspective, where poverty is not defined by having a low income relative to the average of the median income, but by having lower than a predefined absolute income level or by the incapacity to consume basic goods. The severe material deprivation rate indicator is based on the latter perspective and describes the share of those with enforced inability to pay for at least four of the following items (Eurostat 2018): unexpected expenses, a one-week annual holiday away from home, a meal involving meat, chicken or fish every second day, adequate heating of their dwelling, durable goods like a washing machine, colour television, telephone or car, and payment arrears (mortgage or rent, utility bills, hire purchase instalments or other loan payments).

Reflecting economic growth and the general convergence process of the EEE, the indicator of severe material deprivation was declining during the 2009-2019 period (see Figure 12.5). The most spectacular fall of the indicator was observed

in Bulgaria and Romania. In Bulgaria, the percentage of those experiencing severe material deprivation fell from 60 per cent in 2007 to 20 per cent in 2019, while in Romania a reduction from 40 to 16 per cent was observed. The other countries also recorded a decline of the indicator between 2007 and 2019. Despite the general decrease of the indicator during the period, in the crisis period the severe material deprivation rate increased in some of the EEE. The largest increase was observed in Hungary, where the material deprivation indicator increased by ten percentage points (from 18 to 28 per cent) between 2009 and 2013. By 2019, however, the value of the indicator declined from 28 to 8 per cent. The economic crisis also halted the decline of severe material deprivation in Bulgaria.

Fig. 12.5: Severe material deprivation rate (percentage)

Data source: Eurostat (2021f)



12.5 Wealth Inequality

It is frequently argued that household wealth is a better measure of the consumption possibilities of a household than income, as it includes the value of assets accumulated in the past. Although the measurement of household wealth is even more difficult than income, studies of household wealth and wealth inequality are becoming more widespread. Unfortunately, data on household wealth tend to be scarce for the EEE. The first reliable survey on household wealth in the EEE appeared with

the implementation of the European Central Bank's Household Finances and Consumption Survey (HFCS), but the EEE coverage of this study is limited to Hungary, Poland, Slovakia, and Slovenia (European Central Bank, 2016).⁹ Moreover, data on trends in wealth inequality are completely missing for these countries.

Looking at estimates of wealth inequality in the 2014 wave of the HFCS survey (Fessler & Schürz, 2021), among the countries covered by the study, Hungary and Slovenia have a Gini index of household net wealth of 0.63-0.64, and for Poland the Gini index is only slightly lower (0.59). With these figures, Poland is close to the levels of wealth inequality recorded in Belgium and Southern European countries (Greece, Italy, and Spain), while Hungary and Slovenia have similar levels of wealth inequality as Finland or Luxembourg. The Gini index estimated for Slovakia (0.49) is the lowest among the countries participating in the study. According to HFCS data, only the Baltic states – most importantly Latvia – had wealth inequality in 2014 similar to the level recorded in the most unequal Western European countries, such as Germany or Ireland (Gini index of 0.75-0.76).

As nonresponse and under-reporting are also huge problems for estimating the top of the wealth distribution in survey-based studies, some analysts have tried to correct survey data with estimates of top wealth holdings from rich lists published by national business magazines. Following this approach, Brzeziński, Sałach and Wroński (2020) finds that the inequality measures for the EEE grew due to the imputation of highest wealth values on average more than for advanced economies. Overall, the study finds that wealth inequality in the members of the EEE analysed has already caught up with Western Europe. The possible reason for this is that despite low levels of wealth inequality during the socialist period, all post-socialist countries has gone through privatization and a significant withdrawal of the state from its redistributive role in the transition process. In addition, wealth taxes are either very low or non-existent in the EEE, and the equalizing effect of inheritances has been weak as the accumulation period has been relatively short so far.

12.6 Inequality Effects of the Covid Crisis in the EEE

12.6.1 Potential Distributional Effects of Economic Crises in General, and of the Covid Crisis in Particular

Although recessions generally reduce average incomes and contribute to an increase in absolute poverty, there is no clear theoretical prediction about their effect on relative income inequality and poverty (Jenkins, Brandolini, Micklewright & Nolan, 2012). The reason is that the effect of a recession on relative inequality and poverty depends on where the social groups more heavily affected by the crisis are located in the income distribution. Although declining employment tends to hit more those

⁹ Croatia also participated in the most recent data collection but studies on wealth inequality based on these data have not yet been published.

at the bottom (or the lower middle part) of the distribution, recessions may harm the rich as well, e.g., by having a negative effect on capital incomes (Roine, Vlachos & Waldenström, 2009). The economic crisis may have different effects horizontally (by social groups): e.g., the effects can vary by gender if sectors with different gender compositions in their workforce are affected differently.

The effect of a recession varies between countries with different levels of development of human and non-human capital, sectoral composition, institutional setup, and policy approach. For example, during the Great Recession in 2008-2009, declining demand for labour resulted in increasing unemployment in some countries, but in others the reduction of working hours and increasing part-time employment were widespread (Vaughan-Whitehead, 2011). In a third group of countries, labour market adjustment brought about a drop in wages, while employment changed to a lesser extent.

Countries greatly differ also in how their social welfare policies respond to the adverse consequences of the crisis. Research analysing the impact of tax and benefit policy on income inequality differentiates between automatic and discretionary components of policies. Automatic stabilizers are benefits (e.g., unemployment benefit and other safety-net benefits) that are more frequently claimed during recessions when numbers of the unemployed or those falling below the minimum income threshold rise. In addition, governments might implement explicit discretionary changes (see e.g., Callan, Doorley and Savage (2018)) in tax-benefit policies in order to mitigate the effects of the crisis on inequality and poverty, or in order to mitigate the increase in the budget deficit (austerity policies).

The complex relationship between economic crisis and inequality is illustrated by contradicting empirical findings. For example, Darvas (2021) finds evidence that between 1961 and 2019 recessions in the world tended to have an inequality increasing impact, while Camacho and Palmieri (2019) do not find evidence of this relationship. If we focus on the short-term impact of the 2008-2009 Great Recession on OECD countries, the result is that between 2007 and 2010 inequality of market income increased in 20 countries out of the 30 OECD member states for which data were available (OECD, 2015)¹⁰. However, the tax and transfer systems were able to mitigate the rise in market income inequality in the early years of the crisis, so the inequality of disposable income was much more stable: most countries had Gini changes between -1 and +1 points.

The literature outlines several mechanisms through which the Covid crisis may have an impact on inequality. First, the pandemic and resulting lockdown measures had a huge impact on the labour market (Darvas, 2021; Stantcheva, 2021). Lockdown measures directly affected some specific sectors of the economy (e.g., entertainment and hospitality), while other sectors were faced with declining demand for their services (e.g., passenger transportation). Employees in the affected sectors suffered a reduction in the number of hours actually worked, temporary cessation of activity or job losses. Jobs less suitable for remote work are more exposed to the crisis. The prediction of the literature is that such changes may raise inequality, as low-skilled

¹⁰ The largest increase has been observed in countries most affected by the crisis like Ireland, Estonia, and Spain, where the Gini index increased by 4-6 points.

workers are more heavily affected. [Darvas \(2021\)](#) points out that the health effects of the pandemic are also unevenly distributed. Accordingly, people with low education and low incomes were more frequently infected by the coronavirus, which had a negative effect on their labour market position.

These labour market changes have straightforward repercussions on the distribution of household income. Again, the expectation is that low-income households are more severely hit by the crisis, which would drive up inequality and poverty. Some countries, however, implemented diverse policy measures to mitigate the effect of the crisis. Thus, in addition to the existing safety net programs like unemployment benefits and minimum income programs, some governments also introduced tax cuts and wage compensation programs. We should study the extent these measures can counterbalance the inequality-increasing effect of the crisis.

The crisis might also have an effect on inequality between different social groups. For example, [Stantcheva \(2021\)](#) discusses the different effects of the crisis according to gender. In the US, for example, women were more likely than men to lose their jobs or have their working hours reduced. The first reason for this imbalance is that women were overrepresented in the sectors that the crisis hit harder, and the second is that they were more often in temporary or part-time jobs and were more likely to quit or reduce working hours due to the increased need for childcare.

Another vulnerable group is that of young people. The young are generally in a more vulnerable labour market position than older age groups as they lack experience and are in search for the best job-skills match. This vulnerability might increase during a crisis. The experience of a young person's unemployment may have long-lasting impacts on their labour market career, as it increases the likelihood of becoming unemployed later and reduces future wages ([Bell & Blanchflower, 2011](#)). The reasons for these 'scarring effects' are missing work experience, devaluation of human capital, and potential employers regarding unemployment as a sign of low productivity ([Scarpetta, Sonnet & Manfredi, 2010](#)).

[Stantcheva \(2021\)](#) also considers the long-term inequality effects of the crisis. Cutting-back consumption due to a crisis is much more typical in high-income households, which results in increased savings among the rich that, in turn, may contribute to widening wealth disparities. Another long-term effect of the pandemic on inequality is the negative effect of school closures on student achievement and learning outcomes. Time spent studying fell more markedly in the case of children coming from low-income households, which is partly related to unequal access to online learning.

12.6.2 Preliminary Results on the Distributional Effects of the Covid Crisis in the EEE

In this section, we review the potential inequality effects of the Covid crisis, with special emphasis on the EEE. We are mainly concerned with the short-term inequality effects of the crisis. Longer-term consequences, such as the effect on the wealth

distribution or the distribution of human capital, will not be covered. The reason is lack of data for unequal savings and wealth, and increasing inequality in educational outcomes is covered in a separate chapter of this book (see Chapter 10).

As comparative data for the EEE from the *European Union Study on Incomes and Living Conditions (EU-SILC)* or other data sources on the effect of the Covid crisis on household incomes are not yet available, we are unable to directly analyse the effects on the distribution of household incomes. Although for some EU countries data are already available from other survey instruments (see e.g., [Clark, Ambrosio and Lepinteur \(2021\)](#)), they do not include the EEE. Therefore, we rely on two kinds of information. First, there are studies that analyse the employment effects of the first wave of the pandemic along income distribution and in different social groups. Second, several simulation studies have been conducted to quantify the effect of the Covid crisis and the policy measures adopted by different countries on income distribution.

12.6.2.1 Immediate Effects of the Covid Crisis on Various Socio-economic Circumstances that Might Affect Inequality in the Medium term

For households, the Covid crisis may have various effects, such as declining demand for labour (e.g., layoffs due to closing or downsizing firms), loss of incomes (e.g., shortened working hours) or devaluation of assets (like, for example, houses and flats for rent). The full complexity of these diverse shocks to the functioning and survival of households cannot be assessed promptly after the crisis shock: full effects will take years to evolve.

However, various surveys provide information on first order effects in a comparative manner. As a source for a first assessment, we refer to the Eurofound survey series on effects of the pandemic. We categorize risks in various domains into three levels (high, medium and low, all related ranks in an all-European distribution of risks). A summary for the EEE is presented in [Table 12.5](#).

The table shows a summary of respondent evaluations regarding the effect of the pandemic on their own employment, financial, and health access positions. Questions about unemployment shocks refer to July 2020 (retrospectively to the beginning of the pandemic). For financial evaluations and expectations, the data refer to July 2020 and April 2021 (three months backwards and forward).

Table 12.5: Experiences and expectations about the effect of the pandemic on households' employment, income, and health situation in the various countries (low, medium, and high-risk values are based on the proportion of respondents)

Data: own calculations based on [Eurofound \(2021\)](#)

	Experience of un-employment since start of pandemic, (July, 2020)	Unemployment fears (next three months, July, 2020)	Financial situation expected to worsen (next three months, 2020)	Financial situation expected to improve (next three months, July, 2020, reversed scale)
Bulgaria	medium	high	high	high
Croatia	medium	medium	high	high
Czechia	low	medium	low	low
Hungary	high	low	high	low
Poland	medium	low	high	low
Romania	medium	high	high	low
Slovakia	low	medium	medium	medium
Slovenia	medium	medium	high	high

Source: EF 2020, Fig 1, p7 EF 2020, Fig 5, p12 EF 2020, Fig9, p18 EF 2020, Fig 10, p19

Definition of high-risk category (percentage of population belonging to this category)			
11+	13+	30+	-9
Definition of medium-risk category (percentage of population belonging to this category)			
7-10	8-12	24-30	10-13
Definition of low-risk category (percentage of population belonging to this category)			
-6	-7	-23	14+

Countries are listed by the order defined in Section 12.2.2., based on the level of inequality and strength of redistribution.

Results can be summarized as follows:

- The highest rate of reported employment loss was observed in Hungary, while the lowest levels were experienced in Czechia and Slovakia. In the majority of the EEE, the reported incidence of unemployment was about 7-10 per cent of respondents.
- Fears of additional employment losses were highest in Bulgaria and Romania, while lowest in Hungary and Poland.
- Fears of continued financial stress were reported in most countries (Bulgaria, Croatia, Hungary, Poland, Romania, and Slovakia) in July 2020. It is interesting that in Hungary, Poland, and Romania, while a very high share of the population reported financial stress in the past, the share of respondents reporting higher

financial expectations was also at the highest level. This might mean that either the population was very much divided in these countries or that many people expected a quick recovery.

Looking at the table from the perspective of country groupings, we can broadly conclude that citizens of countries with higher initial inequalities and weaker welfare states (Bulgaria and Romania) seem to have experienced larger shocks in terms of employment and their financial situation, while in countries with lower initial market inequalities and relatively stronger welfare arrangements (Czechia and Slovakia) the stress seems to have been smaller.

12.6.2.2 Effects of the Covid Crisis on the Distribution of Labour Income

[Palomino, Rodríguez and Sebastian \(2020\)](#) provide an early simulation of the likely effects of lockdown on wage distribution, assuming that lockdown temporarily effects the working ability of people in different occupations but once lockdown measures are removed, employment and earnings are back to pre-Covid levels. They define the ‘lockdown working ability index’ based on the essentiality and the teleworkability of occupations. In essential occupations (such as healthcare and the food chain), the ability of work is not affected by lockdown. Some occupations, on the other hand, are entirely closed down (e.g., accommodation, entertainment and other tourism sectors) during these periods. In occupations that are not essential and not closed, people can continue to work from home, if their activity is teleworkable.

A European Commission analysis ([European Commission, 2021](#)) confirms the validity of this approach. In their analysis, occupations are classified along three dimensions: teleworkability, the extent to which they are critical, and the level of social interaction they require. The authors show that these characteristics predict how the crisis affects people’s employment in different occupations. Non-teleworkable, non-critical occupations are the ones with the sharpest drop in employment, and also those with the highest incidence of absences from work due to temporary lay-offs. Overall, the strongest protection against job losses during the lockdown was teleworkability.

As countries and social groups (e.g., women and men, and people with different levels of education) within countries have different occupational structures, they are characterized by different levels of the lockdown working ability index. According to [Palomino et al. \(2020\)](#), Bulgaria, Croatia, Slovakia, and Slovenia are among the countries with the lowest ‘lockdown working ability index’ in the EU. This is partly due to their low levels of teleworkability and the essentiality of occupations. In the case of Hungary and Romania, the low level of teleworking is partially compensated by higher levels of essentiality due to the higher importance of agriculture. It is typical that people with low levels of education have lower levels of lockdown working ability indices compared to those with middle level tertiary education.

[Palomino et al. \(2020\)](#) simulate the effect of lockdown on wage inequality and poverty by matching the ‘lockdown working ability index’ to a pre-Covid wave of the EU-SILC study, which is a survey of household incomes in EU countries. They then

calculate the wage loss which individuals in different occupations are likely to suffer in the different countries. The basic scenario calculates the effect of a two-month lockdown.

Table 12.6: The simulated effects of a two-month lockdown on wage poverty and wage inequality in the EEE

Data: [Palomino et al. \(2020\)](#)

Note a: the LWA index can take values between 0 and 1, higher values meaning higher working ability during lockdown

	Lockdown working ability index ^a	Wage poverty (headcount ratio, percentage)		Wage inequality (Gini index), percentage	
		base	change	base	change
Bulgaria	0.37	22.8	5.3	44.2	1.4
Croatia	0.41	15.3	8.5	32.2	1.5
Czechia	0.44	15.3	5.6	29.6	1.4
Hungary	0.47	15.4	4.1	34.6	1.0
Poland	0.44	14.4	8.1	33.2	1.2
Romania	0.46	19.3	2.8	34.2	1.2
Slovakia	0.41	11.7	6.3	25.4	1.2
Slovenia	0.43	18.1	5.7	32.8	1.5
EU average	0.49	20.4	4.9	35.8	1.3

According to the study, a two-month lockdown increases the poverty rate by an average of 4.9 percentage points in the EU countries (see Table 12.6). The EEE tend to have a higher than average poverty increase due to the lockdown: in Croatia, the study predicts an 8.5 percentage point increase, while in Poland an 8.1 points increase in wage poverty is projected. These are the highest increases in wage poverty in the EU. Only Hungary and Romania are expected to have a lower-than-average increase in the poverty headcount ratio. The projected effects on wage inequality are more moderate, with Bulgaria, Croatia, Czechia, and Slovenia having inequality increases higher than the EU average.

Despite providing an interesting perspective on the likely effects of the Covid crisis, more recent employment data do not necessarily confirm the picture suggested by [Palomino et al. \(2020\)](#) regarding the more severe decline of employment and increase of poverty in the EEE. More recent analyses by [Eurostat \(2020\)](#) and the [European Commission \(2021\)](#) are based on actual employment changes (data taken from the Labour Force Survey) between the second quarter of 2019 and the second quarter of 2020, as the latter period was the most severely hit by the first wave of the pandemic.

[Eurostat \(2020\)](#) calculates the risk of job loss and reduced work hours during the first wave of the Covid crisis across the income distribution. The analysis predicts transitions from work to unemployment or to reduced working time (including workers on temporary layoffs or reduced working hours) between the first and second quarters of 2020 using a logistic regression model¹¹ on EU-LFS data. Then using these models, the study predicts transitions to unemployment or reduced work hours of individuals in a pre-Covid wave of EU-SILC, which is a survey of household incomes. This allows then to estimate the employment effects of the crisis along the income distribution. As the analysis focuses on labour effects, income is restricted to income from work, defined as wages plus income from self-employment.

Based on data from the Eurostat Labour Force Survey, the highest risk of layoff or reduced working hours among the EEE is found in Slovakia, where the probability of such transition taking place among those with middle-level incomes is 20 per cent, while the country with the second highest risk is Slovenia, with 17 per cent. Croatia, Czechia, Poland, and Romania have between 11 and 13 per cent, while Bulgaria and Hungary have a risk of layoff and reduced working hours among those with middle income between 6 and 7 per cent. Overall, this does not confirm the picture outlined by [Palomino et al. \(2020\)](#), where Eastern European countries were found to be more vulnerable to the labour market shock. In fact, only two members of the EEE, i.e., Slovakia and Slovenia, have risks higher than the EU average. And this also applies to differences across the income distribution. The difference between those with high incomes and low incomes is not particularly large for the EEE, most countries having a relatively small difference between the rich and the poor (see Figure 12.6).

12.6.2.3 The Impact of the Distribution of Household Incomes: Market Income and Policy Effects

The studies reviewed in the earlier section discuss only the likely effects of the crisis on employment and income from employment, which is only a partial picture of the distributional effects as it does not analyse household incomes and does not take into account policy reactions to the crisis. Other simulation studies aim to provide a more complete picture of the distributional effects when taking these aspects into account.

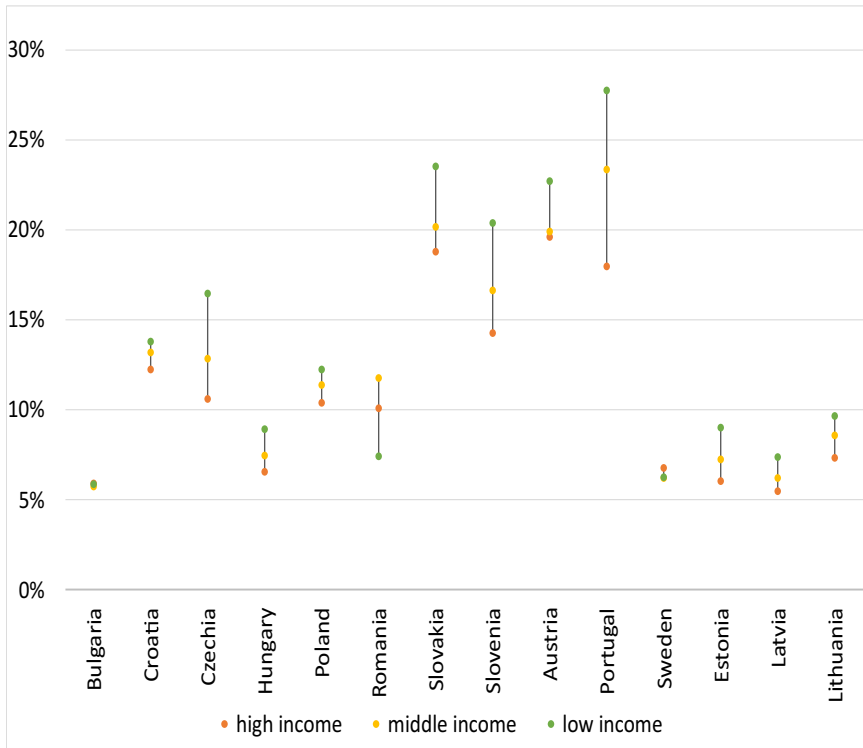
Countries have implemented various policies to mitigate the effects of the Covid crisis. One approach was to increase the generosity of the usual policy measures, such as unemployment benefits, minimum income benefit schemes, or family benefits. The EEE had different approaches in this regard, as demonstrated by [Aidukaite, Saxonberg, Szelewa and Szikra \(2021\)](#), who compare Hungary, Poland, and Slovakia. All three extended family benefits during the crisis period either by offering paid sick leave for parents with children (Poland and Slovakia) or by extending maternity and parental leave benefits (Hungary). Differences were more manifest in the case of unemployment benefits and social assistance. Hungary did not extend support

¹¹ The main explanatory variables used in the model are age group, gender, economic sector, occupation, and type of contract (temporary vs permanent).

Fig. 12.6: Risk of layoff or reduced working hours between 2020 Q1 and Q2 by level of income in the EEE and the comparison countries

Data: Eurostat (2020).

Note: The low-income group includes individuals in deciles 1, 2, and 3; the middle group comprises deciles 4, 5, 6, and 7; while deciles 8, 9, and 10 constitute the high-income category



to the unemployed, while Poland offered a special solidarity cash benefit to the unemployed, and Slovakia extended the unemployment benefit period.

In addition to these approaches, countries implemented employment protection measures (also called wage compensation schemes or job retention measures), which are schemes where workers are paid for more working hours than they are working during a specific period (Eurofound, 2021). These include short-time working schemes, reducing working time and temporary lay-offs, whereby workers do not work at all for a certain period, but the employment contract is maintained. According to the study by Eurofound (2021), Hungary, Poland, Romania, and Slovenia are among the 12 EU member states that introduced such programs during the first wave of the pandemic, while Czechia and Slovakia increased the generosity of an already existing similar benefit. Employment protection measures are also in place in Bulgaria, Romania, and Croatia. There are of course differences in the generosity

and take-up of these measures within the EEE. Maximum replacement rates were highest during the period between March and September 2020 in Bulgaria, Czechia and Poland, where the replacement rate was 100 per cent, while in least generous Hungary the replacement rate was only 70 per cent. In terms of the duration of support, Slovakia seems to be the most generous, while the shortest duration of the benefit is found in Hungary, Poland, and Romania (Eurofound, 2021). The take-up of short-time working or temporary unemployment benefits in April 2020 was the highest in Croatia (57 per cent), while in Czechia, Slovakia, and Slovenia, the take-up rate was between 18 and 21 per cent. The rest of the EEE had take-up rates of 10 per cent or below, with the lowest rate recorded in Hungary (1 per cent).

The relatively early study by Almeida et al. (2021) analyses the impact of the Covid crisis and discretionary policy changes introduced by governments by conducting a simulation analysis on Euromod, a static tax-benefits microsimulation model covering all EU countries. They adjust the Euromod (pre-Covid crisis) data to two different macroeconomic scenarios of the Covid crisis – one with policy changes, and the other without policy changes – and compare them to a scenario of no Covid crisis. The scenarios with no Covid crisis and Covid crisis with policy changes is based on the actual macroeconomic forecasts of the EU, while the third (counterfactual) macroeconomic scenario is constructed by recalculating the forecast without the discretionary fiscal measures and their effects on GDP and employment, disaggregated by economic sector.

The results show that without policy changes the distributional impact of the Covid crisis is regressive and is driving up poverty and inequality in the EU, but the discretionary policy measures can considerably mitigate this effect. According to the study, Bulgaria, Croatia, Czechia, Hungary, and Poland are among the countries where even with the policy changes taken into account, the negative impact of the Covid crisis on disposable income is expected to be the largest (Almeida et al., 2021). Looking at the effect on poverty, without policy changes, Hungary and Slovakia (together with Estonia, Germany, and Spain) are among the countries where poverty is expected to increase the most in the EU. Taking into account the effect of policy measures mitigates the poverty-increasing impact of the Covid crisis, but Hungary and Poland are still among the EU countries where poverty increase is expected to be the most dramatic.

The more recent *Employment and Social Developments in Europe* report by the European Commission (European Commission, 2021) provides a similar analysis, but here the analysis is based on observed changes in employment as a result of the crisis, rather than macroeconomic forecasts. The study also uses the Euromod microsimulation model, where labour market effects of the crisis are simulated using aggregate labour statistics on the probability of transitions from work to either unemployment or monetary compensation schemes. The data on these labour market transitions are taken from administrative data collected by Euromod national teams and developers, and by Eurostat. Statistics used to simulate transitions into monetary compensation schemes refer to the first three quarters of 2020 (two quarters for self-employed workers). The study compares two alternative simulations of the 2020 income distribution: one version without labour market transitions to unemployment

and/or temporary lay-offs, and another version taking into account these transitions and the implementation of monetary compensation schemes (which are simulated using Euromod).

In this study, the simulated decline in market income across the EU amounted to 5.1 per cent. While the analysis predicts a fall in market income for all member states, variations between countries are substantial, ranging from 20 per cent in Ireland, to 1 per cent in the Netherlands (European Commission, 2021).

Tax-benefit systems were relatively effective in protecting households from the consequences of the crisis as disposable income declined only by 1.3 per cent in the EU. The simulations suggest that the tax-benefit systems absorbed 46 per cent of market income loss in the Netherlands, while in Denmark they provide nearly full protection by neutralizing 93 per cent of the decline in market income. In the EEE, Croatia (-7.8 per cent) and Slovenia (-5.6 per cent) are predicted to suffer a decline in market income higher than the EU average.

The reduction in market income generally shows a regressive pattern, with larger earning losses happening in the lower part of the income distribution than in the upper part. This regressivity of the decline in market income is mitigated by tax and transfer schemes, as shown by the at-risk-of poverty rates (European Commission, 2021). The impact of the crisis on the at-risk-of poverty rate is projected to be around 0.3 per cent in the EU (with a fixed poverty threshold). In the EEE, only Bulgaria and Hungary have increases in the at-risk-of-poverty (AROP) rates higher than the EU average. In Czechia, the increase is similar to the EU average, while in Poland it is somewhat lower. In the rest of the EEE, the projected increase in the poverty rate is negligible.

Among the different tax-benefit policies, monetary compensation schemes were the most effective in reducing the impact of the crisis on market income (European Commission, 2021), but the impact of reductions in taxes and social insurance contributions was also of almost similar importance. The effect of unemployment benefits was significant but lower, while other benefits – including pensions – played a minor role.

12.6.2.4 The Effect of the Covid Crisis on Subgroups of the Population

Women are characterized by higher levels of the ‘lockdown working ability index’ in every EU country including the EEE (Palomino et al., 2020), which makes them likely candidates for suffering more severe effects from the Covid crisis. Ciminelli, Schweltnus and Stadler (2021) argue that while, on average, the decrease across the EU was similar for men and women in total hours worked, in a number of countries, including many of the EEE, total hours worked fell more for women than men. The widest gap is found in Hungary and Romania, but the pattern is also visible in Czechia and Slovakia. This raises the risk of widening gender wage gaps due to prolonged non-employment spells or reduced working time in the case of women. According to Eurostat (2021d), in most member states loss of employment income is higher for women than men. The largest differences were detected in Czechia and Slovakia

(together with Greece), but Hungary, Poland, and Slovenia also have a gender gap in employment income loss above the EU27 average. The more significant drop in hours worked and employment income among women may be due to school closures during the lockdown period, increasing work-life balance pressures for women. For example, in the case of Hungary, [Fodor, Gregor, Koltai and Kováts \(2021\)](#) show that in terms of absolute work hours, women's housework increased significantly more than men's, and the gap between men and women had widened considerably. This was particularly the case among middle class, highly educated city-dwellers. Another disadvantaged group are the young: the estimated loss of employment income across the EU is more than twice as high among those between 16-24 years of age compared to adult workers 25-64 (Eurostat, 2021), which is related to the fact that the young are overrepresented in sectors more affected by the crisis. When focusing on income loss from transition to unemployment, the differences are even more visible: job loss is clearly much more marked for the young. In the case of, Bulgaria, Czechia, and Slovenia, the reduction of employment income due to job loss exceeds 10 per cent. Croatia, Poland, and Slovakia also have values slightly above the EU 27 average. It is only in Hungary and Romania that the decline in employment income due to job loss is below the EU27 average.

12.6.2.5 The Attitude Climate and Reactions to Policies

While households react directly to economic (consumption and labour market) and to policy (tax and transfer policy) shocks individually, there are important elements of the general social climate that affect their reaction time, the magnitude, and several other aspects of their behaviour. This general social climate can be characterised, among others, by the level of general trust within the political community and by the legitimacy of the country's institutional environment. We may reasonably assume that similar forces are at work when exogenous shocks like the pandemic itself occur and when we observe government reactions (lockdowns, restrictions, etc.). To observe how different the EEE are in this respect, we have collected scientific data on general attitudes like trust in others and in the legal system; satisfaction with the operation of the economy and of the democratic system, in addition to survey data on how people think about the role of their governments in tackling inequalities (all based on the European Social Survey 2018 wave). Additionally, we incorporate data from a survey by Kantar about popular attitudes to pandemic-induced policies in general, commissioned by the European Parliament ([European Parliament, 2020](#)). The data are summarized in [Table 12.7](#).

What we see is as follows:

- In general, distrust and dissatisfaction are generally more prevalent in the EEE than in Germany and Sweden. However, these values are not worse in our target countries than, for example, in Portugal. Two of the Baltic states (Latvia and Lithuania) would fit well into the group of the EEE. Estonia is different, as most of its values are closer to Sweden and Germany than to its EEE peers.

- In the EEE, trust both in others and in institutions is at a lower level than in other European Union countries, especially in Bulgaria and Croatia. In addition, the level of satisfaction with the economy and democracy seems much lower in these two countries when compared to either the EU or to other members of the EEE and the Baltic countries.
- Expectations towards government actions to tackle inequalities are highest in Bulgaria, Croatia, Hungary, and Slovenia, while they are lowest in Czechia, Estonia, and Sweden.

What are the implications of these findings? First and foremost: there is a considerable degree of heterogeneity in the combinations of trust, satisfaction, and demand for (inequality decreasing) government action in the EEE. Therefore, some of the EEE seem to share a common pattern with each other, while others seem to be closer to their Western counterparts. It also follows from the above that there are some unfortunate combinations: in Bulgaria, for example, the large demand for government action is coupled with low levels of trust (both in others and in the legal system), representing especially large difficulties for efficient policies. In other members of the EEE, the ‘portfolio’ of attitudes seems more beneficial: in Czechia, for example, trust in institutions is higher, while the need for government action to tackle inequalities seems to be lower.

The interpretation of the last column of Table 12.7 is especially interesting. People in the respective countries were asked to position themselves on a 1-6 scale between the following statements regarding the Covid crisis: “The health benefits are greater than the economic damage” (1) and “The economic damage is greater than the health benefits” (6). When the share of those emphasizing economic harm (4-6 in the above mentioned scale) is calculated for those that have an opinion (i.e., leaving out the undecided), the higher the percentage, the more people argue for less restrictions. The last column in Table 12.7 shows that concerns in some of the EEE (Bulgaria, Hungary, Poland, and Slovenia) about the economic harm are significantly higher than in others.

As we have shown in earlier sections, the effects of the pandemic on inequality are complex and depend on many factors. It should also be noted that the perception of the need for government action to tackle social inequalities varies over time. As Figure 12.7 shows, in the EEE the demand for government intervention generally intensified during the 2008-2009 crisis. Following the crisis, it started to gradually decline in all of them, though not everywhere at the same speed.

12.7 Conclusion

In this chapter, we have reviewed the changes in income inequality in the EEE since the Great Financial Crisis and the studies analysing the impact of the Covid crisis on inequality in the region.

Between 2009 and 2019, disposable income inequality increased most markedly in Bulgaria, but Hungary also recorded a similar trend. By contrast, in Poland

Table 12.7: Elements of the general social climate in 2018 and opinions about policy measures induced by the pandemic in 2020 in the EEE*, selected EU15 countries and the three Baltic states

Data: [European Social Survey Cumulative File, ESS 1-9 \(2020\)](#) (for the first five columns) and [European Parliament \(2020\)](#) p 55. fig Q3

Notes:

*There is no data for Romania available in the ESS.

**The scale for presenting positions on questions about trust and satisfaction: 0-10

	Trust in others**	Trust in the legal system**	Satisfaction with the economy**
EEE countries			
Bulgaria	3.5	3.0	3.2
Croatia	4.1	2.6	3.1
Czechia	4.9	5.2	6.2
Hungary	4.9	5.6	4.7
Poland	4.1	4.3	5.8
Slovakia	3.9	4.3	4.7
Slovenia	4.5	3.9	5.2
Selected EU15 countries			
Germany	5.3	6.0	6.6
Portugal	4.0	4.2	4.5
Sweden	6.2	6.5	6.5
Baltic states			
Estonia	5.6	6.0	5.5
Latvia	4.3	4.5	4.1
Lithuania	4.7	4.6	4.5

the Gini index declined, while in other countries of the region income inequality remained stable. The rise in disposable income inequality in Bulgaria was partly the consequence of rising market income inequality and a decline of the inequality-reducing effect of government taxes and transfers, while in Hungary the increase in inequality is solely due to the weakening of the redistributive effect of taxes and transfers.

Regarding poverty, the patterns observed are different from an absolute or a relative poverty perspective. Representing the relative poverty approach, the at-risk-of-poverty rate shows fluctuations in 2009-2019. Reflecting more the absolute poverty perspective, the indicator of severe material deprivation declined during the

Table 12.7: Cont. Elements of the general social climate in 2018 and opinions about policy measures induced by the pandemic in 2020 in the EEE*, selected EU15 countries and the three Baltic states

Data: [European Social Survey Cumulative File, ESS 1-9 \(2020\)](#) (for the first two columns) and [European Parliament \(2020\)](#) p 55. fig Q3

Notes:

*There is no data for Romania available in the ESS.

**The scale for presenting positions on questions about trust and satisfaction: 0-10

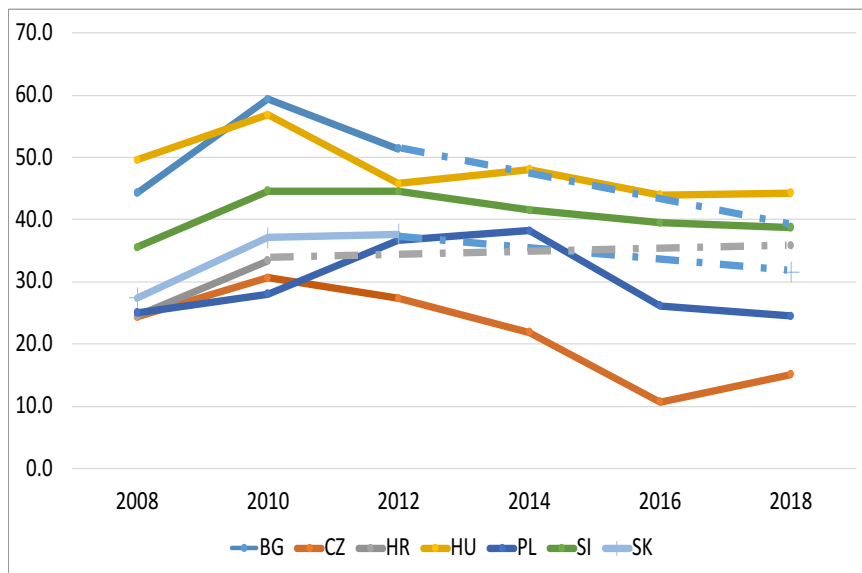
	Satisfaction with democracy**	“Government must act to limit the level of inequalities”	Economic harm of lockdown measures outweighs health benefits
EEE countries			
Bulgaria	3.0	38.6	65.3
Croatia	3.4	35.7	47.8
Czechia	5.5	15.1	52.7
Hungary	4.5	44.3	64.1
Poland	5.4	24.5	61.7
Slovakia	4.4	31.5	44.8
Slovenia	4.3	38.8	61.7
Selected EU15 countries			
Germany	5.8	26.3	43.6
Portugal	5.1	37.4	36.0
Sweden	6.4	17.1	40.2
Baltic states			
Estonia	5.3	16.2	n.d.
Latvia	4.3	36.6	n.d.
Lithuania	4.8	35.4	n.d.

same period. The most spectacular fall of the indicator was observed in Bulgaria and Romania. This mirrors economic growth and the general convergence process of the EEE.

Certainly, the study has some limitations. Due to lack of data, we have been unable to study such phenomena as the impact of rent-seeking on income or wealth inequality (Szanyi, 2019; Mihályi & Szelényi, 2020) or the intersectionality in the effects of the Covid crisis (see e.g., Maestriperi, 2021). We hope that further research will be able to identify additional data and offer new interpretations so that we can obtain a better understanding of the societal effects of the pandemic.

Fig. 12.7: Share of those who "fully agree" with the statement that "Governments must act to tackle social inequality" in the EEE. 2008-2018

Data: [European Social Survey Cumulative File, ESS 1-9 \(2020\)](#), various waves, own calculations



The Covid crisis brought about an unexpected challenge for the EEE. The first simulations on the likely effect of the pandemic on employment and wage inequality in the EU predicted that the EEE would be heavily affected because the share of people in teleworkable and essential jobs, which could be continued during lockdowns, was lower. Later analysis however found that only two of the EEE, i.e., Slovakia and Slovenia, had risks of unemployment or reduced working hours higher than the EU average. Moreover, the difference between those with high and low incomes is not particularly large for the EEE, with most countries showing a relatively small difference between the rich and the poor.

Studies that focus on inequality of disposable income take also into account the effect of various policy measures (including the usual measures and new policies such as wage compensation schemes). In this case again, early studies predicted that the EEE would be among the member states where the negative impact of the Covid crisis on poverty was expected to be the largest. More recent studies based on actual employment changes during the first wave of the pandemic have found that only Bulgaria and Hungary had increases in the at-risk-of-poverty rate higher than the EU average.

After the rise in inequality in the transition period and a period of convergence to average levels of development in the EU, the EEE are now searching for a way to escape the 'middle income trap'. At the same time, the institutional development

trajectory of some of these countries has started to deviate from the general European model. Indicators of rule of law have deteriorated the most in Hungary, and also in Poland after 2015. Bulgaria, Croatia, and Romania also show relatively low levels despite some improvement over the decade. Success in building prosperous and inclusive societies largely depends on a portfolio of institutions, values, and behaviours. Liberal democracies with functioning rule of law and institutions have proven their efficiency in history (Acemoglu & Robinson, 2012). It remains to be seen how the EEE will come out of the crisis caused by the pandemic and what social paths they will follow after these unfortunate years.

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