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Poverty, inequality, and growth: trends, policies, and controversies

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Abstract: Reducing poverty and inequality and promoting inclusive growth are fundamental to achieving the United Nations Sustainable Development Goals. Much has changed in the global economy in recent decades and perspectives on progress made vary widely. This is even more so in light of the ongoing COVID-19 pandemic. However, getting to grips in a meaningful manner with existing trends is critical to evidence-based policy-making. This contribution aims to provide an original review and evaluation of the main stylized facts concerning poverty, inequality, and growth. It will uncover existing trends, put controversies into perspective, and help to provide a platform for informed policy debate.

Key words: poverty, inequality, growth

JEL classification: D63, I32, O1,

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1 Introduction

In 2015, the United Nations (UN) Member States adopted the 2030 Agenda for Sustainable Development, which provides a framework for—present and future—peace and prosperity for people and the planet. At its core lie the 17 Sustainable Development Goals (SDGs) (UNDESA 2016), centred around the objective of 'eradicating poverty in all its forms and dimensions, including extreme poverty'. This is also a basic requirement for achieving sustainable development, including leaving no one behind. The SDGs build on the Millennium Development Goals (MDGs) but more clearly recognize that ending poverty and other deprivations must be pursued together with improving health and education, reducing inequality, and favouring sustainable economic growth. Therefore, along with poverty, we stress that inequality and growth are fundamental dimensions to be considered in formulating strategies and policies to achieve the SDGs.

1.1 The relation between growth, inequality, and poverty

The relation between growth, inequality, and poverty has captured the interest of economists for centuries, with varying intensity and focus. Theory, empirical analysis, and policy debates have taken differing points of departure, and they have been characterized by highly polarized conclusions and positions.

With respect to growth and inequality, one of the first questions of interest has been whether economic growth would result in higher or lower inequality. The Kuznets hypothesis, named after its author, was developed in his 1955 article 'Economic Growth and Income Inequality' and influenced economic research on inequality and growth for decades to come. Kuznets (1955) argued that as economies grow, inequality will initially rise and subsequently fall after a turning point, in line with the progress achieved through the stages of economic development. This inverted U-shaped curve with inequality plotted against income per capita was reflected in the limited data available at that time. Subsequent studies have disputed Kuznets' empirical findings (see, among others, Deininger and Squire 1997; Ravallion 1995), casting doubt on the inevitability of the inverted U-shaped relationship between income and inequality.[1]

While, during the second half of the twentieth century, the focus was on the consequences of growth for inequality, more recently the attention has shifted once again towards examining the reverse relationship, i.e. whether inequality is beneficial or detrimental to growth. Studies have proposed diverging theories on the matter: either that high inequality leads to lower levels of growth or the opposite, that inequality favours growth.[2] Yet, while many of these studies assume that the relationship between inequality and growth is linear, this assumption has been questioned. Some authors have proposed that the growth–inequality nexus varies at different levels of inequality (Banerjee and Duflo 2003; Cornia et al. 2003, 2004). Exploring this hypothesis empirically, Cornia et al. (2003, 2004) found a concave relationship between growth and inequality whereby very low and very high levels of inequality are detrimental to growth.

[1] Do note, however, that, if economic development takes place strictly in accordance with the Lewis (1954) two-sector dual economy model, then the inverted U-shape of the relationship between increasing income and inequality is a logical implication. For background papers see Anand and Kanbur (1993), Fields (1993), and Tarp (1991).

[2] This is a long-standing debate with roots all the way back to the classical economists (see Adelman and Robinson 1989). See McKnight (2019) for a more recent review of the literature and empirical evidence on both hypotheses, as well as Baselgia and Foellmi (2022).

Adding poverty to the picture, the development literature has also focused on its role in the complex relationship between growth and inequality. Bourguignon (2004) proposed the poverty–growth–inequality 'iron triangle' to bring out that the variation in absolute poverty in a country reflects the change in growth and inequality in that country.[3] While the subject is complex and does not seem to fit into a single grand theory, three stylized facts have emerged from the macroeconomic approach to this topic and have found some broad agreement in the literature.

Following Ferreira (2010: 8) a key result from empirical studies (e.g. Dollar and Kraay 2002; Ravallion and Chen 1997) is that (i) *economic growth and changes in inequality are statistically uncorrelated.* This leads to the rejection of the Kuznets hypothesis discussed above, at least regarding the two decades preceding the 2000s. However, even though inequality and economic growth appear to be uncorrelated on average, inequality seems to play a crucial role in the relationship between growth and poverty reduction. That is, while, in general, (ii) *poverty declines as the economy grows,* the level of inequality in a country determines the responsiveness of poverty reduction to economic growth and is a mediating factor in the relationship (Fosu 2016, among others). Ferreira (2010) reports that (iii) *the absolute value of the poverty–growth elasticity falls with inequality*, meaning that the poverty reduction response to economic growth is stronger among low-inequality countries (see also Fosu 2017; Kwasi 2010). Accordingly, various studies find that there is large variation in the transformation of economic growth into poverty reduction across countries. However, inequality is clearly not the only factor affecting the relationship between growth and poverty reduction. Indeed Ravallion (2012) suggests that high initial levels of poverty in a country can hamper the poverty-reducing effect of economic growth. Reconciling these two latter facts, Breunig and Majeed (2016) argue that the obstructive impact of high levels of inequality on poverty reduction is heightened in countries with high poverty rates.

From the discussion above, it is clear that confronting theoretical hypotheses with existing data is essential. Therefore, in the first sections of the present paper we present and describe the main trends for the three outcomes—poverty, inequality, and growth—providing the most recent estimates available. Indeed, we conclude that much has changed in the global economy in recent decades for each of the three outcomes considered. Given the magnitude and trend-reversing nature of the COVID-19 shock, we also point to some of the best-informed estimates regarding its expected impact on poverty, inequality, and growth.

Along with the description of the main recent trends, we dig into the interpretations/perspectives to add complementary understanding. We observe that, depending on the data used, on the set of countries analysed, and on the indicators applied, perspectives on progress made may vary widely. In this regard, our contribution aims to provide an original—although partial—review and evaluation of the main stylized facts concerning poverty, inequality, and growth.

Finally, we discuss how different policy options and policy responses may emerge, depending on the interpretations/perspectives associated with the trends observed—and the respective causation links. We conclude by stressing that coming to grips with existing trends is critical to formulating evidence-based strategies and policies, on the one hand, and that providing a consistent platform for informed policy debate remains critical and beneficial to all development actors involved, on the other.

[3] See Arndt, McKay and Tarp (2016) for a more detailed elaboration.

1.2 The basic concepts of poverty, inequality, and growth

Before proceeding with the illustration of how the main indicators related to poverty, inequality, and growth have evolved over time, it is useful to briefly review here the three concepts, the different measures considered, and how they are used in the remaining parts of the paper.

1.2.1 Poverty

Providing a definition for poverty is perhaps more difficult than defining inequality or growth. In the paper, we use the concept of poverty which stems from the standard economic meaning of lacking the necessary resources to provide for the necessities of life. The *Encyclopedia Britannica* defines poverty as 'the state of one who lacks a usual or socially acceptable amount of money or material possessions. Poverty is said to exist when people lack the means to satisfy their basic needs'.[4]

However, defining what is a socially acceptable amount of material possessions or what people's basic needs are is not an easy task in its own right. Helpful in this task, and key in the analysis of poverty, is the distinction between absolute and relative poverty. Absolute poverty was defined by the UN in 1995 as 'a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services' (UN 1995).

However, such a severe deprivation condition needs to be related to a monetary equivalent to become operational. This has been done using poverty lines, which represent the cost of meeting people's basic needs. Countries typically define national poverty lines which reflect the cost for people in a specific country or region to meet their basic needs. However, based on the national poverty lines of some of the poorest countries in the world, the World Bank has constructed an international poverty line, equivalent to $1.90 per day, to measure absolute poverty at the global level and make meaningful poverty comparisons across different countries.[5] In the paper, we present several poverty estimates that have this international poverty line as reference. In recent years, the World Bank has also introduced in its analyses the $3.20 and the $5.50 poverty lines, which represent the median value of national poverty lines in low middle- and upper middle-income economies, respectively, and are meant to reflect poverty in the two groups of countries. In the following sections, we will mainly focus on both the absolute number of people and the percentage of the population living below the various international poverty lines, the latter being defined as the poverty rate or headcount.

Turning to relative poverty, it is widely acknowledged that poverty evolves and changes as countries grow, and that the level of daily consumption associated with living a dignified life varies both across countries and over time within the same country. While, by definition, absolute poverty lines are fixed values in terms of purchasing power, these variations in the level of consumption associated with living a dignified life are somehow better captured if a concept of relative poverty is employed. Relative poverty is more closely related to the 'socially acceptable amount of money or material possessions' mentioned above, which indeed varies across countries and even over time within the same country. In general, people are deemed as poor in relative terms when their incomes or consumption values are less than a certain percentage of the country's median income/consumption. Therefore, by construction, relative poverty lines are directly proportional

[4] https://www.britannica.com/topic/poverty

[5] The international poverty line was initially set at $1 per day per person, but it was subsequently updated to $1.25 per day per person in 2008 and to $1.90 per day per person in 2015.

to the mean or median of the income/consumption distribution. Whereas the literature on developing countries tends to follow the absolute poverty approach, measuring relative poverty is the preferred option for industrialized countries in which absolute poverty at standard poverty lines is close or equal to zero.

1.2.2 Inequality

Concerning inequality, in this paper we consider only economic inequality, which refers to disparities in incomes, consumption levels, wealth or alternative welfare measures among individuals or groups in a society, or among populations and countries at the global level. In this respect, one can focus on relative or absolute disparities.

Most of the commonly used inequality measures are relative, meaning that inequality remains unchanged if we multiply all incomes by a certain value, i.e. increase in the same proportion (which is usually referred to as the scale invariance axiom). Among the relative inequality indicators, the most widely used is certainly the Gini index. The attractiveness of the Gini index lies in the intuitive interpretation. Varying from 0 to 1, a higher level of the Gini index corresponds to higher levels of inequality, with 0 indicating perfect equality and 1 indicating perfect inequality. Nonetheless, the Gini index is only one of many possible measures of relative inequality. Other indices and measures, which are increasingly common as alternatives for analysing inequality, are income/consumption/wealth shares. They represent the income or wealth captured by selected groups of the income distribution, such as the top 10 per cent, the middle 40 per cent, or the bottom 50 per cent of the income/consumption/wealth distribution. Income share ratios are also being progressively more adopted, one of the most frequently used being the Palma ratio, an index computed by taking the ratio between the incomes of the top 10 per cent and the bottom 40 per cent of the income distribution.

Other inequality measures, vastly used in the literature because of the desirable properties they display, are represented by the generalized entropy (GE) inequality indices. The properties of GE indices include anonymity, the population principle, the principle of transfers, scale invariance, and additive decomposability, which is extremely useful when analysing inequality. This last property means that an index can be decomposed by population sub-groups and it can be expressed as a weighted sum of a within-group and a between-group component (Shorrocks 1984). Depending on the value assigned to a key parameter, α, these indices can become more sensitive to different parts of the distribution. More common applications to inequality analysis adopt the Theil index and/or the mean log deviation, which correspond to taking the value of the parameter α equal to 1 or to 0, respectively.[6] These indices are not as intuitive in their interpretation as the Gini index. Nonetheless, in this paper, we present selected inequality trends using both the mean log deviation and the Theil index, especially when overall inequality is decomposed into its components and analysed accordingly.

However, analysing inequality in relative terms is not the only possible option and one may consider instead that inequality does not change if one adds the same value to all incomes (referred to as translation invariance). Ravallion (2014) provides a useful example: imagining a change in distribution that doubles the income of two households with incomes of $1,000 and $10,000 leads to no changes in relative inequality (the richest household still earns ten times more than the poorest) but doubles the absolute difference in incomes from $9,000 to $18,000. The Niño-Zarazúa et al. (2017) illustration of this issue is also helpful. Doubling the income of two households means that the richest can now buy two yachts instead of one and leads the poorest

[6] For a formulation of the GE inequality indices see Costa and Pérez-Duarte (2019), among others.

to be able to buy two chickens rather than one, which arguably means that inequality has increased. Surveys in earlier work, for example by Amiel and Cowell (1999) and more recently by Ravallion (2014), show that at least some of the respondents thought about inequality in absolute rather than in relative terms. In section 3, we provide additional details on how absolute measures are useful in the analysis of inequality, mainly using the absolute Gini—an absolute version of the standard Gini index.

Concerning the unit of analysis, disparities in income, consumption, or wealth can be analysed by focusing on the individuals of a specific country (within-country inequality) or comparing income differences between countries (between-country inequality, also referred to as international inequality). In the latter case, one could consider all the countries in the world as equal single units and calculate inequality among them, or one could attribute different weights to countries depending on the size of their populations. On top of that, one could also calculate inequality between all the people in the world, independently of where they live. This concept is referred to as 'global inequality', which is influenced by both inequality among and within countries (Bourguignon 2015; Milanovic 2005). Adopting one concept or another has important implications for the trends and interpretations concerning inequality.

1.2.3 Growth

In this paper, we refer to economic growth as an increase in either total or per capita gross domestic product (GDP). Total GDP is the measure of the value added created through the production of goods and services in an economy and can be interpreted as the value of a country's total income. For our purposes, however, GDP per capita, i.e. total GDP divided by population, is a more useful measure, in that it allows us to account for population growth, and can therefore be regarded also as a measure of average income (Angelsen and Wunder 2006).

With respect to growth, we also discuss and present growth incidence curves (GICs). These are tools that can be used to analyse the impact of aggregate economic growth over the entire distribution of income/consumption (Ravallion and Chen 2003). Indeed, GICs show the growth in income/consumption that occurred between two points in time for each percentile of the income/consumption distribution. Depending on whether the accumulated income/consumption growth rates or the accumulated absolute income/consumption changes are presented, they are defined as relative or absolute GICs, respectively. Given their characteristics, GICs also represent a precious tool for assessing whether growth in a given country or region, and over a defined period of time, benefitted the poor relatively more or not. When growth benefits the poor relatively more, it is defined as 'pro-poor' growth (for a more thorough discussion, see Ravallion 2004b).

Our paper proceeds as follows. In sections 2, 3, and 4, we review the trends revealed by various poverty, inequality, and growth indicators in recent years, at the global and regional levels, for different measures, while also providing an overview of what happened after the COVID-19 crisis struck in 2020. Section 2 focuses on poverty, whereas sections 3 and 4 present the main trends in inequality and growth, respectively. In each section, we discuss the different perspectives that have emerged with respect to the trends observed, while a more detailed review of the different policy options deriving from these perspectives is included in section 5. Section 6 concludes.

2 Trends in poverty

Concerning poverty, we focus first on trends in absolute poverty at the global level and we subsequently analyse regional trends, including trends for absolute poverty, using different global poverty lines. After a brief discussion about relative poverty, we conclude by reviewing the most recent estimates of poverty trends after COVID-19 at the global and regional levels.

2.1 Absolute poverty

The first target of SDG1 is to eradicate extreme poverty. At the beginning of the 2010s, achieving this goal seemed hard but feasible, given the success obtained in achieving the MDG of halving the percentage of people in poverty by 2015. The situation at global level was one of decades of steady decline in the share of people living below the international poverty line, set at $1.90 per day. Nonetheless, the shocks experienced in the 2020–22 period have completely changed the picture, and reaching the first goal set by world leaders in 2015 is no longer remotely realistic.

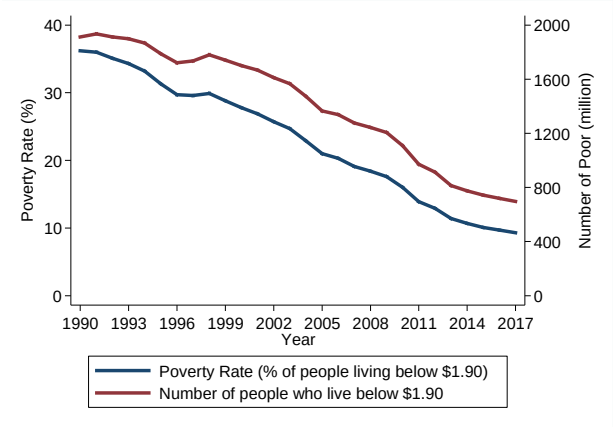
2.1.1 The global poverty rate and the number of poor

During the quarter-century preceding 2015, global extreme poverty decreased by 1 percentage point per year on average. With the first symptoms of deceleration already appearing in 2013–14, the rate of poverty decline slowed to about 0.5 percentage points per year during the period from 2015 to 2017 (World Bank 2018). As a consequence, it was becoming apparent that eradicating extreme poverty by 2030 would require stronger and more incisive action. In an already sobering context for poverty reduction, at least from the perspective of the SDGs, the COVID-19 pandemic and consequent economic crisis took a heavy toll on global poverty. For the first time in decades, global poverty, as measured with the international poverty line, rose in 2020 and reversed the gains of the last several years. We present here the main poverty trends up to the COVID-19 shock, while additional estimates and a forecast with respect to the poverty increase due to COVID-19 are presented at the end of the section.

The number of poor people followed a pattern similar to that of the global poverty rate (Figure 1). According to the latest update of the World Bank data (March 2021), in 2019, 681 million people lived below the international poverty line, set at $1.90 a day. That is, about 9 per cent of the world's population was living in extreme poverty compared to about 43 per cent in 1981.[7]

[7] We do not consider here issues with the existing data, extrapolated data, and missing data for important countries like India (see Sumner et al. 2022, for additional details).

Figure 1: The global poverty rate and number of poor, 1990–2017.



Note: estimated at the international poverty line of $1.90 per person per day.

Source: authors' elaboration based on PovcalNet (World Bank n.d.).

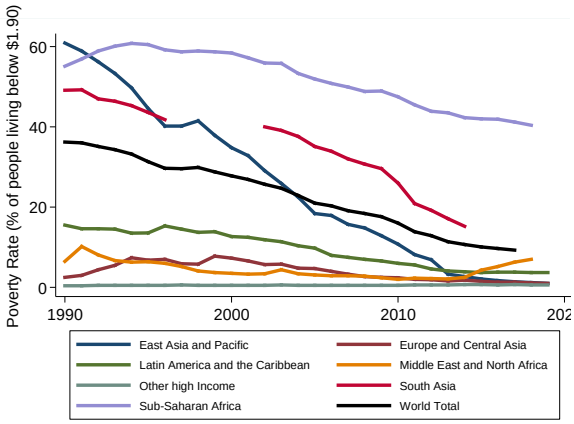
2.1.2 Regions: poverty rate and number of poor

The indisputable gains in poverty reduction, however, vary widely across regions. As shown in Figure 2, much of the reduction in poverty rates/headcount is to be attributed to the sharp decline in extreme poverty that has occurred in East Asia and the Pacific (EAP) in the last three decades and in South Asia (SA) since the early 2000s. China and India are largely responsible for these trends. Conversely, the performance of sub-Saharan Africa (SSA) has been lagging and indeed the slowdown in the rate of global poverty reduction in the last few years can be attributed to SSA's close-to-stagnation rates. Importantly, in SSA, the poverty rate is close to 40 per cent in the latest estimates, and the rate of poverty reduction is slower than the population growth rate in the region (Beegle and Christiaensen 2019).

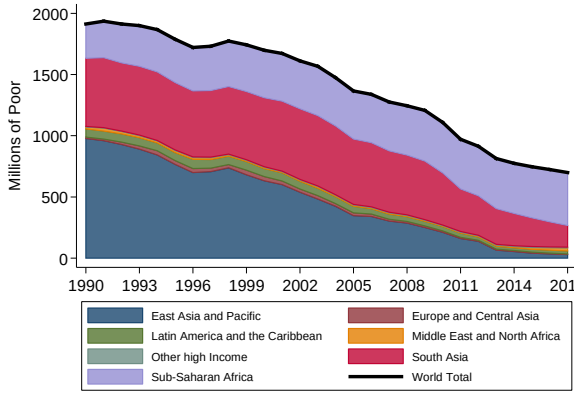
Accordingly, the absolute number of people living in poverty has actually increased since the 1990s in SSA, and global poverty is becoming increasingly an 'African' phenomenon. While the bulk of people living below the poverty line was concentrated in the EAP region in the 1990s, the clear majority of extremely poor people now live (and die) in SSA. Thus, while in the past decades poverty was concentrated in countries with steady and rapid economic growth, this is no longer the case, leading to a slowdown in the reduction of the global poverty rate (Roser and Ortiz-Ospina 2013). Since 2015, the poverty rates and headcounts have also increased in the Middle East and North Africa (MENA), but this phenomenon is largely attributable to the conflicts in the region, such as the ones in Yemen and Syria, which had a dramatic impact on the population.

Figure 2: The poverty rate and number of poor, by region.

(a) Poverty rate, 1990–2019



(b) Number of poor, 1990–2017



Note: estimated at the international poverty line of $1.90 per person per day.

Source: authors' elaboration based on PovcalNet (World Bank n.d.).

2.2 Absolute poverty: different poverty lines

Despite the unquestionable gains in poverty reduction as measured with the international $1.90 poverty line, poverty hardly disappears at the $1.90 threshold. To be clear, the global extreme poverty line looks at the very bottom of the global distribution. Moreover, making it just above this threshold obviously neither guarantees anything like a reasonable material level of welfare nor does it safeguard households and individuals from the risk of falling back into poverty. In addition, Sumner et al. (2022) note that focusing on a poverty value this low makes the poverty headcount highly sensitive to methodological choices and technical issues, and adding or subtracting only a few cents from the $1.90 line could make a difference for hundreds of millions of extremely poor people (Sumner et al. 2022).

Therefore, to better understand the trends in poverty, it is important to look at different cut-offs. The World Bank introduced in its reports the $3.20 and the $5.50 poverty lines, which are meant to reflect poverty in lower middle- and upper middle-income economies respectively (World Bank 2018, 2020). These additional thresholds were chosen because they represent the median value of national poverty lines in the two groups of countries, while the $1.90 poverty line reflects the same value for low-income countries.

2.2.1 Global trends of absolute poverty at different poverty lines

When using these additional poverty lines (see Figure 3), a few stylized facts emerge. The share of people living below both the $1.90 and $3.20 poverty lines has declined sharply and, currently, the percentage of the global population living below the $3.20 poverty line is similar to that of the population living below the $1.90 poverty line in 1990. However, looking at the higher $5.50 poverty line reveals a less encouraging trend. The share of the global population living below this higher poverty line has decreased less sharply and, looking at the absolute number of people living in poverty, there is a decrease of only about 300 million people compared to the 1990s.

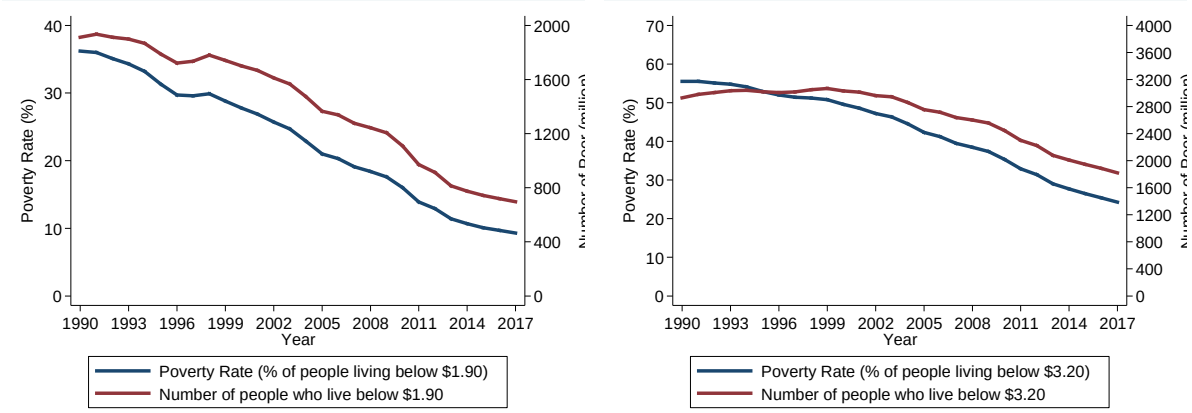
This reveals that, while a vast number of people have moved out of extreme poverty as defined by the $1.90 line, a large share of the global population lives not far above the extreme poverty threshold, and therefore is neither at an acceptable level of welfare nor secure from falling back

into extreme poverty. Sumner et al. (2022) also present the poverty results using a $13 poverty line, which shows very limited poverty reduction in percentage terms and even an increase in the number of poor people.[8] This is—in our understanding—a critical insight from a policy perspective.

Figure 3: The global poverty rate and number of poor, 1990–2017.

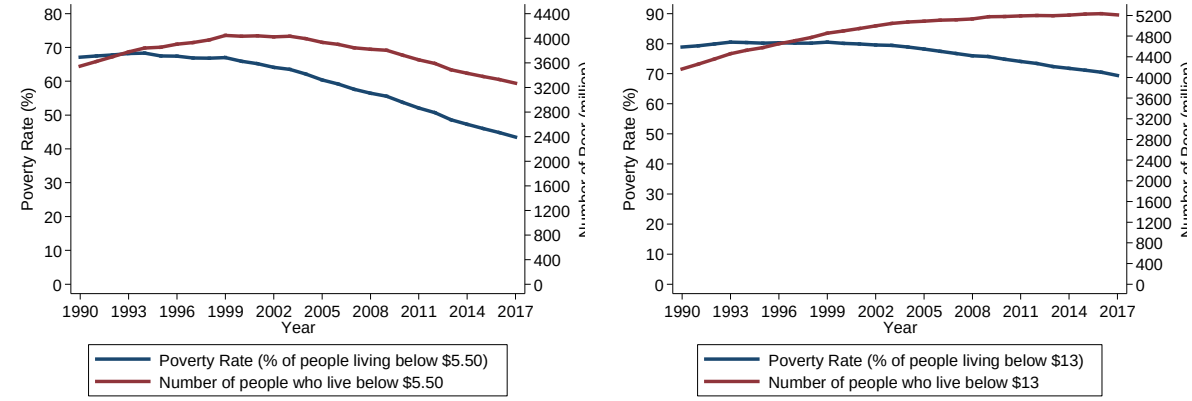
(a) Poverty rate and number of poor, $1.90 poverty line

(b) Poverty rate and number of poor, $3.20 poverty line



(c) Poverty rate and number of poor, $5.50 poverty line

(d) Poverty rate and number of poor, $13 poverty line



Note: estimated at $1.90, $3.20, $5.50, and $13 per person per day poverty lines.

Source: authors' elaboration based on PovcalNet (World Bank n.d.).

2.2.2 Regional trends at different poverty lines

Using higher poverty lines also reveals a different localization of poverty as compared to the international poverty set at $1.90. First, while extreme poverty is concentrated in SSA, poverty is much less of an African phenomenon when looking both at the $3.20 and $5.50 lines. In both these cases, the largest share of poor people is located in SA, with SSA coming second (see also

[8] Sumner et al. (2022: 7) argue that 'global poverty reduction since the Cold War has been mostly about moving people from below to not far above a low poverty line'.

Deaton 2010). In addition, a substantial share of the population living below the $5.50 line is located in EAP, while this region contributes very little measured at the $1.90 poverty line.

As for the regional poverty trends, some of the trends outlined above for the international poverty line are confirmed, such as the increase in the poverty rate in the MENA region, the stagnation in Latin America and the Caribbean (LAC), and the sharp drop in the EAP region. One key difference is that, compared to the $1.90 poverty line, the trends obtained with higher poverty lines reveal a less optimistic picture for SA, especially when looking at the highest poverty line. Figure 4 shows that the $5.50 poverty rate in SA barely decreased from 1990 to the mid-2010s. As for SSA, the poverty rate is almost completely stagnant both at the $3.20 and at the $5.50 levels. SSA has once again the highest share of the population living below these poverty lines, with about 70 per cent of people below the $3.20 line and about 90 per cent below the $5.50 poverty line (Figure 4).[9]

It should also be noted that the sharp reduction of the poverty rate which occurred in China after the 1990s has had a vast impact on each of the poverty cut-offs discussed. Sumner et al. (2022) note that China alone accounts for two-thirds of the reduction of the poverty rate from the 1980s to the present day when looking at the $1.90 poverty line. This effect is even more important when looking at a higher absolute poverty line, such as the $13 line proposed by Sumner et al. (2022). In this case, and considering the entire world, the global poverty rate decreased from 79 per cent in 1918 to 68 per cent in 2019, whereas when China is excluded the poverty rate almost completely stagnated.

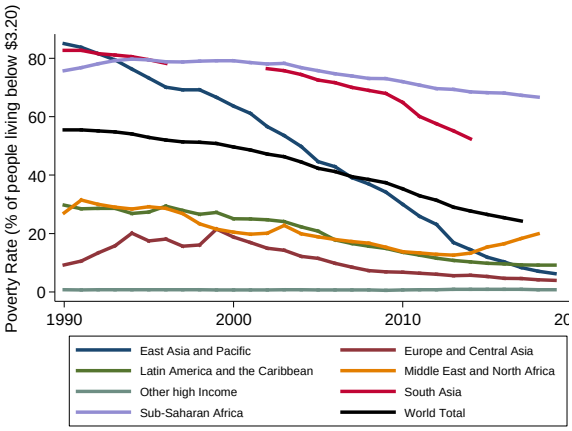
Indeed, depending on the poverty line considered, different perspectives and conclusions emerge with respect to poverty, its trends, and regional specification. As an example, focusing on the distribution of the world's poor, Pande and Enevoldsen (2021) describe that since 1980 the share of the world's poor in a specific country has become progressively more weakly correlated with the country's income. They argue that the poor are gradually becoming concentrated in middle-income rather than poor countries, as well as being concentrated within countries (partly as a result of urbanization).

More recently, evidence has emerged that this trend may be reversing and that global poverty may be again concentrated in low-income countries, at least prior to the pandemic (Sumner and Ortiz-Juarez 2022). However, Sumner and Ortiz-Juarez (2022) highlight how these trends are highly dependent on the poverty lines used. While the above statement is correct when one considers the $1.90-a-day poverty line, if using the $3.20 line instead, one observes that approximately three-quarters of the world poor live in middle-income countries.

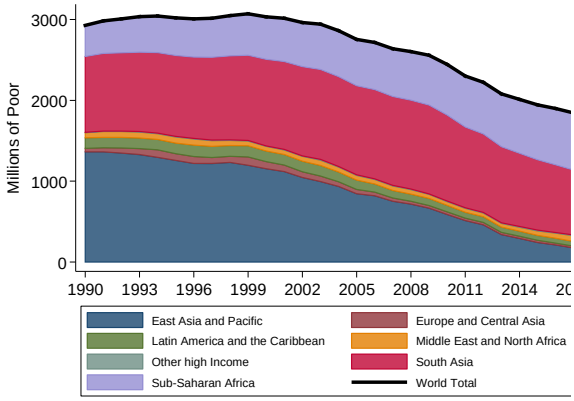
[9] All figures are based on data from the World Bank's PovcalNet Database (World Bank n.d.).

Figure 4: The poverty rate and number of poor, by region.

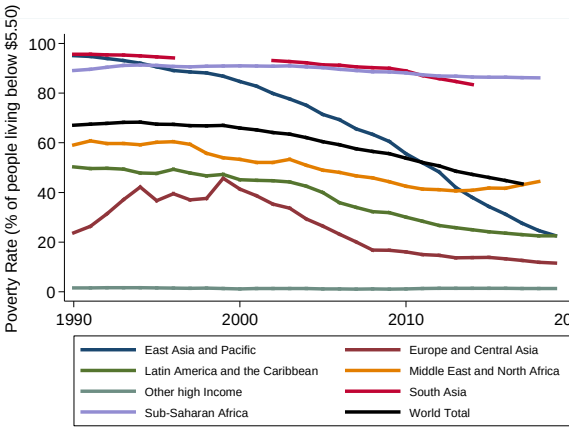
(a) Poverty rate, $3.20 poverty line, 1990–2019



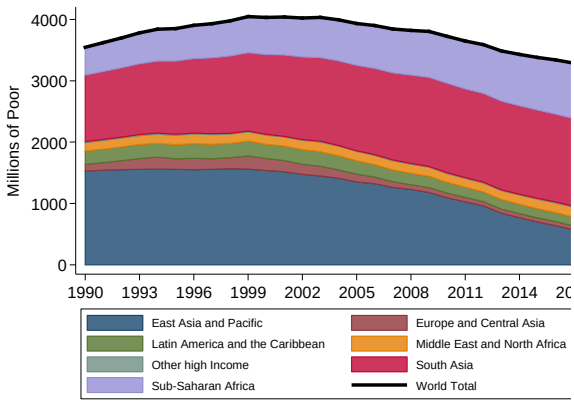
(b) Number of poor, $3.20 poverty line, 1990–2017



(c) Poverty rate, $5.50 poverty line, 1990–2019



(d) Number of poor, $5.50 poverty line, 1990–2017



Note: estimated at the $3.20 and $5.50 per person per day poverty lines.

Source: authors' elaboration based on PovcalNet (World Bank n.d.).

2.3 Relative poverty rate

While higher poverty lines may give us a meaningful measure of poverty in lower middle- and upper middle-income countries, and therefore allow us to look at changes in poverty beyond extreme poverty, these lines are fixed over time and across countries. As mentioned in the introduction, while absolute poverty lines are fixed values in terms of purchasing power, variations in the level of consumption associated with living a dignified life might be better captured if a concept of relative poverty is employed. This is because, by construction, relative poverty lines are directly proportional to the mean or median of the distribution (therefore taking account of the standards of living).[10]

[10] As noted by Ravallion (2016: 231, Box 5.6), this is different to discussing whether poverty measures satisfy the scale invariance (relative terms) or translation invariance (absolute terms) axioms, as discussed for the case of inequality measures. We follow Ravallion (2016) in not using this formulation here and refer to others (e.g. Foster 1998) for a discussion of different elements in poverty measurement that may be considered in absolute or relative terms.

As an example, to capture the evolution of poverty, the Organisation for Economic Co-operation and Development (OECD) calculates relative poverty as the share of people living with less than 50 per cent of each country's median disposable income. Among the OECD countries, this measure of relative poverty is highest in the United States and Israel (about 18 per cent) and the lowest in Iceland and Denmark (about 5 per cent). To compare, relative poverty as calculated by the OECD stands at about 27 per cent in China and is close to 20 per cent in India, Brazil, and South Africa (OECD 2019).

Ravallion (2020) argues that none of the above approaches is perfect in measuring global poverty and suggests an intermediate alternative—the 'weakly relative' poverty lines (Ravallion 2020). Employing this alternative measure, he shows that between 1990 and 2013 the count of poor people in the developing world fell over time according to absolute poverty measures; however, the number of people, who were relatively poor but no longer absolutely poor, appears to have increased. Thus, the decreasing numbers of absolute poor in the developing world have been accompanied by increasing numbers of those who are nevertheless considered poor according to the living standards of the country where they live (Ravallion 2020).[11]

2.4 After COVID-19

As mentioned at the beginning of the section, the COVID-19 pandemic and the consequent economic recession have had a dramatic impact on poverty reduction globally. At the moment, only a limited number of household surveys have produced updated poverty data relative to the 2020–22 period. Thus, most of the estimates of the impact of the pandemic on poverty depend on simulation and forecast exercises or phone surveys, which have their own limitations.[12] Nonetheless, even though predictions are largely dependent on the duration of the pandemic, the magnitude of the impact on each country and region, and the safety nets put in place by national governments, it is abundantly clear that for the first time in decades the crisis has led to an increase in the global poverty rate.

The World Bank's (2020) 'Poverty and Shared Prosperity Report 2020' reports estimates based on three different growth scenarios, assuming that growth is distribution neutral. Based on a forecasted decrease in global per capita GDP by 5 per cent and 8 per cent in 2020, they estimate an increase of between 1.1 and 1.5 percentage points in the $1.90 poverty rate, compared to a baseline scenario without COVID-19. In absolute terms, this corresponds to an additional 88 or 115 million people—depending on the gravity of the scenario—pushed into extreme poverty. According to this scenario, the hardest hit region would be SA, followed by SSA.

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[11] Similar conclusions are reached if an alternative measure of relative poverty, defined as societal poverty, is used (World Bank 2020). This is more focused on developing countries, but it tries to grasp some of the benefits of the relative concept of poverty. This measure is relative to median consumption across countries and over time, and has a floor set at the $1.90 value of the international poverty line. Thus, the societal poverty line cannot be lower than $1.90 and increases with the income level of each country over time. As this line increases with income growth, societal poverty reduction is slower compared to absolute poverty as measured with the international poverty line. The trend, however, is still a downward one, albeit less steep, and in 2019 the share of people living below the societal poverty line was about 35 per cent. Based on this relative measure the number of poor globally only modestly decreased from about 2.4 billion people in 1990 to close to 2 billion people in 2017. Due to the way this line is constructed, it is more equally distributed across regions compared to absolute poverty: for example, a larger share of the number of relatively poor people is found in OECD countries. For the other regions, the trends are similar to those outlined above regarding absolute poverty lines, with the sharpest decrease in societal poverty observed in the EAP region (World Bank 2020).

[12] See, for example, Boland et al. (2006).

While these estimates assume growth is distribution neutral, other authors such as Lakner et al. (2022) propose alternative models which assume an increase in global inequality. Under such assumptions, the increase in the poverty rate would be even higher, ranging from 9.2 per cent to 9.6 per cent compared to a non-COVID counterfactual of 7.9 per cent. Sumner et al. (2022) propose three scenarios at 5, 10, and 20 per cent reductions in per capita income, based on the 2021 update of the World Bank data. They predict an increase in the number of people living below the $1.90 poverty line of between 77 million and 390 million people.

3 Trends in inequality

We move now to the discussion on inequality. Together with poverty, inequality features in the SDGs, with goal number 10 being to 'reduce inequality within and among countries'. Moreover, according to various measures and databases, it seems that (relative) inequality at the global level has indeed been reducing in the last few decades.[13] This is covered in some detail in the first subsection. Subsequently, we analyse inequality in absolute terms and review the different perspectives emerging from using a relative and an absolute approach. Finally, we assess the effect of COVID-19. Alongside poverty, it appears that the pandemic has also had a dramatic impact on global inequality. According to the International Monetary Fund's (IMF) World Economic Outlook (IMF 2022), the COVID-19 pandemic will reverse part of the progress made in reducing income inequality in emerging markets and developing countries in the last decade, leading to an increase in the average Gini index.

3.1 Relative inequality

In the following paragraphs, we first describe the global and regional trends in inequality obtained using the Gini index and then present the main observations from considering income and wealth shares and share ratios. Lastly, we compare trends in global inequality with those of within- and between-country inequality.

3.1.1 Global and regional trends, Gini index

In this subsection, we review the trends at the global and regional levels obtained with the Gini index, the most widely used indicator of relative inequality. As described in the introduction, this index varies between 0 and 1 and a higher level corresponds to higher levels of inequality. With respect to recent trends, a general agreement seems to have emerged in the literature regarding global inequality as measured with the Gini index: weakly rising or steady inequality from 1980 to the 1990s, followed by a downward trend up until the pandemic.[14]

According to Gradín (2021), who uses the UNU-WIDER World Income Inequality Database (WIID) (UNU-WIDER 2021), the Gini index increased from 0.68 in the 1950s to 0.70 in 1991, while the level of relative inequality decreased sharply to 0.61 in 2019 (Figure 5, panel (a)). Based on the 2022 World Inequality Report (WIR), which also provides a long-run perspective from 1820 to 2020, the Gini index stood at 0.72 in the year 2000, having increased in the previous two

[13] See, for example, Anand and Segal (2008), Niño-Zarazúa et al. (2014, 2017), Gradín (2021), and van Zanden et al. (2014).

[14] See, for example, Anand and Segal (2008), Niño-Zarazúa et al. (2014, 2017), and Van Zanden et al. (2014).

decades. It then dropped sharply to 0.67 in 2020 (Figure 5, panel (c)) (Chancel et al. 2021; Chancel and Piketty 2021a).

Using the World Bank database PovcalNet, Alvaredo and Gasperini (2015) calculated the Gini coefficient for developing countries from 1980 to 2010 and report a comparable trend, although at lower levels of the Gini. The study found a relatively stable Gini index until 1987, a sharp increase in the 1990s peaking in 1999, and a slow decrease from 2002 to 2010.

Similarly to poverty trends, the trend in inequality at the global level using the Gini only partially reflects the variability in the regional trends, especially in the developing world (see Figure 5, panel (b)). Alvaredo and Gasperini (2015) report that LAC saw an increase in its Gini index in the 1990s, followed by a larger drop in the 2000s, whereas SSA seems not to have experienced any major change in its aggregate Gini over the 1990–2015 period. Also, while MENA countries showed a slight decline in inequality, as measured by the Gini index, the same measure increased in SA and EAP, and in Eastern Europe and Central Asia (ECA).

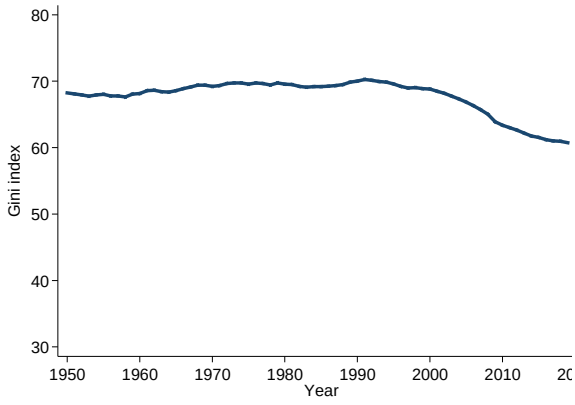
Using data from the WIID, Niño-Zarazúa et al. (2017) conclude that the (relative) Gini index increased between 1975 and 2010 in North America, ECA, SA, and SSA, whereas it decreased in LAC and EAP. These results are mostly in line with Alvaredo and Gasperini (2015), but they slightly diverge with respect to SSA and EAP.

Income, however, is not the only relevant welfare indicator for studying economic inequality; among other dimensions of economic well-being, wealth is a fundamental one. It is therefore worth looking at inequality in the distribution of wealth as it adds further insights to the general picture of income inequality. Based on existing estimates using the Gini index for wealth, it appears that wealth is, by far, more unequally distributed than income.

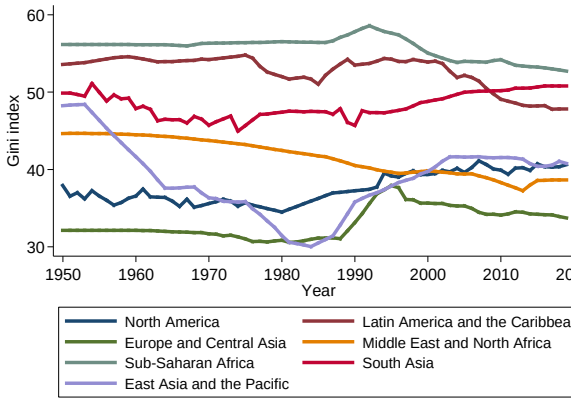
Davies et al. (2011) report a value close to 0.9 for wealth inequality in 2000. A more recent estimate by Davies and Shorrocks (cited in Gradín et al. 2021a), which adjusts data in the top-tail to mitigate sampling error, finds a similar value, slightly above 0.9. Given that 1 represents the level of 'perfect' inequality, these wealth inequality levels are staggering.

Figure 5: Population-weighted average inequality, globally and by region.

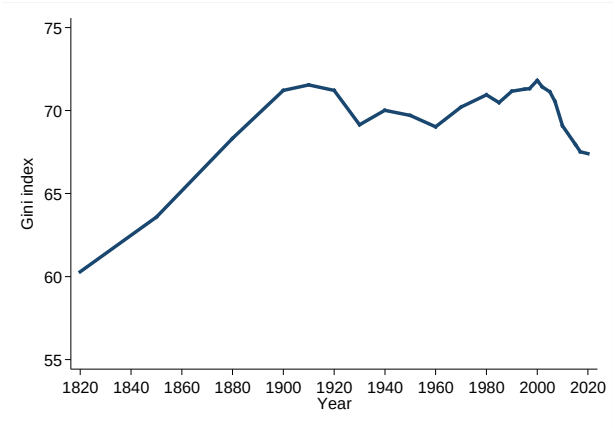
(a) Population-weighted global inequality, Gini index (WIID), 1950–2019



(b) Population-weighted inequality by region, Gini index (WIID), 1950–2019



(c) Global inequality, Gini index (WIR), 1820–2020



Source: authors' elaboration based on WIID (UNU-WIDER 2021), Gradín (2021), WIR 2022 (Chancel et al. 2021) and Chancel and Piketty (2021a; 2021b).

3.1.2 Income and wealth shares and share ratios

Notwithstanding its relevance and widespread application to the analysis of inequality, the Gini index is only one of many possible measures of relative inequality. Other indices and measures of relative inequality have different distributive implications, and this can lead to differing conclusions concerning inequality trends (Gradín 2021).[15] One increasingly common alternative to the Gini index is analysing the share of global income or wealth captured by the top 10 per cent, middle 40 per cent, and bottom 50 per cent of adult individuals in the global income distribution. This is, for example, the approach used in the WIR 2022 (Chancel et al. 2021). According to this report, in 2021 only 8.5 per cent of the global income was captured by the bottom 50 per cent of the distribution. To compare, in the case of perfect equality this group would capture 50 per cent of global income. The top 10 per cent of the distribution captured 52 per cent, of which 19 per cent was captured by the top 1 per cent of the distribution, i.e. about 51 million people (Figure 6, panel (a)).

Similar conclusions are reached by Gradín (2021), who also shows the trend for the Palma index, an index computed by taking the ratio between the incomes of the top 10 per cent and the bottom 40 per cent (Figure 6, panel (b)). Using this index, we observe an increase in global inequality from about 14 in 1956 to 17.5 in 1976, and then a continuous decrease to 7 in 2019. That is, even though the income of the top 10 per cent is still about seven times those of the bottom 40 per cent, this ratio has steadily come down, following the increase in the income share of the bottom 40 per cent and a decrease in the income share of the top 10 per cent (Gradín 2021).

When considering shares and share ratios, wealth appears to be even more unequally distributed than income. According to the WIR 2022, in 2021 the bottom 50 per cent of the global income distribution owned merely 2 per cent of total wealth, while the remaining 98 per cent was captured by the richest 50 per cent of the distribution. In particular, the top 10 per cent owned 76 per cent of global wealth, with the richest 1 per cent of the population owning 38 per cent of total wealth (Figure 6, panel (a)).

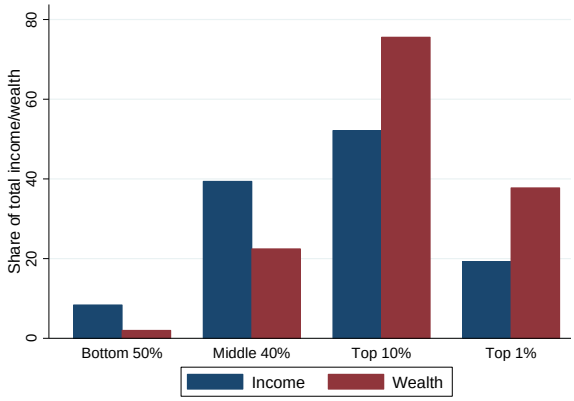
[15] We do not discuss in detail here the mean log deviation, the Theil, and other entropy-based inequality indices. For additional details and trends relative to these indices, see Gradín (2021).

The same report also shows the trend for these measures of inequality from 1820 to 2020. An intuitive way to look at this long-term trend is the ratio between the average income of the top 10 per cent and the average income of the bottom 50 per cent (T10/B50). This ratio increased sharply in the first many decades, more than doubling from 1820 to 1910. It then continued rising, although less steadily, until 1980, when the average income of the global top 10 per cent was estimated to be more than 50 times higher than the average income of the bottom 50 per cent of the distribution. The income gap subsequently decreased from 1980 to the present day ratio of 38 (Figure 6, panel (c)) (Chancel et al. 2021; Chancel and Piketty 2021a).

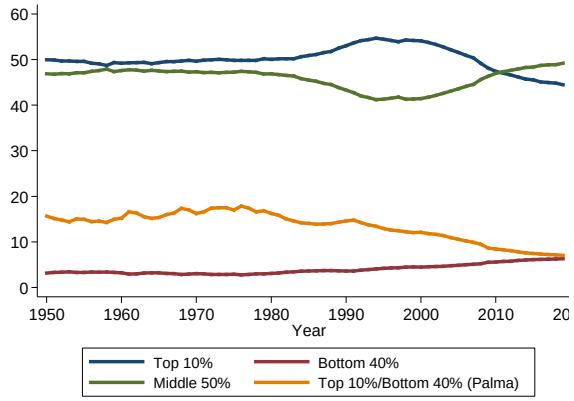
The regional composition of the top 10 per cent and of the bottom 50 per cent also varied widely over time. Europe made up the majority of the top 10 per cent during the period between 1880 and 1910, with North America also occupying a large share from the 1920s. In the second half of the twentieth century, East, South, and South-East Asia started contributing gradually more to the global 10 per cent. However, Europe and North America continue to make up the vast majority of the richest 10 per cent. Conversely, in the bottom 50 per cent, the share of South and South-East Asia and SSA has increased dramatically in the last four decades, while the share of Europeans and North Americans is almost negligible (Chancel et al. 2021; Chancel and Piketty 2021a).

Figure 6: Income/wealth shares and Palma ratio.

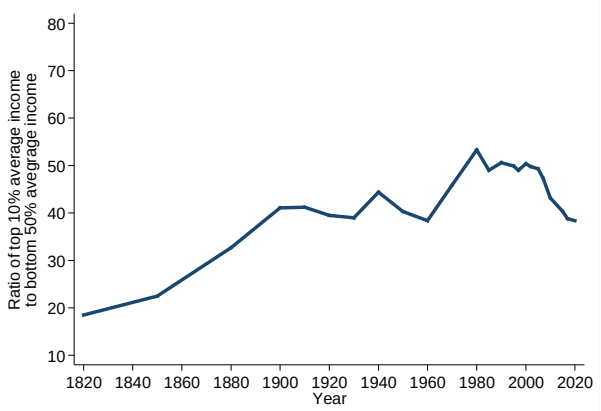
(a) Income and wealth shares (WIR), 2021



(b) Income shares and Palma ratio (WIID), 1950–2019



(c) Ratio of top 10% average income to bottom 50% average income (WIR), 1820–2020



Source: authors' elaboration based on WIID (UNU-WIDER 2021), Gradín (2021), WIR 2022 (Chancel et al. 2021), and Chancel and Piketty (2021a; 2021b).

3.1.3 Global inequality and within-/between-country inequality

In this subsection, we introduce some additional concepts related to global inequality, together with a discussion of between- and within-country inequality which derives from the above considerations. According to Milanovic (2005), there are three different concepts to be considered when discussing global inequality. The *first concept* considers all the countries in the world as equal single units and calculates inequality among them. The *second concept* is similar to the former but attributes different weights to countries depending on the size of their populations. According to the *third concept*, inequality is calculated among all the people in the world, independently of where they live.

Considering inequality among countries, whether one weighs countries equally or considers population weights has implications for the trend obtained. Covering the period from the early 1950s to 2000, Ravallion (2004a) shows how the rising trend in inequality among countries observed when countries are given equal weights disappears when one uses population weights instead.[16]

As described in section 3.1.1, global inequality (i.e. inequality among all citizens of the world—the *third concept* described above) was stable or saw a weak increase from 1980 to the 1990s and then began to fall until recently. While the *first* and *second concepts* ignore differences among people within the same country, global inequality is influenced by both inequality among countries and within countries. The differences between the two concepts help explain some divergence in the statements about inequality trends: while some describe inequality as getting worse, others convey that inequality has been reducing, in part due to the remarkable development in China (Bourguignon 2015).

This point can be illustrated by the different trends between within-country and between-country inequality since the nineteenth century. Bourguignon (2015) describes that increasing inequality among countries explained the rise in global inequality from the beginning of the nineteenth century. In parallel, within-country inequality decreased, particularly around the middle of the twentieth century. From the 1990s onwards, the two trends were inverted: between-country inequality began to decrease and inequality within countries started to increase. Describing similar trends for global inequality, Milanovic (2016) highlights that from 2000 China and India contributed to equalizing inequality, and later to reducing it.[17]

These findings are reinforced by Gradín (2021), who presents updated trends until 2019 using the WIID. As illustrated in Figure 7, his study finds that, also in recent years, global inequality decreased as a result of the downward trend of between-country inequality. Meanwhile, within-country inequality stagnated or slightly increased. This is so when adopting both the Gini index and other indicators, including the mean log deviation or the Theil index (Figure 7), which are particular cases of the GE family of indices (Gradín 2021).

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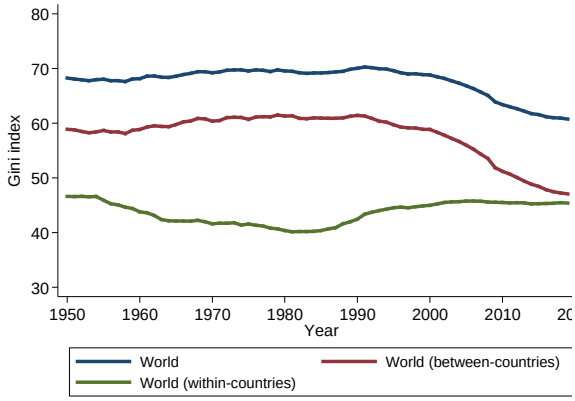
[16] While most of the work on decomposing inequality in between- and within-country components uses the concept applying population weights, the first concept has been useful in the study of convergence among countries.

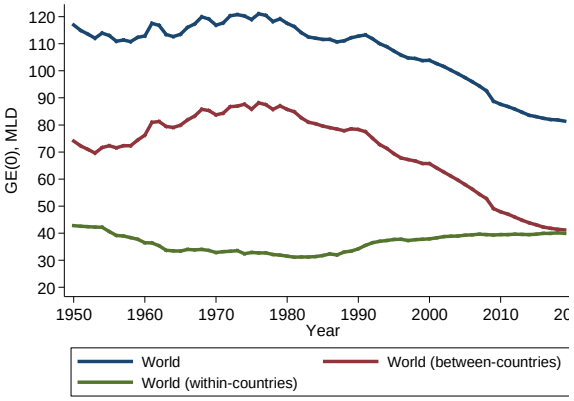
[17] However, this statement, which refers to a decreasing trend for the first decade of the 2000s, comes with a number of caveats (see Milanovic 2016).

Figure 7: Overall global income inequality, between-country and within-country inequality.

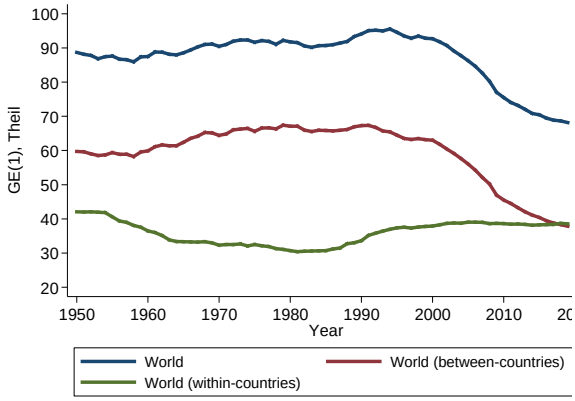
(a) Gini index (WIID), 1950–2019



(b) Mean log deviation (GE(0)) (WIID), 1950–2019



(c) Theil index (GE(1)) (WIID), 1950–2019



Note: GE(0) means that the parameter α in the GE index is set equal to 0, which corresponds to the mean log deviation. GE(1) means that the parameter α in the GE index is set equal to 1, which corresponds to the Theil index.

Source: authors' elaboration based on WIID (UNU-WIDER 2021) and Gradín (2021).

3.2 Absolute inequality

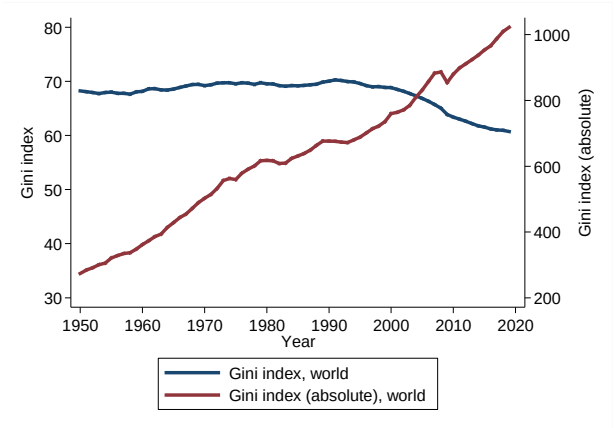
As stated at the beginning of the section, most of the measures presented until this point are relative measures of inequality, which have been prevalent in the literature. However, there is no value-free reason for analysing inequality only from a relative perspective.[18] On the contrary, we have already pointed out how a number of surveys involving university students found that about half of the sample thought about inequality in absolute terms (Gradín et al. 2021a; Ravallion 2014). Indeed, the difference between relative and absolute inequality lies in the axiom adopted: scale invariance (the level of inequality does not change when all incomes are multiplied by a constant)

[18] Absolute measures are sometimes deemed to be 'leftist' ('radical') whereas relative measures are seen as 'rightist' ('conservative'). As Kolm (1976) points out, this nomenclature is reserved for a situation in which mean income is increasing. The interpretation is reversed in the context of declining mean income.

for relative inequality, and translation invariance (the level of inequality remains unchanged when a constant is added to all incomes) for absolute inequality.[19]

When focusing on absolute inequality, the trend evolution over the years is clearer and not reassuring as compared to relative inequality. Regardless of the measure employed (i.e. absolute Gini index or others), absolute inequality has increased in the last decades (Figure 8).

Figure 8: Relative and absolute inequality, global level, 1950–2019.



Source: authors' elaboration based on WIID (UNU-WIDER 2021) and Gradín (2021).

Even though such an outcome is to be expected under economic growth with modest relative inequality reduction, the magnitude of the increase in absolute inequality is stunning. Niño-Zarazúa et al. (2017) compare different measures of global inequality, adopting a relative or absolute perspective. Using relative measures, they find that, in agreement with the inequality measures presented above, global inequality has declined in recent decades, driven mainly by falling between-country inequality, while absolute inequality has increased dramatically. Similar findings are reported by Alvaredo and Gasperini (2015) when looking at absolute and relative Gini coefficients in the developing world in the early 2000s. Gradín (2021) confirms this diverging trend in more recent years.

3.3 Inequality trends and the COVID-19 pandemic

The COVID-19 pandemic is expected to have affected not just poverty but also inequality in multiple ways. Some (see Stiglitz 2020) expect within-country inequality to have risen, as low-income households, low-skilled workers, and people with a lower level of education have arguably been affected more harshly by the economic repercussions of the pandemic.[20] Moreover, two years after the outbreak of the pandemic, advanced economies have at least partially rebounded while

[19] Based on these facts, Ravallion (2004a) argues that the disagreements over whether inequality in the world has gone up or down may partly be due to differing views about the importance of absolute versus relative conceptions of inequality.

[20] Technically speaking, at the same time. it must be kept in mind that, while, for example, a 30 per cent loss of income for the poorest can have dramatic welfare implications and push people into poverty traps, inequality as measured by the Gini does not change if similar percentage drops in income occur across the distribution. Moreover, it may well be that absolute inequality drops simply because the poor have so little in absolute terms. Thus, the actual distributional impact is an empirical question that merits careful analysis, in no way ignoring dynamic effects and the longer-term impact of the crisis for the poor. Deaton (2021) and Kolm (1976) are the most relevant reading on this.

many emerging markets and developing economies (EMDEs) are lagging behind in the recovery process.

There are unfortunately not many comprehensive analyses of the impact of the pandemic on inequality. A notable exception is the World Bank (2022) Global Economic Prospects, which examines the impact of the pandemic on income inequality both among and within countries. The authors estimate that, due a disproportionate impact on the pandemic on lower-income groups, within-country inequality is expected to rise modestly for the 34 EMDEs analysed.[21]

While the increase is modest, it should be noted that inequality in EMDEs is higher than the global average. In addition, the impact on between-country inequalities is estimated to be much bigger, reverting to levels observed around 2010. This is likely to counterbalance the positive trend of decreasing between-country inequality at the global level and reducing within-country inequality that occurred in some important EMDEs for the two decades preceding the pandemic.

4 Trends in growth

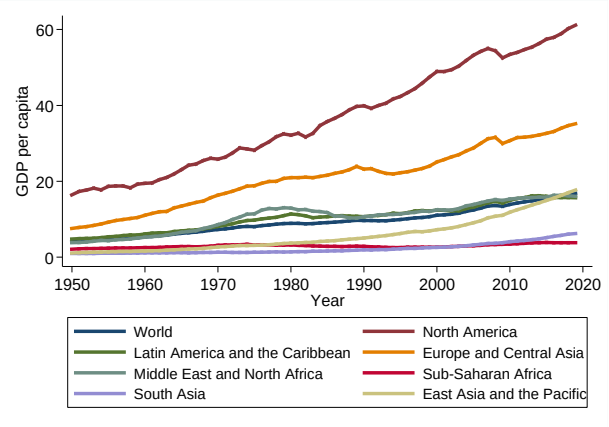
Having examined poverty and inequality, we now turn to an analysis of the recent trends with respect to growth at the global and regional levels and for different percentiles of the income/consumption distribution.

First, it is important to stress once more that poverty and inequality are closely related to economic growth. While the nature of this relationship is the subject of ongoing debate, the main directions of which were briefly outlined in the introduction, it is worth discussing here the trends of economic growth. Our main indicator of interest regarding economic growth is the growth of GDP, either aggregate or per capita. Summarizing the main trends at the global level, it can be argued that the first few decades after the Second World War were characterized by high and steady economic growth, with increases of 2.7 per cent per capita annually in the 1950s and 3.3 per cent in the 1960s. While the 1970s showed a slightly lower rate of increase in GDP per capita, at about 2.1 per cent per year, the 1980s and 1990s showed much slower economic growth, at about 1 per cent annually on average. Economic growth rebounded to 2.3 per cent annually in the first two decades of the new millennium, although the effects of the 2008–09 economic crisis had global repercussions.

Clearly, this global picture conceals a high level of heterogeneity among regions and countries. If, in the first few decades, North America and Europe showed higher paces of growth, EAP started to experience swift increases in annual GDP per capita growth, later followed by SA (Figure 9). In particular, China experienced a 6.3 per cent annual increase in average per capita growth during the last seven decades, while for India the corresponding figure is 3.6 per cent. Conversely, SSA showed a much slower pace of economic growth, with an annual 0.9 per cent per capita growth rate on average. The countries in this region, however, experienced widely differing annual economic per capita growth rates, from above 3 per cent to negative values (Gradín 2021).

[21] The five country case studies summarized by Lanjouw and Tarp (2021) do point cautiously in the same direction, although due care is taken to point out necessary caveats and data issues.

Figure 9: GDP per capita, world and by region, 1950–2019.



Source: authors' elaboration based on WIID (UNU-WIDER 2021) and Gradín (2021).

Global and regional economic growth rates, however, often hide the specific growth patterns that people at different percentiles of the income/consumption distribution may experience. Thus, in addition to a global perspective on economic growth, it is critical to assess the effect of economic growth during the last decades on the global income distribution, especially when the focus is on the relation of growth with poverty and inequality.

These changes are generally portrayed using relative or absolute GICs. For each income quintile/decile/percentile of the global distribution, relative GICs show the accumulated income growth rates, while the absolute curve shows accumulated absolute income changes. In this respect, Lakner and Milanovic (2016) map the evolution of the global income distribution between 1988 and 2008 in what has become known as the 'elephant chart'. The chart portrays a relative GIC, i.e. the proportionate gain in income for each percentage of the income distribution. The elephant's trunk, on the right, corresponds to the steep positive curve between the 80th percentiles and the top of the distribution.

This rise indicates that the very top of the global income distribution gained enormously (about a 60 per cent increase in real income) from the economic growth in the 1988–2008 period. Conversely, the population belonging to the percentiles near the 80th percentile seem to not have gained at all, with real income gains around 0 per cent. The middle of the income distribution (the elephant's head) also experienced a substantial increase in income, while the income of the poorest of the distribution, corresponding to the first deciles, changed very little. Following Milanovic's interpretation, this means that those who gained from the past decades of globalization and economic growth were the very top of the income distribution, i.e. the global 'rich', and the middle class of the developing world. In stark contrast, the middle class of the industrialized world, as well as the very bottom of the distribution (meaning, the global poor) were left behind in the growth process.

The original 'elephant chart' described above is included in Lakner and Milanovic (2016) and, as mentioned, it refers to the 1988–2008 period. In Figure 10, panels (a) and (c), we compute additional elephant charts, but take as reference the 1980–2000 and 2000–19 periods, respectively, using data from the WIID database. While in Figure 10, panel (a), the elephant's trunk is clearly visible, although not as marked as in Lakner and Milanovic (2016), it disappears when the 2000–19 period is analysed (Figure 10, panel (b)).

However, when a long-run perspective (1820–2020) is adopted, the global growth incidence curve appears to be upward sloping: that is, although the bottom 50 per cent of the global income distribution experienced substantial growth between 1820 and 2020, the growth for the top 30 per cent of the distribution was definitely bigger (Figure 10, panel (e)) (Chancel et al. 2021; Chancel and Piketty 2021a).

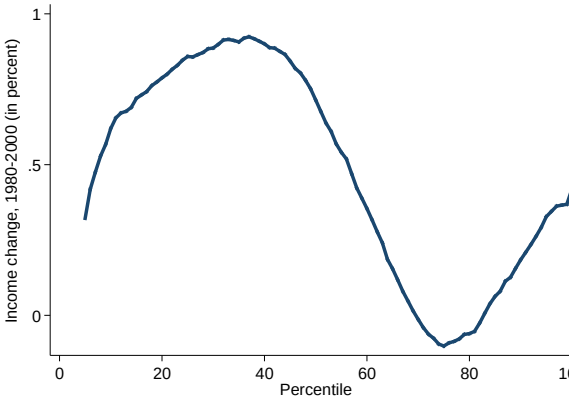
A different chart focusing on wealth and analysing the average annual wealth growth rate in the 1995–2021 period is also included in the WIR 2022. It emerges that the poorest 50 per cent of the global population experienced growth rates of between 3 per cent and 4 per cent per year, with the percentiles between the 50th and 70th percentiles presenting growth rates slightly above 4 per cent and the top 1 per cent benefitting from relatively higher yearly growth rates of between 3 and 9 per cent (Figure 10, panel (f)) (Chancel et al. 2021).

The trends discussed above represent a relative perspective on the changes in income and wealth for different percentiles of the population. However, looking at the absolute gains tells a vastly different story. Even in a context of unchanged relative inequality, growth in median income implies that the top of the income distribution experiences higher absolute gains compared to the bottom. This is depicted in the graph proposed by Ravallion (2018), dubbed the 'serpent' graph. It depicts an absolute GIC, showing the accumulated growth in USD purchasing power parity in the global income distribution. Compared to the elephant chart discussed above, an absolute perspective on the changes in individual income reveals that the poor and middle class in the developing world have gained very little from economic growth in the past decades, as income growth is almost insignificant for all but the last decile of the distribution. Conversely, the very richest percentiles of the income distribution have gained enormously.

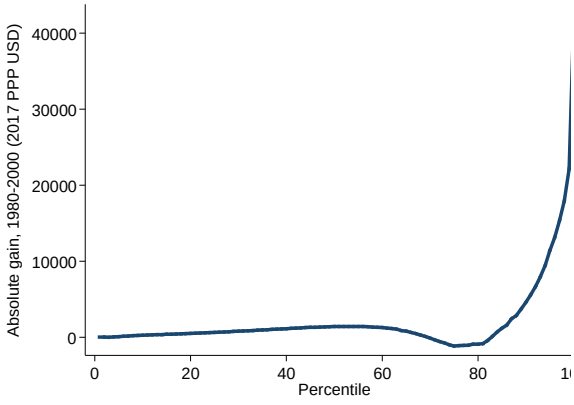
In Figure 10, panels (b) and (d), we display two additional serpent graphs, taking as reference the periods 1980–2000 and 2000–19, respectively, using data coming from the WIID database. Whereas the graph relative to the 1980–2000 period (Figure 10, panel (b)) closely mirrors the graph proposed by Ravallion (2018), the graph for the years 2000–19 (Figure 10, panel (d)) shows that in more recent years the first deciles may have gained in absolute terms as well.

Figure 10: 'Relative' and 'absolute' GICs in the global income/wealth distribution.

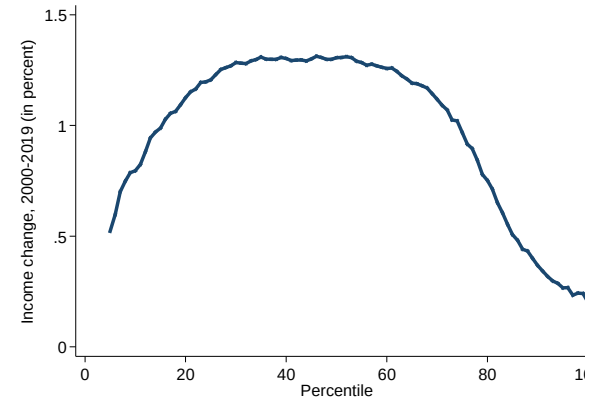
(a) 'Elephant' curve, income change (%) (WIID), 1980–2000



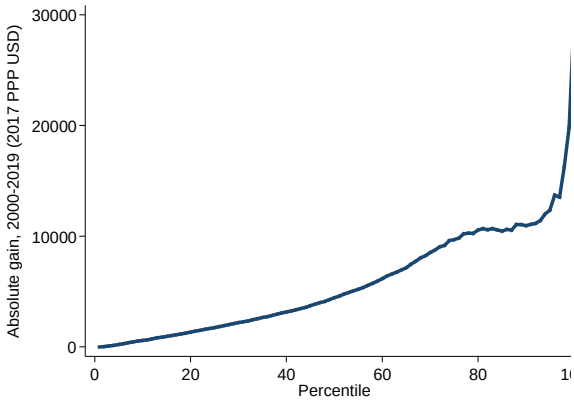
(b) 'Serpent' curve, absolute income gain (WIID), 1980–2000



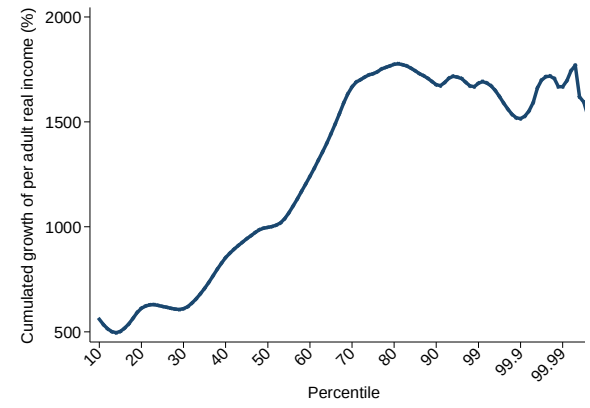
(c) 'Elephant' curve, income change (%) (WIID), 2000–19



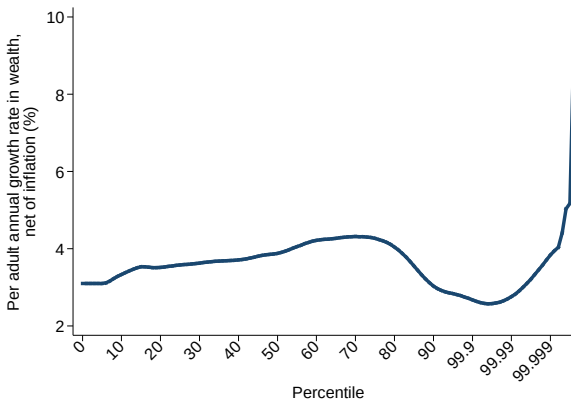
(d) 'Serpent' curve, absolute income gain (WIID), 2000–19



(e) Global growth incidence curve (WIR), 1820–2020



(f) Average annual wealth growth rate (WIR), 1995–2021



Source: authors' elaboration based on WIID (UNU-WIDER 2021), Gradín (2021), WIR 2022 (Chancel et al. 2021), and Chancel and Piketty (2021a; 2021b).

Both the 'elephant' and the 'serpent' have been studied in detail by Gradín (2021) using WIID data for many different time periods. While the 'serpent' emerges clearly from that analysis, the 'elephant' appears much less marked. In accordance with our graphs in Figure 10, panels (a) and (c), the author concludes that the 'elephant' pattern faded, giving rise to a clearer inverted U-shaped pattern in the 2000s. This is argued to be a consequence of the growth experienced by emerging economies like China.[22]

4.1 Growth trends after the COVID-19 pandemic

The COVID-19 pandemic has impacted the global economy in multiple ways, taking a huge toll on global economic growth. In the 2022 edition of the Global Economic Prospects, the World Bank (2022) reports a drop of -3.4 per cent in real GDP compared to 2019, when the percentage change from the previous year was +2.6 per cent. As a result of a relaxation in pandemic-related

[22] Milanovic himself confirmed that, according to newer data, the 'elephant' might have lost his trunk: 'Broadly speaking, the post-2008 period was good for the globally poor and for the global middle class; it was not good for the Western middle classes and the global top 1%' (Milanovic 2020).

restrictions, in 2021 global growth rebounded to 5.5 per cent, the strongest post-recession pace in eight decades. The outlook for 2022 is relatively less encouraging at 4.1 per cent (World Bank 2022). This is attributable to COVID-19 flare-ups, disruption in the supply chains, high food and energy prices, and decreasing policy support. Slightly higher projections are reported by the IMF (2022) in the January 2022 World Economic Outlook, with estimates of global economic growth at a rate of 5.9 per cent in 2021 and 4.4 per cent in 2022.[23]

According to the World Bank (2022), the outlook is even bleaker for EMDEs. While advanced economies are forecast to rebound and recover from the shock, the same cannot be said for EMDEs. Most of the EMDEs are projected to return to pre-pandemic growth rates only in 2022–23. However, in most cases this would not be enough to make up for the setback suffered during the pandemic, and output is expected to remain below the pre-COVID-19 levels by 2023. Among the latter group, small states or countries affected by conflicts are expected to be among the worst affected, and recovery to pre-pandemic level is beyond current projections.

5 Implications for policy responses

While analysing the trends in poverty, inequality, and growth in the previous sections, we highlighted underlying differences in policy interpretations and perspectives, for instance, those related to using global or regional lenses, to considering absolute or relative poverty lines and measures of inequality, and to thinking about inequality among countries or within countries. In this section, we delve more deeply into some of the implications of these different perspectives for policy debates. We refer back to SDG1, to eradicate extreme poverty, and SDG10, to reduce inequality within and among countries, and consider policy options to tackle them.

As we pointed out in the introduction, the links among poverty, inequality, and growth are complex. This creates many challenges in formulating policy responses. In the next subsections, we illustrate this by reviewing questions that emerge in the policy debates and point to existing literature which assesses them in more detail.

5.1 Is growth good for the poor? Is there a trade-off between growth and redistribution?

We start by considering the goal of reducing (or, following SGD1, eradicating) absolute poverty. At the beginning of the paper, we described the arithmetic identity linking income growth, the distribution of income, and absolute poverty. The mechanical properties of the poverty–growth–inequality triangle (Bourguignon 2004) imply that changes in poverty result from changes in average income and shifts in income distribution.[24] If inequality is constant, then an increase in income growth will result in a reduction in poverty; while an increase in inequality (holding growth constant) will lead to an increase in poverty. Thus, asking whether growth is good for the poor leads to two possible answers: 'yes', if we consider growth in isolation; or 'we do not know', given that while higher growth contributes positively to poverty reduction, higher inequality counters this effect, resulting in an ambiguous outcome (Kanbur 2005).

[23] This was prior to the Russian invasion of Ukraine in February 2022, which brought about worsened growth projections.

[24] See Arndt, McKay, and Tarp (2016) for an in-depth discussion and overview of situations in which the popular interpretation of the 'iron triangle' does not hold.

Therefore, while the links between growth and poverty, and between poverty and inequality, appear easier to establish, challenges remain in determining the link between inequality and growth. Both the theoretical and empirical literatures on this relationship are large.[25] Baselgia and Foellmi (2022) provide a comprehensive overview on the causal link from inequality to growth. Within the early theoretical literature, they refer to the classical argument which predicted a positive relationship based on a higher marginal propensity of the rich to save compared to the poor. They also mention the belief, which emerged during the second half of the twentieth century, that there was a trade-off between equality and growth.

Both these links have policy implications and the latter, in particular, suggests that the focus should be on growth ('growing the pie') rather than on redistribution. However, since then, it has been suggested that there are other channels which predict a negative effect from inequality on growth. These are taxation (a less-endowed median voter will vote for increased redistribution, raising the tax rate), political instability, polarization and social unrest, and finally credit constraints. The channel through market size (which will affect the structure of demand) suggests an ambiguous link from inequality to growth. Similarly, the review by Baselgia and Foellmi (2022) of the empirical literature using reduced form equations suggests that there is still no consensus on the effect of inequality on growth.

Likewise, there is ambiguity regarding the impact of growth on inequality. According to the neoclassical growth model, global poverty and inequality will decline with economic growth as a result of poor countries catching up. However, the model has no focus on distributional issues. Cerra et al. (2021) review the implications of relaxing different assumptions of the neoclassical framework in terms of the distributional effects of growth. One channel through which growth can affect inequality is government activities. The impact of growth on poverty and inequality will depend on the preferences of society for public goods and for redistribution as well as on the efficiency and composition of public spending, and the composition and incidence of taxes and transfers.

Relaxing the assumptions related to factors and markets also brings to light some of the links between growth and inequality. For instance, shocks that lead to unemployment have implications for incomes over the long term and affect inequality.[26] Furthermore, the relationship between growth and inequality depends on the sources of growth, given that the growth rates produced by economic development across sectors, industries, factors, and regions may not be even (Cerra et al. 2021). In terms of the empirical literature, there is also no clear answer for this relationship as different factors which drive growth have distinct effects on inequality. For instance, while technological change increases inequality (through increasing the demand for skilled workers and the returns to capital, thus favouring those at the top of the income distribution), trade globalization reduces inequality (Cerra et al. 2021).

Furthermore, and linking back to our discussion of how different perspectives affect the positioning in important debates, the measure of inequality is another factor which affects this relationship. Using data covering the 1990s, Ravallion (2004a) finds no correlation between growth and relative inequality, which would lead a relativist to infer that there is no aggregate trade-off between more growth and less inequality (on average, although it may exist in particular country cases). However, the same data shows that growth was strongly and positively correlated with

[25] We refer to Cerra et al. (2021) for reviews of the link from inequality to growth, and from growth to inequality, respectively.

[26] See Cerra et al. (2021) for a more detailed discussion.

absolute inequality.[27] Thus, an absolutist could be willing to give up more growth and lower absolute poverty in favour of lower absolute inequality (Ravallion 2004a). Similarly, while the discussion so far has focused on absolute poverty, the balance between growth and redistribution policies can be changed when considering relative poverty in the developing world instead. If inequality is not lower, progress towards reducing relative poverty will be slower than progress in absolute poverty reduction (Ravallion 2016).

Overall, both the theoretical and empirical literatures do not offer definitive general answers to whether policies which reduce inequality will have a harmful effect on growth or whether promoting growth will raise inequality levels. Policies which promote growth will contribute to poverty reduction (as described in the introduction, poverty declines with growth) and growth is necessary to achieve other development outcomes, such as health and education improvements and job creation (Cerra et al. 2021). However, the discussion in the previous sections points to the need for them to be complemented by policies which guarantee that growth is inclusive and that the gains are shared across all groups in society. Indeed, we have observed how even sustained aggregate growth at the global or at country level may not translate into growth for all the percentiles of the income distribution.

Poorer people may lag behind and experience low or even negative growth rates even in cases in which mean growth rates are positive and relatively high (several examples for sub-Saharan countries are contained in Arndt, McKay, and Tarp (2016)). Ravallion (2016: 328) shows that the consumption levels of the poorest people in the world, which he defines as the 'floor', have shown hardly any increase in the past few decades. Policy makers aiming to raise the consumption of the poorest people in a country may attempt to design universal cash transfers or other social protection policies which may or may not end up reducing the poverty rate measured at standard poverty lines but which are likely to push consumption growth rates upwards for the poorest percentiles of the income distribution.

Moreover, recent work suggests that there are likely to be complementarities in pursuing both the goals of reducing poverty and inequality. Simulating scenarios for global poverty until 2030 (using a series of assumptions about growth and inequality), Lakner et al. (2020) conclude that a reduction of each country's Gini by 1 per cent per year has a larger effect on global poverty compared to an increase in each country's annual growth by 1 percentage point above the forecasts.

5.2 Should the focus be on within- or between-country inequality? Or on both?

As we described in section 3.1.3, the trends on inequality differ depending on whether one considers inequality within or between countries. Since the 1990s, between-country inequality has been declining while within-country inequality has started to increase in several countries. While between-country inequality appears to be the main driver of global inequality (Gradín 2021: 28), its decline is offset by the increase in national inequalities. This has implications for policy action, which should aim to maintain the trend towards increasing equality among countries while at the same time reducing within-country inequality (Bourguignon 2015: 146). However, different positions on which of the trends is most important imply different conclusions in terms of policy priorities.

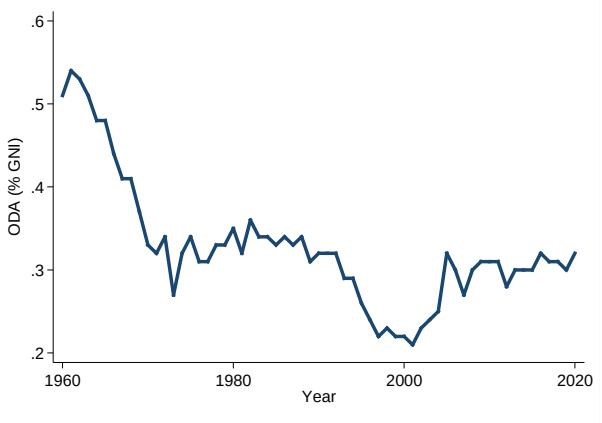
If one adopts the view that within-country inequality is not as important for global inequality, then the crucial goal is to stay on the trend of reducing between-country inequality. Here, the policy

[27] A similar point was made by the same author a decade later using data for 130 countries covering the period 1980–2010 (Ravallion 2014).

focus is on global redistribution, with different channels available. We discuss three, in turn: aid, migration, and globalization (including trade liberalization).

Development aid has an important part to play in this respect. However, there is evidence suggesting that its direct role in reducing global inequality has been limited (Bourguignon 2015; Bourguignon et al. 2009). Often designated as official development assistance (ODA), the size of aid to developing countries has varied since the 1960s (see Figure 11). The commitment made by donor countries at the UN General Assembly in 1970 to spend 0.7 per cent of their gross national income (GNI) on ODA has only been reached by a few countries. Overall, ODA has been close to 0.3 per cent of the GNI of donor countries since around 2005.

Figure 11: ODA on a grant equivalent measure by members of the OECD Development Assistance Committee (DAC) as a percentage of GNI, 1960–2020.



Source: DAC statistics, OECD (2022).

Furthermore, the question of whether aid has been effective in promoting development has been the subject of debate for many decades. In particular, a large literature has considered the aggregate impact of aid on economic growth and discussed whether, on average, aid promotes, undermines, or has no effect across countries.[28] Even if aid pessimists remain sceptical about its effects, there is clear convergence in the literature about a positive impact of aid on growth, as discussed in an extensive literature (see Arndt, Jones, and Tarp 2016; Gisselquist and Tarp 2019; Jones and Tarp 2016; Mekasha and Tarp 2019; Sumner and Glennie 2015).[29]

While the goal of poverty reduction can be indirectly achieved through increased growth (as discussed in section 5.1),[30] there are also potential direct impacts through programmes targeted at areas with a high number of people living below the poverty line or programmes that target low-income households. Some studies support this direct channel (e.g. Banerjee et al. 2021). Moreover, investment in research on what works to lift people out of poverty also has the potential for great returns in terms of poverty alleviation (Pritchett 2018).

The decisions on aid allocation can be further affected by the perspective on how to reduce poverty. As discussed in section 2.2.2, close to three-quarters of the world's poor (considering the

[28] For two earlier overviews of the literature see Hansen and Tarp (2000) and Radelet (2006).

[29] Other aspects related to development aid include aid conditionality, fungibility, and potentially harmful macroeconomic effects, including 'Dutch disease' (see Temple 2010).

[30] See Arndt, Jones, and Tarp (2015) for aid's impact on poverty.

$3.20 poverty line) now live in middle-income countries (Sumner and Ortiz-Juarez 2022). On the one hand, one could argue that aid should not be directed to these countries as their average income level has passed the threshold used to determine whether they are eligible. On the other hand, one could adopt a 'cosmopolitan' perspective (Kanbur 2019) that the poor are poor no matter where they live, and therefore aid should still be allocated to these countries.

A second channel of redistribution is through migration. Differences in income among countries can lead to migratory flows from poorer to richer countries. Pritchett (2018) argues that the potential gains from relaxing the restrictions on the movement of unskilled labour are larger than any other policy option,[31] including giving cash to the poor. However, the fact that it would be beneficial from a global perspective does not preclude the fact that massive migration (motivated by economic reasons) could have negative effects for particular countries or population groups within countries and would create challenges in terms of social integration (Milanovic 2012).

Finally, we refer to the debate on the impact of globalization[32] on inequality[33] and poverty. As for the differences in the trends observed when one considers inequality among or within countries, the positions in this debate are also influenced by the concept one has in mind. Those who focus on reducing between-country inequality are likely to side with the proponents of globalization who point to the benefits of the shift of low-skilled labour from rich to poor countries, which led to job creation in the developing world (Ravallion 2018). On the other side of the debate, the opponents of globalization put the attention on the reverse side of the coin, namely that globalization has destroyed jobs in rich countries and has benefited only the wealthy (Ravallion 2018). The famous elephant graph discussed in section 4 illustrates the main elements of this debate clearly, and it provides arguments for both the positions outlined (see also Gradín et al. 2021a).

Moreover, differences in how poverty is measured also have implications for one's position in this debate. While those who think about poverty in absolute terms tend to be favourable to the effects of globalization in benefitting the poor, those opposing further developments of the globalization process usually think about poverty in terms of relative poverty lines (Ravallion 2016).

Up to this point, we discussed the implications for policy action of giving greater importance to reducing between-country inequality. However, one may instead focus on the upward trend observed with respect to within-country inequality, both at the global level and in several countries. If reducing within-country inequality is regarded as a relatively more important policy goal, then different options may become desirable.

For instance, considering the debate on the effects of globalization, as mentioned at the end of the previous section (and discussed in detail in section 4), those who adopt this perspective highlight the fact that there has not been an even distribution of the gains from globalization, with greater relative income gains accruing to the middle classes of the emerging economies not always leading to bigger absolute income gains (Milanovic 2016).[34] This analysis of the effects of globalization, and the debate around its winners and losers has gained relevance in the policy discourse in industrialized countries. With the aim of protecting low-skilled workers' jobs and sectors

[31] One of the most active contributors to the migration literature is H. Rapoport (see for example Bahar and Rapoport 2018; Kugler et al. 2018).

[32] Understood here as greater openness to trade and mobility of financial capital (following Ravallion 2018).

[33] See the seminal books on inequality which focus on the role of globalization by Bourguignon (2015) and Milanovic (2016) and further discussion in Ravallion (2018).

[34] See also Ravallion (2018).

characterized by low-skill requirements, some advocate for the introduction of protectionist measures.

The argument is as follows. Imposing limits on the import of labour-intensive production goods which rely on low-skilled (or unskilled) labour will protect domestic firms from foreign competition (with lower labour costs), thus reducing domestic unemployment, raising relative wages for this labour, and eventually reducing inequality (Bourguignon 2015: 176). However, as highlighted in Bourguignon (2015: 176), there are costs associated with these policies, namely for the exporting countries against which these protectionist measures were taken, related to the consequences of the decrease in exports in terms of unemployment and wages in these sectors, as well as the effect on the prices of the affected goods.

Also, reducing within-country inequality has emerged as a pressing issue in countries characterized by extremely high levels of inequality, with a focus on identifying what has worked during episodes of decreasing inequality. For instance, in some Latin American countries, after the 1980s and 1990s it was possible—with mixed success—to pursue policies aimed at reducing inequality without increasing poverty (Figures 2, 4, and 5). According to López-Calva and Lustig (2010), the decline in inequality in Argentina, Brazil, Mexico, and Peru during the mid-1990s/ early 2000s was mainly driven by a reduction in the gap between the earnings of skilled and non-skilled workers (supported by the expansion of basic education) and an increase in government transfers to the poor, namely large-scale conditional cash transfers in Argentina, Brazil, and Mexico, and in-kind transfers in Peru. Moreover, and turning to the African continent, there is also evidence which suggests that the implementation of large-scale public policies providing unconditional cash transfers to vulnerable groups was a very important contributor to reducing inequality in South Africa between 1993 and 2008, and continued to contribute over the past decade, though more modestly (Gradín et al. 2021a: 329).

In addition to redistributive social policies, Gradín et al. (2021a) highlight both the potential and the shortcomings of active labour market policies, bearing in mind that they are conditioned by external circumstances as well as the local context. They refer, for instance, to the positive effects of minimum wages and progressive tax and benefit structures in Brazil and Mexico.[35] Based on an analysis of the trends in global inequalities and of inequality in five developing countries (Brazil, China, India, Mexico, and South Africa), they additionally suggest that these policies should be accompanied by macroeconomic stability and by actions to decrease the concentration of income and wealth at the top (for instance, as a result of crony capitalism or rent-seeking) at the same time as ensuring access to health care and education for everyone.

While recognizing that trade-offs exist, our key conclusion is that the focus of policy-making should be not on one or the other, but on implementing policies at different levels which address both within- and between-country inequality.

5.3 How have policy choices changed with the impact of COVID-19?

The above discussion has illustrated how policy choices greatly depend on how policy makers look at the data, on the data and indicators used to analyse certain dimensions, and on the importance assigned to individual dimensions and/or groups in society. Tackling poverty using an absolute or relative approach leads to differing policy conclusions. It is the same for inequality; if we think of inequality in absolute or relative terms, or if we judge inequality within rather than among countries as more problematic, this will point to diverging policy choices. Even with regard to growth,

[35] See also the blog post by the same authors (Gradín et al. 2021b).

focusing on aggregate growth or growth of specific groups/percentiles of the income distribution may suggest contrasting policy options.

The past few decades have shown that the ongoing process of globalization has been characterized by a decrease in global absolute poverty, reduced between-country income inequality, slightly increased within-country inequality, and moderate-to-high GDP growth, although there have been marked differences at the regional level.

The COVID-19 shock has reversed virtually all the established trends for all the dimensions considered here, and the evolution of the impact of COVID-19 is still unfolding. Moreover, it has clearly shown how intrinsically precarious and subject to external shocks the globalization process is, and how volatile the stable growth and the poverty/inequality reduction processes may be. Indeed, an apparently well-defined shock —from both the geographical and economic points of view—has had global effects, spreading to industrialized and developing countries rapidly and pervasively.[36] What appeared to have been taken for granted in an increasingly globalized world was disrupted in just a few months. This included integrated global trade, interconnected value chains, and stable and significant movements of people, goods, and services, among other dimensions.

From the discussion on the post-COVID trends for poverty, inequality, and growth, a few elements seem to emerge. First and importantly, a substantial number of 'new' poor have arisen as a result of the shock. Second, additional people and groups, who were living out of poverty before the pandemic, have become vulnerable. The available estimates seem to agree that, in a short period of time, the COVID-19 shock has managed to reverse years of successful fighting against poverty. This is the result of slower or negative growth and restrictions to movement, economic activities, and sectors, which have deprived many people of their livelihood, plus the inability of many countries to support incomes with strong social protection plans or similar policies.

Third, the increase in billionaires' share of global wealth seems to have risen in 2020 to levels previously unseen (Chancel et al. 2021), reinforcing the tentative conclusion discussed above that inequality has increased during the pandemic. Indeed, the IMF estimates that income inequality has grown in emerging and low-income countries following the COVID-19 crisis to levels comparable to 2008 (Voituriez and Chancel 2021). This may have consequences for the future, as rising inequality, together with increased poverty, affects economic growth and it may endanger democratization, create conflict, and undermine social cohesion and economic progress in general, as suggested by Gradín et al. (2021a).

On top of that, the World Bank has forecast that industrialized countries could return to pre-COVID growth levels earlier than EMDEs, which would point to an increase in between-country inequality as well.[37]

All this has contributed to policy makers at least partially changing their view on how to better tackle poverty, inequality, and growth. Social protection, in the form of social transfers and job protection, among others, which was already receiving increasing attention before the pandemic, now seems to be an unavoidable policy choice for many countries facing lower growth rates and

[36] See also Djankov and Panizza (2020) for a discussion on the effects of COVID-19 on developing economies.

[37] This view is opposed by Deaton (2021), who argues that per capita incomes have fallen relatively more in higher-income countries, that international (not weighted by population) income inequality has decreased, but that population-weighted international income inequality has increased, largely due to the effect of the drop in incomes in India.

increasing poverty/vulnerability. Furthermore, the COVID-19 shock has affected social sectors relatively harder than others, pointing to the need to increase public spending on key sectors like education and health.

An additional element of attention for policy, especially for developing countries, has become support for food production and the protection of food supply chains. In addition, the restrictions imposed on the movements of people, goods, and services during the pandemic have highlighted once more the need to make financial services and technology available also to people in poorer countries.[38] Finally, building resilience to future shocks, particularly among vulnerable people and communities, would be a key and broad-ranging objective for policy makers of all latitudes.

6 Conclusion

Poverty, inequality, and growth are central tenets in any meaningful theory, empirical analysis, and policy debate about socio-economic progress and transformation at the global, national, regional, and local levels. This was confirmed by the UN General Assembly in 2015 when the SDGs were approved by the Member States in what was a unique moment of apparent global unanimity. However, criticism of the 'Christmas tree' like nature of the 17 goals and 169 targets to be tracked by 232 indicators quickly gathered momentum and questions were raised as to whether the SDGs amount to an effective operational agenda for action, an unrealistic 'shopping' or wish list, or something in between. In parallel, the academic development economics literature and public discourse about global development remain crowded with seemingly incoherent and contradictory interpretations, statements, and conclusions about poverty, inequality, and growth trends and their implications. Recent global shocks including the COVID-19 pandemic have added further complexity.

This perplexing state of affairs is unfortunate in policy-making where focus and a clear, well-defined list of a limited number of priorities linking research, policy, and practice are required. Some point to great progress in global development, others to massive failures of the international system. Poverty is sometimes said to have increased, while many argue it has decreased. International organizations put out one flagship report after another about inequality, suggesting that inequality has increased, while other flagships reach the opposite conclusion. Growth, it is argued, is essential for poverty reduction, while it is simultaneously seen by many as the villain in the play when it comes to inequality and sustainability.

The key aim of this paper was to provide an original review and evaluation of the main stylized facts concerning poverty, inequality, and growth, taking as a reference point that these three concepts are linked and mutually interdependent. We proceeded to uncover existing trends and put controversies into perspective with a view to providing a platform for informed policy debate. A core finding is that controversies can regularly be traced back to the different underlying values and measures used. While this may not be surprising to scholars, students, and practitioners of development acquainted with the seminal work of Nobel Laureate Gunnar Myrdal (1959), it is arguably possible to contribute helpful clarity in a straightforward and meaningful manner. This is ultimately why this paper was written.

[38] Section IV in Djankov and Panizza (2020) provides additional policy responses for increasing resilience, focusing on developing countries.

We found that global and regional trends in poverty are far more heterogeneous than often assumed in the public debate. In addition, we highlighted that the portrait of reality that one ends up with depends heavily on underlying conceptual and measurement issues. For example, it matters greatly whether the focus is on poverty rates or on the absolute number of poor people, particularly when it comes to SSA. Furthermore, the choice of cut-off (i.e. poverty line) is critical and it is the same for whether a concept of absolute or relative poverty is relied on. Moreover, in our review, we reiterated two points made by Sumner et al. (2022). First, China alone accounts for two-thirds of the reduction of the poverty rate from the 1980s to the present day when looking at the $1.90 poverty line. Second, this effect is even more important when looking at a higher $13 absolute poverty line, where the global poverty rate decreased from 79 per cent in 1918 to 68 per cent in 2019. When China is excluded, the poverty rate almost completely stagnated.

Importantly, we also noted that the decreasing numbers of absolute poor at the $1.90 line in the developing world (except for SSA) have been accompanied by increasing numbers of those who are nevertheless considered poor according to the living standards of the country where they live. Finally, while the data remains scarce, it is clear that the COVID-19 pandemic and the consequent economic recession have had a dramatic impact on poverty reduction globally. For the first time in decades, the crisis has led to an increase in the global poverty rate, and the estimated increases are clearly worse if combined with an assumed increase in inequality. This is put into perspective by recalling that the $1.90 poverty line reflects nothing more than a very low reference line at which people really cannot be said to be able to live at a meaningful material level of welfare.

Turning to inequality, we first described the global and regional trends in relative inequality obtained using the Gini index and then presented our main observations from considering income and wealth shares and share ratios. It appeared that, while global relative inequality as measured by the Gini has indeed been on a downward trend for several decades, this only partially reflects the variability in regional trends. Moreover, while using income and wealth shares seems to suggest a similar global trend, it is clear that wealth is far more unequally distributed than income. In our focus on the distinction between within- and between-country inequalities, we highlighted that the decline in global inequality (using the most widely used relative measures) in recent decades has been driven by falling between-country inequality, whereas within-country inequality has been either constant or slightly increasing. However, when we addressed global inequality measured in absolute terms, a highly dramatic increase stood out.

All of this implies that great care must be exercised when making statements about what has happened to global inequality over time and across regions and income deciles. Put differently, we are fully in line with Ravallion (2021), who points out that 'the view one takes of global income inequality— the stylized facts one identifies—can be highly sensitive to relaxing some of the (often implicit) assumptions made in measurement' (Ravallion 2021: 18). Particularly important here are the 'ethical weights' assigned respectively to the poor and to the aversion to inequality at the top of the distribution. Ravallion (2021) furthermore cautions that to 'talk about "inequality" without making explicit whether one means absolute or relative inequality is especially problematic' (Ravallion 2021: 43). We focused on this before commenting, lastly, on the impact of COVID-19 on inequality.

The impact of the COVID-19 pandemic on inequality is an area where many conjectures have been made, and it is safe to say that assessments vary from one extreme to the other, reflecting the distinct lack of hard data. Our reading of the tentative information available is that the pandemic has probably led to some increase in relative inequality (and a decrease in absolute inequality). At the same time, great caution is recommended, for example in light of the observations made by Deaton (2021). His observations point in the other direction. We believe that what is important here may be less the immediate impact of COVID-19 on inequality than its evident impact on

growth, and the dynamic and medium-to-longer term effects on poverty and inequality. These are likely to be damaging for the poor and vulnerable members of society in developing countries unless a quick and robust recovery of global economic progress is assured.

To be clear, it is commonly agreed that widely varying global and regional economic growth rates often hide the specific growth patterns that people at different percentiles of the income/consumption distribution experience. Thus, in the present context, it is critical to assess the effect of economic growth on the global income distribution. We did this by looking at relative and absolute GICs. The seminal 'elephant chart' by Lakner and Milanovic (2016) demonstrated that the very top of the global income distribution gained significantly from economic growth in the 1988–2008 period (about a 60 per cent increase in real income).

However, the 'serpent' graph by Ravallion (2018) depicted that an absolute perspective on the changes in individual income reveals that the poor and middle class in the developing world actually gained very little from economic growth during the period in reference, as income growth was almost insignificant for all but the last decile of the distribution. Conversely, the very richest percentiles of the income distribution gained enormously. Updated with more recent data, and along the lines of Gradín (2021), we found that the 'serpent' continues to emerge, while the 'elephant' pattern has faded, reflecting in large measure the economic rise of China. At the same time, 'the updated serpent' suggests that the poor also gained in absolute terms in the 2000–19 period, i.e. during the period prior to the COVID-19 pandemic.

We began our policy section by stressing that the links between poverty, inequality, and growth are complex, although available estimates seem to agree that, in a short period of time, the COVID-19 shock managed to reverse years of successful fighting against poverty. Accordingly, while both the theoretical and empirical literatures do not offer definitive general answers to whether policies reducing inequality will have a harmful effect on growth or whether promoting growth will raise inequality levels, it does seem clear that policies which promote meaningful growth will contribute to poverty reduction. In other words, growth is necessary to achieve a range of development outcomes, such as health and education improvements and job creation. However, our discussion also highlighted the need to complement these with policies which guarantee that growth is inclusive and that the gains are shared across all groups in society. Even sustained aggregate growth at the global or country level may not translate into growth for all percentiles of the income distribution. This would appear to be even more the case in the aftermath of the COVID-19 pandemic.

We also asked in our policy section whether the focus should be on within- or between-country inequality, or both. The answer is that 'it depends'. To put this into perspective, we continue to be struck by the enormous inequalities that exist between developing and developed countries. They are much bigger than the within-country inequalities discussed here. Thus, we pointed to three redistributive channels which can help to address this global problem: (i) foreign assistance, (ii) migration, and (iii) trade and globalization policies. It is beyond the scope of the present paper to dig into all of the complexities here. It is, however, abundantly clear that much could be achieved if developed countries lived up to their international commitments to assist developing countries through increased development assistance, flexible migration policy, and favourable trade policies. This said, it is obviously also necessary for developing country governments to address, to the extent feasible, within-country inequality which slows down growth and poverty reduction, along the lines suggested by Gradín et al. (2021a).

To conclude, the COVID-19 pandemic has no doubt made it harder than expected to achieve the SDG goals in terms of leaving no one behind, addressing between- and within-country inequalities, and promoting inclusive growth. At the same time, it would appear that social protection, in the

form of social transfers and job protection, among others, are now pushing their way up the policy agenda. It is to be hoped that the same will happen for support for food production and the protection of food supply chains. In addition, the restrictions imposed on the movements of people, goods, and services during the pandemic have highlighted once more the need to build resilience, especially among the poor and vulnerable, as a key element of development strategies and policies. This is arguably the most effective way to make constructive use of the relationships inherent in the 'poverty–inequality–growth' triangle.

References

Adelman I., and S. Robinson (1989). 'Income Distribution and Development'. In H. Chenery and T.N. Srinivasan (eds), *Handbook of Development Economics, Volume II*. Amsterdam: Elsevier. https://doi.org/10.1016/S1573-4471(89)02006-1

Alvaredo F., and L. Gasparini L (2015). 'Recent Trends in Inequality and Poverty in Developing Countries'. In A.B. Atkinson and F. Bourguignon (eds), *Handbook of Income Distribution, Volume 2*. Amsterdam: Elsevier. https://doi.org/10.1016/B978-0-444-59428-0.00010-2

Amiel, Y., and F. Cowell (1999). *Thinking about Inequality: Personal Judgment and Income Distributions*. Cambridge Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511492266

Anand, S., and S.R. Kanbur (1993). 'The Kuznets Process and the Inequality–Development Relationship'. *Journal of Development Economics*, 40(1): 25–52. https://doi.org/10.1016/0304-3878(93)90103-T

Anand, S., and P. Segal (2008). 'What Do we Know About Global Income Inequality?'. *Journal of Economic Literature*, 46(1): 57–94. https://doi.org/10.1257/jel.46.1.57

Angelsen, A., and S. Wunder (2006). 'Poverty and Inequality: Economic Growth is Better Than Its Reputation'. In D. Banik (ed.), *Poverty, Politics and Development: Interdisciplinary Perspectives*. Bergen: Fagbokforlaget.

Arndt, C., S. Jones, and F. Tarp (2015). 'Assessing Foreign Aid's Long-run Contribution to Growth and Development'. *World Development*, 69: 6–18. https://doi.org/10.1016/j.worlddev.2013.12.016

Arndt, C., S. Jones, and F. Tarp (2016). 'What is the Aggregate Economic Rate of Return to Foreign Aid?'. *The World Bank Economic Review*, 30(3): 446–74. https://doi.org/10.1093/wber/lhv033

Arndt, C., A. McKay, and F. Tarp (2016). 'Synthesis: Two Cheers for the African Growth Renaissance (But Not Three)'. In C. Arnd, A. McKay, and F. Tarp (eds), *Growth and Poverty in Sub-Saharan Africa*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198744795.001.0001

Bahar, D., and H. Rapoport (2018). 'Migration, Knowledge Diffusion and the Comparative Advantage of Nations'. *The Economic Journal*, 128(612): F273–F305. https://doi.org/10.1111/ecoj.12450

Banerjee, A.V., and E. Duflo (2003). 'Inequality and Growth: What Can the Data Say?'. *Journal of Economic Growth*, 8(3): 267–99. https://doi.org/10.1023/A:1026205114860

Banerjee, A., E. Duflo, and G. Sharma (2021). 'Long-Term Effects of the Targeting the Ultra Poor Program'. *American Economic Review: Insights*, 3(4): 471–86. https://doi.org/10.1257/aeri.20200667

Baselgia, E., and R. Foellmi (2022). 'Inequality and Growth: A Review on a Great Open Debate in Economics'. WIDER Working Paper 2022/5. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/2022/136-5

Beegle, K., and L. Christiaensen (2019). *Accelerating Poverty Reduction in Africa*. Washington, DC: World Bank Publications

Boland, M., M.R. Sweeney, E. Scallan, M. Harrington, and A. Staines (2006). 'Emerging Advantages and Drawbacks of Telephone Surveying in Public Health Research in Ireland and the UK'. *BMC Public Health*, 6(1): 1–7. https://doi.org/10.1186/1471-2458-6-208

Bourguignon, F. (2004). 'The Poverty-Growth-Inequality Triangle'. Working Paper 125. New Delhi: Indian Council for Research on International Economic Relations.

Bourguignon, F. (2015). *The Globalization of Inequality*. Princeton and Oxford: Princeton University Press.

Bourguignon, F., V. Levin, and D. Rosenblatt (2009). 'International Redistribution of Income'. *World Development*, 37(1): 1–10. https://doi.org/10.1016/j.worlddev.2008.06.008

Breunig, R.V., and O. Majeed (2016). 'Inequality or Poverty: Which is Bad for Growth?'. CAMA Working Paper 43/2016. Canberra: Centre for Applied Macroeconomic Analysis. https://doi.org/10.2139/ssrn.2811453

Cerra, V., R. Lama, and N.V. Loyaza (2021). 'Links Between Growth, Inequality, and Poverty'. World Bank Policy Research Working Paper 9603. Washington, DC: World Bank. https://doi.org/10.1596/1813-9450-9603

Chancel, L., and T. Piketty (2021a). 'Global Income Inequality, 1820–2020: The Persistence and Mutation of Extreme Inequality'. *Journal of the European Economic Association*, 19(6): 3025–62. https://doi.org/10.1093/jeea/jvab047

Chancel, L., and T. Piketty (2021b). Methodological Appendix to *Global Income Inequality, 1820-2020: the Persistence and Mutation of Extreme Inequality*. Paris: World Inequality Lab. Available at https://wid.world/longrun (accessed 28 March 2022).

Chancel, L., T. Piketty, E. Saez, and G. Zucman (2021). *World Inequality Report 2022*. Paris: World Inequality Lab. Available at https://wir2022.wid.world/www-site/uploads/2021/12/WorldInequalityReport2022_Full_Report.pdf (accessed 14 March 2022)

Cornia, G.A., T. Addison, and S. Kiiski (2003). 'Income Distribution Changes and their Impact in the Post-World War II Period'. UNU/WIDER Discussion Paper 2003/28. Helsinki: UNU-WIDER.

Cornia, G.A., T. Addison, and S. Kiiski (2004). 'Income Distribution Changes and their Impact in the Post-Second World War Period'. In G.A. Cornia (ed.), *Inequality, Growth and Poverty in an Era of Liberalization and Globalization*. Oxford: Oxford University Press. https://doi.org/10.1093/0199271410.003.0002

Costa, R.N., and S. Pérez-Duarte (2019). 'Not All Inequality Measures Were Created Equal: The Measurement of Wealth Inequality, Its Decompositions, and an Application to European Household Wealth'. ECB Statistics Paper 31. Frankfurt am Main: European Central Bank.

Davies. J.B., S. Sandström, A. Shorrocks, and E.N. Wolff (2011). 'The Level and Distribution of Global Household Wealth'. *The Economic Journal*, 121(551): 223–54. https://doi.org/10.1111/j.1468-0297.2010.02391.x

Deaton, A. (2010). 'Measuring Development: Different Data, Different Conclusions?'. 8th AFD-EUDN Conference. Paris: AFD.

Deaton, A. (2021). 'COVID-19 and Global Income Inequality'. NBER Working Paper 28392. Cambridge, MA: National Bureau of Economic Research. https://doi.org/10.3386/w28392

Deininger, K., and L. Squire (1997). 'Economic Growth and Income Inequality: Reexamining the Links'. *Finance & Development*, 34(001): 38–41.

Djankov, S., and U. Panizza (eds) (2020). *COVID-19 in Developing Economies*. London: Centre for Economic Policy Research.

Dollar, D., and A. Kraay (2002). 'Growth is Good for the Poor'. *Journal of Economic Growth*, 7(3): 195–225. https://doi.org/10.1023/A:1020139631000

Ferreira, F.H. (2010). 'Distributions in Motion: Economic Growth, Inequality, and Poverty Dynamics'. World Bank Policy Research Working Paper 5424. Washington, DC: World Bank. https://doi.org/10.1596/1813-9450-5424

Fields, G.S. (1993). 'Inequality in Dual Economy Models'. *The Economic Journal*, 103(420): 1228–35. https://doi.org/10.2307/2234248

Foster, J.E. (1998). 'Absolute Versus Relative Poverty'. *American Economic Review*, 88(2): 335–41.

Fosu, A.K. (2017). 'Growth, Inequality, and Poverty Reduction in Developing Countries: Recent Global Evidence'. *Research in Economics*, 71(2): 306–36. https://doi.org/10.1016/j.rie.2016.05.005

Gisselquist, R.M., and F. Tarp (2019). 'Aid Impact and Effectiveness: Introduction and Overview'. *Politics and Governance*, 7(2): 1–4. https://doi.org/10.17645/pag.v7i2.2219

Gradín, C. (2021). 'Trends in Global Inequality Using a New Integrated Dataset'. WIDER Working Paper 2021/61. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/2021/999-0

Gradín, C., M. Leibbrandt, and F. Tarp (2021a). *Inequality in the Developing World*. Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780198863960.001.0001

Gradín, C., M. Leibbrandt, and F. Tarp (2021b). 'Global Inequality May Be Falling, but the Gap Between Haves and Have-nots is Growing'. *The Conversation*, 2 September. Available at: https://theconversation.com/global-inequality-may-be-falling-but-the-gap-between-haves-and-have-nots-is-growing-159825 (accessed 19 April 2022).

Hansen, H., and F. Tarp (2000). 'Aid Effectiveness Disputed'. *Journal of International Development*, 12(3): 375–98. https://doi.org/10.1002/(SICI)1099-1328(200004)12:3<375::AID-JID657>3.0.CO;2-M

IMF (2022). *World Economic Outlook. Update. Rising Caseloads, Disrupted Recovery, and Higher Inflation*. Washington, DC: International Monetary Fund.

Jones, S., and F. Tarp (2016). 'Does Foreign Aid Harm Political Institutions?'. *Journal of Development Economics*, 118: 266–81. https://doi.org/10.1016/j.jdeveco.2015.09.004

Kanbur, R. (2005). 'Growth, Inequality and Poverty: Some Hard Questions'. *Journal of International Affairs*, 58(2): 223–32.

Kanbur, R. (2019). 'Inequality in a Global Perspective'. *Oxford Review of Economic Policy*, 35(3): 431–44. https://doi.org/10.1093/oxrep/grz010

Kolm, S.-C. (1976). 'Unequal Inequalities I and II'. *Journal of Economic Theory*, 12(3): 416–42 and 13(1): 82–111.

Kugler, M., O. Levintal, and H. Rapoport (2018). 'Migration and Cross-border Financial Flows'. *The World Bank Economic Review*, 32(1): 148–62. https://doi.org/10.1093/wber/lhx007

Kuznets, S. (1955). 'Economic Growth and Income Inequality'. *American Economic Review*, 45(1): 1–28.

Kwasi, A. (2010). *Growth, Inequality and Poverty Reduction in Developing Countries: Recent Global Evidence*. Paris: OECD.

Lakner, C., D.G. Mahler, M. Negre, and E.B. Prydz (2022). 'How Much Does Reducing Inequality Matter for Global Poverty?'. *The Journal of Economic Inequality*. https://doi.org/10.1007/s10888-021-09510-w

Lakner, C., and B. Milanovic (2016). 'Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession'. *The World Bank Economic Review*, 30(2): 203–32. https://doi.org/10.1093/wber/lhv039

Lakner, C., N. Yonzan, D. Mahler, R. Castañeda Aguilar, and M. Fleury (2020). 'Updated Estimates of the Impact of COVID-19 on Global Poverty: The Effect of New Data'. In World Bank Blogs. Available at: https://blogs.worldbank.org/opendata/updated-estimates-impact-COVID-19-global-poverty-looking-back-2020-and-outlook-2021 (accessed 29 March 2022).

Lanjouw, P.F., and F. Tarp (2021). 'Poverty, Vulnerability and COVID-19: Introduction and Overview'. *Review of Development Economics*, 25(4): 1797–802. https://doi.org/10.1111/rode.12844

Lewis, W. (1954). 'Economic Development with Unlimited Supplies of Labor'. *The Manchester School*, 22(2): 139–91. https://doi.org/10.1111/j.1467-9957.1954.tb00021.x

López-Calva, L.F., and N. Lustig (2010). 'Explaining the Decline in Inequality in Latin America: Technological Change, Education Upgrading, and Democracy'. In L.F. López-Calva and N. Lustig (eds), *Declining Inequality in Latin America: A Decade of Progress?* New York and Washington, DC: United Nations Development Programme and Brookings Institution Press.

McKnight, A. (2019). 'Understanding the Relationship Between Poverty, Inequality and Growth: A Review of Existing Evidence'. CASE papers (216). London: Centre for Analysis of Social Exclusion.

Mekasha, T.J., and F. Tarp (2019). 'A Meta-Analysis of Aid Effectiveness: Revisiting the Evidence'. *Politics and Governance*, 7(2): 5–28. https://doi.org/10.17645/pag.v7i2.1771

Milanovic, B. (2005). *Worlds Apart: Measuring International and Global Inequality*. Princeton, NJ: Princeton University Press.

Milanovic, B. (2012). 'Global Inequality: From Class to Location, from Proletarians to Migrants'. *Global Policy*, 3(2): 125–34. https://doi.org/10.1111/j.1758-5899.2012.00170.x

Milanovic, B. (2016). *Global Inequality: A New Approach for the Age of Globalization*. Cambridge MA: The Belknap Press of Harvard University Press. https://doi.org/10.4159/9780674969797

Milanovic, B. (2020). 'Elephant Who Lost Its Trunk: Continued Growth in Asia, But the Slowdown in Top 1% Growth After the Financial Crisis'. In VOX/EU. Available at : https://voxeu.org/article/continued-growth-asia-slowdown-top-1-growth-after-financial-crisis (accessed 29 March 2022).

Myrdal, G. (1959). *Value in Social Theory: A Selection of Essays on Methodology*. New York, NY: Harper & Brothers.

Niño-Zarazúa, M., L. Roope, and F. Tarp (2014). 'Global Interpersonal Inequality: Trends and Measurement'. WIDER Working Paper 2014/004. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/2014/725-7

Niño-Zarazúa, M., L. Roope, and F. Tarp (2017). 'Global Inequality: Relatively Lower, Absolutely Higher'. *Review of Income and Wealth*, 63(4): 661–84. https://doi.org/10.1111/roiw.12240

OECD (2019). *Society at a Glance 2019: OECD Social Indicators*. Paris: OECD Publishing.

OECD (2022). 'Net ODA (indicator)'. https://doi.org/10.1787/33346549-en

Pande, R., and N. Enevoldsen (2021). 'Growing Pains? A Comment on "Converging to Convergence"'. NBER Working Paper 29046. Cambridge, MA: National Bureau of Economic Research. https://doi.org/10.3386/w29046

Pritchett, L. (2018). 'Alleviating Global Poverty: Labor Mobility, Direct Assistance, and Economic Growth'. CGD Working Paper 479. Washington, DC: Center for Global Development. https://doi.org/10.2139/ssrn.3149890

Radelet, S. (2006). 'A Primer on Foreign Aid'. Working Paper 92. Washington, DC: Center for Global Development. https://doi.org/10.2139/ssrn.983122

Ravallion, M. (1995). 'Growth and Poverty: Evidence for Developing Countries in the 1980s'. *Economics Letters*, 48(3): 411–17. https://doi.org/10.1016/0165-1765(94)00620-H

Ravallion, M. (2004a). 'Competing Concepts of Inequality in the Globalization Debate'. Brookings Trade Forum, 2004, *Globalization, Poverty, and Inequality*, 1–38. https://doi.org/10.1353/btf.2005.0012

Ravallion, M. (2004b). *Pro-Poor Growth: A Primer*. Washington, DC: World Bank. https://doi.org/10.1596/1813-9450-3242

Ravallion, M. (2012). 'Why Don't We See Poverty Convergence?'. *American Economic Review*, 102(1): 504–23. https://doi.org/10.1257/aer.102.1.504

Ravallion, M. (2014). 'Income Inequality in the Developing World'. *Science*, 344(6186): 851–55. https://doi.org/10.1126/science.1251875

Ravallion, M. (2016). *The Economics of Poverty: History, Measurement, and Policy*. New York, NY: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780190212766.001.0001

Ravallion, M. (2018). 'Inequality and Globalization: A Review Essay'. *Journal of Economic Literature*, 56(2): 620–42. https://doi.org/10.1257/jel.20171419

Ravallion, M. (2020). 'On Measuring Global Poverty'. *Annual Review of Economics*, 12(1): 167–88. https://doi.org/10.1146/annurev-economics-081919-022924

Ravallion, M. (2021). 'What Might Explain Today's Conflicting Narratives on Global Inequality?'. In C. Gradín, M. Leibbrandt, and F. Tarp (eds), *Inequality in the Developing World*. Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780198863960.003.0002

Ravallion, M., and S. Chen (1997). 'What Can New Survey Data Tell Us about Recent Changes in Distribution and Poverty?'. *The World Bank Economic Review*, 11(2): 357–82. https://doi.org/10.1093/wber/11.2.357

Ravallion, M., and S. Chen (2003). 'Measuring Pro-poor Growth'. *Economics Letters*, 78(1): 93–99. https://doi.org/10.1016/S0165-1765(02)00205-7

Roser, M., and E. Ortiz-Ospina (2013). 'Global Extreme Poverty'. In OurWorldInData.org. Available at: https://ourworldindata.org/extreme-poverty (accessed 29 March 2022).

Shorrocks, A.F. (1984). 'Inequality Decomposition by Population Subgroups'. *Econometrica*, 52(6): 1369–85. https://doi.org/10.2307/1913511

Stiglitz, J. (2020). 'Conquering the Great Divide'. *Finance & Development*, September: 1–3.

Sumner, A., and J. Glennie (2015). 'Growth, Poverty and Development Assistance: When Does Foreign Aid Work?'. *Global Policy*, 6(3): 201–11. https://doi.org/10.1111/1758-5899.12251

Sumner, A., and E. Ortiz-Juarez (2022). 'Above or Below the Poverty Line: Three Key Questions for Understanding Shifts in Global Poverty'. In UNU-WIDER Blog Post. Available at: https://www.wider.unu.edu/publication/above-or-below-poverty-line (accessed 29 March 2022).

Sumner, A., E. Ortiz-Juarez, and C. Hoy (2022). 'Measuring Global Poverty Before and During the Pandemic: A Political Economy of Overoptimism'. *Third World Quarterly*, 43(1): 1–17. https://doi.org/10.1080/01436597.2021.1995712

Tarp, F. (1991). 'Growth and Income Distribution in Developing Countries'. *Nationaløkonomisk Tidsskrift*, 119(1): 32–46.

Temple, J.R.W. (2010). 'Aid and Conditionality'. In D. Rodrik and M. Rosenzweig (eds), *Handbook of Development Economics*. Amsterdam: Elsevier. https://doi.org/10.1016/B978-0-444-52944-2.00005-7

UN (1995). *The Copenhagen Declaration and Programme of Action: World Summit for Social Development*. New York, NY: United Nations.

UNDESA (2016). *Transforming Our World: The 2030 Agenda for Sustainable Development*. New York, NY: United Nations Department of Economic and Social Affairs.

UNU-WIDER (2021). 'World Income Inequality Database (WIID)'. Version 31 May 2021. Helsinki: UNU-WIDER. https://doi.org/10.35188/UNU-WIDER/WIID-310521

van Zanden, J.L., J. Baten, P. Foldvari, and B. van Leeuwen (2014). 'The Changing Shape of Global Inequality 1820–2000; Exploring a New Dataset'. *Review of Income and Wealth*, 60(2): 279–97. https://doi.org/10.1111/roiw.12014

Voituriez, T., and L. Chancel (2021). *Developing Countries in Times of COVID: Comparing Inequality Impacts and Policy Responses*. Paris: World Inequality Lab.

World Bank (2018). *Poverty and Shared Prosperity 2018: Piecing Together the Poverty Puzzle*. Washington, DC: World Bank.

World Bank (2020). *Poverty and Shared Prosperity 2020: Reversals of Fortune*. Washington, DC: World Bank. https://doi.org/10.1596/978-1-4648-1602-4

World Bank (2022). *Global Economic Prospects*. Washington, DC: World Bank. https://doi.org/10.1596/978-1-4648-1760-1

World Bank (n.d.). 'PovcalNet Database'. Available at: http://iresearch.worldbank.org/PovcalNet/povOnDemand.aspx (accessed 19 April 2022).