Chapter 1

Recent trends in economic inequality

Disparities in income, wealth and consumption have tended to dominate the discussion on inequality, not only because they contribute directly to the well-being of individuals and families, but also because they shape the opportunities people have in life as well as their children's future: access to goods and services available on the market depends on economic resources as do—to a considerable degree—good educational outcomes and good health. Chapter 1 describes different kinds of economic inequality across and within countries and compares levels and trends of inequality across regions.

The evidence presented shows that economic inequalities have declined somewhat across countries in recent years but they have risen within many countries, as wealthier individuals have become wealthier while the relative situation of the poorer segments of the population has not improved. However, trends have been far from universal: as countries have grown and developed, inequalities have increased, in many cases, and have declined in some others. Successful cases of reducing inequalities illustrate the importance of policies and institutions in shaping inequality trends.

## I. Trends in global economic inequality

Globally, the distribution of income remains very uneven. In 2010, high-income countries – that accounted for only 16 per cent of the world's population – were estimated to generate 55 per cent of global income.[1] Low-income countries created just above one per cent of global income even though they contained 72 per cent of global population. An average gross domestic product (GDP) per capita of $ 2,014 in sub-Saharan Africa in 2010 stood out against regional GDPs per capita of $ 27,640 in the European Union and $ 41,399 in North America.

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1   High-income countries are those with a gross national income (GNI) per capita of $12,476 or more in 2011, while low-income countries are those with a GNI per capita of $1,025 or less, according to the World Bank. GDP adjusted for purchasing power parity (PPP) at 2005 constant international dollars from the World Bank World Development Indicators Database, accessed between 15 and 30 July 2012 and available [online] at: http://databank.worldbank.org/ddp/home.do?Step=3&id=4.

The magnitude and direction of change in income distribution among countries since 1980 depend significantly on the indicator used. One way of measuring international inequality is to examine the Gini coefficient of per capita incomes of countries. This Gini coefficient has been calculated by taking each country's GDP per capita as one observation or data point. Figure I.1 shows trends in this non-weighted Gini coefficient of international inequality, as well as trends in a variant of this coefficient, obtained by weighting each national GDP per capita by each country's population–to account for the fact that China's economic growth, for instance, should have affected more people than growth in a smaller country. Based on this population-weighted Gini, international income inequality has been declining since the early 1980s. Statistically, most of this decline has been due to the rapid growth of China.

Figure I.1 indicates that international income inequality increased quite sharply between 1980 and 2000, both measured through the weighted Gini, if China is excluded, and through the non-weighted Gini. Several factors played a role in this, particularly declining incomes in Latin America during the 'lost decade' of the 1980s and the prolonged economic implosion of countries in sub-Saharan Africa, as well as the economic collapse of transition countries in the late 1980s and 1990s. However, since about 2000, the decline in international

Figure I.1. International income inequality, 1980-2010
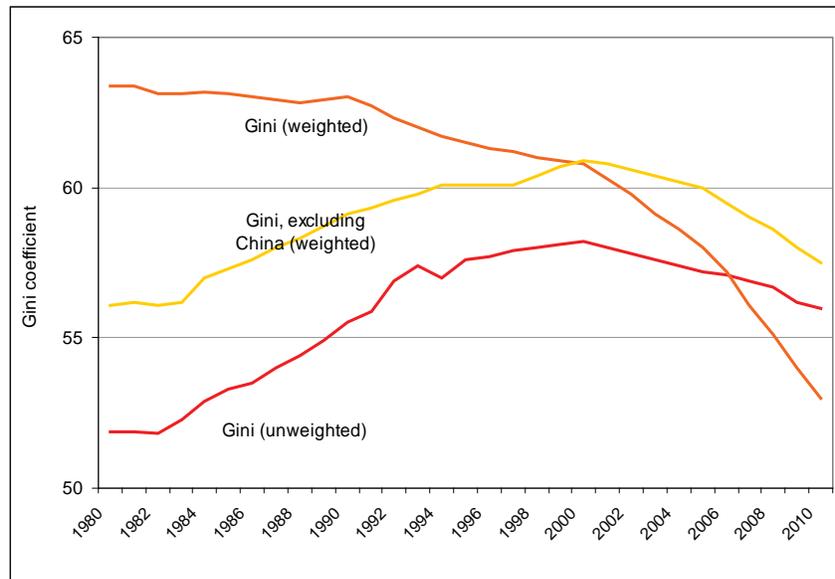
Source: Based on Milanovic (2012), figure 3, reproduced and extended to 2010 using the World Bank World Development Indicators Database, available [online] at: http://databank. worldbank.org/ddp/home.do?Step=3&id=4. Accessed between 15 and 30 July 2012, and World Population Prospects: The 2010 Revision. Comprehensive Dataset (United Nations, sales no. 11.XIII.8).

inequality has been observable even without China. Stronger economic growth in all three major developing regions (Asia, Africa and Latin America) has contributed to this trend.

Despite this recent improvement, international inequality remains very high –in fact, excluding China, the Gini coefficients of international inequality were higher in 2010 than they had been in 1980. That is, the country where a person was born, or where they live, is an important determinant of their expected income, given the enduring, large disparities in national income per capita.

In addition, while low-income countries have been growing faster than high-income countries and international inequality is falling, the absolute gap in mean per capita incomes between these two groups of countries increased from $ 18,525 in 1980 to close to $ 32,900 in 2007, before falling slightly to $ 32,000 in 2010.[2] The absolute gap between incomes per capita of low- and upper-middle income countries has more than doubled, from around $ 3,000 in 1980 to $ 7,600 in 2010.

The magnitude of income disparities across countries is large, but so are disparities across individuals within each country. Figure I.2 shows national GDP per capita as well as average GDP per capita of the top and bottom 10 per cent of the population of selected countries. The mean income of a resident of Albania or Russia was lower than that of an individual in the lowest 10 per cent of the distribution in Sweden, who also earned almost 6 times more than an Albanian in the bottom 10 per cent of their country's distribution, 80 times more than a Bolivian in the bottom decile, and 200 times more than an individual in the bottom decile in the Democratic Republic of the Congo in the late 2000s. At times, income distributions of different countries, even within the same region, barely overlap. For instance, the average income of an individual in the bottom decile in South Africa is higher than that of an individual in the richest decile in the Democratic Republic of the Congo.[3] Yet, internal distribution also has a strong impact on the relative economic situation of individuals in different countries. Poor people in more unequal countries can have lower living standards than poor people in countries with lower average incomes but less unequal distribution. For instance, individuals in the bottom 10 per cent earned less in the United States than in Sweden, in Brazil than in Indonesia, and in South Africa than in Egypt in the late 2000s.

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2   GDP adjusted for purchasing power parity (PPP) at 2005 constant international dollars from the World Bank World Development Indicators Database, available [online] at: http://databank.worldbank.org/ddp/home.do?Step=3&id=4. Accessed between 15 and 30 July 2012.

3   These comparisons should be interpreted with caution, as they are based on income estimates derived using PPP exchange rates. These have several problems, especially when comparing incomes at the lower end of the distribution, because they are based on the prices of an average basket of goods that may not be representative of the basket consumed by the poor in different societies, and the prices themselves are estimated through relatively infrequent country surveys upon which local inflation rates are applied.

Figure I.2. Average income per capita of the top and bottom 10 per cent of the population and of the total population in selected countries, late 2000s
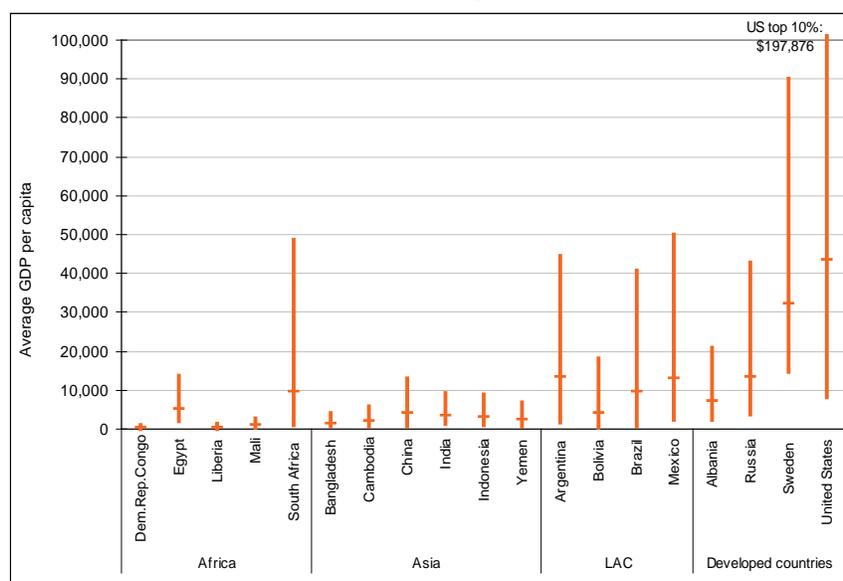
Sources: World Bank World Development Indicators Database, available [online] at: http://databank.worldbank.org/ddp/home.do?Step=3&id=4. Accessed between 1 and 15 November 2013, and *World Population Prospects: The 2012 Revision. Comprehensive Dataset*.

Note: The top and bottom of each bar represent the average GDP per capita (PPP, in constant 2005 international dollars) of the top and bottom 10 per cent of the population of each country, respectively; the marker in between represents average (national) GDP per capita**.**

It is possible to estimate the global distribution of income along these lines, that is, going beyond the mean incomes of each country, by combining data on domestic income distribution from household surveys and adjusting incomes using purchasing power parity (PPP) exchange rates to translate domestic currencies into international dollars (Milanovic, 2012). Based on this method, global inequality measured by the Gini coefficient increased from 68.4 per cent in 1988 to 69.4 per cent in 1998 and reached 70.7 per cent in 2005 – a level of inequality larger than that found in any one country. The income share of the top 10 per cent of the world population increased from around 51.5 per cent to 55.5 per cent during the period. Since this measure of global inequality among individuals reflects, in principle, inequalities within and across countries, and since inequalities across countries did not increase in this period, the rise in global inequality must be due to increased inequalities within countries. Chen and Ravallion (2012) suggested that within-country inequalities explained less than one third of total income inequality in the developing world as a whole in 1981, but that they constituted more than half of total inequality in 2008.

II. Recent patterns of inequality within countries

A. Trends and patterns in income inequality

Income distribution has become increasingly unequal in the majority of developed countries and some large developing countries in the last twenty years, but trends differ markedly between countries and regions. Between 1990 and 2012, inequality in disposable income, that is, income after taxes and transfers, increased in 65 out of 130 countries for which data trends are available, as shown in table I.1.[4] These countries are home to more than two thirds of the world population. In many of them, inequality has risen more or less continuously. In others, including several countries with economies in transition, inequality trends have followed an N-shape – that is, inequality rose in the 1990s, declined or remained stable in the late 1990s or early 2000s, and began rising again during the 2000s. In the majority of those countries where income inequality has declined, trends have followed an inverted U shape – inequality increased in the early 1990s and started to decline in the late 1990s or early 2000s.

However, recent trends differ markedly by region. In general, income inequality has increased in countries and regions that enjoyed relatively low levels of inequality in 1990, and has declined in some countries that still suffer from high inequality. Namely, some large, emerging economies, and the large majority of developed countries, have experienced sharp rises in Gini coefficients since 1990, including Nordic countries with traditionally low levels of inequality. The rise in income inequality has been particularly fast in Eastern Europe.

Although Latin America and the Caribbean remains one of the regions with the highest levels of income inequality apart from Africa, the Gini coefficient declined between 1990 and 2012 in 14 out of the 20 Latin American countries for which data are available, including Brazil, which has traditionally had very high levels of inequality (Solt, 2013). According to the information available, the gap between the rich and the poor declined in many African countries as well, including very high-inequality countries such as Botswana, Lesotho and Swaziland, but continued to increase relatively quickly in South Africa during the post-apartheid period, despite continued economic growth and the expansion of social assistance programmes. In 2008, South Africa's Gini coefficient stood at around 70 (World Bank, 2012a).[5]

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4   For an overview of data and indicators of economic inequality, see annex to Chapter 1. The description of recent inequality trends focuses on the period 1990-2012 so as to ensure maximum data coverage and reliability–for instance, inequality indicators are not widely available in countries of Central Asia and Eastern Europe before 1990; where they are available, the estimated measurement errors are relatively high. For more information, see Solt (2009). Data available from: http://www.siuc.edu/~fsolt/swiid/swiid.html.

5   Inter-racial inequality has remained high in South Africa but fell during this period; meanwhile, intra-racial income inequality increased, especially in urban areas (Leibbrandt

Table I.1. Trends in income distribution by region, 1990 to 2012[a]

Number of countries by type of trend in the Gini coefficient

	Africa	Asia	Latin America and the Caribbean	Europe, North America, Oceania and Japan	Total	Percentage of countries	Percentage of total population[c]
Rising inequality	13	18	4	30	65	50.0	70.6
Continuously rising	4	4	1	13	22		
U-shaped trend	8	2	1	6	17		
N or reclined S shape (increase-decline-increase)	1	12	2	11	26		
Falling inequality	19	10	14	8	51	39.2	25.3
Continuously falling	6	0	3	2	11		
Inverted U-shaped trend	13	10	11	6	40		
No trend[b]	3	3	2	6	14	10.8	4.1
Total	35	31	20	44	130	100.0	100.0

Source: Calculations based on data from Solt, Frederick, Standardized World Income Inequality Database, Version 4.0, released September 2013. Available [online] at: http://myweb.uiowa.edu/fsolt/swiid/swiid.html. Accessed between 1 and 15 November 2013.

Notes:

a. Or latest year available, if 2005 or later.

b. Includes countries where inequality has remained relatively constant as well as countries where inequality has fluctuated but where there is no clear upward or downward trend during the period.

c. Percentage of the total population of the 130 countries with data. These 130 countries accounted for 94 per cent of the world population, including 80 per cent of the African population and more than 95 per cent of the population in other regions in 2012.

Historically, Asia has experienced lower inequality than other developing regions. However, despite remarkable growth and impressive declines in extreme poverty, the region has seen widespread increases in income inequality at the national level, as well as in both urban and rural areas. Between 1990 and 2012, income inequality rose in 18 out of 31 countries with data–accounting for over 80 per cent of the region's population. Most notable among them has been China, where inequality increased both in urban areas (with the Gini growing from 25.6 in 1990 to 35.2 in 2010) as well as in rural areas (from 30.6 to 39.4), leaving rural areas more unequal than urban areas – a position unlike that of most developing countries.[6]

In countries where inequality has declined, two key factors have contributed to such declines: the expansion of education, and public transfers to the poor. Starting in the early 1990s, increases in public expenditure on education throughout Latin America and the Caribbean, for instance, led to rising secondary enrolment and completion rates, and this became a major determinant of the fall in wage inequality (Ferreira and others, 2012; López-Calva and Lustig, 2010). This increase in public spending was, itself, the result of a shift in the economic policy model followed by many countries in the region. In general, there was growing social consensus on the need for Governments to serve as the engines of development, providing social protection as well as public infrastructure (Cornia, forthcoming).

In countries where inequality has risen, income is concentrated increasingly at the very top of the distribution ladder. The share of income owned by the top quintile of the population increased in the majority of countries (61 out of 111) although it did not increase globally from 1990 to the mid-2000s (Ortiz and Cummins, 2011, table 5, p.16). However, income shares have risen significantly among the top 5 per cent and, particularly, among the top 1 per cent of the population. Much like the Gini coefficient, top income shares have increased since the 1980s, according to data available for the 16 developed and 6 developing countries shown in table I.2[7].

Gains have been largest at the very top. In the United States of America, for instance, the average income of the top 5 per cent increased at an annual rate of 1.5 per cent between 1980 and 2011, while the growth rate of the income of the top 0.1 per cent was 4.0 per cent. In contrast, the average real income of the bottom 99 per cent of income-earners grew at an annual rate of only 0.6 per cent between 1976

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and others, 2010).

6   Asian Development Bank (2012). Asian Development Outlook 2012: Confronting Rising Inequality in Asia.

7   The time series of top income shares shown here have been constructed using tax statistics. For additional information on top income data and methodology, see Atkinson and Piketty, eds. (2007); Atkinson and Piketty, eds. (2010) and Atkison, Pikkety and Saez (2011). Data available in Alvaredo and others, The World Top Incomes Database [online] at: http://g-mond.parisschoolofeconomics.eu/topincomes/ (accessed on 15 June 2012).

Table I.2. Share of income owned by the top 1 per cent

	Year	Per cent of income owned by top 1%	Annual growth rate of top 1% income share since 1980 (in %)
Argentina	2004	16.7	
Australia	2008	9.2	2.2
Canada	2010	12.2	1.5
China	2003	5.9	4.7
Denmark	2005	4.3	0.3
Finland	2009	7.5	1.9
France	2006	8.9	0.6
India	1999	8.9	
Indonesia	2004	8.5	0.8
Ireland	2009	10.5	1.5
Italy	2009	9.4	1.5
Japan	2010	9.5	0.9
Mauritius	2011	7.1	0.2
New Zealand	2010	7.3	0.9
Norway	2008	7.9	1.8
Portugal	2005	9.8	3.3
Singapore	2010	13.4	0.8
South Africa	2009	16.6	1.4
Spain	2010	8.2	0.3
Sweden	2011	7.0	1.8
United Kingdom	2009	13.9	2.6
United States	2012	19.3	2.7

Source: Alvaredo and others, The World Top Incomes Database. Available [online] at: http://g-mond.parisschoolofeconomics.eu/topincomes. Accessed in November 2013.

Note: China: annual growth rate 1986-2003. Indonesia: annual growth rate 1982-2004. South Africa: annual growth rate 1990-2010.

and 2007 in the United States, which implies that the top 1 per cent captured 58 per cent of income growth (Atkinson, Piketty and Saez, 2011). While average incomes grew faster in the United States than in France during that period, the incomes of the bottom 99 per cent grew more slowly in the former. Therefore, excluding the top 1 per cent results in more inclusive, and more equitable, economic growth by France than by the United States of America.

Therefore, inequality has increased mainly because the wealthiest individuals have become wealthier, both in developed and developing countries where the necessary data were available. Palma (2011) observed that, in absolute terms, the top 10 per cent of the population in middle-income countries has succeeded in catching up with the top 10 per cent in rich countries, while the bottom 40 per cent of the population of middle-income countries is still far below its counterpart in rich countries—even in relative terms—regarding their share of national income. The author proposed an alternative to the Gini coefficient for measuring income inequality: *the ratio of the top 10 per cent of the population's share of income to the bottom 40 per cent's share*. Overall, the ranking of countries according to this *'Palma ratio'* conforms to other measures of inequality, but trends can differ from changes in the Gini (Cobham and Sumner, 2013). For example, the value of the Gini coefficient declined from 1990 to 2010 in countries such as Mexico, Nigeria and the United Republic of Tanzania, while the Palma ratio increased. That is, even though income inequality as measured by the Gini coefficient declined in those countries, the share of income of the top 10 per cent has increased relative to that of the bottom 40 per cent–or, alternatively, the share of the bottom 40 per cent has declined. Conversely, Pakistan and the Philippines experienced increasing inequality based on the Gini coefficient, but not by the Palma ratio.

B. Other dimensions of economic inequality

Income inequality measures do not capture all household wealth – which, in addition to income earned, may include ownership of capital, including physical assets (land, housing) and financial assets. While the two are highly correlated, the distribution of wealth is typically more unequal than the distribution of income. In a considerable effort to collect comparable data across countries, Davies and others (2008) found that the Gini coefficient of wealth ranged between 55 and 80 per cent in a sample of 26 countries in the year 2000 and that the share of wealth owned by the top 10 per cent of the population ranged from 40 to 70 per cent.[8] In contrast, the share of income owned by the top 10 per cent ranged from 20 to 43 per cent in a sample of 26 developed and developing countries with data (Alvaredo and others, 2012).

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8   Although the work by Davies and others (2007) is the most recent and comprehensive to date, sources of data (household surveys of differing purpose and sampling frame, in some cases, tax records in other cases), the economic unit of analysis (households, individuals or adults, depending on the country) and data quality affect their comparability, particularly when it comes to estimates that require data from the full wealth spectrum. Therefore, the estimates cited should be interpreted with caution.

However, wealth inequality appears to have increased less than income inequality, or even declined in some countries. In the United States of America, for instance, the share of wealth owned by the top 1 per cent was slightly lower in 2001 (33.4 per cent) than in 1983 (33.8 per cent) (Davies and others, 2008). One explanation for this is that, to a large extent, the rise in top income share has been brought about by growing earnings dispersion, rather than by an increase in capital income, and particularly by a rise in executive compensation (Ebert, Torres and Papadakis, 2008; Atkison, Piketty and Saez, 2011). Another likely explanation, which may apply to the pre-crisis period, is the housing bubble. Ownership of real assets, and particularly housing, has been relatively more important for individuals in the middle and bottom of the income-distribution ranking than for those at the top, who might rely to a larger extent on financial assets. Thus, increases in real estate prices tend to reduce top wealth shares and other measures of wealth inequality, and may have countered the trend towards higher wealth inequality due to higher share prices and increasing returns to financial assets, in general.

In many developing countries, the distribution of land ownership has been particularly relevant in explaining inequality. Land concentration remains particularly high in Latin America, followed by Western Asia and Northern Africa (Vollrath, 2007; World Bank, 2005). Highly-unequal land distribution has created social and political tensions and is a source of economic inefficiency, as small landholders frequently lack access to credit and other resources to increase productivity, while big owners may not have had enough incentive to do so. However, attempts at land reform have been successful only in a few countries, mainly in Eastern Asia (World Bank, 2003; 2005). Broader rural development strategies and complementary measures that would be easier to implement politically, such as access to education and infrastructure, are greatly needed to enhance land equity and productivity.

There have also been important changes in the distribution of income between capital and labour. While the period of expansion that preceded the economic and financial crises was accompanied by employment growth across most regions, such growth occurred alongside a redistribution of income towards capital and away from labour. In developed countries, the share of wages in total income declined from 74 per cent in 1980 to close to 65 per cent in 2010 (Stockhammer, 2013). In developing countries with available data, wage shares have declined as well–by as much as 20 percentage points, on average, in Mexico, the Republic of Korea and Turkey–although trends have varied markedly by country (Stockhammer, 2013; ILO, 2012a; IMF, 2007). For instance, wage shares fell the most in Latin America and the Caribbean during the 1980s and 1990s but have increased significantly in several countries–Argentina, Brazil, Ecuador and Venezuela–since 2000 (Cornia, 2011; 2012). Declines in the wage share, where these have taken place, have been attributed to the impact of labour-saving technological change and to a general weakening of labour market regulations and institutions (namely, decreased unionization).

Such declines are likely to affect individuals in the middle and bottom of the income distribution disproportionately, since they rely mostly on labour income.

In addition, the wage gap between top and bottom earners has also increased in the majority of developed countries and in many developing countries with data (Galbraith, 2012; ILO IILS, 2008; OECD 2013). On the one hand, there has been an increase in non-standard forms of employment–including temporary and part-time employment, in developed countries, and informal-sector work in developing countries–which are generally less well-remunerated than standard employment. Labour-saving technologies have also had a negative impact on the earnings of less-skilled workers in developed countries (Stockhammer, 2013). On the other hand, top salaries have increased significantly. Atkison, Piketty and Saez (2011) found that a significant proportion of gains in top income shares are due to increases in top labour incomes. That is, those at the top of the income ladder are not only capital owners, as used to be the case in the first half of the twentieth century, but also top wage earners (see also Piketty, 2003; and Wolff and Zacharias, 2009). The rise in pay of top executives has attracted considerable attention in the past few years, particularly in the context of the recent crises. Ebert, Torres and Papadakis (2008) found that, in 2007, chief executive officers of the 15 largest companies in six selected countries earned between 71 and 183 times more than the average employee–excluding share-based compensation. Focusing on the United States and the Netherlands, they also showed that the gap between executive and employee pay grew considerably between the early 2000s and 2007.

Although increases in executive compensation have not outpaced growth in employee pay or inflation in the United States or Europe since the financial crisis, the gap has remained very large (Mishel and Sabadish, 2013; Hay Group, 2013). In the United States, for instance, compensation of chief executive officers of the top 350 companies – including salary and bonuses – was 221 times higher than the average employee's pay in 2007, and remained 202 times higher in 2012 (Mishel, 2013). Since the crisis started, several European countries, including the Netherlands, Norway, Sweden and Switzerland, have enacted legislation that has put restrictions on executive pay (Mercer, 2013).

As will be discussed in chapter 5, investment in education, labour market institutions and regulations can change this pattern of increasing wage inequality, even in highly-integrated economies. For example, the reduction in income inequality in Latin America has been related to the reduction in wage inequality which, in turn, is related to the more equalizing role played by the spread of education (Cornia, forthcoming). Well-designed minimum-wage policies can have very significant, positive effects in reducing wage inequality. Recently, countries like Brazil, South Africa and Viet Nam have succeeded in reducing wage inequalities largely through higher minimum wages, which also were found to have statistically negligible adverse effects on levels of employment (ILO, 2012a).

C. Growth and inequality: policies matter

Regional and national trends in economic inequality suggest that there is no clear relationship between inequality and development: income disparities have increased in many countries, and have declined in some others, as countries have grown and developed in the last 25 years. Yet, increasing inequality has been assumed as a cost of the development process, probably based on the Kuznets (1955) proposition that inequality tends to be low at the early stages of development when societies are mostly agricultural, and inequalities increase as industry develops, countries urbanize and economies grow faster. As countries develop further, increased wealth would enable the introduction of broad-based education and social protection, and the growing political power of urban lower-income groups would result in support for more even income distributions. As a result, inequality would follow the shape of an inverted U curve.

The empirical evidence on such a relationship between inequality and development is ambiguous, at best.[9] A comparison of income distributions across countries by gross national income (GNI) per capita in 2012 shows a slightly inverted U shape, but country observations are significantly scattered and the correlation between the two variables is small: countries at similar levels of income per capita have very different levels of income inequality (see figure I.3). The shape of these cross-sectional distributions may have more to do with the history of each country and region and their situation in 2012 than with the assumed relationship between inequality and development. For example, Latin American countries, the majority of which are middle-income countries, have been more unequal throughout their history than countries in other regions.

Trends within individual countries have also been different from those which this theory predicts. Namely, inequality has increased in some middle-income countries and has declined in others. The contrasting experiences of Brazil, China and India have been widely discussed in the literature (see, for instance, Bourguignon, Ferreira and Lustig, eds., 2005; Deaton and Kozel, 2005; Chaudhuri and Ravaillon, 2006). While Brazil continues to suffer from record-high levels of income inequality, recent economic growth has benefited the poor, due—in part—to improvements in education, labour market conditions, and the expansion of social assistance programmes, including *Bolsa Familia*, the world's largest conditional cash transfer programme. In contrast, the unprecedented growth enjoyed by China and, to a lesser extent, India, has been accompanied by rising inequality. Income inequality has also increased in most developed countries–instead of remaining stable or declining–although national experiences have varied significantly across the developed world, as well.


9　　For a summary of the empirical literature on inequality and development, see Atkinson and Bourguignon, eds., (2000). Additional references are found in Salvedra, Nolan and Smeeding, eds., (2011). For a recent cross-country assessment, see Palma (2011).

D. The power of redistribution

A significant part of the difference observed in disposable income disparities across countries can be explained by the redistributive impact of social transfers and taxes. Both should have immediate, direct effects on income distribution, although the magnitude of their impact will depend on the degree of progressiveness of the tax system (income and property taxes are usually progressive, while indirect taxes are regressive) and on the degree to which the poor benefit from social transfers and social insurance. The negative effects of indirect taxes on the incomes of the poor, or nearly-poor, can be stronger than the positive effects of cash transfers (Lustig, 2012).

According to the empirical literature, social transfers have had a larger redistributive impact than taxes. Wang and Caminada (2011) estimated that social transfers accounted for 85 per cent of the observed reduction in inequality

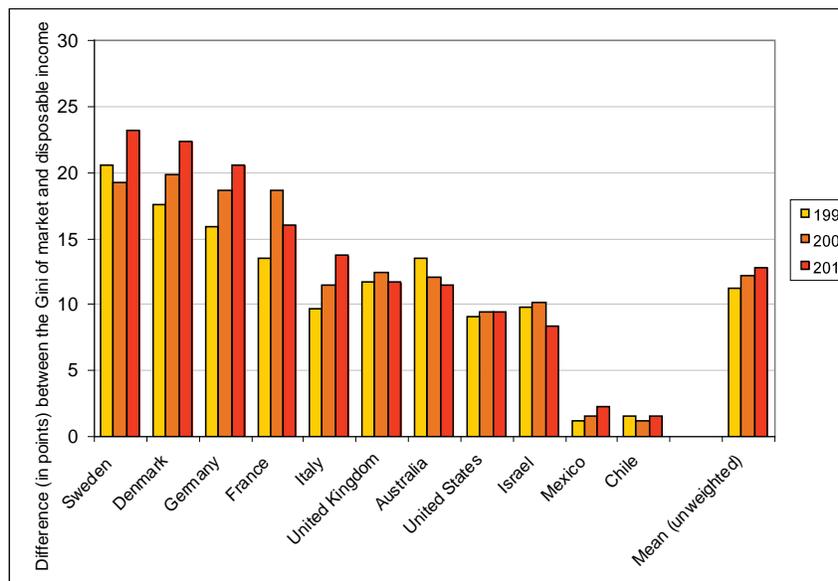## Figure I.3. Gini coefficient and GNI per capita by country [a]
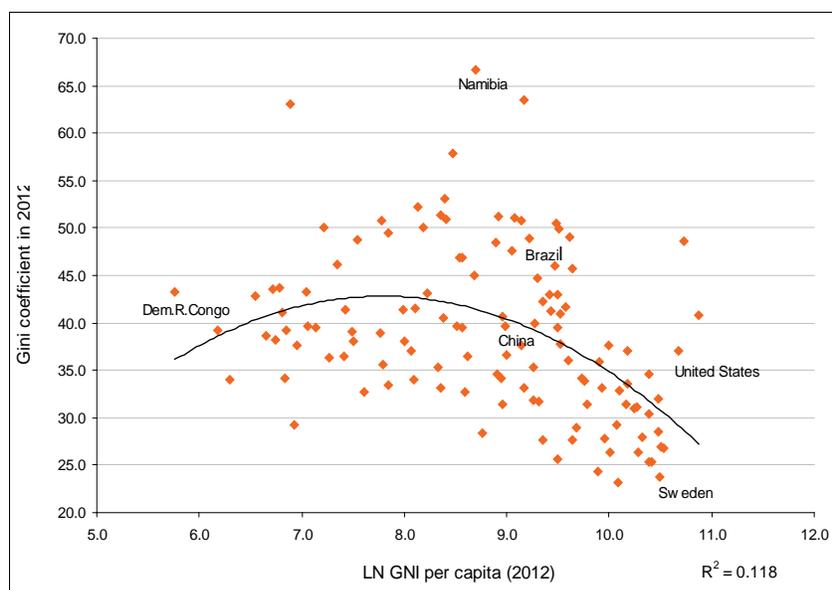
Sources: Solt, Frederick, *Standardized World Income Inequality Database*, Version 4.0, released September 2013. Available [online] at: http://myweb.uiowa.edu/fsolt/swiid/swiid.html. Accessed between 1 and 15 November 2013; and United Nations Development Programme (2013). *The Rise of the South. Human Progress in a Diverse World*. Statistical Annex.

[a] GNI converted to international dollars using 2005 PPP rates and divided by the midyear population.

Notes: The estimated squared Pearson product-moment correlation coefficient (R^2), shown on the bottom right of the figure, is 0.21, denoting that the correlation between the two variables is very weak.

**Figure I.4. Trends in redistribution[1] in selected countries,
1990, 2000, 2007 and 2011**

[1] Difference between the Gini coefficients of market income and disposable income.

in a sample of 36 countries, while taxes explained 15 per cent of such a reduction. Similarly, according to Doerrenberg and Peichl (2012), a 1 per cent increase in Government spending on social transfers was correlated with a 0.3 per cent drop in inequality in member countries of the OECD, while the effect of tax progressivity was much smaller.[10]

Over time, the redistributive impact of social transfers and taxes has failed to correct the trend of rising income inequality in developed countries. From 1990 to 2007, a period of global policy shift toward less Government intervention and greater reliance on market forces, the relative difference between the Gini coefficient of market income and that of disposable income—the extent of redistribution—declined, or remained constant, in six out of the 12 countries shown in figure I.4 (Sweden, the United Kingdom, the United States, Spain, Israel and Chile). On average, the difference remained relatively stable, increasing only from 10.6 to 11.8 points of the Gini coefficient, meaning that disparities in

10   Declines in tax progressivity, however, are found to be important determinants of the increase in top income shares (Atkinson, Piketty and Saez, 2011).

disposable income rose almost as much as disparities in market income in the countries shown. The economic crisis brought about increased redistribution in some countries between 2007 and 2011–in Sweden, Denmark and, to a lesser extent, in Italy and the United Kingdom. However, the redistributive impact of taxes and transfers in most of the countries shown in figure I.4 declined during the first four years of the crisis. With important exceptions, policies have not become increasingly redistributive as inequality has grown.

III. Conclusion

Inequality trends have not followed a universal pattern. Economic inequalities across countries remain very large, but have declined somewhat, while income disparities have increased within many countries over the last two decades, particularly in countries and regions that had enjoyed relatively low levels of inequality in 1990. However, some countries of Latin America and Africa have been able to reduce economic inequalities.

Despite the broad expectation that inequalities should decline systematically as societies develop, or remain low in developed societies, evidence shows that the move towards less inequality is not automatic. Rather, policies must actively pursue such a goal. Indeed, the empirical evidence presented suggests that much depends on country-specific conditions and national policymaking. The poor are more likely to benefit from economic growth and share in the gains from globalization when there are pro-poor national policies in place, where growth is equitable, and labour markets inclusive. Chapter 5 discusses this further and shows that countries that have used redistributive fiscal policy measures, developed universal social protection programmes, or even wide-ranging social assistance, with emphasis on education and health spending, and those that have increased labour-market opportunities for those at the bottom, have weathered better the general trend towards growing within-country inequality.

Annex to Chapter 1:

Data and indicators of economic inequality

There are different ways of measuring and summarizing the distribution of income and the levels of economic inequality among individuals or households. While each of the indicators available has strengths and limitations, their appropriateness can be assessed against a number of criteria. For instance, indicators of economic inequality must be scale-invariant: their values should not change when all incomes change proportionally. They must also satisfy the principle of transfers, whereby transferring income from a richer to a poorer person should result in a reduction in inequality as measured by the indicator, and the reverse should also hold. They must also fulfil the symmetry or anonymity axiom – the index must depend only on the income values used to construct it and not take into account additional information.

The most widely-used indicator of inequality, and the one used most extensively in the present *Report,* is the Gini coefficient, which ranges from 0 (perfect equality) to 100 (complete inequality: one person has all the income or consumption while all others have none).[11] Thus, the closer the coefficient is to 100, the more unequal the income distribution. The Gini measures the extent to which the distribution of income, or the consumption expenditure among individuals or households, deviates from a perfectly equal distribution. It has clear graphical representation and is easy to interpret but, as with other measures of inequality, suffers from a number of limitations. For instance, it is not additive across groups: i.e. the total Gini for a society is not equal to the sum of the Ginis for its sub-groups (Galbraith, 2012). In addition, it does not identify whether rises or falls in inequality were triggered by changes at the bottom, middle or top of the income distribution ranking. Also, the Gini itself is more responsive to changes in the middle of the income distribution ladder than to changes at the very bottom, or at the very top (Palma, 2011).

A better indicator of income concentration at the top or the bottom of the distribution would be a more direct measure, such as the share of income or consumption of the bottom, or top 10 per cent, or top 20 per cent of the population, or the *Palma ratio – the ratio of the top 10 per cent of the population's share of income to the bottom 40 per cent's share –* also discussed in the current *Report.* The quality of data on income or consumption at the very top and bottom of the distribution, however, is often questionable, as discussed in the *Report.*

Cross-country analyses of economic inequality are affected by the consistency and comparability of data. Greater data coverage across countries and over time often comes at the cost of reduced comparability across observations. Although full comparability can only be achieved through concerted efforts to harmonize

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11   The Gini has been shown as a percentage in the present *Report* to allow for greater detail in the analysis.

data collection, the main source of income inequality data used in this *Report,* the Standardized World Income Inequality Database (SWIID), overcame some of the limitations found in other global datasets.[12] One of the main sources of non-comparability, for instance, is that some countries use household income as the main indicator of economic well-being, while others use consumption expenditure (Jenkins and Van Kerm, 2009). Among those that use household income, some datasets report income before taxes and transfers (market income), others report disposable or net income (after taxes and transfers), while some report income after taxes but before transfers. An additional factor affecting comparability is the reference unit over which income is measured. Solt (2009) identifies five main reference units that have often been used: household per capita, household adult-equivalent, household without adjustment, employee and individual.

Based on these different definitions, SWIID classifies country-year observations into 21 different categories (Solt, 2009). Comparability problems are partly overcome in the database by calculating country-specific ratios between each pair of categories where data are available. Where data are missing, ratios are generated on the basis of those ratios available through multi-level models using, when possible, ratios from the same country and for the same decade. Since the distribution of income within a country, typically, changes slowly over time, dramatic differences in estimates of inequality for a given year compared to those preceding or following it are likely to reflect errors in measurement. In the SWIID, a five-year, weighted, moving-average algorithm is used to allow estimates to be informed by observations for surrounding years.[13] Overall, Solt (2009) estimated that about 30 per cent of the observations in the database had associated standard errors of one point or less on the 0-100 scale of the Gini coefficient. Over 60 per cent of standard errors were less than two points, and more than 85 per cent were less than three points. Observations with large standard errors were concentrated in the earlier years of the period covered by the database (1960 to 1980).

Even though SWIID constitutes the most comprehensive effort, to date, to improve data comparability while maintaining broad coverage, data will not be strictly comparable without concerted efforts to harmonize data collection across countries and improve survey coverage. For now, greater comparability can only be achieved by narrowing the scope of analysis to one, or a few, countries.

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12   The Standardized World Income Inequality Database (SWIID) provides Gini coefficients of disposable and market income for 153 countries for as many years as possible from 1960 to 2011.

13   This smoothing method was not applied to countries with high-quality data, including those covered by the Luxembourg Income Study (LIS) (Solt, 2009). This *Report* also showed some cases where rapid changes in inequality were likely to have taken place, namely in Eastern Europe and the former Soviet Union.