

3 Income inequality



Rising inequality need not be an inevitable outcome of growth. Despite continued growth in the 2000s, some countries were able to reverse the direction of change in inequality and started to witness falling income inequality.



3.1. Introduction

This chapter reviews the trends and drivers of income inequality at a national level, i.e., income inequality between people and households within countries. Many studies have shown that inequality between nations has increased (WCDSG, 2004). But this process has been accompanied by a growing inequality within most countries (Cornia, 2004) and policy-making is mainly national. As noted by the World Commission on the Social Dimension of Globalization (WCSDG), “globalization starts at home” and national policies can make a great difference in driving inequality down. Paying attention to inequality at the national level therefore remains important.¹

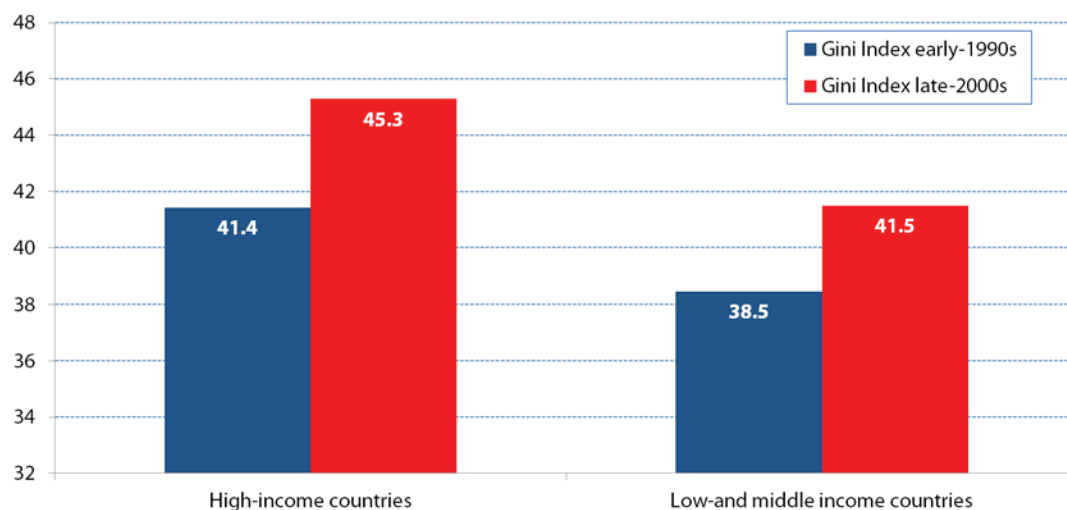
3.2. Trends in household income inequality

3.2a. Global trends

Data on household income inequality shows a rising trend from the early 1990s to the late 2000s² in most countries. In a sample of 116 countries, household income inequality as measured by the population-weighted average level of the Gini index increased by 9 percent for the group of high-income countries³ and by 11 percent for low- and middle-income countries (Figure 3.1).

Of course, a global overview masks variations over time and between countries. Various countries and regions have not seen a linear trend, but have witnessed periods of increasing and decreasing inequality during this period. Similarly, in the same regional and income grouping, countries have very different trajectories, resulting in some cases in a net increase in income inequality over the mentioned period and in other cases in a net decrease.

Figure 3.1. Gini index of household income inequality by development status (early 1990s and late 2000s)



Source: UNDP calculations using data from Solt (2009).



Box 3.1. Global income inequality: convergence or divergence?

Three different concepts can be used to capture global income inequality:

Concept 1: Focuses on inequality between nations based on their level of average GDP (income) per capita, without taking into account differences between countries in population size. India and the Maldives have the same importance, because their population sizes are not taken into account.

Concept 2: This concept focuses on the differences in GDP per capita or average incomes across countries but it takes into account population weight.

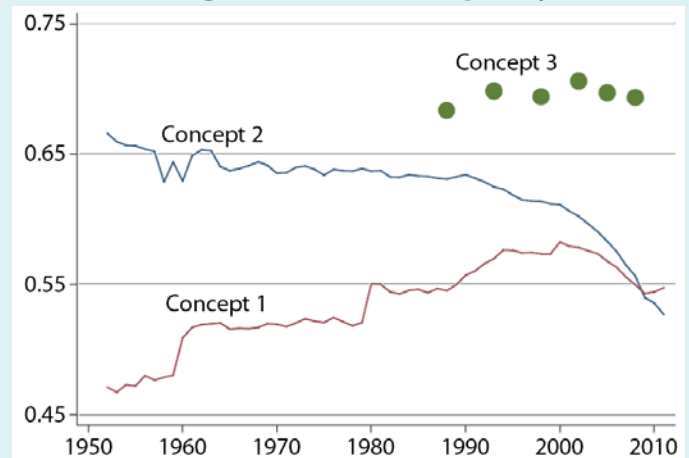
Concept 3: Concept 3 differs from Concepts 1 and 2 in that it takes into account actual incomes of individuals, not national income averages. That is, unlike the first two concepts, this one is individual-based: each person, regardless of her country, enters into the calculation with her actual income.

The following figure presents the trend in the Gini Index of global inequality from 1950 to 2010 according to the three concepts as calculated by Milanovic (2013).

According to concept 1, we see that average incomes across countries have actually become more divergent. Yet, if the population size is taken into account (Concept 2) we see that incomes across the world are converging. The reason for this difference in trends is that a number of very populous countries, mainly China and India, experienced relatively faster growth in per capita GDP than most other countries.

Source: Milanovic (2013).

Gini index of global income inequality



Global inequality according to Concept 3 requires data for the distribution of income between households within countries that is available starting only from the mid-1980s. As can be seen, the Gini Index of global income inequality according to this concept stands at 0.7. This is much higher than the level of income inequality found within any individual country.

Despite the convergence in the average income of some big developing economies, rising income inequalities within these economies mean that overall global inequality did not go down. On the contrary: it showed some increase during the globalization era from the mid-1980s to the early 2000s.

3.2b. Regional trends

At the regional level, household income inequality increased on average in all regions of the developing world except for Africa and Latin America and the Caribbean. The largest increases in inequality were in ECIS and Asia and the Pacific regions, where inequality increased on average by 35 percent and 13 percent, respectively (Table 3.1). The Arab States did not experience, on balance, a significant change in household income inequality.

Africa is the region with the largest average decline in inequality (7 percent), followed by Latin America and the Caribbean, with a decrease of 5 percent driven by significant reductions in inequality during the 2000s in the large countries of the region (namely, Argentina, Brazil and Mexico).



Table 3.1. Gini index of household income inequality by region (early 1990s and late 2000s)

Region	No. of countries	Gini index early 1990s	Gini index late 2000s	Percentage change
Africa	26	48.0	44.4	-7%
Arab States	6	36.1	36.0	0%
A&P	13	35.9	40.0	13%
ECIS	19	33.0	43.8	35%
LAC	20	51.4	48.4	-5%
All	84	38.5	41.5	11%

Source: UNDP calculations using data from Solt (2009).

Within each region, there are varying trends. While some countries experienced a rise in inequality, others saw a decline (Table 3.2). Yet, most regional averages show a net increase because the intensity of upward changes was generally higher than that of downward shifts (Table 3.3). More specifically: of 84 developing countries, about half of them (38) had rising inequality while the other half (34) had falling inequality, but the average increase for the former group was 20 percent while the average decrease for the latter group was 14 percent.

Table 3.2. Number of countries with rising and falling income inequality by region (early 1990s to late 2000s)

Region	Falling	No change	Rising	All
Africa	16	3	7	26
Arab States	3	1	2	6
A&P	5	2	6	13
ECIS	2	1	16	19
LAC	8	5	7	20
Low- & middle-income countries	34	12	38	84

Source: UNDP calculations using data from Solt (2009).

Table 3.3. Change in income inequality among countries with rising and falling income inequality by region (early 1990s to late 2000s)

Region	Falling	No change	Rising
Africa	-15%	-1%	10%
Arab States	-5%	1%	12%
A&P	-19%	2%	19%
ECIS	-11%	1%	43%
LAC	-10%	-2%	9%
All	-14%	1%	20%

Source: UNDP calculations using data from Solt (2009).



3.2c. Trends by income status

Inequality trends were also not uniform for countries when classified according to income status.⁴ As mentioned earlier, the group of high-income countries had a 9 percent increase in inequality. At the same time, income inequality increased by 12 percent for the low-income and the lower-middle-income groups of countries. The only income status group that showed a decline in the level of income inequality was the group of the upper-middle-income countries (a decline of 7 percent) (Table 3.4).

Table 3.4. Gini index of household income inequality by income status (early 1990s and late 2000s)

Income status group	No. of countries	Gini index early 1990s	Gini index late 2000s	Percentage change
Low income	33	36.0	39.9	12%
Lower-middle income	47	41.1	43.9	12%
Upper-middle income	12	53.4	49.7	-7%
High income	24	41.9	45.7	9%
All	116	39.0	42.1	10%

Source: UNDP calculations using data from Solt (2009).

However, these group averages mask a more interesting story. During the period under study, the world has seen important changes in the income status of many low- and middle-income countries. Some low- and middle-income countries grew at a much faster rate than other countries and were therefore able to move to higher-income status groups. Table 3.5 looks at the change in inequality for the groups of countries that moved to a different income status from the early 1990s to the late 2000s.

Table 3.5. Changes in income status groups and income inequality (early 1990s to late 2000s)

Income group in the early 1990s	Change in income group by the late 2000s	No. of countries	Gini index early 1990s	Gini index late 2000s	Percent change
Low income	No change	27	36.4	38.6	8%
	Moved to lower-middle	6	35.5	41.5	17%
Lower-middle income	No change	24	44.5	41.3	-3%
	Moved to upper-middle	17	39.2	47.1	25%
	Moved to high income	3	32.7	39.5	21%
	Moved to low income	3	37.5	42.3	22%
Upper-middle income	No change	7	54.4	50.3	-7%
	Moved to high income	5	43.7	43.9	1%
High income	No change	24	41.9	45.7	9%

Source: UNDP calculations using data from Solt (2009).



An important observation from Table 3.5 is that developing countries that moved to higher income classifications, irrespective of initial income level, experienced larger increases in inequality than countries that stayed in the same income group.

For example, in the low-income group, the average Gini index increased by 8 percent for countries that remained in that group, but increased by 17 percent for countries that moved up to the lower-middle income group. The sharpest contrast can be observed in the lower-middle income group of countries: countries that stayed in that group had a modest decline of 3 percent in income inequality, while the group of countries that moved up witnessed an increase in the Gini index of well over 20 percent.⁵ Similarly, in the upper-middle income group of countries, countries that remained in this group showed a decline of 7 percent in income inequality, while those that moved up to high income status showed an increase of 1 percent.

Inequality increased on average in all the major income groups that underwent fast growth during the past two decades. This phenomenon is interesting, as it can give insights to how dynamics of growth and structural change interact with inequality. This important observation will be further elaborated when discussing drivers of inequality below.

3.2d. Reversals in trends in income inequality

The trajectories of income inequality were not necessarily linear during the last three decades, as can be observed when breaking down this time horizon into two periods. Table 6 looks at the number of countries with rising and falling inequality between the 1980s and 1990s versus the number of countries with rising and falling inequality during the 2000s.

Table 3.6. Number of countries with falling and rising inequality (1980-1999 and 2000-2010)

Direction in 2000s	Direction in 1980s/1990s			
	Falling inequality	No change	Rising inequality	Total
Falling inequality	15	4	23	42
No change		1	4	5
Rising inequality	15		23	38
Total	30	5	50	85

Source: UNDP calculations using data from Solt (2009).

The 2000s witnessed some interesting changes in inequality trends, with more countries experiencing falling inequality than during the 1980s and 1990s. Out of 85 countries, 30 countries had falling inequality during the 1980s and 1990s. By the 2000s, this number had risen to 42 countries.⁶ The reverse is true for countries that experienced stable or rising inequality. Prior to 2000, about 65 percent of the countries with reliable data showed stable or increasing income inequality, while, after 2000, this number drops to 51 percent. Despite this reversal in trend, the majority of the world’s population is still living in countries with stable or increasing inequality, because, in populous countries like India and China, inequality is rising.



Data also show trend reversals at the level of individual countries. For example, of the 50 countries with rising inequality in the 1980s and 1990s, the levels of inequality fell in the 2000s for 23 countries. However, of the 30 countries with falling inequality in the 1980s and 1990s, 15 countries started to see increases in the levels of income inequality in the 2000s (Table 3.6).

Table 3.7 shows that, in most regions, more countries experienced falling inequality in the 2000s than in the 1980s and 1990s. For example, in the 2000s, 12 countries in Latin America and the Caribbean had falling inequality (compared to only six in the 1980s and 1990s) and five countries in Eastern Europe and the ECIS had falling inequality (compared to just two in the 1980s and 1990s). The only exception to this trend is the Asia and the Pacific region, where there were fewer countries with falling inequality in the 1980s and 1990s than in the 2000s.

Table 3.7. Number of countries with rising and falling inequality by income status and region (1980-1999 and 2000-2010)

	High income	Low & middle income					
	All	Africa	Arab States	A&P	ECIS	LAC	Total
1980–1999							
Rising inequality	22	2	1	3	14	8	50
No change ⁷		3	1			1	5
Falling inequality	7	5	3	7	2	6	30
Total	29	10	5	10	16	15	85
2000–2010							
Rising inequality	14	3	1	6	11	3	38
No change	4		1				5
Falling inequality	11	7	3	4	5	12	42
Total	29	10	5	10	16	15	85

Source: UNDP calculations using data from Solt (2009).

The above-mentioned findings are consistent with the analysis of global inequality trends carried out by Cornia and Marorano (2012). They observe that the 1980s and 1990s were characterized by a dominance of increases in within-country income inequality in all regions except the Middle East and North Africa, while, from 2000 to 2010, they observe a bifurcation in inequality trends. They note a marked and unanticipated decline in income inequality in practically all of Latin America and in parts of sub-Saharan Africa and South-East Asia. However, inequality continued its upward trend — if at a slower pace — in most OECD countries, in the European and Asian transition economies, in South Asia and in the Middle East and North Africa. They note that the year of inflection of the Gini trend varied somewhat as a result of region-specific circumstances. In particular, the majority of countries of the South-East Asian and Asian economies in transition (Cambodia, China, and Viet Nam) experienced a steady inequality rise in both sub-periods. In contrast, after a rapid surge between 1990 and 1998, the countries of Eastern Europe and the former Soviet Union recorded an average modest decline in the Gini index during the years 1998–2003. This decline, however, was followed in subsequent years by a further income polarization. Cornia and Marorano observe that, in sub-Saharan Africa,



income inequality started falling in most of the 21 countries with sufficient data (of a total of 44 countries) since 1995, while, in Latin America, the inequality decline began in 2002–2003 following the end of the 2001 ‘dotcom’ and Argentinean crises of 2001–2002, both of which affected the entire region.

This overview of global and regional trends shows an average increase in household income inequality in high-income and low- and middle-income countries, including a number of large developing economies (such as China, India and Indonesia). Moreover, countries that experienced fast growth had, on balance, more acute increases in inequality than other countries. This raises some interesting questions about the patterns of growth during the period and how they might have impacted income distribution.

However, rising inequality does not seem to be an inevitable outcome of growth. Despite continued growth in the 2000s, some countries were able to reverse the direction of change in inequality and started to witness falling income inequality (Brazil, for example). An investigation of drivers of income inequality has to consider the exogenous or global drivers that influence the pattern of growth and structural transformation and endogenous drivers of inequality that are subject to influence by national policies.

3.3. Drivers of income inequality

3.3a. Types of income distribution

Household income distribution

The analysis of the trends in income inequality was focused on the distribution of income between households in an economy. One can interpret household income distribution in three ways (van der Hoeven, 2011):

- *Primary income distribution*: the distribution of household incomes consisting of the (sometimes cumulated) different factor incomes in each household before taxes and subsidies as determined by markets and market institutions
- *Secondary income distribution*: the distribution of household incomes after deduction of taxes and inclusion of transfer payments (i.e., as determined by fiscal policies)
- *Tertiary income distribution*: the distribution of household incomes when imputed benefits from public expenditure are added to household income after taxes and subsidies. This interpretation of household income is particularly relevant for developing, emerging and developed countries, as different government services are often provided for free or below market prices.

Most policy discussions on inequality focus on secondary household income distribution (take-home pay, rents interest earnings and profits after taxes).

Daudey and Garcia-Penalosa (2007) argue that the distribution of personal or household income depends on three factors: the distribution of labour endowments, the distribution of capital endowments, and the way in which aggregate output is shared between the two production factors. They further note that, if the distribution of capital is more unequal than that of labour, an increase in the labour share of total income would reduce personal income inequality. They find on the basis of cross-country and panel data that the shares of capital and labour in national income vary substantially over time and across countries.⁸ Moreover, their article shows that the factor distribution of income is an essential and statistically significant determinant of the personal distribution



of income:⁹ a larger labour share is associated with a lower Gini index of personal incomes (for example, an increase in the labour share in Mexico to that in the United States would reduce the Gini index of the former by between two and five points). It is therefore important to also consider the functional distribution of income.

Functional distribution of income

The classical economists were especially concerned with the distribution of income between labour and capital: *the functional income distribution*. In effect, functional income distribution was at the centre of the debates on growth and distribution for many years. After a period during which the issue of functional distribution was left somewhat at the margins of the economic debate, renewed attention has been given in recent years to the relation between functional distribution and household income inequality.¹⁰ The focus on functional inequality points to the importance of better understanding the changing position of labour in the production process in order to correctly interpret inequality trends, as labour has been losing ground relative to capital over the past 20 years (ILO, 2011). Furthermore, experience has shown that it is not possible to reduce primary inequality without addressing how incomes are generated in the production process and how this affects functional inequality (van der Hoeven, 2011).

Atkinson (2009) argues that there are at least three reasons to pay greater attention to functional income distribution:

- To link incomes at the macroeconomic level (national accounts) and incomes at the level of the household
- To help understand inequality in the personal distribution of income
- To address the social justice concerns with the fairness of different returns to different sources of income

Experience has shown that it is not possible to reduce primary inequality without addressing how incomes are generated in the production process and how this affects functional inequality.

Glyn (2009) furthermore argues that functional income distribution matters to people for at least two reasons. First, despite broader access to capital among households, wealth and especially high-yielding wealth is still extremely unevenly distributed (see section 3.4) and therefore redistribution from labour to property still has a significant effect in raising household income inequality. Second, the fact that profits may be rising much faster than wages conflicts with widely held views of social justice and fairness. However, in the post-World War II period, less attention was given to the functional distribution of income¹¹ and attention shifted to personal income or *household income distribution*.

It is therefore important to be more explicit about the drivers of functional income distribution as well as the drivers of primary, secondary and tertiary income distribution and the relation between the different types of inequality.

3.3b. Relation between various drivers and different types of income inequality

Many drivers affect income distribution. One can distinguish between drivers that are largely exogenous (i.e., outside the purview of domestic policy) and ones that are endogenous (i.e., mainly determined by domestic policy). However, a clear line is difficult to draw because even drivers that may look at first sight exogenous or autonomous are often the outcome of policy decisions in the past or the outcome of a political



decision to create certain institutions (for example, the creation of the World Trade Organization to establish trade liberalization or the decision to invest in technical progress). Moreover, with increased globalization, exogenous drivers gain in importance. As a consequence, more is expected from national policy drivers to counteract the effect of the more exogenous drivers. Table 3.8 shows the interactions between the major drivers and the various types of income distribution.

Table 3.8. Main drivers and various types of income distribution

Drivers	Distribution type				
	Functional distribution	Wage distribution	Primary household income distribution	Secondary household income distribution	Tertiary household income distribution
Exogenous drivers					
1. Trade globalization	X	X	X		
2. Financial globalization	X	X	X		
3. Technical change	X	X	X		
Endogenous drivers					
4. Macroeconomic policies	X	X	X		
5. Labour market policies	X	X	X	X ¹²	
6. Wealth inequality	X	X	X		
7. Fiscal policies: taxation and transfers	X		X	X	X
8. Fiscal policies: government expenditure					X

The upper left quadrant of Table 3.8 illustrates the relation between drivers that can be attributed to globalization (and are therefore exogenous by the above definition) and the functional income distribution (including wage distribution). The upper right quadrant gives the relation between drivers related to globalization and the various types of household income distribution. The lower left quadrant gives the relations between endogenous drivers (i.e., drivers that are mainly resulting from domestic policy) and the functional income distribution. The lower right quadrant gives the interactions between endogenous drivers and the various forms of household income distribution.

3.3c. Exogenous drivers of income inequality: globalization

Many aspects of globalization can be seen as drivers of income inequality, especially with respect to the functional and primary distribution of income. Traditionally, most attention has been given to the effects of trade and trade openness on income inequality, but, more recently, global finance and technical change (particularly in relation to its effect on wage differentials) have also been the focus of much attention. The impact of these globalization drivers on income inequality in many countries depends also on national macroeconomic and labour market policies, which can either counteract or intensify their effects. Before presenting empirical evidence on how globalization drives inequality, this section discusses some more theoretical aspects of how trade, financialization and technical change affect income inequality.



Trade globalization

The leading framework for understanding the possible link between trade and inequality until the 1990s was the Heckscher-Ohlin model. This model predicts that countries export goods that use intensively the factor with which they are most abundantly supplied and that trade therefore increases the real return to the factor that is relatively abundant in each country, lowering the real return to the other factor. According to the Heckscher-Ohlin model, inequality in developing countries that are well endowed with unskilled labour should have declined with trade as the real returns to unskilled labour rises (Harrison, McLaren and McMillan, 2011). However, this is contradicted by evidence of rising inequality in developing countries during rapid globalization. An additional problem for the Heckscher-Ohlin theory has been widespread evidence of within-industry increases in demand for skilled workers (UNCTAD, 2012).

An alternative — and currently more credited — framework to explain the relation between globalization and inequality trends looks at how technological change increased the demand of skilled workers (Harrison et al., 2011). Other factors that have been cited by economists include: changes in labour market institutions leading to the weakening of labour collective action platforms, such as unions and the declining real value of minimum wages; differential access to schooling; and immigration. Most labour and trade economists were skeptical of assigning too much importance to trade-based explanations for the increase in inequality (Freeman, 2004).

New theoretical developments focusing on heterogeneous firms and bargaining, trade in tasks, labour market frictions and incomplete contracts provide better insights into the effects of trade on income and wage inequality and can better explain how trade could contribute to rising within-industry inequality as well as rising inequality in countries at all income levels (Harrison et al., 2011). They mention rising skill premia across countries as a result of North-South trade in tasks and even as a result of North-North trade in goods due to research and development effects or the skill bias of the transport sector. Other models go beyond the skill premia to analyse the effect of trade on the middle class and distinguish between wage inequality and inequality in lifetime consumption through explicitly dynamic models of labour adjustment. The effects of trade on inequality among observationally identical workers (i.e., those doing the same job in the same industry) are also explored through heterogeneous-firms models or implicit-contracts models.

In short, the assumptions of simple models of trade and distribution do not do justice to the complex relations between trade and inequality. It is fair to say instead that the way in which trade triggers gains and losses among factors of production and classes of workers depends to a large extent also on the specific institutional and social features of each country.

In addition to changes in the total number of jobs, other trade-related effects with a bearing on income inequality include shifts in labour towards more (or less) productive activities or even away from formal employment towards informality or unemployment. UNCTAD (2012) notes that, in the group of developing countries in Asia, and most notably in China, labour has moved from low-productivity (often rural) jobs towards higher productivity jobs, especially in manufacturing. At the same time, labour in Latin America and sub-Saharan Africa has moved in the opposite direction (i.e., from high-productivity jobs in manufacturing towards lower-productivity jobs) towards informal services and the production of primary commodities (McMillan and Rodrik, 2011). Taking this broader perspective enables a better understanding of the structural transformations that give rise to intersectoral factor movements and sector-specific productivity shifts. Other



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factors that need to be taken into account when assessing trade effects on inequality are external shocks and macroeconomic and exchange rate policies (UNCTAD, 2012).

Financial globalization

One explanation for the fact that inequality in developing countries increased despite expectations of declining inequality according to the Heckscher-Ohlin model, is that trade openness was often combined with capital openness (financial liberalization). According to Taylor (2004), the opening of the capital account, without compensating national measures, caused the real exchange rate to rise in many countries. This, in turn, shifted aggregate demand towards imports and led to a restructuring of production, thus reducing the absorption of unskilled labour, increasing informalization and raising wage inequality.

The opening of the capital account is only one of the many (interrelated) aspects of a global process, often called financialization, which also includes various forms of financial deregulation. Developing countries have been especially vulnerable to financial volatility (Ghosh, 2011). For instance, financial deregulation in some countries, notably the United States, has had a destabilizing effect on developing countries that otherwise had a fairly prudent financial management framework. The reason is that international capital flows largely respond to the 'manics' and 'panics' of financial markets in addition to economic fundamentals (Freeman, 2010).

Financialization has had two important effects on the bargaining position of labour. First, as a result of financialization, firms have gained more options for investing: they can invest in financial assets as well as in real assets and they can invest at home as well as abroad. They have gained mobility in terms of the geographical location as well as in terms of the content of investment. Second, financialization has empowered shareholders relative to workers by putting additional constraints on firms to create immediate profits while the development of a market for corporate control has aligned management's interest to that of shareholders (Stockhammer, 2013). ILO (2008) observes that "financial globalization has led to a depression of the share of wages in GDP".

Freeman (2010) argues that deregulating finance was based on theory and ideology and that evidence that an unbridled global capital market would improve economic outcomes was non-existent. Comparing the performance of countries with differing degrees of integration to the global capital market over time, Kose, Prasad, Rogoff and Wei (2006) found little evidence that the financial liberalization in fact improved economic performance. Prasad, Rajan and Subramanian (2007) conclude that "greater caution toward certain forms of foreign capital inflows might be warranted" (2007: 32). Van der Hoeven and Luebker (2007) argue furthermore that financialization has increased macroeconomic instability in many developing countries, with a more than proportional negative effect on the income of poorer workers and a consequent worsening of functional and primary income inequality.

Technical Change

Technological change influences the distribution of income through its effect on different factors of production. If technological change results in greater demand for skilled labour (more educated or more experienced) rather than for unskilled labour by increasing its relative productivity, the skill premium — the ratio of skilled to unskilled wages — might increase, driving at the same time an increase in income inequality (unless compensating measures are taken). Technological change also affects the functional distribution of income by raising the productivity of and returns to capital relative to labour. Primary income inequality



might therefore increase as capital incomes are less equally distributed and accrue to the upper income deciles of households.

A declining labour income share means that the growth of wage rates lags behind growth of labour productivity (possibly because of the presence of a large pool of rural surplus labour typical of many developing countries). The pool of surplus labour weakens the bargaining power of labour and depresses wages in the nonagricultural sectors, contributing to declines in the labour income share when globalization and market-oriented reform lead to rapid growth (ADB, 2012).

However, it would be wrong to focus on the skill premium in isolation, as there may well be a race between 1) technological progress, which tends to increase the demand for skilled labour, thereby raising more than proportionally the wages of the skilled labour, and 2) educational attainment, which increases the supply of skilled labour, thereby depressing the wages of skilled labour (Tinbergen, 1975). Goldin and Katz (2008) argue that, following a long period of relatively stable technological progress, rapid progress in information technology and the widespread use of computers in the workplace accelerated the rate of technological change in the 1980s and 1990s. The resulting increase in the demand for skilled labour outpaced educational advances in developed and developing countries alike, causing increases in wage inequality (UNCTAD, 2012). But the theory of a race between technological progress and supply of education rests on two premises, which may not be always fulfilled. The first is the assumption that the education system can indeed provide the new skills required by technological change. The second is that the labour market will cause an excess supply of skilled workers to bring their wages down. In many countries, though, highly paid interest groups can neutralize downward pressure on their wages arising from labour market dynamics.

Technological change also affects the functional distribution of income by raising the productivity of and returns to capital relative to labour. Primary income inequality might therefore increase as capital incomes are less equally distributed and accrue to the upper income deciles of households.

Concerns about inequality in developing and transition economies often focus on distributional effects stemming from changing production structures. Such effects are likely to be larger in developing than in developed countries because productivity gaps between different economic sectors, as well as among enterprises within the same sector, tend to be much larger in developing countries (McMillan and Rodrik, 2011).

Empirical Evidence

So far, this section has delineated three major drivers of income inequality that influence functional and primary income distribution: trade globalization, financial globalization and technical change. Although one can theoretically analyse these drivers separately, it is more difficult to do so empirically, as these drivers do not always operate independently. For example, trade openness often takes place in a context of capital account openness and increasing trade and foreign direct investment influences technical change. The empirical analysis therefore looks at the drivers of income inequality in conjunction.

Contrary to neo-classical conventional wisdom, which sees the labour share in GDP as relatively constant, Diwan (1999) and Harrison (2002) argue that the proportion of GDP that goes into wages and other labour income is variable over time. Moreover, the evidence on the functional distribution of income over the past two decades indicates a shift of distribution in favour of capital, i.e., the share of labour in total GDP declined.



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Harrison (2002) shows that, in the group of poorer countries, labour's share in national income fell on average by 0.1 percentage points per year from 1960 to 1993. The decline in the labour share accelerated after 1993 to an average decline of 0.3 percentage points per year. In the richer subgroup, the labour share grew by 0.2 percentage points before 1993, but then fell rapidly by 0.4 percentage points per year.

A number of factors can explain the change in labour shares. Harrison (2002) found that changes in factor shares are primarily linked to changes in capital/labour ratios in production. However, measures of globalization (such as capital controls or direct investment flows) also play a role. Exchange rate crises lead to declining labour shares, suggesting that labour pays a disproportionately high price when there are large swings in exchange rates (i.e., wages are more severely affected than GDP). Capital controls, in contrast, are associated with an increase in the labour share, an effect that Harrison attributes to the weaker bargaining position of capital vis-à-vis labour if the cost of relocating production increases with capital controls. Lee and Jayadev (2005) explore whether the weak bargaining position of labour under open capital accounts is also a causal mechanism for the decline in labour shares. They found that financial openness exerted a downward pressure on the labour share in developed and developing countries from 1973 to 1995.

The overall decline in the labour share is partly explained by what van der Hoeven and Saget (2004) call the "ratchet effect": after an economic shock or a financial crisis, the labour share in gross national income decreases, but then increases at a slower pace than GDP in the phase of recovery. Some authors argue that the decline in labour share after economic shocks in the 1990s was, in effect, the consequence of an excessive labour share before the crisis; they thus partly blame labour for the build-up of the crisis. However, only in a minority of cases were financial crises in the 1990s caused by bidding up wages and labour shares. In most cases, the crisis was caused by external events or rent-seeking behaviour of capital owners. In a study of the manufacturing sector in a large sample of developing countries, Amsden and van der Hoeven (1996) argue that a decline in real wages and a fall in the wage share of value added in most non-Asian developing countries in the 1980s and the 1990s reflect a redistribution of income from labour to capital, as low wages were made to bear the burden of uncompetitive manufacturers.

Trade openness also played a role in the changes in labour shares. Harrison (2002) finds that increasing trade is associated with a fall in the labour share. This result is robust across various specifications of the regression analysis. These results point to a systematic negative relationship between various measures of globalization and the labour share. Similarly, Vos (2007) argues that it is also clear that trade liberalization is no panacea for poverty reduction. Average welfare gains are mostly small and, in many instances, have been inequality-enhancing.

Daudey and Garcia-Penalosa (2007) indicate a new potential trade-off between growth and equality. In order to attract foreign investment and promote growth, developing countries have tended to foster policies that are favourable to capital and that increase its return, but that also carry a substantial cost in terms of inequality. This means not only that governments should carefully assess the desirability of such policies, but also that external shocks that tend to reduce the labour share may call for corrective policies in order to offset their distributional implications.

The decline in labour shares is not limited to specific sectors, but is an economy-wide phenomenon. Rodriguez and Yayadev (2010) investigate by means of a large panel dataset for 135 countries whether the secular decline in labour shares is due to the decline of the labour share in particular sectors or whether the decline in labour share is economy-wide. By matching national economy-wide results with results for the labour share at the three-digit industry level, they conclude that the decline in labour shares is driven primarily by decreases

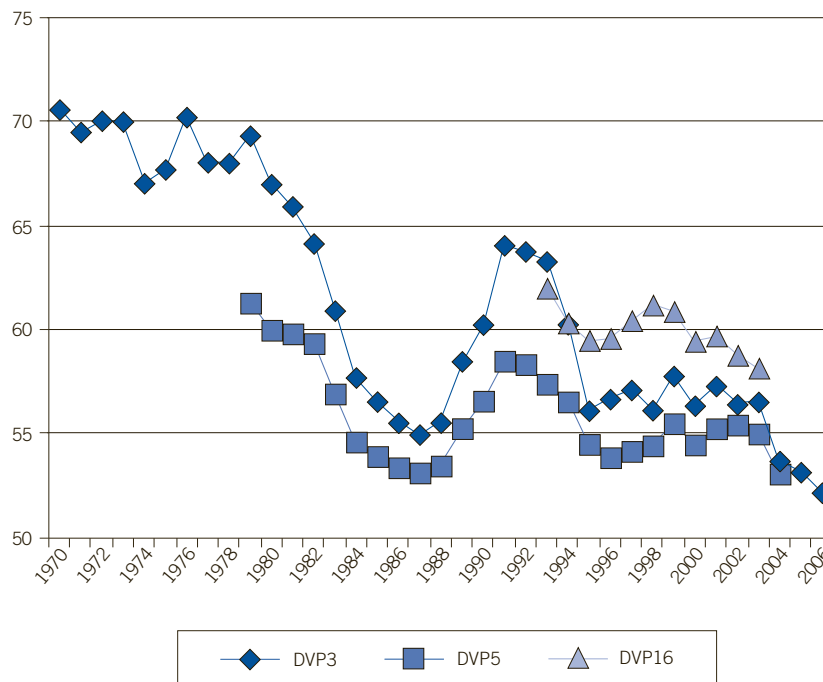


in intra-sector labour shares opposed to movements in activity towards sectors with lower labour shares. This important conclusion implies that the decline in labour shares is driven by economy-wide phenomena and, therefore, national policies rather than industry specific policies are needed to reverse it.

The downward trend of the labour income share is even more pronounced in many emerging and developing countries, with considerable declines in Asia and North Africa and more stable but still declining wage shares in Latin America (ILO, 2011). However, these trends have not been uniform across workers with different skills and levels of education.

The International Labour Organization (2013) and Stockhammer (2013) have used an enlarged panel dataset encompassing developed, developing and emerging countries to investigate the drivers of declining wage shares. They observe that the simple average of labour shares in 16 developed countries for which data are available from 1970 to 2010 declined from about 75 percent of national income in the mid-1970s to about 65 percent in the years just before the global economic and financial crisis. The average of labour shares in a group of 16 developing and emerging economies also declined from around 62 percent of GDP in the early 1990s to 58 percent just before the crisis (Figure 3.2). Even in China, a country where wages roughly tripled over the last decade, GDP increased at a faster rate than the total wage bill — and hence the labour income share went down (Figure 3.3).

Figure 3.2. Adjusted labour income shares in developing and emerging economies, 1970-2000



Note: DVP3 = unweighed average of Mexico, Republic of Korea and Turkey; DVP5 = unweighed average of China, Kenya, Mexico, Republic of Korea and Turkey; DVP16 = unweighed average of Argentina, Brazil, Chile, China, Costa Rica, Kenya, Mexico, Namibia, Oman, Panama, Peru, Republic of Korea, the Russian Federation, South Africa, Thailand and Turkey.

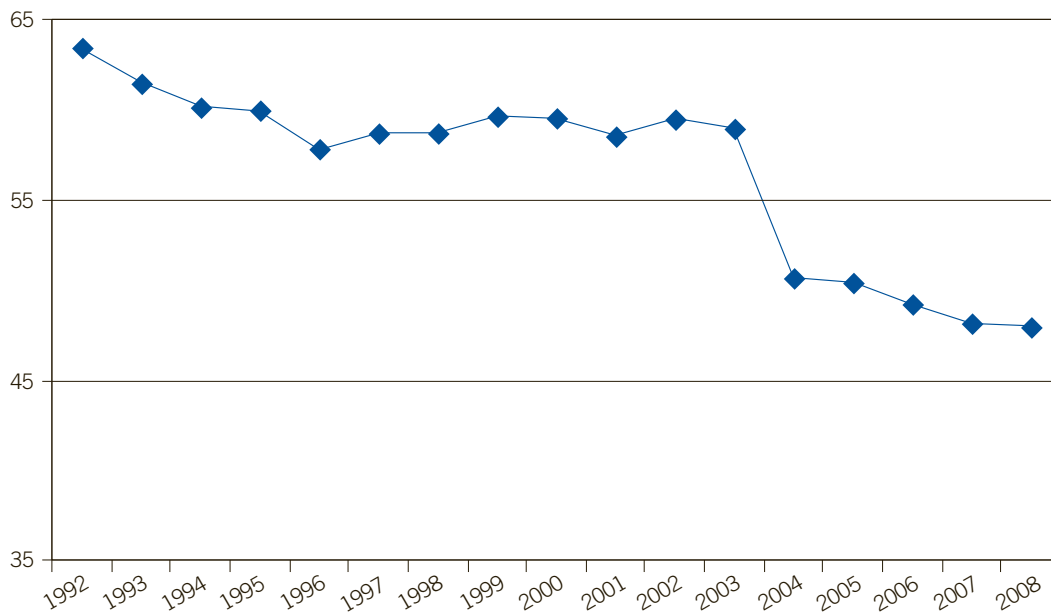
Source: ILO (2013: Fig. 32, p. 44), Stockhammer (2013: Fig 2, p. 2).



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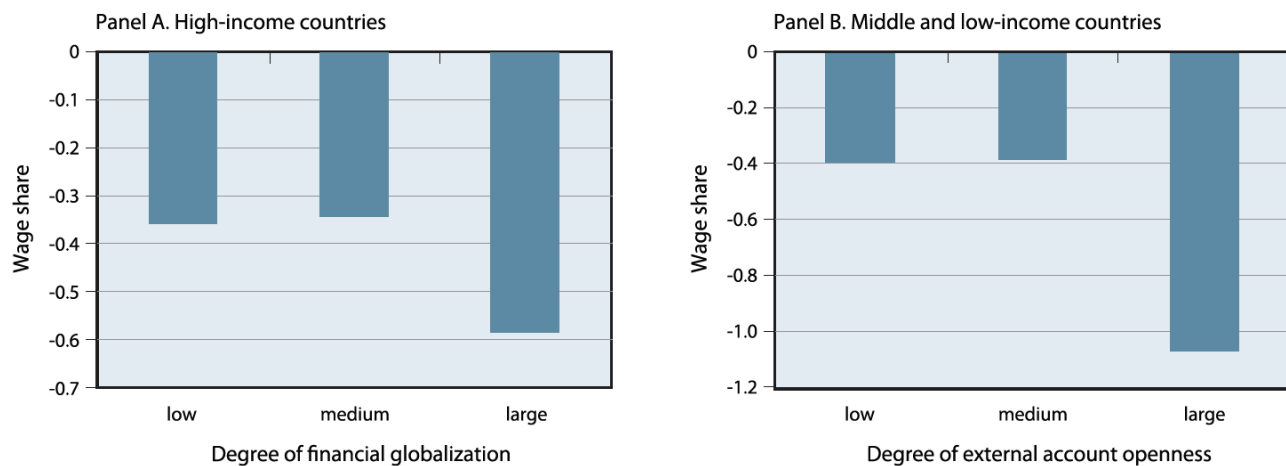
A number of studies from the ILO also analysed the different drivers behind the decline in labour shares. The ILO (2011) investigates the effects of financialization on the wage share in developed and developing countries reporting a consistently negative relationship between financialization and wage shares across the majority

Figure 3.3. Unadjusted labour income share in China, 1992–2008



Source ILO (2013: Fig. 33, p. 45).

Figure 3.4. Financialization and changes in the wage share, 1985 to 2005 (Average annual growth, in percent)



Note: Panel A: Financial globalization: sum of foreign assets and liabilities. Panel B: Financial globalization: degree of capital account openness.

Source: ILO (2011: Fig. 3.3, p. 60).



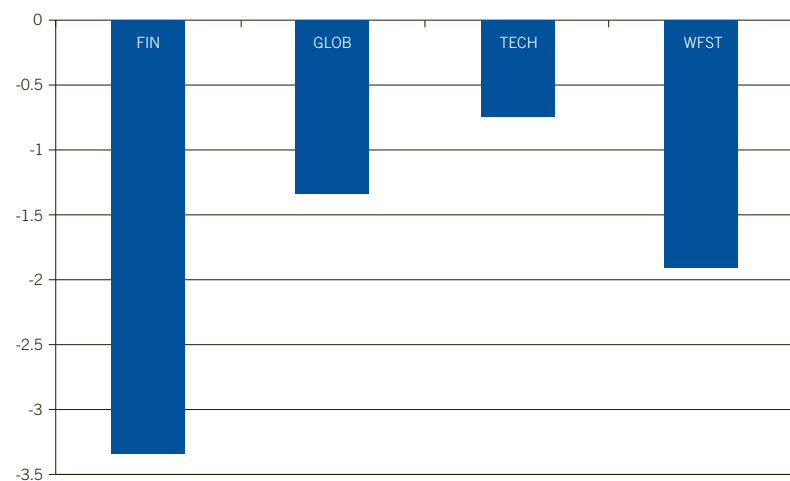
of high-income countries (Figure 3.4, panel A). Similarly, in middle- and low-income countries, a higher degree of capital account openness is associated with a larger decline in the wage share (Figure 3.4, panel B). More detailed regression estimates (ILO, 2011) show that capital account openness and currency devaluation are significantly associated with a wage share decline in Eastern Europe and Latin America, partly as a result of significant swings in capital flows and the consequent boom–bust cycles. These results confirm Diwan’s earlier observation (2001) that currency crises are associated with sharp declines in the wage share, reiterating that the cost of financial instability has fallen disproportionately on labour.

More recent analysis (Stockhammer, 2013; ILO, 2013) investigates welfare state enhancement and labour market institutions in addition to financialization, globalization and technical change as drivers of income inequality. As the authors admit, quantifying these drivers is not easy and, in some cases, crude estimates had to be made. Technical change is, for example, measured by GDP per worker and share of agriculture and industry in GDP, globalization by the quotas of exports and imports in GDP, welfare state by government consumption, and financial globalization by an index constructed by the IMF (Abiad, Detragiache and Tressel, 2008).¹³

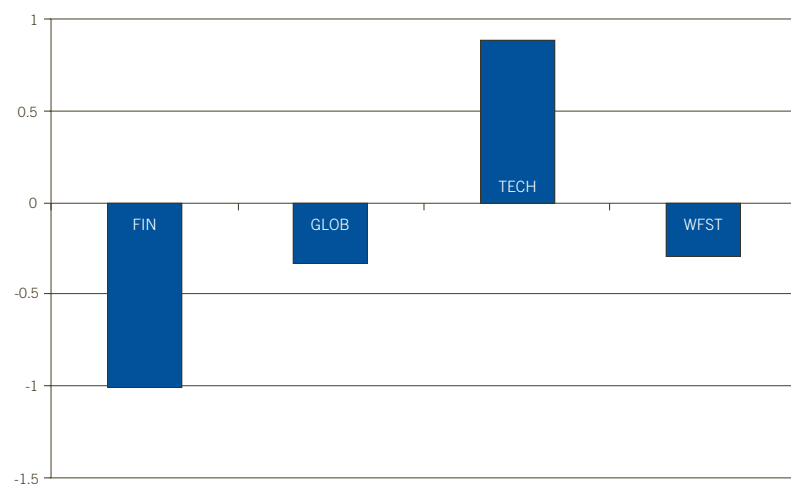
Bearing these limitations in mind, Figure 3.5a shows that, in the case of developed economies, all factors contributed to the fall in the labour income share over time, with financialization playing the largest role. The estimates mean that, in terms of relative contribution, financialization contributes to 46 percent of the fall in labour income shares, compared to

Figure 3.5. Decomposing changes in the average adjusted labour income share between the periods 1990–1994 and 2000–2004 in developed (a) and developing countries (b)

(a) Developed economies



(b) Developing countries



Note: FIN: Financialization, GLOB: Globalization, TECH: Technology, WFST: Welfare state measures and labour market Institutions.

Sources: ILO (2013: Fig. 38, p. 52), Stockhammer (2013: Fig. 7, p. 33; Fig. 9, p. 4).



the 19 percent of trade globalization and the 10 percent of technology. In addition, 25 percent of the decline in labour share is due to downward changes in two broad institutional variables: government consumption and union density.

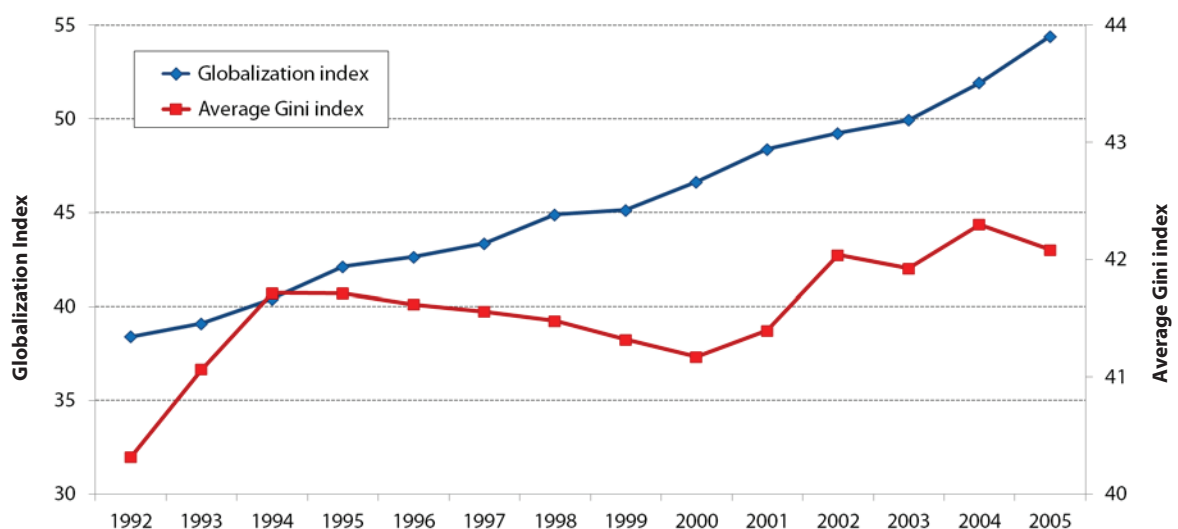
In the case of developing economies (Figure 3.5b), a positive impact of technology on the labour share can be observed, which the ILO (2013) explained as a “catching up” effect of economic growth, with a tightening of labour markets and the draining of excess labour supply. This technology effect partly offsets the adverse effects of financialization, globalization and the shrinking of the welfare state in developing countries. Nevertheless, as was the case for developed economies, financialization stands as the single most adverse factor in terms of explaining the decline of labour income shares. In addition to these variables, the ILO (2013) observes that increases in unemployment also have a strong negative impact on the labour share, mainly as a result of downward pressure on wages and the weakening of workers’ bargaining position.

Empirical evidence also shows how several exogenous drivers such as financialization and globalization have resulted in higher primary household income inequality.

In Figure 3.6, the Gini index of household income is plotted against the globalization index.¹⁴ The globalization index¹⁵ is the most widely based index of globalization, as it combines the major *de facto* indicators of globalization (trade, foreign direct investment (FDI) stocks, portfolio investment and income payments to foreign nationals) with various *de jure* indicators (hidden import barriers, the mean tariff rate, taxes on international trade and capital account restrictions).

In a sample of 102 countries (30 of them high-income countries, 72 lower- and middle-income countries), the rise in the Gini index coincided with a similar increase in globalization. For countries in this sample, the

Figure 3.6. Income inequality and globalization across the world, 1992–2005

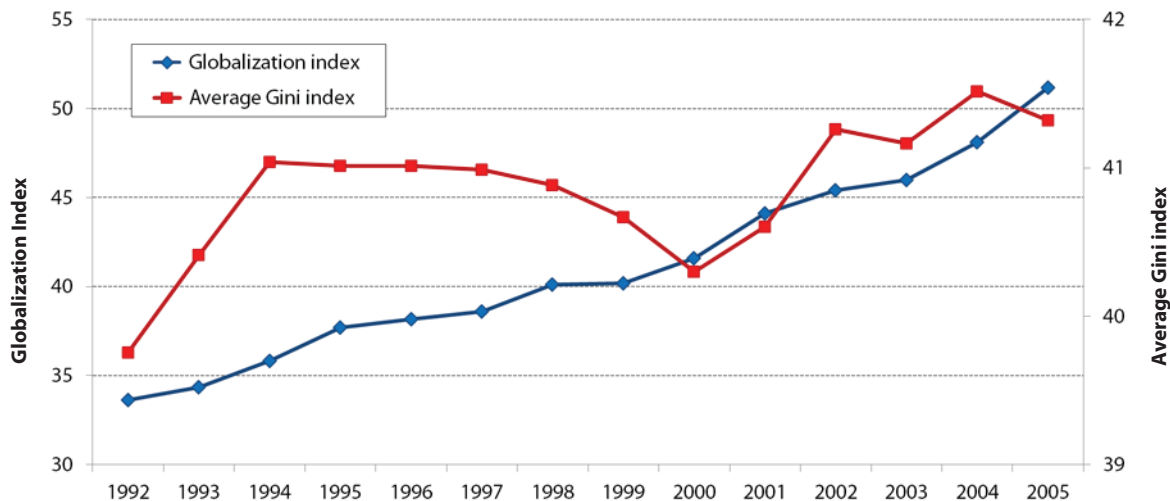


Source: UNDP calculations using data from Solt (2009).



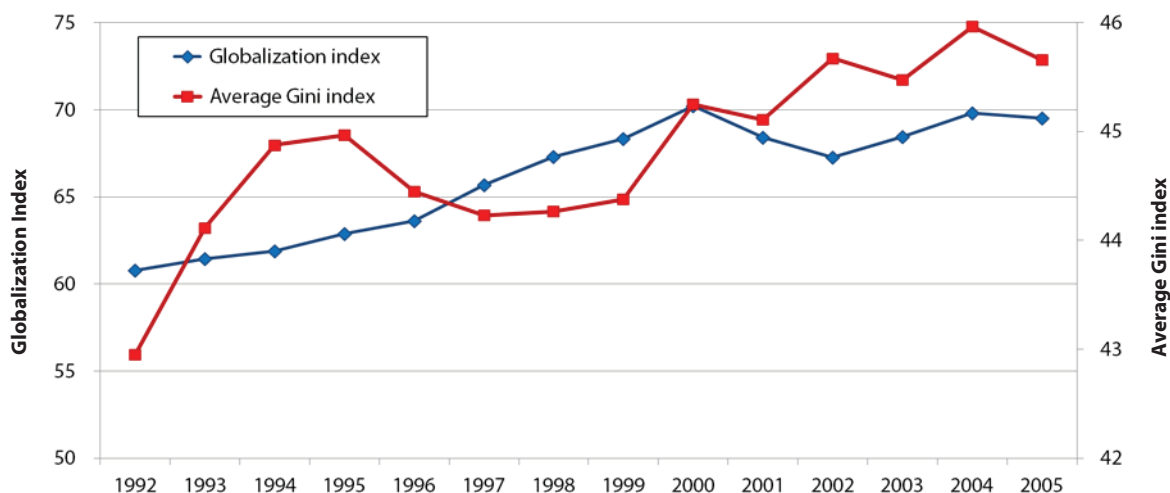
average level of inequality increased by 4 percent during the period, while the index of globalization increased by 42 percent. The correlation between the two measures is above 70 percent.¹⁶ This strong correlation for all countries holds also when high-income (developed) and developing countries are considered separately. The correlations between the two indicators in each group are 68 percent and 67 percent, respectively (see Figure 3.7 and Figure 3.8). But in high-income economies, there is an already high level of globalization at

Figure 3.7. Income inequality and globalization across developing countries, 1992-2005



Source: UNDP calculations using data from Solt (2009).

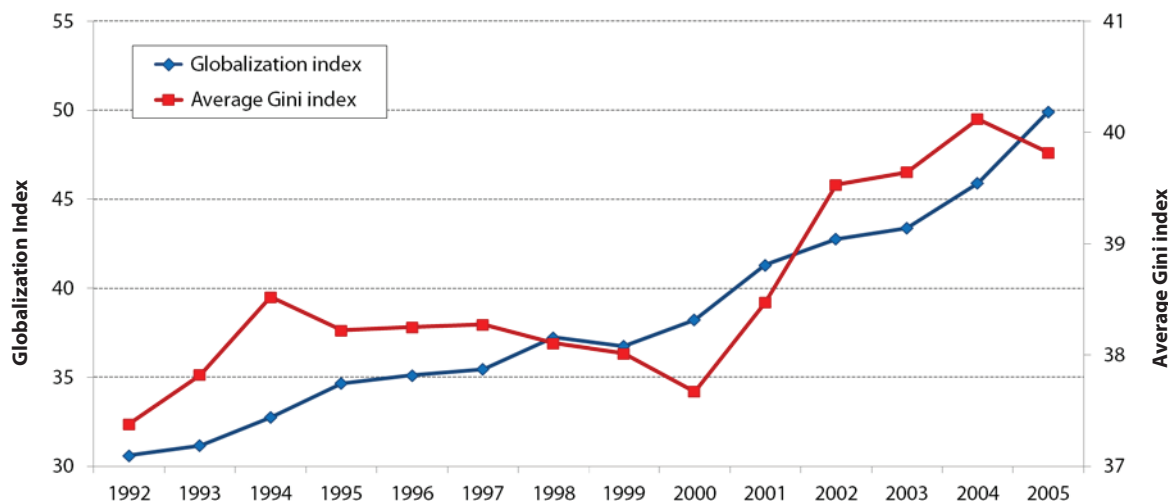
Figure 3.8. Income inequality and globalization in high-income (developed) countries, 1992-2005



Source: UNDP calculations using data from Solt (2009).



Figure 3.9. Income inequality and globalization in the Asia & Pacific region, 1992-2005



Source: UNDP calculations based on Solt (2009).

the beginning of the period, with a slow rise thereafter (from 61 percent in 1992 to 68 percent in 2005), while lower- and middle-income economies start at a much lower level of globalization and have a much steeper rise (from 34 percent in 1992 to 52 percent in 2005).

The strong effect of globalization on rising household income inequality is even more apparent in the case of countries in Asia and the Pacific (Figure 3.9). This region had the steepest rise in the globalization index (from 30 to 41) and the fastest increase in the Gini index of household income inequality (37.0 to 40.0) of all developing regions.

Table 3.9. Average Gini index and globalization index by income status groups

Income status group	Gini index	Globalization index
Low income	39.6	49.2
Lower-middle income	43.5	54.4
Upper-middle income	50.9	60.3

Source: UNDP calculations using data from Solt (2009).

Grouping countries by income status and looking at period averages also gives some quite interesting insights (Table 3.9). Among developing countries, indicators of income inequality and of globalization increase uniformly for each level of income status group.¹⁷ Put differently, upper-middle-income developing countries score higher on inequality and globalization than lower-middle-income countries, and lower-middle-income countries score higher on both measures than low-income countries. Among the subgroups of countries that changed income status classification during the period, the group of countries that graduated from low to



lower-middle and the group that graduated from upper-middle to high income (developed) had a strong positive correlation in the trends of globalization and income inequality.

The analysis of the empirical evidence on the effect of globalization, especially financialization, on income inequality over the past two decades confirms that globalization, especially financialization, is a strong driver of increases in functional and household income inequality.

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3.3d. Endogenous drivers of income inequality

The previous sections discussed the effects of exogenous drivers on the functional and household distribution of income (the north-east and north-west quadrants of Table 3.8). This section discusses the impact of endogenous drivers on the distribution of income.

The discussion of endogenous drivers can be broken into two main groups: drivers that impact mainly the functional and primary distribution of income and drivers that impact directly the secondary and tertiary distribution of income. In the case of the latter group, the analysis is mostly concerned with the role of fiscal policies such as taxation and government spending in shaping the distribution of household income.

Endogenous drivers of functional and primary inequality

Macroeconomic policies address the overall aggregates of the economy: prices, output, employment, investment and savings, government balances and balances on the external account. There are three major policies to manage these macroeconomic aggregates: exchange rate policies, fiscal policies and monetary policies (Ghosh, 2007). Macroeconomic policy in its modern meaning was conceptualized during the 1930s as an answer to the Great Depression and rising unemployment. During the post-World War II years, which were dominated by Keynesian thinking, macroeconomic policies were designed to lead to macroeconomic stability, basically defined as full employment and stable economic growth, accompanied by low inflation and sustainable external accounts. The emphasis on full employment and growth in the post-war years led in most countries to an increase in the wage share and an improving functional income distribution (Ocampo, 2003).

However, since the 1980s, fiscal balance and price stability have moved to centre stage, replacing the Keynesian emphasis on real economic activity. The shift in macroeconomic thinking in many developing countries was mainly driven by the so-called 'Washington Consensus', a wider set of policies aimed at stabilizing economies and forcing structural change through market liberalization in the wake of the debt crises in the 1980s, especially in Latin America and Africa.

The changes in monetary, fiscal and exchange rate policies under the aegis of the Washington Consensus were often (new) drivers for growing inequality (e.g., Cornia, 2004; Taylor, 2004; van der Hoeven and Saget, 2004).

Monetary policy used the interest rate as a policy instrument to curb inflation below the 5 percent guideline set by international financial institutions in developing countries (UNESCAP, 2013). This policy effectively



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induced a recession in developing economies by increasing the cost of capital, thus lowering investment and growth. And, indeed, growth was lower from 1980 to 2000 compared to the period from 1960 to 1980 (Cornia, 2012). Furthermore, these contractionary monetary policies led to a surge in unemployment and, in several cases, even to an increase in informal employment. As companies shed labour and cut wage costs, without a safety net to compensate for the loss of income, functional and household income inequality worsened.

Financial liberalization and high interest rates encouraged large capital inflows, including speculative capital. This led to an appreciation of the Real Effective Exchange Rate, which, in turn, led to a worsening of the trade balance, as exports became more expensive abroad and imports cheaper. While increased capital flows increased demand, the appreciated Real Effective Exchange Rate meant that this demand was satisfied with imports rather than local production, thus depressing growth and employment.

Exchange rate policies adopted during the period to achieve macroeconomic stability had adverse impacts on inequality. In this context, many developing countries were encouraged by international financial institutions to maintain either a fixed nominal exchange rate regime or a free-floating exchange regime (Cornia, 2006). Each of these 'two corner solutions' put developing economies at the risk of currency crises and large currency devaluations. On the one hand, fixed nominal exchange rate regimes are unable to cope with external shocks such as trade shocks and are prone to speculative attacks, thus increasing the risk of a currency crisis. On the other hand, free floats often turn into a 'free fall', given the volatile and pro-cyclical behaviour of capital flows (Reinhart and Rogoff, 2003). Massive currency devaluations and crises that arose from the adoption of these two 'extreme' exchange rate regimes led to rapid declining real wages, often affecting lower wage-earners disproportionately in comparison to other wage-earners, capital owners and land owners (van der Hoeven, 1991).

Capital account openness and the resulting large capital inflows, combined with high interest rates, meant that banks were more likely to lend to high-risk/high-return activities in sectors with lower concentrations of unskilled workers such as finance, insurance and real estate. Conversely, poor households and the small and medium enterprise sector, where most of the poor and unskilled workers are employed, were locked out of the benefits of the expansion in credit markets due to lack of collateral, insufficient profit margin and prohibitive transaction costs (Cornia, 2012). As noted by UNESCAP, this asymmetric distribution of the benefits of finance can "lead to poverty traps, negative effects on social and human development and a rise in inequality" (UNESCAP, 2013: 153).

As a result of the Washington Consensus, fiscal policies abandoned their development and distributional role and became geared towards achieving stabilization. Policies to maintain low budget deficits (or even surpluses) were seen as essential to achieve low inflation. This was achieved through expenditure cuts, with little regard for the composition of those cuts and whether they happened at the expense of public investment in infrastructure or social expenditures (UNESCAP, 2013). This harmed growth and distribution. Public investment in infrastructure diminished, with a negative effect on growth and poverty reduction, while expenditure cuts in social services like health and education worsened tertiary income distribution and reduced the opportunities for social mobility.

In addition to expenditure cuts, governments reduced trade taxes to encourage globalization and income and corporate tax rates to encourage the private sector. The resulting fall in tax revenue in turn led to higher government deficits, which necessitated even further expenditure cuts. Indirect taxes that were introduced to compensate for the loss of tax revenue, such as value added tax (VAT), did not generate enough revenue, but



reduced the progressivity of the taxation system. In summary, the redistributive role of taxation was minimized by reducing the size of tax revenues available for social spending and by making the tax system less progressive. Issues of fiscal policy are discussed in more detail in the following section on the drivers of secondary and tertiary inequality.

In summary, monetary, exchange rate and fiscal policies adopted during the past three decades contributed to increasing inequality by reducing growth, investment and employment. Yet little attention was paid to the distributional impacts of those policies. However, various countries recently have started to apply more development oriented macroeconomic policies, which Cornia (2012) refers to as “new structuralist macroeconomics”. New structuralist macroeconomics, mainly based on experiences in Latin America and Asia, have three main objectives: preventing external and internal crises, maintaining a low inflation rate and budget deficit (or even surplus), and promoting long-term growth and employment while lowering income inequality. New structuralist macroeconomics-oriented policies resulted in a trend reversal of functional and household inequality in a number of Latin American countries during the past decade (Cornia, 2012). (For further discussion on the role of macroeconomic policies in lowering inequality, see chapter 7.)

Monetary, exchange rate and fiscal policies adopted during the past three decades contributed to increasing inequality by reducing growth, investment and employment. Yet little attention was paid to the distributional impacts of those policies.

Various authors argue that labour market policies have been an important driver of inequality (see, for instance, van der Hoeven and Taylor, 2000). In particular, the labour market policies undertaken in the wake of structural adjustment policies as part of the Washington Consensus have increased income inequality in all countries where these policies have been applied (Cornia, 2004; van der Hoeven and Saget, 2004). Especially relevant for income inequality are the labour market policies concerned with the distribution of wages, the gender gap therein and minimum wages

Not only has the share of wages in national income declined as discussed in the section on exogenous drivers and functional inequality, but the distribution of wages themselves has also become more unequal. The distance between the top 10 percent and the bottom 10 percent of wage earners increased from 1995 to 1997 in 23 of 31 countries surveyed, while the proportion of workers with low pay (defined as less than two thirds of the median wage) also increased in 25 of 37 countries (ILO, 2008a). These trends towards growing inequality remain strong even when other income sources, taxation and income transfer are considered (ILO, 2010a). In reviewing levels and trends in education, skills premia and skilled labour force across eight East Asian countries, for example, Gropello and Sakellariou (2010) observe that, while there are increasing proportions of skilled/educated workers over the long run across the region, this is combined with stable or increasing education/skill wage premia. The importance of skills premia as drivers of inequality becomes even stronger in countries where access to post-secondary education is distributed more askew than incomes (Sharma, Inhauste and Feng, 2011).

The Economic Commission for Latin America and the Caribbean (ECLAC, 2010) also reports on an increase in the wage gap in Latin America, which came as a surprise to analysts, who had expected globalization to increase the demand for lower-skilled labour in the region. ECLAC argues that economic reforms did not raise employment or income and did not lead to an increase in work for lower-skilled labour, as demand preferences shifted towards a higher level of education. This was mainly due to the fact that the comparative advantage of many Latin American



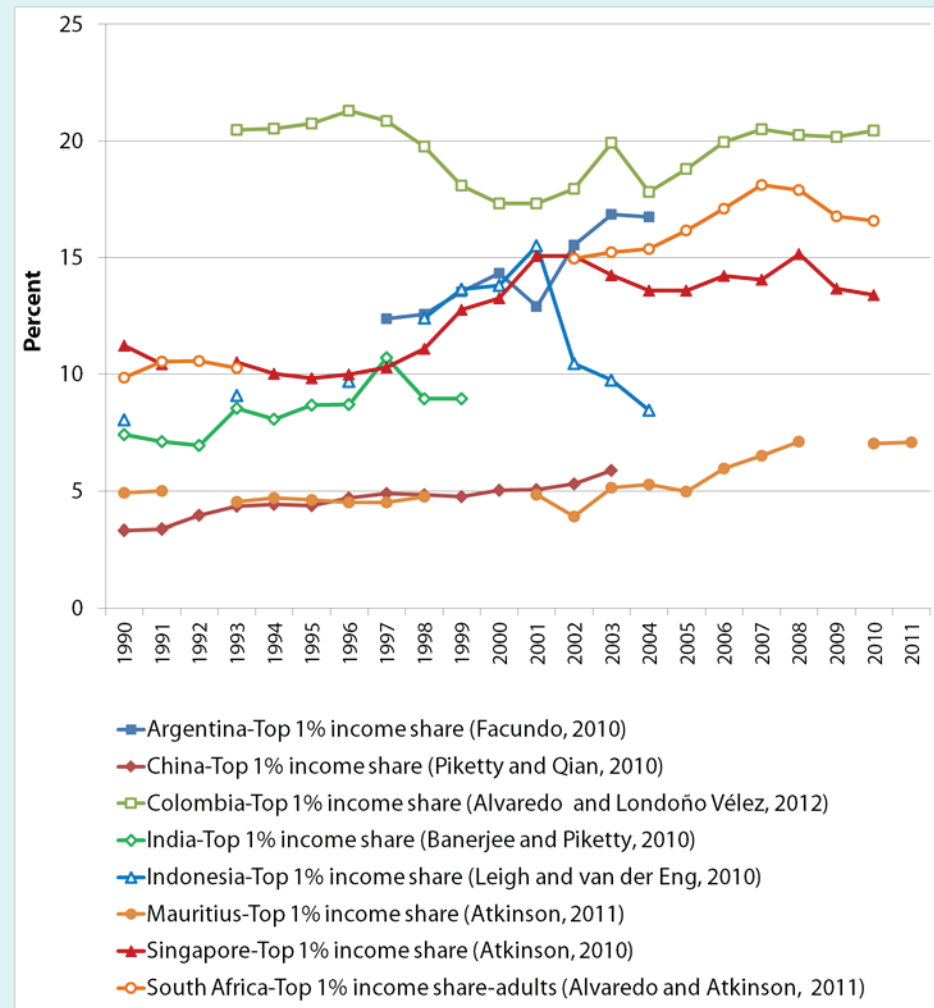
Box 3.2. The incomes of the top 1 percent

The growing inequality between the top 1 percent of income earners and other households is another phenomenon that is widely observed in the wake of globalization. If the labour compensation of the top 1 percent of income earners had been excluded from the nationwide computation, the decline in the labour share would have been even greater than what is observed (OECD, 2012). This reflects the sharp increase, especially in English-speaking developed countries, of the wages and salaries (including bonuses and exercised stock options) of top executives, who now cohabit with capital owners at the top of the income hierarchy (Atkinson, Piketty and Saez, 2011; Wolff and Zacharias, 2009). The proportion of wage earnings in the top segments of household income also increased, to various degrees, in other countries, including Japan, the Netherlands, Canada, Italy, Spain and the United Kingdom — though not in Sweden, Finland or Australia (Atkinson, Piketty and Saez, 2011).

Data for the share of top incomes in developing countries are far scarcer, but, for seven developing countries for which data are available, a similar trend as in developed countries can be observed (Fig. 10).

The share of the top 1 percent income group in Colombia reaches 20 percent, a level similar to that in the United States. The same is observed in South Africa and Argentina. The absence of recent data in India and China prevents an

Top income shares, 1990–2011



Source: *The World Top Incomes Database*, topincomes.g-mond.parisschoolofeconomics.eu.

analysis of most recent trends, but trends up to the end of the last century were also upwards. Indonesia is the only country that showed a declining trend, although data go only up to 2004.



countries was not based on large supplies of low-skilled labour (owing to their intermediate position in the global economy), but rather on natural resources. Thus, trade liberalization did not benefit the least skilled, but instead facilitated capital goods imports and, with them, the use of technological patterns of highly industrialized countries, thereby replicating their skills bias. To this was added competition from countries outside the region that had enormous reserves of low-waged unskilled labour (Freeman, 2005).

Conventional economic theory would predict that education and schooling would reduce skill premia in the medium term as the supply of skilled labour increases in response to the higher wage premia. However, this did not seem to happen in many developing countries. Behar (2011) reviews why schooling has not countered the pervasive rises in wage inequality driven by skill-biased technical change. He concludes that technological change is skill-biased in the South simply because the North causes permanently rising wage inequality in the South. He models expanded schooling access as producing relatively educated new cohorts of labour market entrants. However, this makes the market for skill-biased technologies more attractive, thus generating accelerated skill-biased technical change, which, in turn, leads to higher wage inequality and possibly stagnant unskilled wages. Thus, rising skill supply has been an ineffective counter against these trends. Behar argues that, in terms of Tinbergen's (1975) race between education and technology, education is standing still or even running backwards. He distinguishes between research and development that are inherently skill-biased and those which are endogenously skill-biased due to rising skill supply. Developing countries engage in little research and development, but acquire technologies from abroad. Irrespective of the reasons for observed skill-biased technical change in rich countries, this produces an external source of skills-biased technical change in poorer countries. Other authors, though, caution against seeing skills-biased technical change as a major driver of wage inequality. For example, Singh and Duhamel (2004) show evidence for middle- and high-income countries that only weakly supports the skills-biased technical change hypothesis. They suggest other factors, such as changes in remuneration norms, labour institutions and financial markets as being more relevant in explaining rises in wage inequality than skills-biased technical change.

Chapter 5 will illustrate that the gender gap is another important driver of wage inequality. Elson (2007) and Heintz (2006) find that many factors drive the gender gap in earnings: differences in education, shorter tenure in the labour market and interruptions in women's employment histories associated with raising children. Nevertheless, a large quantity of research has shown that, even after controlling for education, age and job tenure, gender gaps in remuneration remain. In part, this is due to the persistence of earnings gaps within occupational categories (Horton, 1999), suggesting that wage discrimination remains influential. Research also suggests that earnings differentials between men and women are also apparent across the various forms of informal work (Chen et al., 2005). However, Heintz argues that labour force segmentation is as important, if not more important, in determining the gap between women's and men's earnings. Women are disproportionately represented in lower-paying forms of employment, often with fewer social protections and less stable incomes. Much less is known about the gender earnings gap in low-income countries, where informal forms of employment, including widespread non-wage employment, dominate. Also, the structure of production and responses to global integration can affect changes in the gender income gap. For example, Seguino (2000) finds that capital mobility is one contributing factor to higher wage inequality in Taiwan, Province of China.¹⁸ Since women are more concentrated in industries in which capital mobility is high, their bargaining power, and hence their wages, would fall relative to those of men as global integration progresses.



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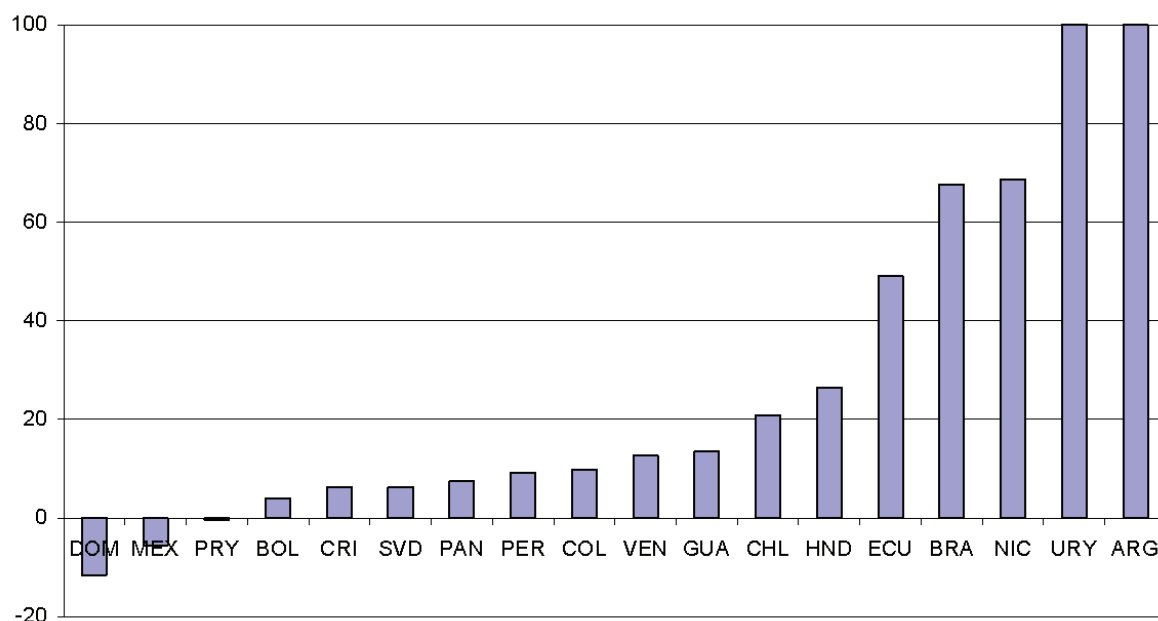
Several ILO studies (Saget, 2001, 2008) have indeed observed that, as a consequence of structural adjustment, liberalization policies and changes in labour market institutions, the minimum wage in a number of countries is so low that it does not contribute to reducing inequalities or poverty reduction and has become meaningless. This has also led to poorly developed collective bargaining where frustrated minimum wage consultations are the only forum where trade unions can make their demands known.

On the other hand, changes in labour market policies that improve and enforce minimum wage policies can reduce inequality. In the early 2000s, for instance, several Latin American countries revised their stance on minimum wages, with important increases — in some countries even doubling previous levels (see Figure 3.10). These changes have been an important driver of reductions in income inequality in Latin America.

One of the important drivers of income inequality is the large inequality in wealth. Wealth is distributed far more unequally than incomes in all countries for which data are available. (See Figure 3.11.)

In developing countries with very unequal distribution of land and in transition countries with questionable privatization practices, there tends to be great inequality of wealth. The financial crisis in 2008 initially caused a meltdown of personal wealth around the world. Whilst the super-rich have lost fortunes as property and share prices have plummeted, ordinary people are also faring badly as the global recession threatens the livelihoods and security of billions. The misery caused by the worldwide recession hits the poor the hardest, in part because they lack the personal assets that act as a shock absorber in difficult times. Davies (2008) shows

Figure 3.10. Increase in real value minimum wages (2002-2010)

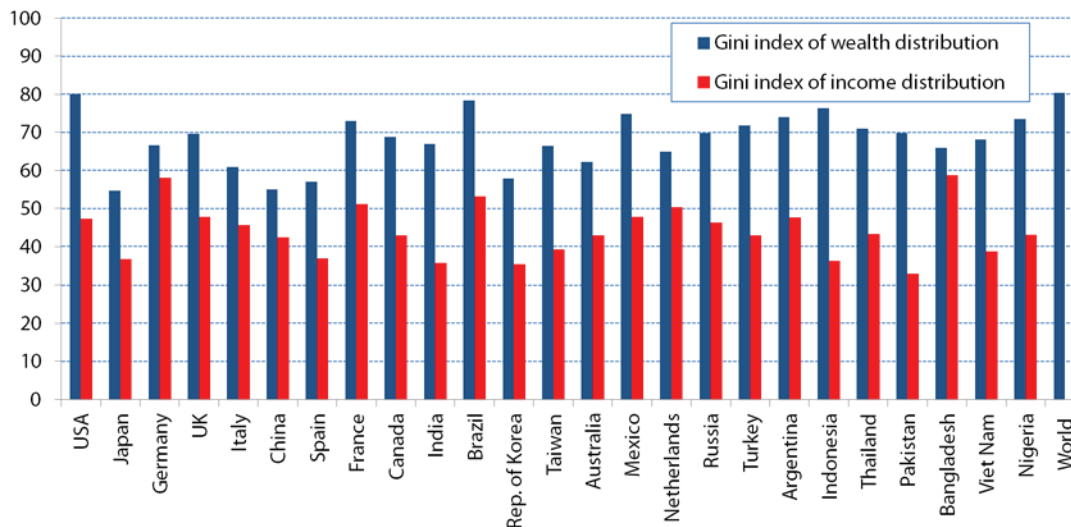


Note: DOM: Dominican Republic; MEX: Mexico; PRY: Paraguay; BOL: Bolivia; CRI: Costa Rica; SVD: El Salvador; PAN: Panama; PER: Peru; COL: Colombia; VEN: Venezuela; GUA: Guatemala; CHL: Chile; HND: Honduras; ECU: Ecuador; BRA: Brazil; NIC: Nicaragua; URY: Uruguay; ARG: Argentina.

Source: Lustig (2012).



Figure 3.11. Gini indices of wealth and income distribution in selected countries, mid-2000



Note: Taiwan: Province of China.

Source: Davies (2008) and Solt (2009).

that the Gini index of the distribution of personal wealth ranges from 55 to 80, which are in all countries higher or much higher than for the distribution of primary (market) income (Table 3.3). Another feature of the distribution of wealth is that the rich (i.e., high-income) countries hold greater proportions of wealth in financial assets than poorer or middle-income households (countries), where wealth is predominantly held in real assets such as land, houses and farm infrastructure. Research by Credit Suisse (2012) has found that, by the middle of 2011, household wealth in all regions (except Africa) had fully recovered from the 2007–2008 financial crisis. The prospects for Europe look less bright because household wealth has suffered hits from several quarters. History suggests that the combination of equity price falls and currency depreciation affecting Europe in 2011 is unlikely to be repeated to the same extent in 2012, but the overall wealth outlook remains neutral at best, rather than positive. From a global viewpoint, the emerging market giants — most especially China — will continue to hold the key to household wealth creation in the immediate future.

Closely linked to the question of wealth is the intergenerational transmission of inequality. According to the Credit Suisse (2012), inheritance is an important component of wealth. Worldwide, 31 percent of Forbes billionaires inherited at least some of their wealth. If China, the Russian Federation and other transition countries are excluded, the figure is 38 percent. More broadly, Credit Suisse (2012) suggests that inherited wealth likely accounts for 30 percent to 50 percent of total household wealth in OECD countries. In low-growth or traditional societies, the share is probably higher. At the other end of the scale, very little household wealth in today's transition economies was inherited.

Equally dominant is the effect of the acquirement of human capital. The previous section alluded already to higher education as a driver for greater wage inequality in some Asian countries and to the fact that access to higher education is still skewed, often depending on a family's wealth and income. Stephen Machin (2009),



Income inequality

for example, shows how important the influence of family background is on students' test scores. In 53 of 54 countries, including developing and emerging countries, family background is statistically significant and the implied gaps in test scores are large. According to ECLAC (2010), the pattern of secondary school graduation in the Latin American region has increased substantially, but, contrary to expectations, has remained highly stratified in secondary and tertiary completion rates. While gender parity for women has been more than achieved (a greater percentage of young women than men complete secondary school), the average graduation rate is generally very low (51 percent) and its distribution very large: in the first quintile, only one in five young people will complete secondary school, while four in five will do so in the fifth quintile. These contrasts show that education in its current form reinforces rather than reverses the intergenerational transmission of inequality.

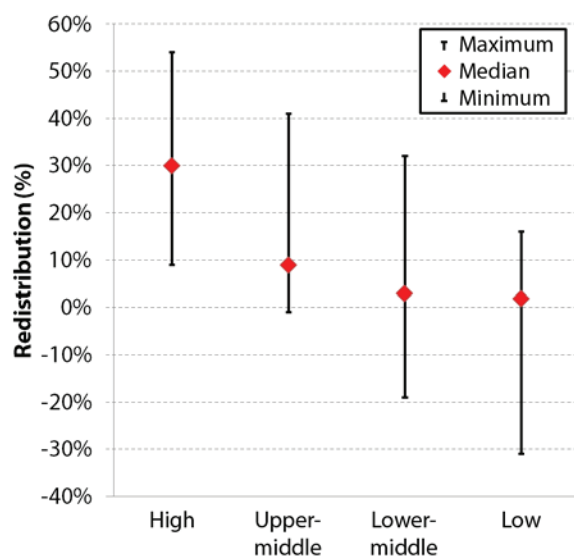
Endogenous drivers of secondary household income inequality

Fiscal policy is an important driver of higher (or lower) income inequality because it affects secondary and tertiary income distribution.

Fiscal policies are mainly determined by a combination of political will and institutions of economic and social governance and can vary greatly between countries — indeed, even between countries with similar levels of development. Figures 3.12 and 3.13 show the maximum, minimum and median reductions in inequality from primary to secondary distribution by income groups in the early 1990s and the late 2000s (for details, see Table 3.A2 in the Annex).

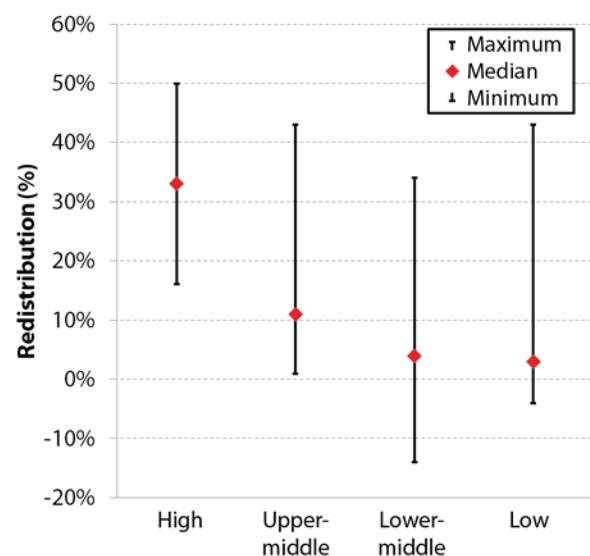
In high-income countries, taxes and subsidies have a sizable effect on reducing inequality. In the period up to 2000, the reduction of primary inequality to secondary inequality ranged from 54 to 9 percent. Through taxes

Figure 3.12. The degree of redistribution in the early 1990s by income group



Source: UNDP calculations using data from Solt (2009).

Figure 3.13. The degree of redistribution in the late 2000s by income group



Source: UNDP calculations using data from Solt (2009).



and subsidies, the median country in this high-income group was capable of reducing primary inequality by as much as 30 percent (Figure 3.13).

Upper-middle-income countries were also able to reduce primary inequality, albeit at a more reduced magnitude. The best performing country in this group managed to reduce primary inequality by as much as 41 percent, while the worst performing country was barely able to reduce primary inequality. The median country in this group managed to reduce primary inequality by 9 percent.

However, in lower-middle-income and low-income countries, the picture was very different. Some countries in these two income groups have been able to reduce primary inequality by over 32 percent and 16 percent, respectively. There were also countries where government intervention resulted not in a decrease in primary inequality, but rather in an increase in inequality by as much as 19 percent in lower-income countries and 31 percent in low-income countries. In those countries, the main culprits for low distributive impact are an increased dependence on regressive taxation (such as value added taxes) and an inefficient public expenditure system, which tend to dilute benefits to poor households. For example, a study of the impact of taxation on inequality in some Latin American countries (Lustig et al., 2012) finds that, for most countries in the region, households richer than the 3rd decile are usually 'net contributors' to the fisc, and that the net fiscal impact pushes from 5 percent to 10 percent of households *back into poverty*, after adjusting for fiscal mobility.

As a result, the median countries in these two groupings were hardly able to reduce primary inequality (3 percent and 2 percent, respectively).

The situation after 2000 has changed (Figure 3.13). For all country groupings, there is a higher maximum level of reduction of primary income inequality, especially noticeable for the low-income category, where the highest level of reduction in inequality changed from under 10 percent before 2000 to over 40 percent after 2000. Median performing countries in all categories also slightly increased their reduction in primary income (33 percent, 11 percent, 4 percent and 3 percent, respectively).

It thus seems that richer countries on average are better able to reduce primary inequality, but also that, in all country income categories, huge variations in this reduction did exist and do exist. National institutions and national policies can therefore play an important in reducing primary inequality, as will be discussed in much greater detail in chapter 7.

Moreover, the degree of inequality reduction from primary to secondary distributions does not seem to be related to the level of primary inequality. Luebker (2013) investigated for a select group of developing and developed countries how policy drivers of taxation and subsidies affect primary and secondary distribution. While various developed countries achieved a reduction in the Gini index of 20 or more between the primary and secondary income distribution, this is much more limited for developing countries like Brazil, Guatemala

It thus seems that richer countries on average are better able to reduce primary inequality, but also that, in all country income categories, huge variations in this reduction did exist and do exist. National institutions and national policies can therefore play an important in reducing primary inequality... Initial inequality thus matters, but can explain only about half of the variation in the Gini indices from primary to secondary inequality.

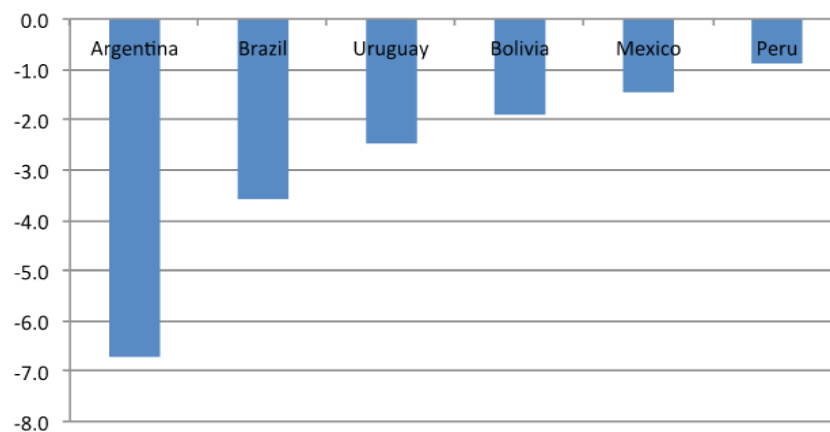


and Columbia. In fact, one striking fact is that differences in the Gini index for the secondary income distribution are, to a significant extent, policy- or institution-driven and are not fully determined by inequality in the primary distribution. Luebker (2013) found a simple correlation between Gini indices for the primary and secondary distribution of only $r = 0.499$ (p-value: 0.011). Initial inequality thus matters, but can explain only about half of the variation in the Gini indices from primary to secondary inequality.

Transfers, more than taxation, can be very progressive and have a strong impact on reducing inequality. A recent study of developed and emerging countries of the OECD (OECD, 2011) observes that the magnitude of change between the primary distribution and the secondary distribution has declined most likely as a consequence of globalization and less regulation. Tax and benefit systems have become less redistributive in many countries since the mid-1990s. The main reasons for the decline in redistributive capacity are found on the benefit side: cuts to benefit levels, tightening of eligibility rules to contain expenditures for social protection, and the failure of transfers to the lowest income groups to keep pace with earnings growth all contributed.

This observation of the impact of transfers on reducing inequality is in line with the conclusions of the Asian Development Bank (2012) that tax systems tend to show a mildly progressive incidence impact, but that direct cash transfers and in-kind transfers can be quite progressive unless there are serious targeting problems. International experience shows that the expenditure side of the budget (including transfers) can have a more significant impact on income distribution. Cash transfers to lower income groups through government social protection programmes have had a major impact on inequality in a number of developing countries. In Latin America and other developing regions, the system of cash transfers (either conditional or unconditional) to alleviate poverty has gained importance over the past decades. Lustig et al. (Figure 3.14) find that these cash transfers are also important drivers to for reducing income inequality. For countries where information is available, they found that these various systems of transfers drove inequality down by 7 percentage points in Argentina to 1 percentage point in Peru.

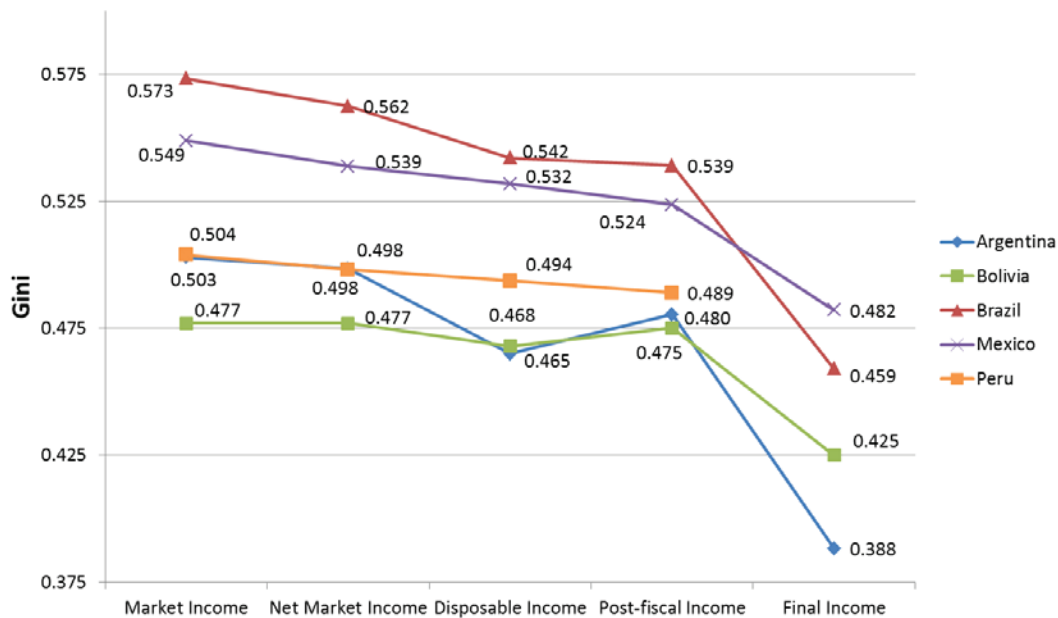
Figure 3.14. Cash transfers and inequality (decline in Gini in percent)



Source: Lustig (2012).



Figure 3.15. Changes in the distribution of primary, secondary and tertiary income in various Latin American Countries (around 2008)



Source: Lustig et al. (2012: Fig. 1, p. 23).

The Asian Development Bank (2012) also reports that conditional cash transfers in Asia have been implemented in Bangladesh, Cambodia, Pakistan and, more recently, Indonesia and the Philippines. These programmes, which are financially sustainable and combined with complementary programmes to improve the delivery of health care and education services, could play an important role in reducing poverty and inequality in Asia.

Endogenous drivers of tertiary inequality

How does government expenditure on social sectors drive changes in the tertiary income distribution? Or, in other words, how much does income inequality change when net household incomes (secondary income) are added to the imputed value of government expenditure? An important point is, of course, which types of government expenditure are considered in this respect. Frequently and especially in developing countries, expenditure on health and education are considered, but, in industrialized countries, expenditure on different art forms, sport manifestations, etc., are also included. It is also not a foregone conclusion that government expenditure has an equalizing effect in reducing secondary income inequality. It is foreseeable that higher income groups may benefit more from government expenditure than poorer groups (for example, heavily subsidized hospitals in well-off urban areas, tertiary education, opera tickets, etc.).

While the prime objective of social services is often not redistribution, but the provision of a decent education, basic health care, and acceptable living standards for all, they are in fact redistributive. As chapter 7 argues, expenditure programmes in the social sectors (education and health) are more progressive when more is spent in relative and absolute terms on those goods and services more frequently used by the poor (basic



education and primary health care). However, the effective targeting of lower-income groups in expenditure programmes is hard to design and to implement.

The adverse effect of exogenous drivers, such as financial and trade globalization, on income inequality during the past three decades has been exacerbated by national policies that have had a negative impact on income distribution... National policies, including a strengthening of institutions to deal with inequality, can play an important role in reducing income inequality.

OECD (2011) shows countries with sufficient data that household income inequality can be substantially reduced and that some countries even spend much more on the provision of such 'in-kind' services than on cash benefits, as in, for example, the English-speaking and Nordic countries, Republic of Korea and Mexico. Across OECD countries, social expenditures reduced income inequality by one fifth on average and their share of GDP and redistributive impact remained constant over the 2000s.

A recent project in Tulane University led by Nora Lustig (2012) and made for several countries studies in depth how government taxes, subsidies and expenditure have affected different forms of inequality.¹⁹ Figure 3.15 shows that the reduction from secondary inequality (disposable income) to tertiary inequality (final income) can be substantial. In Argentina and Brazil, the Gini index dropped substantially from 46.5 to 38.8 and from 54.2 to 45.9, respectively, and, in Bolivia and Mexico, from 46.5 to 42.5 and from 53.2 to 48.2, respectively.

3.4. Conclusion

Over the past 20 years, on average, household income inequality has risen in high-income (developed) and developing countries. Classifying countries by income, the trend clearly shows that countries moving up in income classification have had steeper increases in income inequality than most other countries. Examining regional trends over the whole period from the early 1990s to the late 2000s, average inequality fell in some regions (Latin America) and rose in others (Asia).

Looking at periods before and after the turn of the century shows more non-linear trends. In some countries, inequality rose during the 1980s and 1990s, but then fell in 2000s; in others, inequality fell during the 1980s and 1990s, but rose in the 2000s. However, despite reversals in some countries, the intensity of change has been greater in the direction of rising income inequality. It therefore remains important to focus on drivers of income inequality and by examining different forms of income distribution such as functional distribution, wage distribution, primary distribution (household market income), secondary distribution (market income corrected for taxes and subsidies), and tertiary distribution (taking into account imputed household income from services).

This chapter argues that globalization and especially financialization, and, to a certain extent, skills-based technical change, have been important exogenous drivers of inequality. These drivers have in various cases strengthened existing patterns of inequality through a stubbornly high-wealth inequality and through intergenerational transfers of inequality due to skewed access to higher-level education.



The adverse effect of exogenous drivers, such as financial and trade globalization, on income inequality during the past three decades has been exacerbated by national policies that have had a negative impact on income distribution. Monetary policies that emphasized price stability over growth, labour market policies that weakened the bargaining position of labour vis-à-vis employers, and fiscal policies that prioritized fiscal consolidation at the expense of benefits and progressive taxation, all contributed to driving income inequality.

However, national policies can be reoriented to promote income equality. National policies, including a strengthening of institutions to deal with inequality, can play an important role in reducing income inequality. Several countries in Europe, for example, have managed to use fiscal policies to mitigate a high primary income inequality down to lower levels of secondary and tertiary inequality. Additionally, the right mix of macroeconomic, fiscal, and social policies can reverse the rising trend in income inequality, as exemplified by various Latin American countries. A number of countries in that region have been able to arrest the upward trend of growing inequality, despite being subject, like all countries in the world, to the continuing challenges of globalization.



Annex 3.A. Gini Index of primary household income distribution by country (early 1990s to late 2000s)

Country	Development Status	Region	Income Status (early 1990s)	Income Status (late 2000s)	Income Status (2012)
Australia	Developed	Advanced	High	High	High
Austria	Developed	Advanced	High	High	High
Belgium	Developed	Advanced	High	High	High
Canada	Developed	Advanced	High	High	High
Croatia	Developed	Advanced	Lower middle	High	High
Cyprus	Developed	Advanced	High	High	High
Czech Republic	Developed	Advanced	Lower middle	High	High
Denmark	Developed	Advanced	High	High	High
Estonia	Developed	Advanced	Upper middle	High	High
Finland	Developed	Advanced	High	High	High
France	Developed	Advanced	High	High	High
Germany	Developed	Advanced	High	High	High
Greece	Developed	Advanced	Upper middle	High	High
Hungary	Developed	Advanced	Upper middle	High	High
Iceland	Developed	Advanced	High	High	High
Ireland	Developed	Advanced	High	High	High
Israel	Developed	Advanced	High	High	High
Italy	Developed	Advanced	High	High	High
Japan	Developed	Advanced	High	High	High
Luxembourg	Developed	Advanced	High	High	High
Netherlands	Developed	Advanced	High	High	High
New Zealand	Developed	Advanced	High	High	High
Norway	Developed	Advanced	High	High	High
Poland	Developed	Advanced	Lower middle	High	High
Portugal	Developed	Advanced	Upper middle	High	High
Singapore	Developed	Advanced	High	High	High
Slovenia	Developed	Advanced	Upper middle	High	High
Spain	Developed	Advanced	High	High	High
Sweden	Developed	Advanced	High	High	High

Note: A&P: Asia and the Pacific; ECIS: Europe and the Commonwealth of Independent States; LAC: Latin America and the Caribbean.

Source: UNDP calculations using data from Solt (2009).



Development Status	Gini index (early-1990s)	Gini index (late 2000s)	Percent Change	Direction of Change
Developed	43.8	47.2	7.9%	Rising
Developed	53.1	47.5	-10.5%	Falling
Developed	32.5	37.8	16.4%	Rising
Developed	39.1	42.8	9.6%	Rising
Developed	28.8	32.5	12.9%	Rising
Developed	36.8	47.2	28.2%	Rising
Developed	29.7	39.5	33.0%	Rising
Developed	48.7	54.4	11.8%	Rising
Developed	32.5	35.1	8.0%	Rising
Developed	36.6	47.1	28.6%	Rising
Developed	41.1	50.4	22.6%	Rising
Developed	45.1	55.5	23.1%	Rising
Developed	46.3	38.8	-16.1%	Falling
Developed	40.0	37.8	-5.5%	Falling
Developed	35.6	45.5	28.0%	Rising
Developed	44.8	39.7	-11.4%	Falling
Developed	41.0	44.6	8.7%	Rising
Developed	43.7	43.6	-0.2%	No change
Developed	36.0	37.0	2.9%	No change
Developed	34.4	41.5	20.7%	Rising
Developed	40.5	46.1	13.9%	Rising
Developed	42.2	43.8	3.7%	Rising
Developed	41.6	40.4	-2.9%	No change
Developed	34.0	40.3	18.5%	Rising
Developed	48.3	57.0	18.0%	Rising
Developed	45.7	50.4	10.3%	Rising
Developed	31.6	41.8	32.4%	Rising
Developed	37.2	39.4	5.9%	Rising
Developed	45.6	44.9	-1.5%	No change



Annex 3.A. Gini Index of primary household income distribution by country (early 1990s to late 2000s) (contd.)

Country	Development Status	Region	Income Status (early 1990s)	Income Status (late 2000s)	Income Status (2012)
Switzerland	Developed	Advanced	High	High	High
United Kingdom	Developed	Advanced	High	High	High
United States	Developed	Advanced	High	High	High
Botswana	Developing	Africa	Lower middle	Upper middle	Upper middle
Burkina Faso	Developing	Africa	Low	Low	Low
Burundi	Developing	Africa	Low	Low	Low
Cape Verde	Developing	Africa	Lower middle	Lower middle	Lower middle
Central African Rep.	Developing	Africa	Low	Low	Low
Ethiopia	Developing	Africa	Low	Low	Low
Gambia	Developing	Africa	Low	Low	Low
Ghana	Developing	Africa	Low	Low	Lower middle
Guinea	Developing	Africa	Low	Low	Low
Guinea-Bissau	Developing	Africa	Low	Low	Low
Kenya	Developing	Africa	Low	Low	Low
Lesotho	Developing	Africa	Low	Lower middle	Lower middle
Madagascar	Developing	Africa	Low	Low	Low
Malawi	Developing	Africa	Low	Low	Low
Mali	Developing	Africa	Low	Low	Low
Mauritius	Developing	Africa	Lower middle	Upper middle	Upper middle
Namibia	Developing	Africa	Lower middle	Lower middle	Upper middle
Niger	Developing	Africa	Low	Low	Low
Nigeria	Developing	Africa	Low	Low	Lower middle
Rwanda	Developing	Africa	Low	Low	Low
Senegal	Developing	Africa	Lower middle	Low	Lower middle
Sierra Leone	Developing	Africa	Low	Low	Low
South Africa	Developing	Africa	Upper middle	Upper middle	Upper middle
Swaziland	Developing	Africa	Lower middle	Lower middle	Lower middle
Uganda	Developing	Africa	Low	Low	Low
Zambia	Developing	Africa	Low	Low	Lower middle
Algeria	Developing	Arab States	Lower middle	Lower middle	Upper middle
Egypt	Developing	Arab States	Low	Lower middle	Lower middle
Jordan	Developing	Arab States	Lower middle	Lower middle	Upper middle

Note: A&P: Asia and the Pacific; ECIS: Europe and the Commonwealth of Independent States; LAC: Latin America and the Caribbean.

Source: UNDP calculations using data from Solt (2009).



Development Status	Gini index (early-1990s)	Gini index (late 2000s)	Percent Change	Direction of Change
Developed	39.4	46.5	17.8%	Rising
Developed	46.7	51.7	10.8%	Rising
Developed	43.2	46.2	6.8%	Rising
Developing	56.9	52.8	-7.1%	Falling
Developing	46.4	49.9	7.4%	Rising
Developing	33.8	33.6	-0.7%	No change
Developing	43.8	52.2	19.0%	Rising
Developing	59.5	43.5	-26.9%	Falling
Developing	38.2	29.8	-22.2%	Falling
Developing	53.6	49.7	-7.3%	Falling
Developing	38.2	42.4	11.1%	Rising
Developing	49.2	38.6	-21.6%	Falling
Developing	53.4	38.7	-27.4%	Falling
Developing	58.6	48.7	-16.8%	Falling
Developing	61.1	51.7	-15.4%	Falling
Developing	45.6	47.0	3.2%	Rising
Developing	66.1	39.4	-40.4%	Falling
Developing	39.5	38.8	-1.7%	No change
Developing	44.5	39.2	-12.0%	Falling
Developing	71.0	67.4	-5.1%	Falling
Developing	40.2	43.3	7.7%	Rising
Developing	46.3	43.1	-6.9%	Falling
Developing	32.0	46.4	45.0%	Rising
Developing	57.1	39.4	-30.9%	Falling
Developing	62.2	44.4	-28.7%	Falling
Developing	65.2	70.0	7.3%	Rising
Developing	58.0	47.2	-18.6%	Falling
Developing	41.7	41.2	-1.2%	No change
Developing	56.0	51.0	-9.0%	Falling
Developing	38.6	35.5	-8.1%	Falling
Developing	33.3	32.2	-3.3%	Falling
Developing	43.6	39.4	-9.7%	Falling



Annex 3.A. Gini Index of primary household income distribution by country (early 1990s to late 2000s) (contd.)

Country	Development Status	Region	Income Status (early 1990s)	Income Status (late 2000s)	Income Status (2012)
Morocco	Developing	Arab States	Lower middle	Lower middle	Lower middle
Tunisia	Developing	Arab States	Lower middle	Lower middle	Upper middle
Yemen	Developing	Arab States	Low	Low	Lower middle
Bangladesh	Developing	A&P	Low	Low	Low
Cambodia	Developing	A&P	Low	Low	Low
China	Developing	A&P	Low	Lower middle	Upper middle
India	Developing	A&P	Low	Low	Lower middle
Indonesia	Developing	A&P	Low	Lower middle	Lower middle
Iran	Developing	A&P	Lower middle	Lower middle	Upper middle
Lao PS	Developing	A&P	Low	Low	Lower middle
Malaysia	Developing	A&P	Lower middle	Upper middle	Upper middle
Nepal	Developing	A&P	Low	Low	Low
Pakistan	Developing	A&P	Low	Low	Lower middle
Philippines	Developing	A&P	Lower middle	Lower middle	Lower middle
Thailand	Developing	A&P	Lower middle	Lower middle	Upper middle
Viet Nam	Developing	A&P	Low	Low	Lower middle
Armenia	Developing	ECIS	Lower middle	Lower middle	Lower middle
Azerbaijan	Developing	ECIS	Lower middle	Lower middle	Upper middle
Belarus	Developing	ECIS	Upper middle	Upper middle	Upper middle
Bosnia & Herzegovina	Developing	ECIS	Lower middle	Lower middle	Upper middle
Bulgaria	Developing	ECIS	Lower middle	Upper middle	Upper middle
Georgia	Developing	ECIS	Lower middle	Lower middle	Lower middle
Kazakhstan	Developing	ECIS	Lower middle	Upper middle	Upper middle
Kyrgyzstan	Developing	ECIS	Lower middle	Low	Low
Latvia	Developing	ECIS	Lower middle	Upper middle	Upper middle
Lithuania	Developing	ECIS	Lower middle	Upper middle	Upper middle
Macedonia, FYR	Developing	ECIS	Lower middle	Lower middle	Upper middle
Moldova	Developing	ECIS	Lower middle	Lower middle	Lower middle
Romania	Developing	ECIS	Lower middle	Upper middle	Upper middle
Russia	Developing	ECIS	Lower middle	Upper middle	Upper middle
Tajikistan	Developing	ECIS	Low	Low	Low
Turkey	Developing	ECIS	Lower middle	Upper middle	Upper middle

Note: A&P: Asia and the Pacific; ECIS: Europe and the Commonwealth of Independent States; LAC: Latin America and the Caribbean.

Source: UNDP calculations using data from Solt (2009).



Development Status	Gini index (early-1990s)	Gini index (late 2000s)	Percent Change	Direction of Change
Developing	36.4	41.5	13.9%	Rising
Developing	37.3	40.0	7.3%	Rising
Developing	38.9	39.2	0.8%	No change
Developing	31.3	57.5	83.6%	Rising
Developing	43.7	43.7	0.0%	No change
Developing	35.0	42.4	21.1%	Rising
Developing	33.0	35.7	8.2%	Rising
Developing	37.7	38.5	2.0%	No change
Developing	45.5	41.6	-8.5%	Falling
Developing	31.0	37.5	20.8%	Rising
Developing	44.3	38.1	-13.9%	Falling
Developing	36.4	48.5	33.4%	Rising
Developing	42.0	32.9	-21.7%	Falling
Developing	57.8	42.9	-25.9%	Falling
Developing	51.0	43.3	-15.0%	Falling
Developing	35.8	39.0	8.8%	Rising
Developing	32.6	43.3	32.8%	Rising
Developing	36.9	32.6	-11.6%	Falling
Developing	27.2	31.2	15.0%	Rising
Developing	40.3	36.7	-9.0%	Falling
Developing	26.5	40.1	51.1%	Rising
Developing	33.8	43.3	27.8%	Rising
Developing	29.4	37.8	28.7%	Rising
Developing	27.8	46.3	66.6%	Rising
Developing	33.2	53.4	60.8%	Rising
Developing	35.1	52.3	48.9%	Rising
Developing	29.4	35.2	19.8%	Rising
Developing	30.7	32.4	5.5%	Rising
Developing	32.9	49.3	49.6%	Rising
Developing	31.9	49.2	54.4%	Rising
Developing	33.7	36.0	6.7%	Rising
Developing	44.6	45.3	1.5%	No change



Annex 3.A. Gini Index of primary household income distribution by country (early 1990s to late 2000s) (contd.)

Country	Development Status	Region	Income Status (early 1990s)	Income Status (late 2000s)	Income Status (2012)
Turkmenistan	Developing	ECIS	Lower middle	Lower middle	Upper middle
Ukraine	Developing	ECIS	Lower middle	Lower middle	Lower middle
Uzbekistan	Developing	ECIS	Lower middle	Low	Lower middle
Argentina	Developing	LAC	Lower middle	Upper middle	Upper middle
Bolivia	Developing	LAC	Lower middle	Lower middle	Lower middle
Brazil	Developing	LAC	Upper middle	Upper middle	Upper middle
Chile	Developing	LAC	Lower middle	Upper middle	Upper middle
Colombia	Developing	LAC	Lower middle	Upper middle	Upper middle
Costa Rica	Developing	LAC	Lower middle	Upper middle	Upper middle
Dominican Republic	Developing	LAC	Lower middle	Upper middle	Upper middle
Ecuador	Developing	LAC	Lower middle	Lower middle	Upper middle
El Salvador	Developing	LAC	Lower middle	Lower middle	Lower middle
Guatemala	Developing	LAC	Lower middle	Lower middle	Lower middle
Honduras	Developing	LAC	Low	Lower middle	Lower middle
Jamaica	Developing	LAC	Lower middle	Lower middle	Upper middle
Mexico	Developing	LAC	Upper middle	Upper middle	Upper middle
Nicaragua	Developing	LAC	Low	Lower middle	Lower middle
Panama	Developing	LAC	Lower middle	Upper middle	Upper middle
Paraguay	Developing	LAC	Lower middle	Lower middle	Lower middle
Peru	Developing	LAC	Lower middle	Upper middle	Upper middle
Trinidad and Tobago	Developing	LAC	Upper middle	Upper middle	High
Uruguay	Developing	LAC	Upper middle	Upper middle	Upper middle
Venezuela	Developing	LAC	Upper middle	Upper middle	Upper middle

Note: A&P: Asia and the Pacific; ECIS: Europe and the Commonwealth of Independent States; LAC: Latin America and the Caribbean.

Source: UNDP calculations using data from Solt (2009).



Development Status	Gini index (early-1990s)	Gini index (late 2000s)	Percent Change	Direction of Change
Developing	30.7	43.8	42.9%	Rising
Developing	24.8	31.9	29.0%	Rising
Developing	31.9	42.7	33.7%	Rising
Developing	44.2	43.3	-2.0%	No change
Developing	50.0	55.8	11.7%	Rising
Developing	58.3	51.1	-12.3%	Falling
Developing	52.1	50.9	-2.4%	No change
Developing	47.6	52.1	9.4%	Rising
Developing	43.1	47.3	9.6%	Rising
Developing	47.6	46.8	-1.7%	No change
Developing	45.8	47.4	3.3%	Rising
Developing	48.0	44.8	-6.6%	Falling
Developing	57.2	54.6	-4.5%	Falling
Developing	53.0	53.5	1.0%	No change
Developing	49.5	49.7	0.4%	No change
Developing	49.3	45.2	-8.3%	Falling
Developing	55.6	51.4	-7.7%	Falling
Developing	52.9	50.0	-5.5%	Falling
Developing	37.0	49.3	33.2%	Rising
Developing	44.9	47.3	5.2%	Rising
Developing	39.2	37.6	-4.2%	Falling
Developing	39.9	42.8	7.4%	Rising
Developing	41.8	39.5	-5.4%	Falling



Annex 3.B. Rates of redistribution from primary to secondary income distribution by country (early 1990s to late 2000s)

Country	Income status (early 1990s)	Gini index of primary income distribution		Gini index of secondary income distribution		Rate of redistribution	
		Early 1990s	Late 2000s	Early 1990s	Late 2000s	Early 1990s	Late 2000s
Australia	High	43.8	47.2	30.5	33.9	30%	28%
Austria	High	53.1	47.5	33.8	27.4	36%	42%
Belgium	High	32.5	37.8	23.3	25.1	28%	34%
Canada	High	39.1	42.8	27.5	31.4	30%	27%
Cyprus	High	36.8	47.2	22.5	29.3	39%	38%
Denmark	High	48.7	54.4	25.9	27	47%	50%
Finland	High	36.6	47.1	21	25.5	43%	46%
France	High	41.1	50.4	27	28.9	34%	43%
Germany	High	45.1	55.5	26.5	30.3	41%	45%
Iceland	High	35.6	45.5	22.5	27.3	37%	40%
Ireland	High	44.8	39.7	33	29.3	26%	26%
Israel	High	41	44.6	30.6	37	25%	17%
Italy	High	43.7	43.6	30.7	32.6	30%	25%
Japan	High	36	37	29.1	30.5	19%	18%
Luxembourg	High	34.4	41.5	23.7	28.4	31%	32%
Netherlands	High	40.5	46.1	26.2	26.8	35%	42%
New Zealand	High	42.2	43.8	31.6	32.5	25%	26%
Norway	High	41.6	40.4	23.2	22.2	44%	45%
Singapore	High	45.7	50.4	41.3	41.3	9%	18%
Spain	High	37.2	39.4	30.3	32.7	19%	17%
Sweden	High	45.6	44.9	21	21.9	54%	51%
Switzerland	High	39.4	46.5	30.9	30.2	22%	35%
United Kingdom	High	46.7	51.7	32.8	36.5	30%	29%
United States	High	43.2	46.2	33.6	36	22%	22%
Bangladesh	Low	31.3	57.5	26.9	31.9	14%	45%
Burkina Faso	Low	46.4	49.9	60.6	46.6	-31%	6%
Burundi	Low	33.8	33.6	33.2	33.2	2%	1%
Cambodia	Low	43.7	43.7	42.8	42.1	2%	4%
Central African Rep.	Low	59.5	43.5	58.7	42.3	1%	3%

Source: UNDP calculations using data from Solt (2009).



Annex 3.B. Rates of redistribution from primary to secondary income distribution by country (early 1990s to late 2000s) (contd.)

Country	Income status (early 1990s)	Gini index of primary income distribution		Gini index of secondary income distribution		Rate of redistribution	
		Early 1990s	Late 2000s	Early 1990s	Late 2000s	Early 1990s	Late 2000s
China	Low	35	42.4	33.5	39.7	4%	6%
Egypt	Low	33.3	32.2	32.4	31.5	3%	2%
Ethiopia	Low	38.2	29.8	41.3	29.2	-8%	2%
Gambia	Low	53.6	49.7	59.6	47.7	-11%	4%
Ghana	Low	38.2	42.4	37.9	40.4	1%	5%
Guinea	Low	49.2	38.6	48.7	37.9	1%	2%
Guinea-Bissau	Low	53.4	38.7	51.6	37.7	3%	3%
Honduras	Low	53	53.5	50.2	51.8	5%	3%
India	Low	33	35.7	31.4	34	5%	5%
Indonesia	Low	37.7	38.5	34.9	37.6	8%	2%
Kenya	Low	58.6	48.7	53.3	46.1	9%	5%
Lao PDR	Low	31	37.5	30.3	36.5	2%	3%
Lesotho	Low	61.1	51.7	59	48.7	3%	6%
Madagascar	Low	45.6	47	46.6	43.6	-2%	7%
Malawi	Low	66.1	39.4	60.3	38.6	9%	2%
Mali	Low	39.5	38.8	44.3	38.1	-12%	2%
Nepal	Low	36.4	48.5	35.7	47.2	2%	3%
Nicaragua	Low	55.6	51.4	53.2	49.5	4%	4%
Niger	Low	40.2	43.3	39.4	42.9	2%	1%
Nigeria	Low	46.3	43.1	52	42.7	-12%	1%
Pakistan	Low	42	32.9	35.2	33.5	16%	-2%
Rwanda	Low	32	46.4	33.2	44.1	-4%	5%
Sierra Leone	Low	62.2	44.4	60	43.8	4%	1%
Tajikistan	Low	33.7	36	28.9	33.1	14%	8%
Uganda	Low	41.7	41.2	43.6	38.6	-5%	6%
Viet Nam	Low	35.8	39	35.3	38.2	2%	2%
Yemen	Low	38.9	39.2	37.9	38.1	2%	3%
Zambia	Low	56	51	66.6	50	-19%	2%
Algeria	Lower middle	38.6	35.5	34.4	34.5	11%	3%
Argentina	Lower middle	44.2	43.3	43.4	41.7	2%	4%
Armenia	Lower middle	32.6	43.3	35.1	38.4	-8%	11%
Azerbaijan	Lower middle	36.9	32.6	35.3	30.3	4%	7%

Source: UNDP calculations using data from Solt (2009).



Annex 3.B. Rates of redistribution from primary to secondary income distribution by country (early 1990s to late 2000s) (contd.)

Country	Income status (early 1990s)	Gini index of primary income distribution		Gini index of secondary income distribution		Rate of redistribution	
		Early 1990s	Late 2000s	Early 1990s	Late 2000s	Early 1990s	Late 2000s
Bolivia	Lower middle	50	55.8	48.3	53.4	3%	4%
Bosnia & Herzegovina	Lower middle	40.3	36.7	37	34.2	8%	7%
Botswana	Lower middle	56.9	52.8	54.7	50.6	4%	4%
Bulgaria	Lower middle	26.5	40.1	25.8	35.8	3%	11%
Cape Verde	Lower middle	43.8	52.2	42.7	50	3%	4%
Chile	Lower middle	52.1	50.9	51.6	49.7	1%	2%
Colombia	Lower middle	47.6	52.1	49.7	51.3	-4%	2%
Costa Rica	Lower middle	43.1	47.3	42.2	46	2%	3%
Croatia	Lower middle	28.8	32.5	23.3	27.6	19%	15%
Czech Republic	Lower middle	29.7	39.5	20.5	25.6	31%	35%
Dominican Republic	Lower middle	47.6	46.8	46.9	45.5	1%	3%
Ecuador	Lower middle	45.8	47.4	47.8	46.8	-4%	1%
El Salvador	Lower middle	48	44.8	47.3	43.3	2%	3%
Georgia	Lower middle	33.8	43.3	34	39.5	-1%	9%
Guatemala	Lower middle	57.2	54.6	54.3	50.7	5%	7%
Iran	Lower middle	45.5	41.6	43.5	39.9	4%	4%
Jamaica	Lower middle	49.5	49.7	48.3	49.7	2%	0%
Jordan	Lower middle	43.6	39.4	43.1	39	1%	1%
Kazakhstan	Lower middle	29.4	37.8	26.8	36.9	9%	2%
Kyrgyzstan	Lower middle	27.8	46.3	29.1	36.5	-5%	21%
Latvia	Lower middle	33.2	53.4	24.7	36.6	26%	32%
Lithuania	Lower middle	35.1	52.3	26.4	36.4	25%	30%
Macedonia, FYR	Lower middle	29.4	35.2	29.6	39.6	-1%	-13%
Malaysia	Lower middle	44.3	38.1	42.5	37.8	4%	1%
Mauritius	Lower middle	44.5	39.2	37.6	38.9	16%	1%
Moldova	Lower middle	30.7	32.4	28.1	35.9	8%	-11%
Morocco	Lower middle	36.4	41.5	37.6	40.7	-3%	2%
Namibia	Lower middle	71	67.4	69.8	66.6	2%	1%
Panama	Lower middle	52.9	50	51.4	48.5	3%	3%
Paraguay	Lower middle	37	49.3	40.1	48.7	-8%	1%
Peru	Lower middle	44.9	47.3	53.6	49.9	-19%	-6%
Philippines	Lower middle	57.8	42.9	39.1	41.3	32%	4%

Source: UNDP calculations using data from Solt (2009).



Annex 3.B. Rates of redistribution from primary to secondary income distribution by country (early 1990s to late 2000s) (contd.)

Country	Income status (early 1990s)	Gini index of primary income distribution		Gini index of secondary income distribution		Rate of redistribution	
		Early 1990s	Late 2000s	Early 1990s	Late 2000s	Early 1990s	Late 2000s
Poland	Lower middle	34	40.3	25.3	29.7	26%	26%
Romania	Lower middle	32.9	49.3	22.8	32.6	31%	34%
Russia	Lower middle	31.9	49.2	33.1	45.2	-4%	8%
Senegal	Lower middle	57.1	39.4	55.7	36.5	3%	8%
Swaziland	Lower middle	58	47.2	56.4	46.9	3%	1%
Thailand	Lower middle	51	43.3	51.1	43.3	0%	0%
Tunisia	Lower middle	37.3	40	38	36.7	-2%	8%
Turkey	Lower middle	44.6	45.3	43.8	37.5	2%	17%
Turkmenistan	Lower middle	30.7	43.8	26.4	40.7	14%	7%
Ukraine	Lower middle	24.8	31.9	20.2	29.5	18%	8%
Uzbekistan	Lower middle	31.9	42.7	27.5	37	14%	13%
Belarus	Upper middle	27.2	31.2	26.7	27	2%	13%
Brazil	Upper middle	58.3	51.1	51.8	46.7	11%	9%
Estonia	Upper middle	32.5	35.1	23.3	30.8	28%	12%
Greece	Upper middle	46.3	38.8	31.9	32.5	31%	16%
Hungary	Upper middle	40	37.8	26.8	26	33%	31%
Mexico	Upper middle	49.3	45.2	47.9	43.7	3%	3%
Portugal	Upper middle	48.3	57	30.5	33.2	37%	42%
Slovenia	Upper middle	31.6	41.8	18.6	24.2	41%	42%
South Africa	Upper middle	65.2	70	61.1	63.5	6%	9%
Trinidad and Tobago	Upper middle	39.2	37.6	38.1	37.6	3%	0%
Uruguay	Upper middle	39.9	42.8	40.4	43	-1%	0%
Venezuela	Upper middle	41.8	39.5	39.4	38.5	6%	3%

Source: UNDP calculations using data from Solt (2009).



Annex 3.C. Change in Gini index of primary household income distribution by country from 1980s to 2000s

Country	Region	Gini index				Direction of change	
		1980	1999	2000	2010 or latest available	1980s/1990s	2000s
Australia	Advanced	37.0	43.2	43.8	47.2	Rising	Rising
Austria	Advanced	51.1	43.7	43.7	47.5	Falling	Rising
Belgium	Advanced	25.4	45.4	43.2	37.8	Rising	Falling
Canada	Advanced	37.0	43.1	43.0	42.8	Rising	No change
Denmark	Advanced	48.7	46.8	46.2	54.4	Falling	Rising
Estonia	Advanced	36.4	42.6	41.1	35.1	Rising	Falling
Finland	Advanced	38.3	44.5	46.0	47.1	Rising	Rising
France	Advanced	36.3	44.6	46.9	50.4	Rising	Rising
Germany	Advanced	38.1	47.8	51.0	55.5	Rising	Rising
Greece	Advanced	48.6	47.9	50.2	38.8	Falling	Falling
Hungary	Advanced	27.8	43.0	46.0	37.8	Rising	Falling
Ireland	Advanced	47.2	42.7	42.3	39.7	Falling	Falling
Israel	Advanced	39.9	44.2	44.6	44.6	Rising	No change
Italy	Advanced	41.9	44.9	44.8	43.6	Rising	Falling
Japan	Advanced	33.3	38.3	40.3	37.0	Rising	Falling
Korea, Rep. of	Advanced	41.0	33.4	33.9	35.8	Falling	Rising
Luxembourg	Advanced	36.9	41.0	41.8	41.5	Rising	No change
Netherlands	Advanced	38.2	38.7	40.9	46.1	Rising	Rising
New Zealand	Advanced	37.1	44.9	46.4	43.8	Rising	Falling
Norway	Advanced	38.3	45.2	46.1	40.4	Rising	Falling
Poland	Advanced	32.1	36.8	38.0	40.3	Rising	Rising
Portugal	Advanced	50.7	55.3	54.9	57.0	Rising	Rising
Singapore	Advanced	42.6	48.2	47.9	50.4	Rising	Rising
Spain	Advanced	34.9	40.6	39.1	39.4	Rising	No change
Sweden	Advanced	46.3	45.1	47.8	44.9	Falling	Falling
Switzerland	Advanced	44.6	42.0	42.3	46.5	Falling	Rising
Taiwan, Prov. of China	Advanced	29.2	35.6	36.1	39.3	Rising	Rising
United Kingdom	Advanced	41.1	48.0	47.7	51.7	Rising	Rising
United States	Advanced	40.4	47.1	47.2	46.2	Rising	Falling

Note: A&P: Asia and the Pacific; ECIS: Europe and the Commonwealth of Independent States; LAC: Latin America and the Caribbean.



Annex 3.C. Change in Gini index of primary household income distribution by country from 1980s to 2000s (contd.)

Country	Region	Gini index				Direction of change	
		1980	1999	2000	2010 or latest available	1980s/1990s	2000s
Botswana	Africa	55.7	55.4	55.3	52.8	No change	Falling
Ethiopia	Africa	33.1	37.9	34.9	29.8	Rising	Falling
Kenya	Africa	65.0	53.1	49.8	48.7	Falling	Falling
Madagascar	Africa	46.1	41.9	43.4	47.0	Falling	Rising
Malawi	Africa	66.5	47.1	45.6	39.4	Falling	Falling
Mauritius	Africa	50.8	50.9	48.0	39.2	No change	Falling
Nigeria	Africa	49.0	49.1	47.8	43.1	No change	Falling
Sierra Leone	Africa	61.4	49.6	48.2	44.4	Falling	Falling
South Africa	Africa	66.2	67.0	69.0	70.0	Rising	Rising
Zambia	Africa	57.9	51.5	49.9	51.0	Falling	Rising
Algeria	Arab States	38.3	36.0	36.2	35.5	Falling	Falling
Egypt	Arab States	37.3	40.7	37.2	32.2	Rising	Falling
Jordan	Arab States	39.0	39.1	39.7	39.4	No change	No change
Morocco	Arab States	61.0	40.2	40.4	41.5	Falling	Rising
Tunisia	Arab States	41.9	40.6	40.4	40.0	Falling	Falling
Bangladesh	A&P	46.0	33.6	32.9	57.5	Falling	Rising
China	A&P	30.0	40.1	41.2	42.4	Rising	Rising
India	A&P	35.6	36.6	34.4	35.7	Rising	Rising
Indonesia	A&P	35.3	32.3	33.7	38.5	Falling	Rising
Iran	A&P	45.6	45.1	44.6	41.6	Falling	Falling
Malaysia	A&P	61.9	44.8	47.3	38.1	Falling	Falling
Nepal	A&P	48.9	46.0	46.4	48.5	Falling	Rising
Pakistan	A&P	43.5	32.1	31.4	32.9	Falling	Rising
Philippines	A&P	56.6	51.5	46.7	42.9	Falling	Falling
Thailand	A&P	46.1	46.8	45.9	43.3	Rising	Falling
Armenia	ECIS	29.4	45.9	47.1	43.3	Rising	Falling
Azerbaijan	ECIS	28.2	44.9	36.5	32.6	Rising	Falling
Belarus	ECIS	25.1	27.0	27.3	31.2	Rising	Rising
Bulgaria	ECIS	28.3	31.4	29.2	40.1	Rising	Rising
Georgia	ECIS	27.4	44.9	47.5	43.3	Rising	Falling
Kazakhstan	ECIS	27.8	34.9	34.3	37.8	Rising	Rising

Note: A&P: Asia and the Pacific; ECIS: Europe and the Commonwealth of Independent States; LAC: Latin America and the Caribbean.



Annex 3.C. Change in Gini index of primary household income distribution by country from 1980s to 2000s (contd.)

Country	Region	Gini index				Direction of change	
		1980	1999	2000	2010 or latest available	1980s/1990s	2000s
Kyrgyzstan	ECIS	26.7	45.9	39.6	46.3	Rising	Rising
Latvia	ECIS	34.1	45.4	46.9	53.4	Rising	Rising
Lithuania	ECIS	33.3	46.3	46.2	52.3	Rising	Rising
Moldova	ECIS	24.2	43.7	42.3	32.4	Rising	Falling
Russia	ECIS	26.2	47.3	47.9	49.2	Rising	Rising
Tajikistan	ECIS	28.0	33.9	34.2	36.0	Rising	Rising
Turkey	ECIS	50.7	40.4	39.6	45.3	Falling	Rising
Turkmenistan	ECIS	29.4	27.0	33.1	43.8	Falling	Rising
Ukraine	ECIS	31.6	37.4	35.9	31.9	Rising	Falling
Uzbekistan	ECIS	27.8	39.8	37.1	42.7	Rising	Rising
Argentina	LAC	41.7	47.6	48.5	43.3	Rising	Falling
Bolivia	LAC	49.2	57.0	57.6	55.8	Rising	Falling
Brazil	LAC	63.0	56.9	57.3	51.1	Falling	Falling
Chile	LAC	51.3	52.7	52.2	50.9	Rising	Falling
Colombia	LAC	63.1	53.4	53.2	52.1	Falling	Falling
Costa Rica	LAC	51.9	44.8	45.3	47.3	Falling	Rising
El Salvador	LAC	47.4	50.0	50.3	44.8	Rising	Falling
Guatemala	LAC	44.1	55.5	55.5	54.6	Rising	Falling
Jamaica	LAC	78.0	50.6	46.5	49.7	Falling	Rising
Mexico	LAC	50.1	50.1	49.5	45.2	No change	Falling
Panama	LAC	49.7	53.3	52.9	50.0	Rising	Falling
Peru	LAC	70.6	50.8	50.4	47.3	Falling	Falling
Trinidad & Tobago	LAC	53.0	38.2	38.1	37.5	Falling	Falling
Uruguay	LAC	41.0	41.3	41.6	42.8	Rising	Rising
Venezuela	LAC	43.5	45.7	44.9	39.5	Rising	Falling

Note: A&P: Asia and the Pacific; ECIS: Europe and the Commonwealth of Independent States; LAC: Latin America and the Caribbean.



Notes

1. During the 1980s and 1990s, income inequality before taxes and subsidies was more or less the same in Finland and the UK, rising in both countries; but while income inequality after taxes and subsidies rose in the UK, it declined in Finland! Atkinson 2004.
2. The actual year of the early 1990s and the late 2000s differs by country, depending on data availability. In these calculations, the starting years range from 1990 to 1993 and the end years range from 2003 to 2010. For detailed data, see Appendix A.
3. This chapter uses the UN country income classifications. The high-income group represents developed economies and the low-income and middle-income (both lower and upper) groups represent developing economies.
4. The UN classifies by their level of development as measured by per capita gross national income (GNI). Accordingly, countries have been grouped as high-income (which represents the group of developed countries), upper-middle-income, lower-middle income and low-income (UN, 2012).
5. In the group of 116 countries in this sample, there are three lower-middle income countries in the early 1990s that were moved down to the low income group by the late 2000s (namely the Kyrgyz Republic, Senegal and Uzbekistan). The average change in inequality for those three countries is above 20 percent, but it is mostly driven by Uzbekistan, where inequality increased by 33 percent (in Senegal, inequality actually fell during the period). The two transition economies (the Kyrgyz Republic and Uzbekistan) experienced the sharp increases in inequality that followed the transition to market economies in the early 1990s. However, their economic growth stagnated during the period. See Appendix A for detailed country data.
6. For a full list of countries, see Appendix B.
7. Less than 1 percent change in the Gini index of income inequality. See Data Appendix B.
8. They constructed a panel of 39 countries from 1970 to 1994 and regressed the Gini index on a number of standard variables, such as the level of income and educational attainment and found that adding the labour share as a regressor improves the fit of the equation substantially and that the labour share has a negative and significant impact on the Gini index.
9. Other variables used are manufacturing share, GDP per capita, openness, civil liberties and human capital, which are discussed below.
10. The IMF investigated (Jaumotte, and Tytell, 2007) the effect of globalization on the wage share in developed countries as did the OECD (Bessani and Manfredi, 2012), while UNDP (Rodriguez and Jayadev, 2010) and the ILO (2011, 2012) carried out several analyses on a broader set of data encompassing all countries.
11. This shift in emphasis was partly caused by the assumption of a constant capital share in the neo-classical production function.
12. The channel through which labour market policies influence secondary income distribution is through collective labour agreements, which result in government support for transfers such as unemployment benefits or wage subsidies.
13. For developed countries, a more refined definition is used in some cases (Stockhammer, p. 11).
14. For details, see Ragab, A. (2013) "Technical note on income inequality and trade and financial globalization trends", UNDP, New York.
15. For detailed definitions of index components and weights please see Dreher, Gaston and Martens (2008) globalization.kof.ethz.ch
16. Analysis with other more restricted indices or variables of globalization (such as trade openness or financialization) gave similar results. See Ragab, A. (2013) "Technical note on income inequality and trade and financial globalization trends", UNDP, New York.



Income inequality

17. This trend of higher inequality and greater globalization for each successive income group is not continued for the group of high-income (developed) countries, which has the highest level of globalization (68.9), but a level of inequality (45.5) lower than that of upper-middle income developing countries.
18. Unrecognized member state.
19. The project "Commitment to Equity" is using slightly different terms: Primary income = market income, secondary income = disposable income, and tertiary income = final income.



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