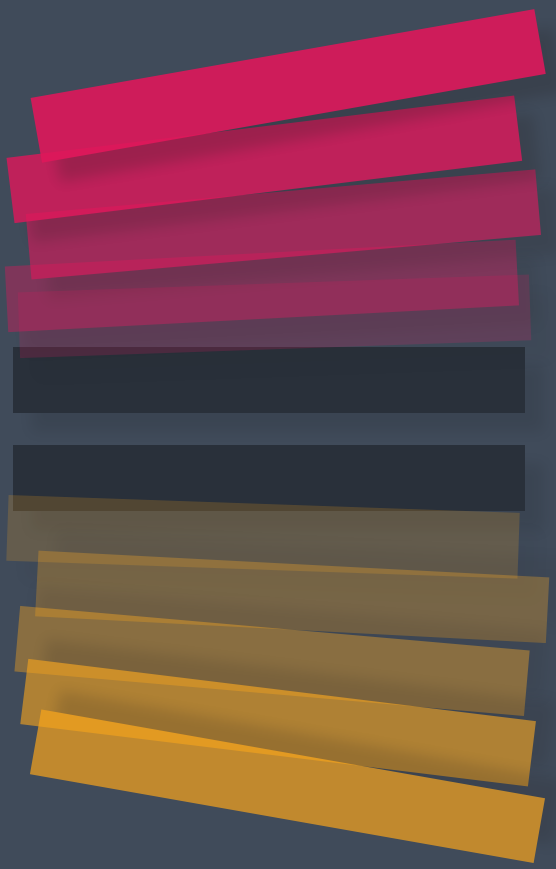
PREPRINT EDITION

International Labour Organization

INTERNATIONAL INSTITUTE FOR LABOUR STUDIES

# World of Work Report 2008



## Income Inequalities in the Age of Financial Globalization

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The **International Institute for Labour Studies** was established by the International Labour Organization in 1960 as a centre for advanced studies in the social and labour field to further a better understanding of labour issues through education and research.

### Who are the authors of World of Work Report 2008?

The report has been prepared by staff of the International Institute for Labour Studies and is published under the responsibility of its Director.
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Raymond Torres, Director of the Institute, edited and coordinated the report.

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## Boxes

# 1 Trends in employment and inequality

## Main findings

- The ongoing global economic slowdown is affecting low-income groups disproportionately. This development comes after a long expansionary phase where income inequality was already on the rise in the majority of countries.
- The recent period of economic expansion was accompanied by substantial employment growth across most regions. Between the early 1990s and 2007, world employment grew by around 30 per cent. However, there was considerable variation in labour market performance between countries. In addition, not all individuals shared equally in the employment gains. In a number of regions, women continued to represent a disproportionate share of non-employed persons – reaching nearly 80 per cent in the Middle East, North Africa and Asia and the Pacific.
- Employment growth has also occurred alongside a redistribution of income away from labour. In 51 out of 73 countries for which data are available, the share of wages in total income declined over the past two decades. The largest decline in the share of wages in GDP took place in Latin America and the Caribbean (-13 points), followed by Asia and the Pacific (-10 points) and the Advanced Economies (-9 points).
- Between 1990 and 2005, approximately two thirds of the countries experienced an increase in income inequality (as measured by changes in the Gini index). In other words, the incomes of richer households have increased relative to those of poorer households. Likewise, during the same period, the income gap between the top and bottom 10 per cent of wage earners increased in 70 per cent of the countries for which data are available.
- The gap in income inequality is also widening – at an increasing pace – between the firms' executives and the average employee. For example, in the United States in 2007, the chief executive officers (CEOs) of the 15 largest companies earned 500 times more than the average worker. This is up from 360 times more in 2003. Even in Hong Kong (China) and South Africa where executives are paid much less than their United States' counterparts, CEO pay still represents 160 and 104 times, respectively, the wages of the average worker.

- The prospects are for a continuation of a rise in income inequality in the course of the present economic slowdown and the recent developments such as the financial crisis and the sharp rise in food prices. As this report shows, the latter has already disproportionately affected poorer households.
- Rising income inequality can be a good thing to the extent that it is crucial to reward work effort, talent and innovation – key engines of economic growth and wealth creation. However, there are instances where income inequality reaches excessive levels, in that it represents a danger to social stability while also going against economic efficiency considerations. Indeed, higher income inequality is associated with higher crime rates and lower life expectancy. Higher inequality may also deepen macroeconomic instability in the sense that low-income households may adjust more slowly to economic shocks. In addition, there are instances where richer groups may secure economically-inefficient advantages, such as distortive taxes or an allocation of public funds that goes against the economic interests of the country as a whole. More fundamentally, when income inequalities are perceived to reach excessive levels, social support for pro-growth policies may be strongly eroded. Already now, there are widespread perceptions in many countries that globalization does not work to the advantage of the majority of the population.
- The policy challenge is therefore to ensure adequate incentives to work, learn and invest, while also avoiding socially-harmful and economically-inefficient income inequalities. Later chapters of this report examine this issue in detail.

## Introduction

Since 2007, the world of work has been hit by a number of global developments, in particular financial turmoil, rising food prices and a shortage of raw materials. This has brought an end to the rapid growth and strong employment performance exhibited by the world economy almost uninterruptedly since the mid-1990s.

Looking forward, a critical issue is the extent to which the current financial crisis and slowdown in the world economy may affect disproportionately low-income groups. This is all the more relevant given that, as this chapter will show, during the high-growth period, income inequality increased in the majority of countries, which may in turn damage the social fabric.

The purpose of this chapter is to discuss trends in employment and income inequality over the past two decades, and to assess why rising income inequality should be a matter of policy concern.

A number of the underlying factors behind rising income inequalities will be analysed in detail in later chapters. Chapter 2 examines the role of financial globalization, while Chapter 3 offers a comprehensive quantitative analysis of the role of domestic factors, notably tripartite institutions, in shaping income inequalities, taking due account of trade and other dimensions of globalization. Chapter 4 considers trends in job quality and the extent to which these trends may have contributed to rising income inequality. Chapter 5 examines redistributive policies through taxes and social transfers. Lastly, Chapter 6 considers Decent Work as a policy package to address excessive income inequalities and support employment growth.

Section A of this chapter provides an overview of developments in the world of work, especially as regards employment growth and labour's share of income over the past two decades. Section B reviews recent regional and country developments with respect to income inequality. This includes a special focus on the compensation of executives in selected countries. The extent to which income inequality is an issue of concern for policy-makers will be discussed in Section C. Lastly, Section D introduces some of the potential factors underlining the trend increase in income inequality and sets up a more detailed discussion in the chapters that follow.

## A. Overview of recent developments and employment trends

### The world of work is being affected by the economic slowdown

Rapidly rising oil, food and raw material prices, as well as the global financial turmoil, have affected the world economy over the past year.[1] In the light of these developments, the International Monetary Fund (IMF) has revised global economic growth forecasts downwards, especially for a number of the Advanced Economies – the United States, European Union (EU) 15 and Japan.[2] Growth turned negative in a number of countries, including France, Germany, Japan and Italy, in the second quarter of 2008, with growth in emerging and developing economies expected to slow down, although to what degree will partly depend on how severe the situation in the Advanced Economies turns out to be.[3]

The current economic slowdown has already had an immediate impact, bringing to a halt the strong employment growth enjoyed, with little or no interruption, by most Advanced Economies since the early 1990s. The United States, for example, experienced negative employment growth in each of the first eight months of 2008. Moreover, employment growth in most countries of the Organisation for Economic Co-operation and Development (OECD) is expected to slow down over the remainder of 2008 and into early 2009 (OECD, 2008a; OECD, 2008b).

Global employment growth, although still positive, is also expected to slow down in 2008, as employment gains diminish in developing economies. As a result, unemployment is expected to rise to 6.1 per cent in 2008 (ILO, 2008a).

In the context of the current financial crisis, it is also quite likely that the impact of these most recent developments has yet to be fully felt. In this respect, it will be important to monitor the extent to which low-income groups may be affected, especially in the developing world, where the recent steep increase in food prices has disproportionately reduced the purchasing power of poorer households (see Section B).

These developments will likely intensify some of the changes that have characterized the world of work over the past two decades or so. First, as the Advanced Economies' share of total employment has been in steady decline over the past decade, falling to just over 15 per cent in 2007, that of the developing economies has continued to rise (fig. 1.1, panel A). In fact, the world of work is evolving in such a manner that the regions of Asia and the Pacific and Latin America and the Caribbean now account for nearly two thirds of world employment, the former alone accounting for more than half. The two regions have also enjoyed similar employment growth since 2000 (fig. 1.1, panel B).

Second, even though the most recent period of economic expansion, from the early 1990s on, has been accompanied by relatively robust employment growth, this overall trend masks a number of important distributional factors: (i) employment growth has varied considerably within each region and large numbers of women remain excluded from the world of work; (ii) labour's share of income has been declining; and, (iii) in the majority of cases, this period of expansion went hand in hand with wider income inequalities – the theme of this year's World of Work Report.

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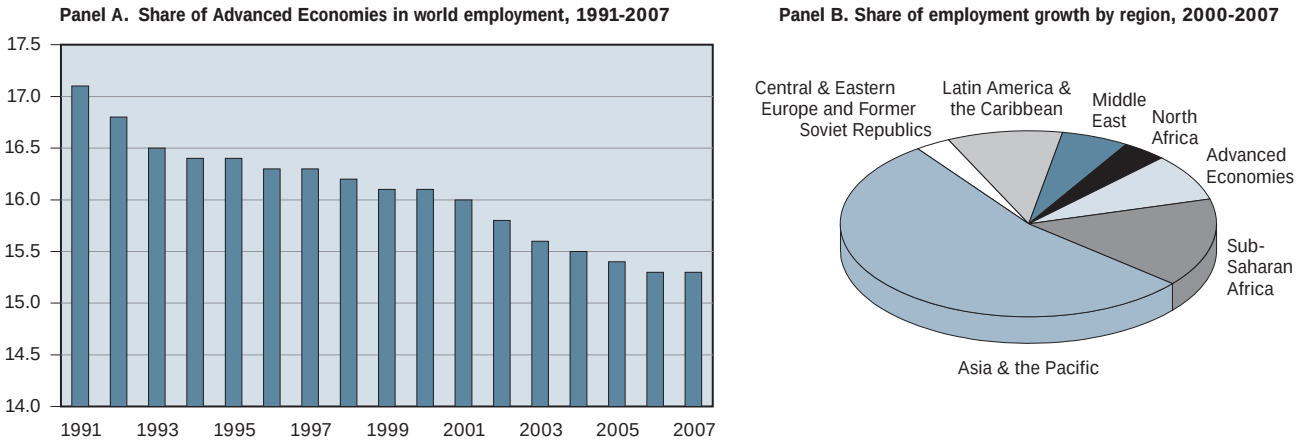
1. In December 2007, the food price index issued by the Food and Agriculture Organization of the United Nations (FAO) stood at 187, the highest monthly average since its inception in 1990. On 11 July 2008, the price of a barrel of oil reached its highest ever price, at over US$ 147.
2. See Appendix A for a list of country groupings.
3. The recent slowdown in the United States and other developed nations has not yet become global, which suggests that there may be some decoupling of growth in developing countries from growth in the Advanced Economies. However, there is some considerable debate as to the reality of this supposition, especially when examined over the longer term (see, for example, Kose, Otrok and Prasad, 2008).

**Figure 1.1. World employment trends**




Source: Estimates by International Institute for Labour Studies (IILS); ILO, 2008a.

## The slowdown follows a long period of rapid employment growth

Between the early 1990s and 2007, almost all regions of the world enjoyed relatively robust employment growth (fig. 1.2, panel A). In particular, since 1991, the Middle East, Sub-Saharan and North Africa and Latin America and the Caribbean have experienced annual growth of nearly 2.8 per cent, and often more, which, over the years, amounts to around a 50 per cent total increase in employment. Jobs gains in the Advanced Economies have been steady, if unspectacular, at 1 per cent per annum, but they have been outpaced by the Asia and the Pacific region – by a factor of two since 2002. At the other end of the spectrum, Central and Eastern Europe and the Former Soviet Republics saw a deterioration in the employment situation that accompanied a series of market reforms beginning in 1989, although that trend began to be reversed around 1999 (ILO, 1999).

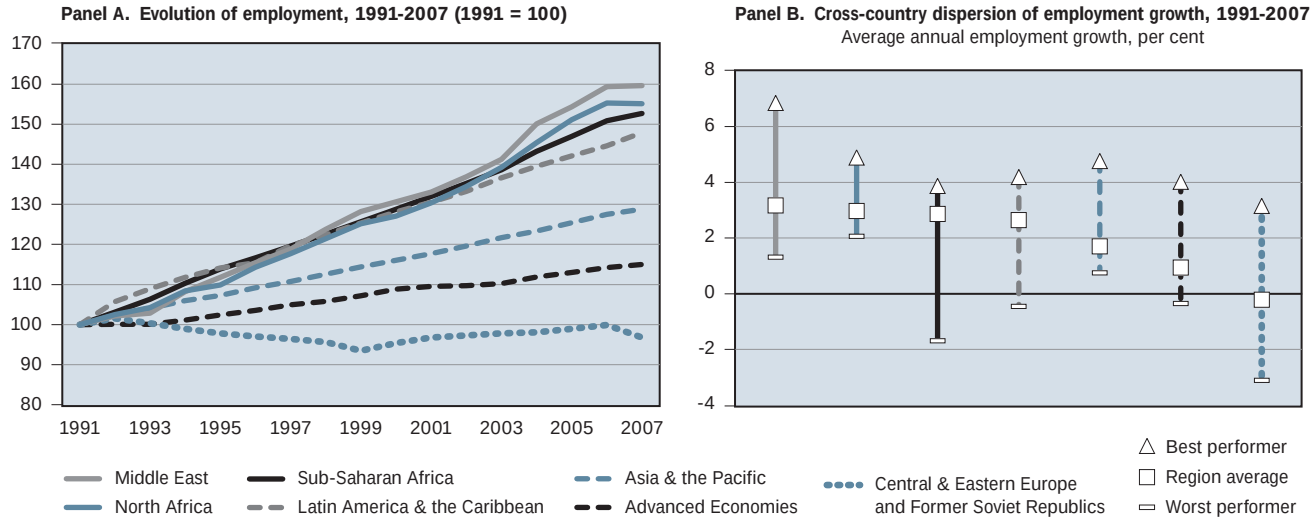
Strong regional improvements in employment outcomes, however, tell only part of the story. The reality is that significant variations in employment growth have occurred within all regions since the early 1990s, as shown by Figure 1.2, panel B. Moreover, the coefficient of variation reveals that the dispersion in country growth rates was highest in regions with stronger employment growth (the Middle East and Sub-Saharan Africa) and lowest where growth was more moderate (the Advanced Economies).[4]

The employment contribution of women to the world of work, since the early 1990s, has varied considerably from region to region. In the Advanced Economies, for example, women have accounted for the bulk of employment growth (over 60 per cent: see fig. 1.3, panel A), but elsewhere for less than a third. There have been considerable improvements in recent years in female labour market outcomes, with many women progressing from precarious jobs to wage and salaried employment. However, these trends have not made a substantial difference to the gender gap in the workplace (ILO, 2008b). The employment rates of women, at 49.1 per cent, continue to trail those of their male counterparts by some 25 percentage points (ILO, 2008a).

Not surprisingly, this has influenced the extent to which lower female employment rates drag down overall employment rates. For example, in the Middle East, North Africa and Asia and the Pacific, women constitute 80 per cent or more of the non-employed (fig. 1.3, panel B).[5] Even in the Advanced Economies and Central and Eastern Europe and

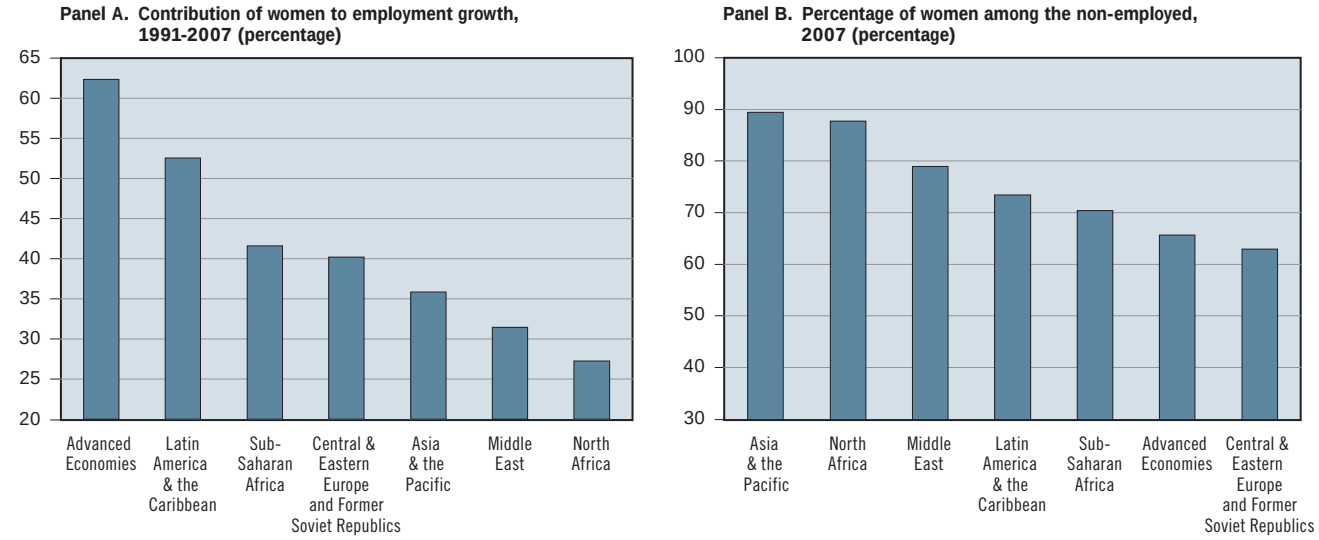
4. The coefficient of variation is measured as the standard deviation divided by the mean.
5. "Non-employed" is defined as the sum of the difference, by country and gender, between the maximum and the prevailing employment rate among persons aged 15 and over in the region.

## Figure 1.2. Employment growth and dispersion




Source: IILS estimates; ILO, 2008a.

## Figure 1.3. Trends in female employment growth




Source: IILS estimates; ILO, 2008a.

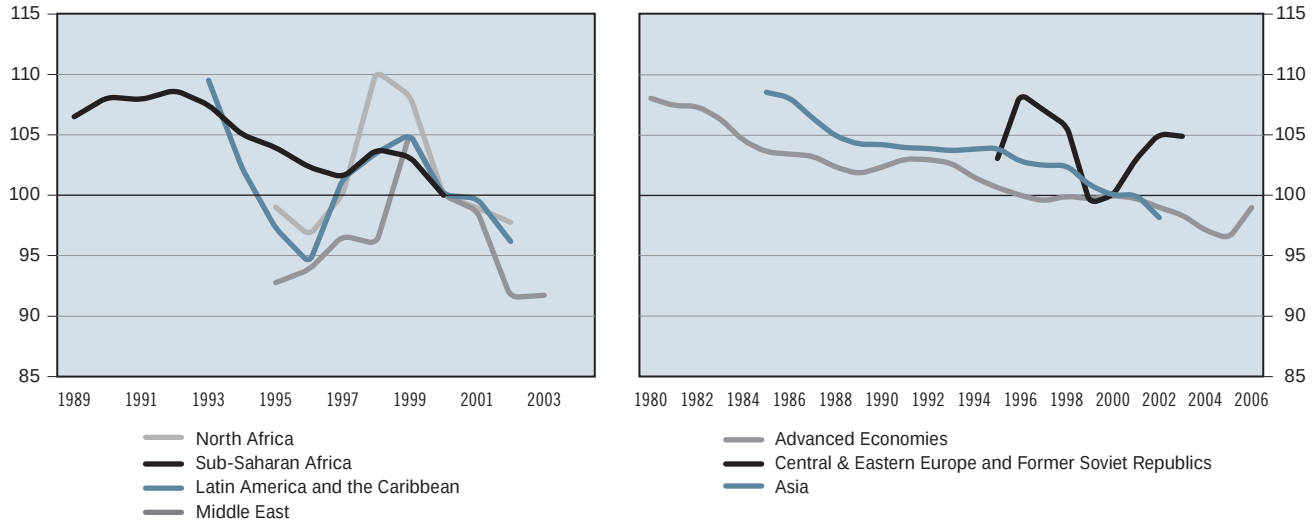
Former Soviet Republics, where women constitute a sizeable proportion of employment, they nonetheless also account for nearly two thirds of the non-employed. The development potential of many of these countries is thus constrained by the limited opportunities for women to benefit from, and take part in, the world of work (ILO, 2008b). It should be noted, in that context, that the nature of employment has also changed dramatically. The evolution of non-standard work arrangements in which women participate to a disproportionate degree, is discussed in Chapter 4.

## Wage shares declined significantly over the expansionary period

The past few decades have witnessed a significant change in the capital-labour income distribution (see Gollin, 2002; Krueger, 1999). An analysis of the data collected – for advanced economies, newly industrialized and developing nations alike – reveals that the wage (or labour) share of total income has declined in nearly three quarters of the countries considered. The decline occurred in most regions (fig. 1.4).[6] The fastest decrease occurred in Latin America (over 13 percentage points) and over a rather short period – 1993 to 2002 – but significant declines were also found in the Advanced Economies and Asia, where wage shares fell over 9 percentage points during the periods 1980-2005 and 1985-2002, respectively. Exceptions to this downward trend are Central and Eastern Europe, the Russian Federation, the Middle East and North Africa where the labour share has fluctuated but remained constant over the period 1995-2003.

Interestingly, the pattern of the decline has been similar in most countries: wage shares have declined steadily over the past three decades, except in the late 1980s/early 1990s and again in the late 1990s. Secondly, the drop in wage shares was particularly fast in the early 1980s and the early 2000s.

**Figure 1.4. Development of wage shares, by region, 1985-2006 (Wage share in 2000 = 100)**



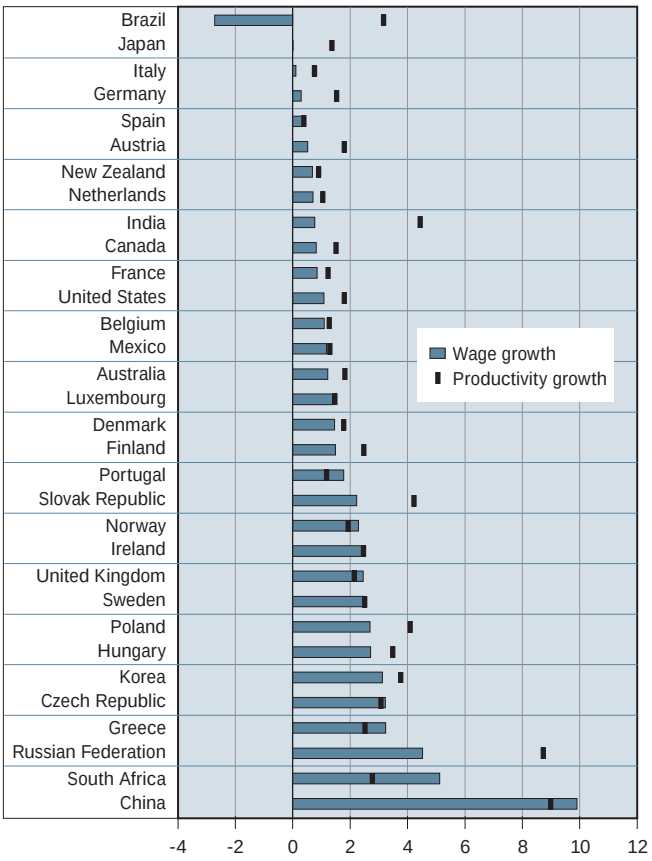

Source: IILS estimates (see Appendix B for methods, calculations and data sources).

Much of the literature to date confirms the results presented here, namely that labour's share of income has been declining steadily over the past few decades. Several studies have tried to examine the factors that may have contributed to this, with a particular emphasis on the effects of globalization, including trade and technological change, but no particular consensus has emerged.[7] For example, Harrigan and Baladan (1999) found that skill-biased technological change had a greater effect on wage shares than the intensification

6. Although the data on wage shares are widely available for OECD countries, considerable efforts were made to collect data for additional countries in order to obtain a broader view: see Appendix B for a more detailed description of the data sources and calculations. It should be noted that a correction for the self-employed was not possible for all countries involved. Wage shares are, therefore, presented as an index, in order to indicate that the analysis focuses on changes rather than levels.

7. See section C of this chapter for a discussion of the relationship between some of these developments and income inequality.

**Figure 1.5. Average annual wage and productivity growth, per cent, 1990-2006**




Note: Countries are sorted in ascending order (top to bottom) according to wage growth. Data for 1990 refer to 1995 in the case of Brazil, the Russian Federation and 1996 in the case of the Czech Republic, Greece, Hungary, Ireland, Mexico, Poland, Portugal, Slovak Republic and Sweden. Data for 2006 refer to 2004 in the case of Brazil, China, India, and South Africa and to 2005 in the case of the Russian Federation.

Source: IILS estimates (see Appendix B for methods, calculations and data sources).

of trade did. In the view of Guscina (2006), meanwhile, the decline was due to openness and technological progress, while Jaumotte and Tytell (2007) held that globalization was only one of several factors and that others, including labour market reform, had also contributed. Note that these studies do not test for the effects of the development of financial markets on wage share (see Chapter 2).

A more detailed way of examining the distribution of income between labour and capital is to compare the annual growth rates of real wages and productivity. Figure 1.5 compares the growth rates of remuneration with output per employee. If the annual growth rate of real wages is lower than that of productivity, the wage share of income declines.

An analysis of countries for which data are available (Brazil, China, India, the OECD countries, the Russian Federation and South Africa) indicates that, for the period 1990-2006, the findings are broadly consistent with the above; in 24 out of 32 countries, productivity growth exceeded wage growth (fig. 1.5).[8] In other words, labour's share of income fell.[9]

A closer examination of non-OECD countries reveals some interesting, if mixed, results.

8. Given that the time frames presented vary from country to country, direct cross-country comparisons over time cannot be made.

9. Over the period 2000-2006, the Nordic countries, the United Kingdom and the Central and Eastern European economies (all OECD countries) had strong real wage and productivity growth, leading to an increase in the wage share for the period.

- China's performance was among the best in terms of wage and productivity growth for both periods. Moreover, the rate of improvement compared with other countries increased;
- South Africa also experienced a growing wage share and a strong real wage and productivity growth rate, although to a lesser extent than China;
- Productivity growth in both Brazil and India consistently outpaced wage growth, with the former experiencing negative wage growth over the period 1995-2004.

The overall trend over the 1990s and early 2000s is that real wages increased less than productivity, generating a reduction of the wage share in the vast majority of countries considered. Any increase in the wage share that occurred in some OECD countries in the early 2000s did not make up for the decline that took place in the 1990s. In sum, the two different ways of computing changes in the wage share ultimately yield similar results: the wage share declined in nearly three quarters of the countries considered.

## B. Trends in income inequality

The debate regarding the impact of globalization, and its numerous manifestations, is widely documented (see, for example, Lee, 2008; IMF, 2007). Broadly speaking, deeper international economic integration can raise income levels for all participating countries, albeit after a potentially difficult transition phase. On the other hand, it is argued that while overall income levels improve, the benefits of globalization are not shared equally.

There have been three basic approaches to the assessment of how global income distribution has evolved in the latest era of globalization (World Bank, 2007), involving a consideration of:[10]

(i) Within-country inequality – this approach takes into account the income distribution within countries using measures such as the Gini index to illustrate the entire income distribution of a country. Recent studies, including this report, find that within-country inequalities have increased over the past two decades or so;

(ii) International inequality – measures differences in average incomes across countries. There are no references made to income distribution within each country as it is assumed that people have the mean income of their countries. According to some recent studies, international income inequality has tended to decline. This largely reflects the trend increase in per capita income in emerging economies like China and India;

(iii) Global inequality – an approach that takes into account both within- and between-country income inequalities.[11] According to this approach, income differences among all individuals in the world are considered, irrespective of the country of residence of the individuals.[12]

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10. See also, for example, Capéau and Decoster, 2004 and Milanovic, 2005a and 2005b for a discussion of trends in world income inequalities.

11. Household budget surveys are used to measure income shares to calculate a precise image of within country inequality. Then, each income share is weighted by the GDP per capita of the country considered in order to calculate the mean income for each income class.

12. Over the past few decades, conclusions regarding global income distribution have varied according to the approach taken, with no clear consensus emerging on trends or magnitude (see Anand and Segal, 2008; World Bank, 2007; and Chapter 2 of this report).

A distinction also needs to be made between income inequality and wealth inequality. Income refers to flows, while wealth refers to stocks. As wealth depends on the accumulation of income flows, it is therefore determined by savings behaviour, levels of income such as labour income and financial income (arising from interest returns, capital gains and dividends), taxes and inheritance.[13] In this chapter, only the within-country income inequality approach will be considered.[14] Measurement issues are discussed in box 1.1.

## Rising income inequality since the early 1990s

The period 1990-2000 offers the most comprehensive snapshot of income inequality and patterns over time by region and country. Over this period, more than two thirds of the 85 countries for which data are available experienced an increase in income inequality, as measured by changes in the Gini index (fig. 1.6). The few reductions were principally concentrated in Sub-Saharan Africa and the Middle East. However, within these regions, especially the former, the levels of inequality remain high.

Other notable developments in income inequality by region include:

- Advanced Economies: only Denmark, France, Germany and Switzerland recorded declines in income inequality, while the largest increases occurred in Belgium, Finland and Sweden. Generally, levels of income inequality remained low compared to other regions, although in the Republic of Korea, the United Kingdom and the United States, which have the highest levels in the region, they are almost as high as the highest levels in other regions;
- Asia and the Pacific: modest declines in the Gini index occurred only in Cambodia and the Philippines, where income inequality remains nonetheless among the highest in the region. China and Laos recorded substantial increases over the period 1990-2000;
- Central and Eastern Europe and Former Soviet Republics: there were noticeable increases in income inequality everywhere except the Russian Federation, Kazakhstan and Slovenia, where reductions were recorded, although the former continues to have one of the highest levels within the region;
- Latin America and the Caribbean: mixture of countries with rising and falling income inequality, with Bolivia and Colombia recording the largest increases and Guyana the largest decline. Guyana now has the lowest level of income inequality in the region and Panama the highest;
- Middle East and North Africa: among the few countries for which data were available, there were only moderate changes (in either direction), as income inequality remained close to levels present in the early 1990s. Only Yemen, and to some extent Jordan, experienced noteworthy reductions in income inequality, with the former posting one of the most significant declines found in any of the regions;
- Sub-Saharan Africa: nearly two thirds of the countries for which data are available saw reductions in income inequality, but levels remain among the highest worldwide.

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13. While the two are highly correlated – typically, the distribution of wealth within countries is more unequal than the distribution of income – it is asset inequality that has the more profound and more direct consequences for economic growth. Social outcomes, however, are more directly affected by income inequality so public policies usually focus on income rather than on wealth (see section C of this chapter).
14. Wealth inequality, the resulting financial market problems and the consequences for economic growth will be discussed in Chapter 2.

### Box 1.1. Measurements of income inequality

There are different measures of income inequality. All seek to assess the distribution of income among individuals (or households), and thus the level of inequality in a given society, but each has its strengths and limitations. The appropriateness of a given measurement can be assessed against a number of criteria (see Litchfield, 1999; Cowell, 1999 and 2006). These criteria include:

- *The Transfer Principle:* the measurement in question should fall (rise) with the redistribution of income from (to) a richer to (from) a poorer person, or at least should remain unchanged;
- *Income Scale Independence:* when all incomes change proportionally (for example, if each person's income doubles), there is no change in the measurement of inequality;
- *Population Principle:* merging two distributions will not alter the measure of inequality;
- *Anonymity or Symmetry:* only individual incomes are taken into account in the construction of the measure;
- *Decomposability:* the overall measure and changes are consistent with changes at every level, so that increases in inequality within population subgroups will result in overall increases in inequality.

Two inequality measures are considered in this report.

**Gini index**

First, the Gini index varies between 0 (complete equality) and 100 (complete inequality). It measures the extent to which the distribution of income (or consumption expenditure) among individuals or households deviates from a perfectly equal distribution.
The Gini index, like other measures of inequality, suffers from a number of drawbacks. First, it does not identify where in the income distribution the rise (or fall) in income inequality may have occurred and marginal changes over time may be difficult to quantify. Moreover, it cannot be used if values are negative (for example, negative net wealth). And while there are ways of decomposing the Gini index, the component terms of total inequality are not always intuitively or mathematically appealing (see, for example, Fei, Rainis and Kuo, 1978; Yitzhaki and Lerman, 1991).

**P9/P1**

Second, the P9/P1 ratio measures the ratio of the income of a person in the 90th percentile to that of a person in the tenth percentile. The measure is common, especially in developed countries, for a number of reasons. First, such ratios are fairly straightforward and easy to interpret, for example, a ratio of 5 means that the income of the poorest person in the top 10 per cent of income distribution is five times that of the richest person in the bottom 10 per cent. Second, it is easy to calculate, and in developed countries, there is often a longer time-series of data that makes it possible to examine changes in income inequality over time. There are, however, at least two disadvantages to using the P9/P1: first, they do not reflect what happens in other parts of the income distribution and, secondly, sufficient data on developing nations are not available for comparison purposes.

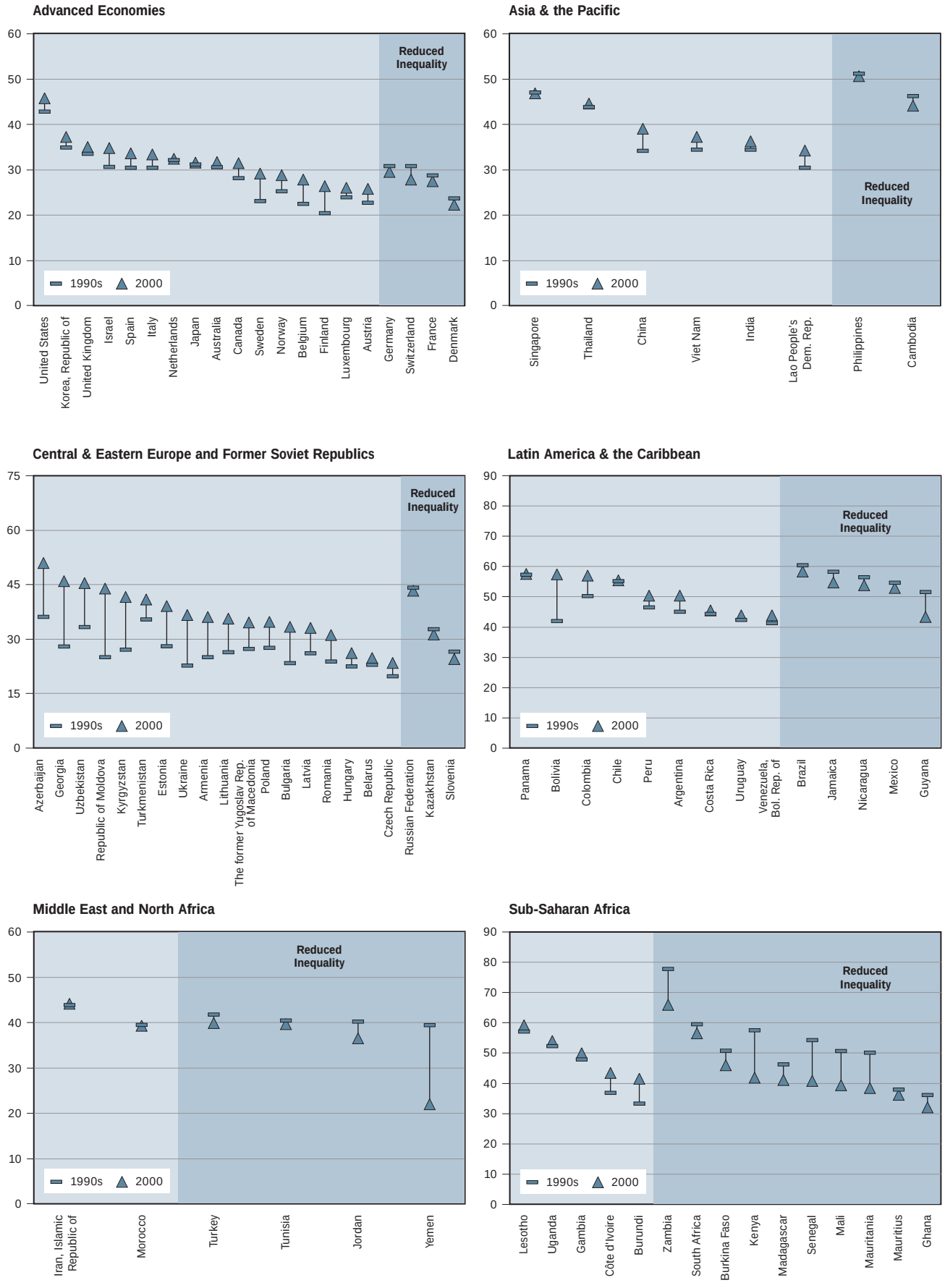
In this report, income inequality is calculated principally using the Gini index for consistency and, given that it is a widely accepted measure of inequality, meeting the requirements of at least the first four criteria above. Moreover, data are readily available for a wide range of countries over time. The P9/P1 ratio is also used for some specific purposes, like the analysis of wage differentials.

Source: World Bank (1999).

During the period 2000 to 2005 – admittedly a shorter period and fewer countries – a slightly different story emerges at first glance as income inequality fell in more than half of the 44 countries for which data are available, and substantially in some, including El Salvador, the Islamic Republic of Iran, Lithuania, Mexico, Sweden and Uzbekistan. On the other hand, income inequality still rose in some 20 countries, the increases being rather substantial in Armenia, China, Latvia, Romania and Turkey.

A more comprehensive analysis over the full period (1990-2005) reveals that income inequality rose in more than two thirds of the countries for which data are available. In

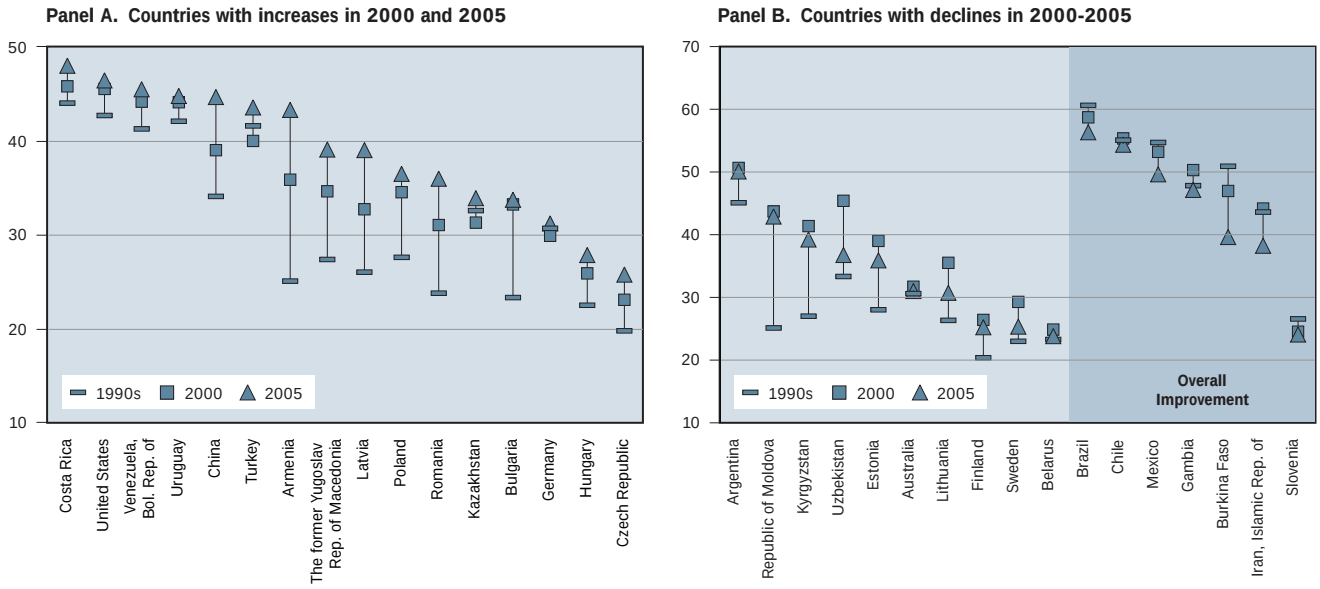
## Figure 1.6. Gini index by region for 1990 and 2000




Note: The data presented may refer to a year close to the reference year, e.g. 1991 instead of 1990.

Source: IILS estimates (see Chapter 3).

**Figure 1.7. Changes in Gini index between 1990 and 2005**




Notes: The data presented may refer to a year close to the reference year, e.g. 2001 instead of 2000, and 2005 may refer to the most recent year available, for example, 2004.

Source: IILS estimates (see Chapter 3).

approximately half those countries, income inequality increased in both 2000 and 2005 (fig. 1.7). In approximately another one third, any decline that occurred in the most recent period – albeit over a shorter time – was not enough to offset the increases that occurred over the 1990s. Only in a few countries (fewer than one third of the total), including for example Brazil, Burkina Faso and Mexico, were overall improvements to income inequality recorded.

## Increasing wage gap between high- and low-wage earners

The wage gap between the highest 10 per cent and lowest 10 per cent earners has also tended to increase. An examination of existing data for OECD countries and microdata for Brazil, China and India reveals that inequality has risen in 18 of the 27 countries since the early 1990s for which data are available.[15] The highest wage dispersion occurred in Brazil, China, India and the United States and the lowest in Belgium and the Nordic countries (fig. 1.8).[16]

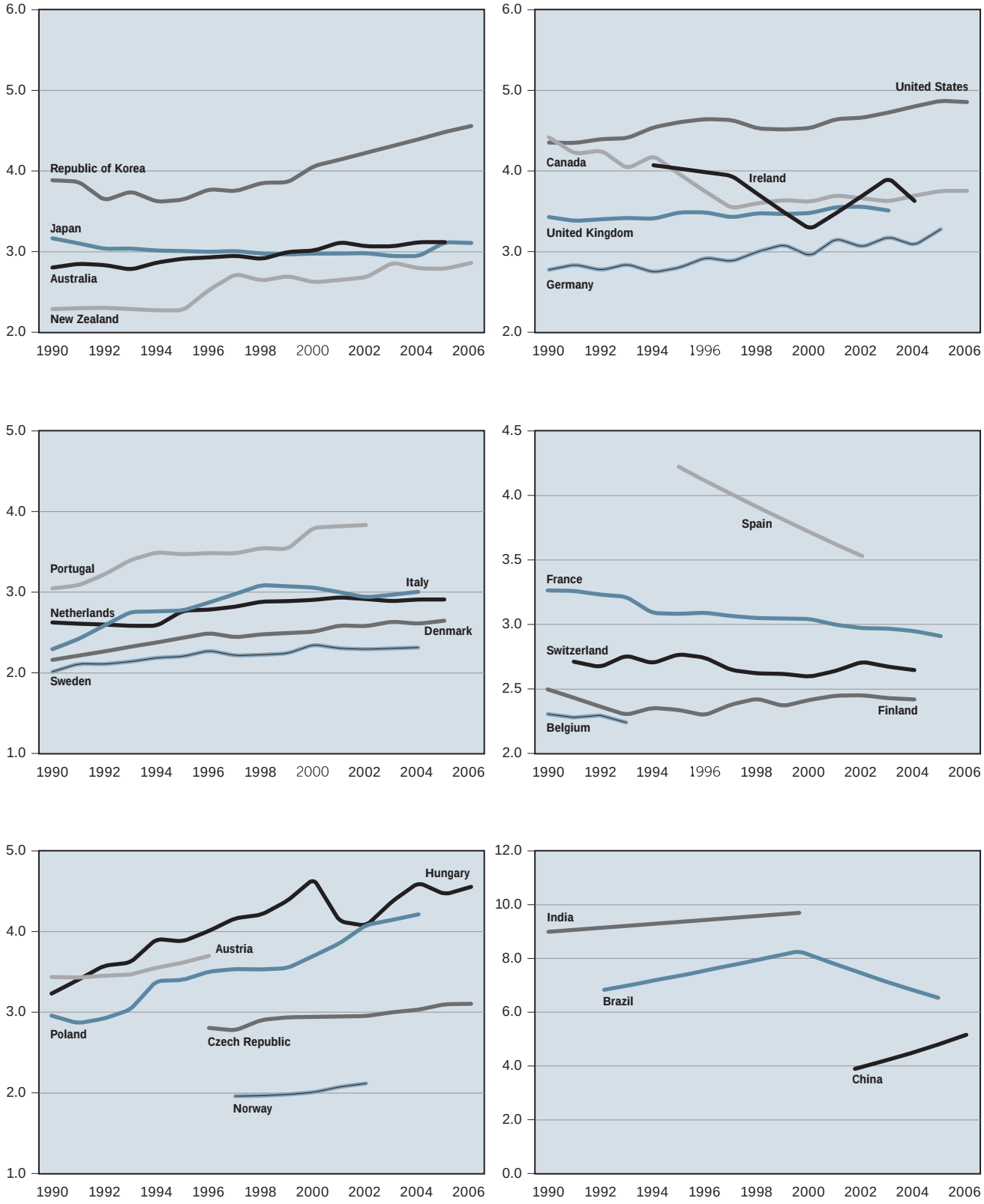
Over the past two decades, large increases have occurred in Hungary, Poland, Portugal and the United States, where the ratio is now near or above 4, but also, interestingly, in developing countries and in countries that have low inequalities overall such as the Nordic countries. Such a development in these countries, where low inequality is seen as a major element of social cohesion, provides an illustration of the trend toward increasing inequalities.

While some countries experienced overall declines, only in Belgium, France, Spain and Switzerland did the ratio fall more or less consistently over time. It is important to note, however, that most decreases took place for countries with short time-series data,

15. See Appendix B for methods and calculations.

16. See Section B of this Chapter for evidence regarding the ratio of executive pay to average wages in a number of countries.

**Figure 1.8 Ratio of earnings of top 10 per cent earners vis-à-vis bottom 10 per cent earners, 1990-2006**




Note: Data for Brazil (1992, 1999 and 2004), China (2001 and 2005) and India (1990 and 1999) refer to specific years only, not a full time series and refer to salaried employment.

Source: IILS estimates.

such as Belgium, Spain and Switzerland, or with series breaks, such as Canada and Finland.[17] In fact, Canada, Finland, Ireland and the Republic of Korea have seen significant increases in the ratio since the mid- to late-1990s.

More generally, the late 1990s are characterized by a marked increase in the wage gap between the top and bottom wage earners. The section on executive pay (see below), seems to suggest that the income of the top earning deciles grew much faster than that of the medium or bottom earnings deciles.

A comparison of changes over the 1990s and 2000s (using the Gini index) and wage gaps (using the P9/P1 ratio) can provide valuable information on the consistency of within-country income inequality measures. In particular, the P9/P1 ratio may help explain changes in the Gini index, since the former provides information regarding the gap between the extreme two deciles and the latter a summary of overall inequality.

Such a comparison shows that changes in the Gini index and P9/P1 ratio are consistent in most countries: movements in the P9/P1 (gap between the upper and lower wage earners) correspond with movements in the Gini index (overall income inequality). Of course, this does not mean that the P9/P1 ratio explains the dynamic of changes in the Gini, but there is some coherence between the movements (in the same direction) of both measures. For example: in France and Switzerland, there was a drop in both the Gini and the P9/P1 ratio in the 1990s; the large increases in the Gini and the P9/P1 ratio in Finland and Sweden during the 1990s were also consistent with each other. The small increase in inequality in the Republic of Korea, the United Kingdom and the United States in the 1990s was in line with the small increase in the P9/P1 ratio over that period. The same applies to the newly industrialized economies; large increases in overall income inequality in China in the early 2000s and in India in the 1990s are consistent with an increasing gap between the upper and lower wage distribution; and in Brazil, the small drop in the Gini index was accompanied by a reduction in the P9/P1 ratio during the 1990s and 2000s.

## Rising income inequality between executives and average employees

The rise in executive pay, which is sometimes regarded as a driver of income inequality, has attracted considerable attention over the past few years but especially so in the context of the recent financial crisis.[18,19]

This is an issue which needs to be treated in a dispassionate manner, avoiding informed perceptions. Indeed, the job of executives – the top managers of firms – has become more difficult owing to the fact that the market conditions under which firms operate have become more volatile. Enterprises are under increasing pressure to seize the opportunities of globalization and new technology. The gains from seizing those opportunities can be large indeed. The losses from failing to adapt can also be significant, however, while the new technology and new forms of work organization being introduced by firms make the task of managers more complex. These trends explain why firms are increasingly focusing on performance in determining executive pay.

Cross-country studies in this area are, however, difficult for a number of reasons, including variations in accounting and disclosure practices. Moreover, comparisons

17. In Finland, the P9/P1 decreased over the period 1980-2006 because of a series break between 1990 and 1994. Over the period 1994-2005, it increased from 2.3 to 2.4. In Canada a break came in 1994 and the index dropped from 4 to 3.5. Canada also experienced an increase in P9/P1 over the late 1990s and early 2000s.

18. Throughout this section, the term "executive" refers to both CEOs and lower-level executives.

19. Shields (2005) provides an interesting analysis in this respect. He shows how companies affiliated to the Business Council of Australia constantly criticize the lack of competitiveness of the Australian workforce, while at the same time, their own executive pay is on the rise.

through time are hampered by methodological changes in the way executive pay is calculated and/or disclosed (box 1.2). With these caveats in mind, the purpose of this section is to examine the patterns of executive pay in some of the countries for which such data are available, namely Australia, Germany, Hong Kong (China), the Netherlands, South Africa and the United States.[20]

### *What is executive pay and how is it measured?*

Executive pay includes various components. First, there is a fixed component, which may be regarded as the basis of the compensation package and includes salary and certain benefits and allowances in kind, including the private use of company cars, aircraft, financial counselling and home security.[21]

Second, there is often a variable component that is either accorded on a discretionary basis or based on previously defined performance criteria.[22] These are based on individual, business unit or corporate performance and may include thresholds or ceilings limiting the amount of payment involved (Lynch and Perry, 2003).[23] Long-term variable compensation is typically based on certain performance criteria established in advance and often linked to a company's stock in order to create incentives for greater shareholder value. These can include a combination of stocks, restricted stock, stock options and stock appreciation rights.[24]

Third, companies often have a pension programme in place, either specifically designed for executives or open to a wider range of employees. In the United States, a certain part of the compensation is often deferred until the executive reaches retirement age.

Finally, many companies provide termination benefits for executives, either as a lump sum or in the form of continued payment of compensation after the expiry of a contract. The termination clauses may preclude payment if the termination of the contract is caused by the executive, in the event of unilateral termination of contract, for example, or as the result of a serious fault of the executive.

Reflecting on these methodological issues (box 1.2), it is difficult to compare executive pay across countries. To remedy this, it would be useful to develop a uniform way of calculating the value of the different components of share-based compensation. This, however, goes beyond the scope of this report. Rather, the purpose here is to provide a snapshot of executive compensation and how it has evolved, over time, and in comparison with the average wage.

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20. See Ebert, Papadakis and Torres (2008) for a more detailed analysis of executive pay.
21. Certain companies also provide reimbursement for tax liabilities. The determination of fixed compensation is usually based on "competitive benchmarking", involving a general salary survey and detailed analysis of specific industries or market peers. See Murphy (1999) for criticism and further comments.
22. The term "bonus" is misleading in this respect, as demonstrated by the disclosure practices in the United States. Prior to 2007, "bonus" referred to payments for predetermined targets, but it now means discretionary payment by the board.
23. Criticism in some countries, for instance in the United Kingdom, has focused on the fact that bonus targets frequently remain unpublished. Further, Bruce et al. (2007) draw attention to an increasingly complex structure of bonus targets that is linked to higher bonus pay but not to higher shareholder return.
24. Stocks refer to a specific number of shares, the value of which rises with the value of the stock; restricted stock refers to shares distributed to executives on the basis of performance or seniority; stock options to the right to purchase a certain number of shares at a predetermined price (the "exercise price") for a specified period of time; and stock appreciation rights refer to the right to receive payment in cash determined in line with the appreciation of the stock price.

### Box 1.2. Measurement of executive pay: methodological issues

**Disclosure practices**

Disclosure practices differ widely across countries. While some countries, including France, the Netherlands, the United Kingdom and the United States require companies to report detailed compensation data in a remuneration report, others like Greece, have no specific requirements. In some cases, such as France, Germany and the Netherlands, disclosure practices were initially governed by codes of best practice but were transformed into legal provisions, since the compliance by firms was considered unsatisfactory (European Corporate Governance Institute, 2003 and Rang, 2008).

In addition, many regulatory provisions are vague, so companies in such countries as Brazil, Germany, Japan and Mexico frequently report only aggregate data on executive compensation. Even in Germany, where companies have been required to provide detailed individual data on executive compensation since 2006, this "requirement" can be overturned by two thirds of shareholders. In some countries, executives seem to consider the disclosure of the precise amount of remuneration to be a risk to their personal safety (Leal and Carvalhal da Silva, 2005).

**Stock options and share-based compensation**

One of the principal difficulties associated with measuring executive compensation is to quantify the actual or prospective value of share-based compensation. Even in countries where disclosure of stock options is prescribed by national regulation, a specific methodology for calculating this value is seldom laid down. As a result, in France, South Africa and the United Kingdom, companies often disclose the number of the shares or options granted but without putting a value on them. Even where a value has been calculated, the methodology can vary. For example, companies in many countries calculate the value of share-based compensation at the time that it was granted, whereas in others they calculate the value of stock awards and options that have actually been exercised.

The situation is further complicated by the fact that there are also different methodologies for calculating the value of share-based compensation at the date on which it is granted. The most common method for calculating the cost to a company is the Black-Scholes model, which estimates the value of a stock option upon exercise. Whatever the model used by individual companies, it should be noted that, in the majority of the countries reviewed for the purposes of this study (principally Australia, France, Germany, Hong Kong (China), the Netherlands, South Africa and the United Kingdom), the regulations rarely lay down a specific method of calculation. As a result, calculations of the value of share-based compensation vary not only across countries but also across companies within the same country.

In addition, there are problems inherent in all the existing models used to calculate share-based compensation. For example, among other drawbacks, they do not take into account the fact that stock options may be cancelled if an executive leaves the company, with the result that they overstate the cost of the options for the company. Furthermore, the Black-Scholes model assumes that the stock options will be exercised upon expiration of the options. But in practice, executives may be free to exercise their options at any time between the vesting and the expiry of the options (see Hall and Murphy, 2000; Murphy, 1999). A recent study of stock options in Australia estimates that the average value at grant date ascribed to stock options amounted to only 26 per cent of the value of stock options actually exercised (Institutional Shareholder Services Australia, 2006).

### *Executive pay, excluding share-based compensation, exceeds average wages by a factor of at least 50 and, in some cases, 180*

An examination of executive pay in 2007 for the 15 largest companies in six selected countries shows that chief executive officers (CEOs) earn, on average, between 71 and 183 times more than the average employee (table 1.1).[25] The highest-paid CEOs are in the United States, where average pay exceeds US$ 10 million per year, or about 183 times

25. Available at: http://www.forbes.com/2008/04/02/worlds-largest-companies-biz-2000global08-cx_sd_0402global_land.html.

**Table 1.1. Executive pay, 2007**

| | CEO | | Average executive | |
|---|---|---|---|---|
| | Pay in US$ (annual average in millions) | Pay as a ratio of average employee wages | Pay in US$ (annual average in millions) | Pay as a ratio of average employee wages |
| Australia | 6.0 | 135 | 2.4 | 53 |
| Germany | 6.8 | 148 | 3.8 | 82 |
| Hong Kong | 2.7 | 160 | 1.1 | 63 |
| Netherlands | 3.6 | 71 | 2.2 | 43 |
| South Africa | 1.4 | 104 | 0.9 | 71 |
| United States | 10.3 | 183 | 6.3 | 112 |

Source: IILS estimates based on the annual reports of 15 of the largest companies in the respective countries.

the wage of the average American worker. And while CEOs in Hong Kong (China) and South Africa, for example, are paid much less than their US counterparts, their compensation still represents between 160 and 104 times the wage of the average worker in these countries. Even average executives earn between 43 and 112 times as much as average employees.

It is also interesting to note that the difference between CEO and average executive compensation varies significantly across countries. For example, in Australia and Hong Kong (China), CEOs earn 100 per cent more than the average executive, while they earn over 60 per cent more in Germany, the Netherlands and the United States and 50 per cent more in South Africa.

These estimates must, however, be considered with some caution. Given that the executive pay tends to rise with firm size, the magnitude of pay differences between executives (of the 15 largest companies) and employees may therefore have been overestimated.[26] On the other hand, data presented in table 1.1 excludes share-based remuneration to enable cross-country comparisons. It is likely that, if share-based remuneration and other variable compensation – which can represent a sizeable percentage of total compensation – is included, the true difference in compensation between executives and employees has been underestimated. For example, in the United States and the Netherlands, the variable component (often linked to firm performance) represents a significant percentage of overall compensation.

### *The gap between executive and employee pay has grown over time: cases of the United States and the Netherlands*

An attempt has been made to obtain data on changes in executive pay, including share-based compensation, between 2003 and 2007 in the 15 largest companies in two countries, the Netherlands and the United States.[27] The choice of countries was determined mainly by the objective of comparing developments in two countries with different corporate governance traditions and different institutional frameworks. For example, unlike

26. According to theory (Murphy, 1999); and as confirmed by empirical research in various countries, including the United States (Tosi et al., 1998), Australia (Merhebi et al., 2006), Portugal (Fernandes, 2008) France (Dardour, 2008) and Germany (albeit not consistently, according to Haid and Yurtoglu (2006); Rang 2006), executive pay increases with company size.

27. In the event that companies were not listed on the national stock exchange or did not provide comparable data, it was decided to include, instead, the next biggest company on the list.

the United States, the Netherlands is a relatively small country, whose companies employ a two-tier governance system. Elements that have long been inherent in executive compensation in the United States, such as comprehensive disclosure of compensation and the frequent use of share-based compensation, have emerged only relatively recently in the Netherlands (see De Jong et al, 2005; Duffhues and Kabir, 2008).

It was possible to obtain data on share-based compensation in both countries. However, unlike the companies in the United States, various Dutch companies did not provide the information necessary for the share-based calculation according to the Black-Scholes model (see box 1.2). The value of stock awards and stock options was therefore determined by calculating the value of the stock awards vested in the year of the annual report and the stock options actually exercised in that year. Any direct comparison between the two countries, in this respect, should, therefore, be made with some caution.

### *United States*

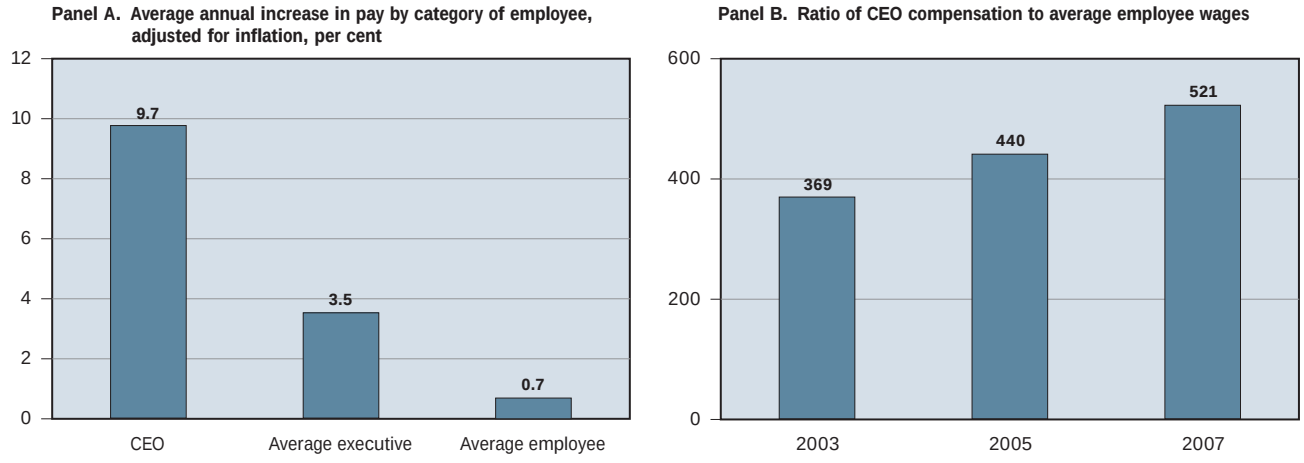
The real average pay of American CEOs, including share-based compensation, rose from over US$ 16 million per year in 2003 to nearly US$ 24.5 million in 2007. This increase – nearly 10 per cent per year on average – far exceeded that of 2.5 per cent for other executives and 0.7 per cent for employees (fig. 1.9, panel A).

Including share-based compensation, therefore, accentuates the gap between CEO compensation and average salaries. In 2007, US CEOs earned more than 521 times the average employee, as against 370 times four years earlier (fig. 1.9, panel B). When share-based compensation is included, CEOs also earned nearly twice as much as average executives in 2007, compared to one and a half times as much in 2003.

Clearly, variable compensation represents an important contribution to overall remuneration. In fact, an analysis of the principal components of compensation reveals that, in 2007, variable compensation (share-based and variable in cash) constituted nearly 90 per cent or more of total compensation for CEOs and average executives in the United States. Furthermore, share-based compensation was the dominant component of total compensation, constituting more than 60 per cent for CEOs and 50 per cent for average executives.

A quantitative analysis of the compensation components provides additional interesting insights with respect to the evolution of variable compensation. For example, from 2003 to 2007, the salary component of CEOs and executive managers rose at similar

**Figure 1.9. Evolution of executive pay versus average employee wages in the United States, 2003-2007**




Source: IILS estimates based on the annual reports of 15 of the largest companies in the United States.

**Table 1.2. Increase in executive pay components, United States, 2003-2007, per cent**

| | Salary and perquisites | Variable compensation in cash | Share-based compensation | Deferred payment |
|---|---|---|---|---|
| CEO pay | 20 | 45 | 70 | 294 |
| Executive pay | 18 | -0.9 | 48 | 227 |

Source: ILS estimates based on the annual reports of 15 of the largest companies in the United States.

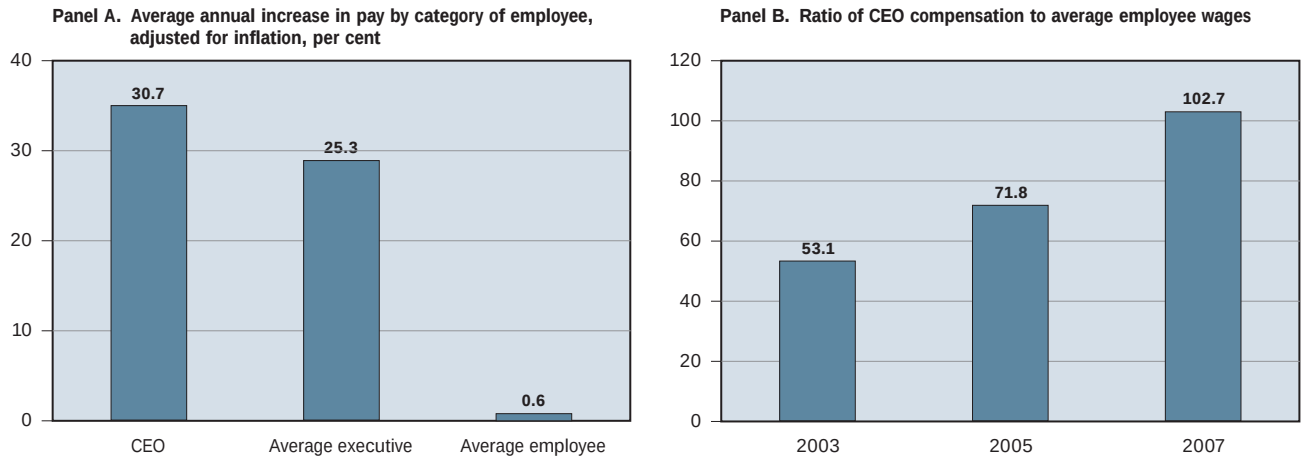
rates of around 20 per cent (table 1.2). For CEOs, however, variable compensation in cash increased roughly 45 per cent and share-based compensation 70 per cent, whereas, for the average executive, variable compensation in cash declined and share-based compensation increased 48 per cent. Deferred payments such as pension rights rose more than 200 per cent between 2003 and 2007 for both CEOs and average executives, but such payments represent only a small share of overall remuneration (less than 4 per cent in both cases).

Thus, not only is there an increasing gap in pay between CEOs and employees (including other executives) in the United States, but variable compensation accounts for a significant, and growing share of this difference.

### *Netherlands*

The real average pay of Dutch CEOs, including share-based compensation, tripled from over US$ 2 million per year in 2003 to over US$ 6 million in 2007. The increase – over 30 per cent per annum on average – marginally exceeded the growth in average executive pay (25 per cent) but clearly dwarfed the growth in average employee remuneration of 0.6 per cent per annum (fig. 1.10, panel A). As a result, in 2007 Dutch CEOs earned over 100 times more than the average Dutch employee, compared to 50 times in 2003 (fig. 1.10, panel B). The gap between CEOs and other executives was far less dramatic: Dutch CEOs earned only 1.9 times more than the average executive in 2007, up from 1.4 in 2003.

**Figure 1.10. Evolution of executive pay versus average employee wages in the Netherlands, 2003-2007**




Source: IILS estimates based on the annual reports of 15 of the largest companies in the Netherlands.

**Table 1.3. Increase in executive pay components, Netherlands, 2003-2007, per cent**

| | Salary and perquisites | Bonus | Share-based compensation | Deferred payment |
|---|---|---|---|---|
| CEO pay | 50 | 174 | 5391 | 8 |
| Average executive pay | 35 | 163 | 3706 | -9 |

Source: IILS estimates based upon on the annual reports of 15 of the largest companies in the Netherlands.

In the Netherlands, executive compensation has also undergone some interesting developments in recent years as regards the composition of compensation. The relation between fixed and variable remuneration in Dutch compensation packages has traditionally been different from the corresponding packages in US and UK companies, in that basic salary constitutes the most important component of compensation. However, the share of variable compensation is increasing in importance.

Fixed compensation, which comprised more than 70 per cent of both CEO and average executive compensation packages in 2003, fell to 61 per cent and 57 per cent, respectively, in 2007. Interestingly, this is mainly due to developments in share-based compensation – a fairly recent phenomenon, in the Netherlands – which increased by more than 5000 per cent for CEOs and more than 3700 per cent for average executives between 2003 and 2007, albeit from relatively low levels (table 1.3). In fact, while share-based compensation played only a marginal role in 2003, it constituted about one third of the compensation package for both CEOs and executives in 2007.[28]

### *Looking forward: potential impact of food and commodity price hikes*

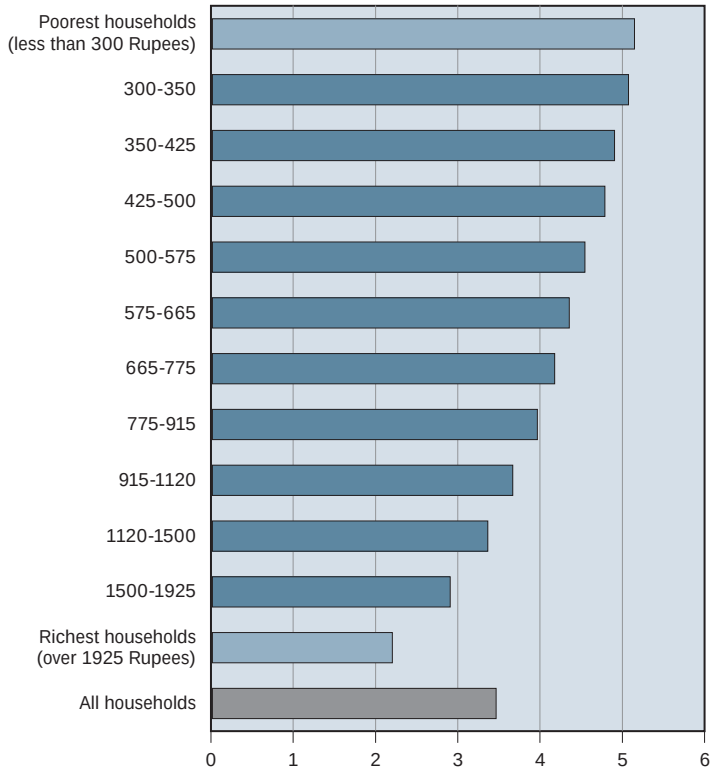
While some developments in the global economy have clearly benefited those in the highest income brackets, others have made the poorest worse off. This is particularly the case of rising food and commodity prices – particularly fuel prices. These increases are part of a general inflationary trend of prices for raw materials, partly linked to increasing demand for food and fuel from newly industrialized economies such as China. Declining stocks of crude oil and disappointing harvests have also contributed to the inflationary pressure. Other factors, including, speculation in financial markets and changing consumption patterns, are also likely to be contributing to rising food and commodity prices.

The peculiarity of food and fuel is that they have virtually no substitutes. An increase in their price does not, therefore, generate a large decrease in consumption, so any increase in food prices affects households' purchasing power. Moreover, low-income households are likely to be more adversely affected, in that they spend a large proportion of their income on such goods, as illustrated by the examples of India and the United States.

In India, since 2006, food prices have grown by 9 per cent, compared with 6.3 per cent for non-food prices. This is predicted to have a negative effect on the purchasing power of all urban households (fig. 1.11). The only exception, of course, is those households

28. It should be noted that even before 2005 many Dutch companies had share-based incentive programmes in place. However, as share-based compensation is a relatively recent phenomenon in the Netherlands, numerous stock awards and options had not, in 2007, yet vested. In addition, various share-based compensation programmes gave only limited value, as stock prices were relatively low at that time.

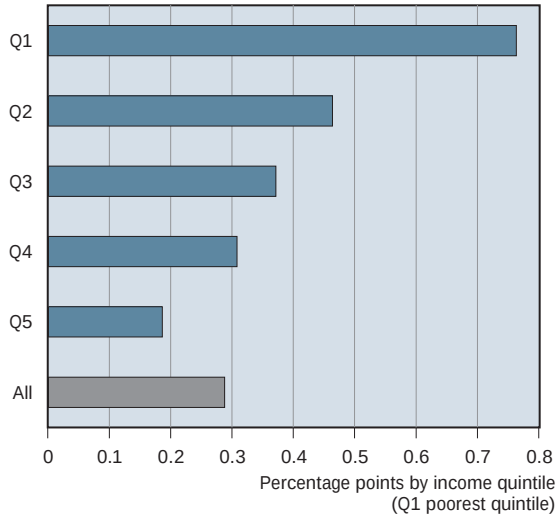
**Figure 1.11. Estimated decline in purchasing power of Indian urban households resulting from rising food prices, 2007 (percentage points)**




Note: Y-axis refers to monthly per capita expenditures (in Rupee).

Source: IILS estimates based on Household Expenditure Survey, India.

**Figure 1.12. Estimated decline in purchasing power of households in the United States resulting from rising fuel prices, 2007**




Source: IILS estimates based on consumer expenditure survey (US Bureau of Labor Statistics).

that produce food and benefit from the increase in food prices – but this is less likely in urban areas than rural ones.

Food price inflation affects those who spend a larger proportion of their income on food, in particular poorer households. For example, the poorest households in urban India experienced an estimated drop in purchasing power of over five per cent, while the richest in urban areas in 2007 experienced only a drop of 2.2 per cent.[29]

Over the period 1999-2007, fuel price inflation in the United States was, on average, four times the inflation in the general consumer price index. In fact, over the most recent period – 2003 to 2007 – the price of fuel grew six times faster than the consumer price index. The most recent price increase in 2007, amounting to 7 per cent, adversely affects the poorest households (fig. 1.12). In particular, the poorest 20 per cent of households will see an estimated drop in their purchasing power nearly four times greater than that in the richest households, owing to the fact that they spend a larger fraction of their net income on fuel: 11 per cent, as against 2.5 per cent.[30]

29. An analysis of food price elasticities in India confirms that food is considered a necessity. In other words, price elasticities are lower than 1 and close to zero: 0.13 and 0.17 for rural and urban areas respectively.
30. Fuel price elasticities in the United States are also lower than 1 (necessity), being on average equal to 0.27 across households over the period 2003-2007.

## C. Why is income inequality a matter of policy concern?

Rising inequalities, as documented in the previous sections, can be a sign of robust economic growth, as some members of society get ahead, work harder or introduce innovative products and services. Indeed, inequalities may be linked to a number of developments, which, in the long run, may generate unambiguous positive effects. For example, certain structural reforms, such as those that were implemented in transition economies in the early 1990s, may have increased income inequalities, but this was necessary in order to ensure adequate incentives to work and invest.

On the other hand, inequalities may have inefficient social and economic outcomes. In particular, when inequalities become persistent and some groups are systematically barred from the benefits of growth, the economic and social costs are likely to intensify as those at the bottom claim their share of the national income by any means possible, thus creating a more unstable macroeconomic environment. There may also be cases where wealthy groups try to block pro-growth policies, if such groups fear that the opportunities may be too widely redistributed.

The purpose of this section is to review the evidence on changes in income inequality and the impact on social outcomes and macroeconomic stability. It also discusses labour market discrimination and political economy problems that arise from distributional issues.

### Social and economic costs of inequality

#### *Inequality and crime*

There comes a point where income inequality increases black-market activity and property crimes. Illegal activities often provide better returns for less affluent households, even when the risk of punishment is taken into account (Glaeser, 2005): inequality may dilute the deterrent effect of sanctions when low-income households are as badly off outside prison as they are inside (McAdams, 2007). Moreover, segregation arising from the unequal distribution of income reinforces opportunistic behaviour – at both ends of the income spectrum (Bowles, Choi and Hopfensitz, 2003) – as people belonging to different social strata have fewer interactions. Lastly – and more subtly – rising inequality may lower the amount of policing, as richer households attempt to limit public spending on police forces in low-income neighbourhoods.

Reviewing the empirical literature, Soares (2004) confirms the positive relationship between inequality and crime rates. Quantitatively, reducing inequality is far more effective in reducing crime than such alternatives as better education or policies to promote growth. According to the study, if inequality were reduced from the levels observed in Colombia to those found in the United Kingdom (roughly corresponding to 1 standard deviation in the sample), thefts would fall by 50 per cent and contact crimes by 85 per cent. A similarly large increase in education spending or a 1 percentage point increase in average growth would bring crime rates down by only 30 per cent and 6 per cent respectively.

#### *Inequality and health*

Rich people live longer (Deaton, 2003), whereas low-income households often lack the resources to maintain and improve their health status. Access to ambulatory or stationary health-care services is more limited or even non-existent for those on lower incomes. Similarly, lifestyle choices are heavily influenced by individual income: the incidence of obesity,

alcohol or drug abuse typically decreases with increasing income. Inequality also has a strong impact on disease prevention and immunization, in that low-income households are less well informed and less likely to visit a doctor or to get a second opinion in the event of health problems, although preventive measures are recognized to be one of the most efficient ways to provide health-care services.

High income inequality is also reflected in lower average life expectancy rates as noted already by Preston in 1975. Cross-country evidence suggests that such a negative relationship does indeed exist, with the 10 per cent most equal countries enjoying an average life expectancy (at birth) of 77.4 years in 2006, and the 10 per cent least equal countries only 60.

However, there is some debate whether there is an economically or socially meaningful correlation between inequality and aggregate health outcomes or whether it is purely compositional (Deaton, 2001). The spread of disease in richer neighbourhoods arising from lack of hygiene in those with lower average incomes constitutes one such direct link. Nevertheless, little evidence exists to date as to the quantitative impact of this aspect of income inequality on health. Hence, while from a public policy point of view it may be preferable to target spending so that low-income households have access to appropriate health-care services; it is less clear whether redistribution and lower income inequality would in themselves be sufficient to improve the health status of those at the bottom of the income distribution.

### *Labour market discrimination and employment*

Large inequalities in income may result in racial and gender discrimination in the labour market, thereby discouraging participation and reducing labour supply (World Bank, 2006). Historically, reduced inequality has been shown to lie at the heart of the increase in female labour force participation rates in most developed economies over the past 30 years. This is reflected in the fall in the gender wage gap and a decrease in discrimination against women (see Bar and Leukhina, 2006, for recent estimates for the United States). Nevertheless, gender discrimination remains a major issue in most, if not all, ILO countries.

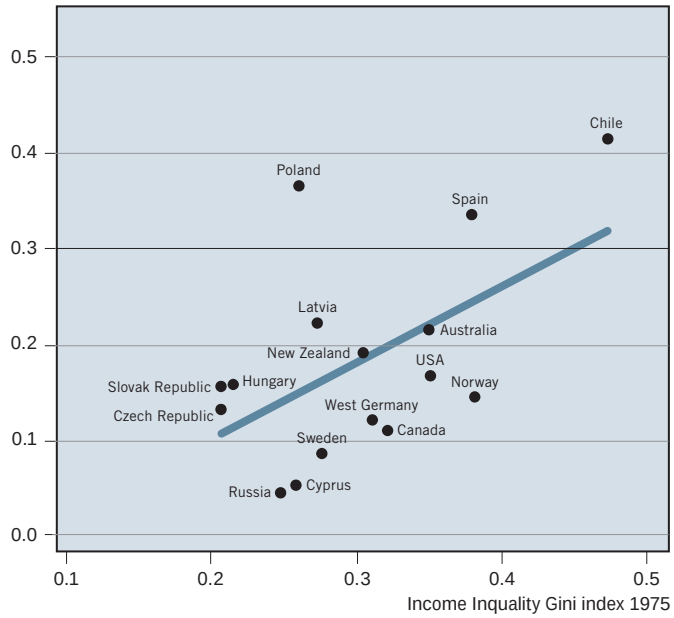
Similarly, urban and job segregation have been shown to weigh against African-Americans in the US labour market (Dickerson, 2007). Comparable patterns hold for developing economies, where the labour market and well-paid jobs continue to be segregated, creating ethnic faultiness that result in social upheaval and civil strife (Chua, 2003).

### *Inequality and social mobility*

The relationship between income inequality and social mobility (as measured, for instance, by the correlation of inter-generational earnings) is inevitably ambiguous. On the one hand, when income inequality is based on merit and equal opportunities, the prospect of a higher income may increase incentives to get an education and work harder. On the other hand, where inequality results in segregation, richer families may find it easier to pay for good quality education for their children than their poorer counterparts. This tends to perpetuate existing income inequalities.

Empirical evidence suggests inequalities can be persistent, as they reduce social mobility. Low-income households are largely confined to their current income strata even across different generations (see fig. 1.13). At the microeconomic level, persistent inequality can cause demotivation and discouragement among low-income groups, depressing their productivity levels (Torgler, Schmidt and Frey, 2006). At the macroeconomic level, segregation resulting from inequality results in adverse peer effects for children from low-income families and a lack of role models that would help them aspire to education and training to improve their future income prospects (Durlauf, 2004).

**Figure 1.13. Income inequality and inter-generational mobility**




Note: The graph displays the inter-generational income correlation calculated from the International Social Survey Programme (1999) against the Deininger-Squire Gini coefficient in 1975.

Source: IILS estimates based on Andrews and Leigh, 2008.

## The political economy of inequality

### *Inequality and corruption*

There is an association between inequality and corruption (see fig. 1.14), similar to the link between inequality and crime. The unequal distribution of income and wealth may create incentives for certain high-income groups to interfere with the political process and democratic governance (You and Khagram, 2005). In particular, a heavy concentration of wealth and income will provide richer individuals with sufficient resources to offer bribes even to high-ranking officials and policy-makers.[31]

There is a risk that political power arising from excessively large income and wealth inequalities will enable richer households to maintain the profitability of their economic activities by promoting anti-competitive measures. Thanks to such inequalities, richer households can buy political influence to protect their economic interests and shield themselves from market competition. Indicators on product market regulation collected by the World Bank suggest that the administrative requirements for setting up a new company are more than twice as high in the least equal compared with the most equal countries. Such obstacles may also help the incumbent elite to stay in power since there is less political competition prevalent (Acemoglu and Robinson, 2002). In extreme cases, well-connected individuals or family members of the political and economic elite receive licences for monopolies. Less restricting but equally inefficient are licensing and entry restrictions used mainly for sunset industries or the use of trade policy and subsidies to protect labour-intensive and agricultural production (maize in Mexico, steel in the United States, agriculture subsidies in the EU). Such badly designed restrictions on product market competition not only create distortions that result in higher prices and reduced consumer welfare but also lead to dynamic misallocations by hampering the introduction of new technologies and lowering potential economic growth (Scarpetta and Tressel, 2002).

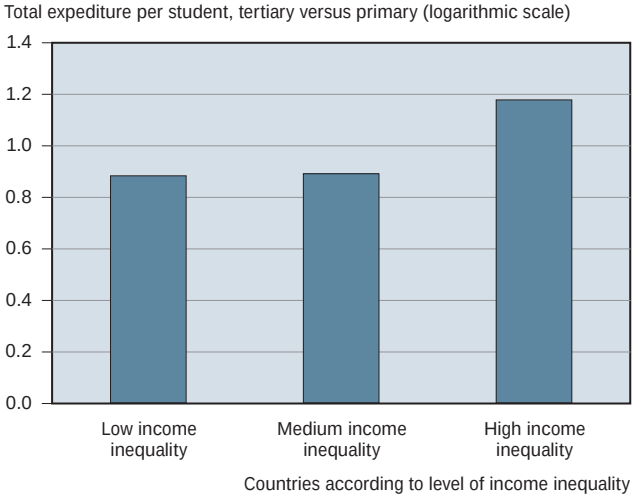
31. Such bribes may not be opposed, by their adversaries, who could be tempted to offer even more in order to avoid adverse effects for themselves from policy distortions. In that context, the cost, for richer individuals of not-bribing is much higher in unequal societies than in those with more equally distributed resources (Glaeser, Scheinkmann and Shleifer, 2003).

**Figure 1.14. Income inequality and corruption**


Note: High (low) income inequality countries include the 20 per cent of countries with the highest (lowest) income inequality according to the Gini index. Medium income inequality countries include the other countries.

Source: IILS estimates based on Transparency International, 2008 and World Development Indicators, 2008.

**Figure 1.15. Income inequality and spending on tertiary education**




Note: High (low) income inequality countries include the 20 per cent of countries with the highest (lowest) income inequality according to the Gini index. Medium income inequality countries include the other countries.

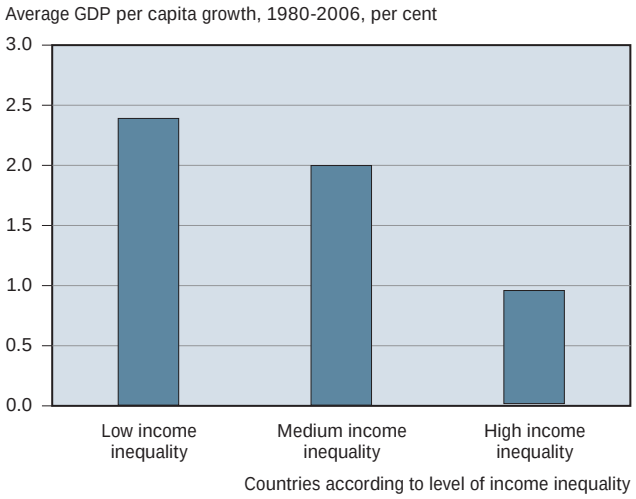
Source: IILS estimates based on World Development Indicators, 2008.

### *Inequality and redistribution*

A specific link between inequality and lobbying lies in the influence wealthy households have on the allocation of public money. Wealth decreases the opportunity cost of lobbying and increases the chance that like-minded people will band together to influence government activity (Zhang, 2008). For instance, one area in which wealthier households lobby to divert public spending into channels beneficial to themselves is education (see fig. 1.15). When spending on primary and secondary education is low in comparison to spending on tertiary education, children from low-income households will have fewer chances to obtain the secondary education that is a prerequisite for attending university. Richer households may also influence public infrastructure expenditure, such as road construction, in order to obtain public contracts for their own companies, or interfere with the political process in order to divert public spending to subsidies for specific industries or goods that they themselves consume. Estimates of the incidence of fuel subsidies in Indonesia show, for instance, that two thirds of such subsidies (representing around 11 per cent of central government expenditure in 2007) will go to the top two income quintiles (OECD, 2008b).

An additional mechanism through which inequality can generate inefficiencies is distortive taxation. In countries where income is spread more unevenly, distributional conflict will become more intense (this is because the median voter will tend to earn much less than average income; see, for example, Persson and Tabellini, 1991; Alesina and Rodrik, 1994). This will modify the agenda of the competing political parties, which may lead to more distortive taxation, with adverse effects on income growth. In practice, such a mechanism leads to two testable hypotheses neither of which has, however, received strong support in the literature. The first is that, when more inequality leads to more redistribution, inequality should become less persistent, which does not seem to be the case, as indicated above. Secondly, there should be a negative correlation between income inequality and GDP per capita growth, a claim that might seem to be supported by cross-country

**Figure 1.16. Income inequality and trend per capita GDP growth**




Note: Countries are ranked according to their level of income inequality using the Gini index, and then separated into tertiles corresponding to high, medium and low income inequality.

Source: IILS estimates based on IMF, 2008 and World Development Indicators, 2008.

empirical evidence (see fig. 1.16). However, when controlling for country or regional fixed effects, more recent studies do not corroborate this result, as they find either a positive correlation (Forbes, 2000) or a correlation of which the sign depends on the level of development, suggesting that only low-income countries may experience low growth as a result of high inequality (Barro, 2000).

### *Inequality and pro-growth policies*

Large income disparities may result in resistance to policies promoting pro-growth and pro-free trade policies, such as lower tariff barriers or the phasing out of subsidies for specific industries, particularly when the benefits of an open market are expected to reach only a minority (see box 1.3 for a discussion of some recent country experiences). Often, these policies require economic adjustments and reallocation across sectors, as competition and deregulation change relative prices in the economy. Since the cost of such adjustments will be borne by a well-defined group, opposition will grow and have to be appeased by the redistribution of some of the gains from economic deregulation, either to smooth the transition or to finance income-support schemes for those losing out (so-called "compensating reforms": see Roland, 2002; Delpla and Wyplosz, 2007). However, there may be opposition to the unequal distribution of benefits, even though all groups may win on a net basis. In other words, distributional conflict may result from the post-reform heterogeneity of gains (Alesina and Drazen, 1991; Drazen and Grilli, 1993). In this regard, opposition is particularly strong when benefits go mainly to a (small) minority of the society, such as enterprises or professions benefiting from rents (Chua, 2003). Successful reform, therefore, requires not only a level playing-field, so that all sections of society can benefit from market openness, but also concrete action to spread the benefits, for instance through tax-and-transfer schemes (see Chapter 5) or by supporting access to land and property, especially by those on low incomes (De Soto, 2003; Bardhan et al., 2006).

## Box 1.3. Inequality and reform: Experiences in Bolivia and the Republic of South Korea

**Bolivia**

Among Latin American countries, Bolivia stands out as the one with the most unequal after-tax income inequalities, mainly as a result of unequal market-income distribution and weak redistribution through transfers and taxes. Informal employment is widespread (estimated at around 68 per cent of total employment) and the large gas sector does not contribute to the country's economic development as much as it could, either directly through employment creation (0.04 per cent of total employment is in the gas sector) or indirectly through higher government investment (27 per cent of government revenues came in 2006 from gas exports but were almost fully absorbed in building up a large fiscal surplus: IMF, 2007). The situation is partly due to pension reform: a fully-funded system was introduced in 1998, costing the government around 4.1 per cent of GDP per year, until the system became self operating (Weisbrot and Sandoval, 2006).

During the 1980s and 1990s, a series of reforms was enacted, mainly under the auspices of the World Bank and the IMF, which included: (i) the privatization of the state oil company (YPFB), municipal water suppliers, and public pensions; (ii) financial market liberalization; and (iii) tax reforms. Overall, Bolivia has in Latin America the most active structural reform agenda (Lora, 2001). Despite this, however, trend GDP growth did not show any signs of picking up (IMF, 2005).

Following a series of external and domestic shocks (curtailing of credit lines, the acceleration of the coca eradication programme, the devaluation of the Brazilian Real and the Argentinean crisis), real GDP per capita growth started to slow down and even became negative at the turn of the century. The failure of the reforms to produce sizeable benefits to everyone, in addition to the cyclical turnaround, triggered the emergence of a vigorous Indian movement that came into being with the aim of forcing policy-makers into reverse gear. The political agenda of the Indian movement was dominated by conflict over water, as the privatization had led to rapid price increases and left large parts of the poorer population without access to running water. The benefits from privatization had mainly gone to foreign investors and some richer groups, which gained from the improved water infrastructure.

In 2005, the movement cumulated in the election of the first Indian president of Bolivia, Evo Morales, who was prompt in reversing some of the earlier reforms by renationalizing the incumbent oil company, on the grounds that the contract signed with the new private owner took an unduly large share out of the hands of the government.

The failure of the earlier reform agenda to relieve poverty and lift GDP and employment growth can mainly be attributed to the perverse effects of inequality on economic performance. Corruption and political interference by interest groups remained widespread, adding to the cost of doing business in a landlocked country with poor infrastructure. As a consequence, the investment ratio remained among the lowest in Latin America, limiting the potential for catching up. Moreover, well-organized interest groups continued to benefit from existing regulations, keeping informal employment high and reducing the potential for improvements in productivity growth promised by the structural reform agenda.

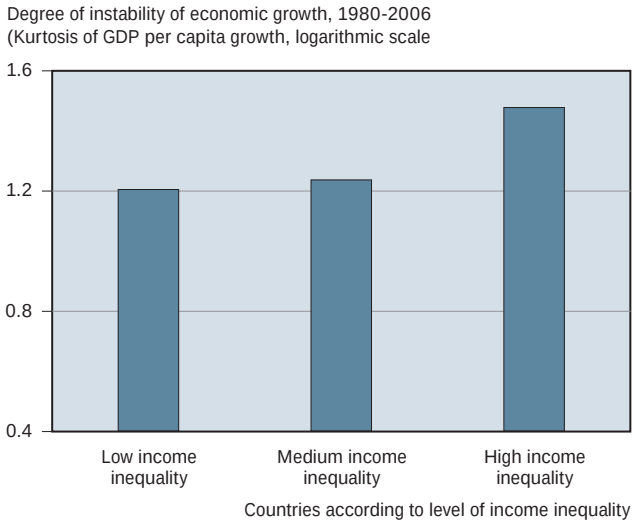
**Republic of South Korea**

The Republic of Korea has long been characterized by low and stable income inequality, reaching levels comparable to those observed in other – notably European – OECD countries. In the wake of the Asian financial crisis in 1997, however, income inequality started to rise, even though social transfer programmes managed to limit the effect on disposable income and to stabilize inequality, albeit at a slightly higher level (OECD, 2000; OECD, 2007). Moreover, despite the favourable aggregate picture, the socio-economic challenge remains substantial: the degree of informality is high (almost 26 per cent of all employees outside agriculture are not registered for mandatory social security, OECD, 2008b), the participation rate of women is low and jobs are precarious for some groups, like women and older workers (with potentially adverse effects on their productivity and employability: OECD, 2007).

Against the background of Asian crisis, the government enacted a series of labour market reforms, while at the same time complying with ILO international labour standards (on freedom of association principle, for example). Earlier restrictions on trade union pluralism had involved tight regulation of industrial activities and labour contracts. Dismissal law formulated very specifically the circumstances under which an employee could be fired. Trade union representatives were restricted in the type and manner of industrial action that could be undertaken. In the face of increasing resistance, in particular, with the unofficial Korean Confederation of Trade Unions (KCTU), the government decided to change its stance on industrial relations, recognized KCTU in 1999 and eased some of the more restrictive parts of the dismissal law. At the same time, regulations on temporary employment were reformed, in particular with the introduction of the Dispatched Workers Act in 1998, which allows temporary work agencies to organize the market.

In sum, this suggests that reforms are feasible, despite increased income inequality, if the measures ensure that the interests of workers and employers are better balanced.

**Figure 1.17. Income inequality and instability of economic growth**




Note: Countries are ranked according to their level of income inequality using the Gini index, and then separated into tertiles corresponding to high, medium and low income inequality.

Source: IILS estimates based on IMF, 2008 and World Development Indicators, 2008.

### *Inequality and instability*

Income inequality is also related to macroeconomic instability. Distributive struggles can lead to inflationary pressures, which, in the case of emerging economies, can result in disorderly exchange rate devaluations and sudden stops in economic growth. Moreover, income inequality – even where it is not causally linked to instability – may magnify the costs of adjustment for low-income households in the wake of a macroeconomic crisis. For instance, the Argentine peso crisis in 2001-2002 worsened inequality as richer households managed to protect their assets from devaluation. More generally, there is evidence that the (measured) labour share decreases following a financial crisis as workers, predominantly those in the formal sector, lose their jobs (Diwan, 2001). Not only is the variability of macroeconomic outcomes greater in more unequal economies, but such economies also experience extreme situations – that is, extremely weak or, less commonly, extremely strong economic performance – more often than other countries (so called "fat tails" see fig. 1.17). In other words, stop-and-go growth episodes are more frequent, the more unequal the income distribution in an economy. At least for middle-income countries, such boom-bust episodes may, nevertheless, have resulted in higher trend growth, insofar as they are symptoms of deeper financial development and structural changes in the economy (Tornell and Westermann, 2002; Rancière, Tornell and Westermann, 2008). Whether such a link exists more generally is, however, an open question and may depend also on an economy's capacity to absorb such a crisis rapidly, which in itself is a function of its degree of inequality and its structural policies.

## D. Bottom line and rationale for the next chapters

This chapter has shown that, over the past two decades, income inequality followed an upward trend in the majority of countries. Recent developments point to a further widening of income inequality, as the ongoing economic slowdown and financial crisis in the world economy combined with food price increases are likely to affect low-income groups disproportionately.

The chapter also highlights the policy relevance of these trends. There are cases where income inequality supports economic growth and social development. But in other cases income inequality can be harmful and may therefore require policy action. Much depends on (i) whether income inequality is perceived to be excessive – and, according to the World Value Survey, this is indeed increasingly the case;[32] and (ii) the root causes of growing income inequalities. The purpose of the next chapters is to address the latter issue.

Globalization has manifested itself in a number of ways, including more liberal trade and direct investment agreements, and freer movement of capital – or financial globalisation more generally.[33] While much work has been done on the socio-economic effects of trade and foreign direct investment, the extent to which financial globalisation can cause higher income inequality has received less attention. The issue is therefore examined in detail in Chapter 2.

Domestic factors can also contribute to higher income inequalities. These are examined in chapters 3 to 5. Chapter 3 examines how labour market institutions, including collective bargaining and tripartite dialogue, are linked with income inequality, controlling for trade and other globalisation factors. Traditionally, these institutions have provided a framework for ensuring that the gains from economic growth are shared in a balanced manner, consistent with market realities. The issue analysed in Chapter 3 is whether the distributive role of labour marker institutions has changed.

The links between employment and income inequality are discussed in Chapter 4. This includes an analysis of the possible effects on income inequality of changing employment patterns – characterised by a growing incidence of non-standard employment. The issue of whether employment gains help reduce income inequality, or on the contrary exacerbates it, is also examined in that chapter.

The welfare state is often considered a powerful redistributive instrument. Social benefits and transfers may help alleviate low-income traps. And, progressive taxation will exert a broader income redistribution effect. Chapter 5 looks at whether these instruments continue to play this role.

Finally, Chapter 6 examines how the different policy planks discussed in earlier chapters can be combined so as to limit the trend rise in income inequality, while at the same time supporting employment growth. The chapter considers the role of the Decent Work Agenda in this respect.

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32. The World Value Surveys provides information on the degree of tolerance vis-à-vis income inequality. In the 23 countries where respondents replied to the three waves of the survey (1989-1993, 1994-1999 and 1999-2004), the tolerance index declined from a value of 6.5 in the first wave, to 5.6 in the second wave and 5.4 in the third wave (lower values of the index indicate lower degree of tolerance vis-à-vis income inequality). See www.worldvaluessurvey.org ( http://www.worldvaluessurvey.org ) for more details.

33. See, for example, Heshmati A. (2003) for a discussion of the impact of globalization on inequality. Cornia G. A. (2005) also provides an extensive discussion of the impact technological change, external liberalization or social spending on inequalities.

## Appendix A

# Regional country groupings

### Advanced economies

**Western Europe**
Austria
Belgium
Cyprus
Denmark
Finland
France
Germany
Greece
Iceland
Ireland
Italy
Luxembourg
Malta
Netherlands
Norway
Portugal
Spain
Sweden
Switzerland
United Kingdom

**Other Advanced Economies**
Australia
Canada
Israel
Japan
Korea, Republic of
New Zealand
United States

### Sub-Saharan Africa

Angola
Benin
Botswana
Burkina Faso
Burundi
Cameroon
Cape Verde
Central African Republic
Chad
Comoros
Congo
Congo, Democratic Republic of
Côte d'Ivoire
Djibouti
Equatorial Guinea
Eritrea
Ethiopia
Gabon
Gambia
Ghana
Guinea
Guinea-Bissau
Kenya
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Mauritius
Mozambique
Namibia
Niger
Nigeria
Rwanda
Sao Tome and Principe
Senegal
Seychelles
Sierra Leone
Somalia
South Africa
Swaziland
Tanzania, United Republic of
Togo
Uganda
Zambia
Zimbabwe

### North Africa

Egypt
Libyan Arab Jamahiriya
Morocco
Sudan
Tunisia

### Middle East

Bahrain
Iran, Islamic Republic of
Iraq
Jordan
Kuwait
Lebanon
Oman
Qatar
Saudi Arabia
Syrian Arab Republic
Turkey
United Arab Emirates
West Bank and Gaza Strip
Yemen

### Latin America & The Caribbean

Antigua and Barbuda
Argentina
Aruba
Bahamas
Barbados
Belize
Bolivia
Brazil
Cayman Islands
Chile
Colombia
Costa Rica
Cuba
Dominica
Dominican Republic
Ecuador
El Salvador
Grenada
Guatemala
Guyana
Haiti
Honduras
Jamaica
Mexico
Netherlands Antilles
Nicaragua
Panama
Paraguay
Peru
Puerto Rico
Saint Kitts and Nevis
Saint Lucia
Saint Vincent and the Grenadines
Suriname
Trinidad and Tobago
United States Virgin Islands
Uruguay
Venezuela, Bolivian Republic of

### Central & Eastern Europe And Former Soviet Republics

**Central and Eastern Europe**
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Estonia
Hungary
Latvia
Lithuania
The former Yugoslav Republic of Macedonia
Montenegro
Poland
Romania
Serbia, Republic of
Slovakia
Slovenia

**Commonwealth of Independent States**
Armenia
Azerbaijan
Belarus

Georgia
Kazakhstan
Kyrgyzstan
Republic of Moldova
Russian Federation
Tajikistan
Turkmenistan
Ukraine
Uzbekistan

### Asia & The Pacific

**Eastern Asia**
China
Hong Kong, China
Korea, Democratic People's Republic
Macau, China
Mongolia
Taiwan, China
Pacific Islands
American Samoa
Cook Islands
Fiji
French Polynesia
Guam
Kiribati
Marshall Islands
Nauru
New Caledonia
Niue
Northern Mariana Islands
Papua New Guinea
Samoa
Solomon Islands
Tokelau
Tonga (TON)
Tuvalu
Vanuatu
Wallis and Futuna Islands

**South Asia**
Afghanistan
Bangladesh
Bhutan
India
Maldives
Nepal
Pakistan
Sri Lanka

**South-East Asia**
Brunei Darussalam
Cambodia
Indonesia
Lao People's Democratic Republic
Malaysia
Myanmar
Philippines
Singapore
Thailand
Timor-Leste
Viet Nam

## Appendix B

# Calculation methods for wage dispersion, wage shares, productivity and real wage growth

## Wage dispersion

Wage dispersion measures the earnings difference between low-wage earners and top wage earners. Wages earners are classified into 10 deciles. The wage dispersion chosen is P9/P1, the ratio of the wage earnings of the top decile to those of the bottom decile.

For most OECD countries, earnings distribution per decile for the period 1990 to 2006 is based on various statistical sources provided by national agencies. The definition of earnings changes depending on the type of income considered, gross or net, the period considered annual, monthly, weekly, daily or hourly, and the type of workers considered, full time or part time. Countries covered include Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Hungary, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Republic of South Korea, Spain, Sweden, Switzerland, the United Kingdom and the United States. In some cases (Austria, Italy, Poland, Portugal and Sweden), OECD data were supplemented using data compiled by Atkinson, 2008.

For China, Brazil and India, calculations are based upon national household surveys that contain information on individual labour earnings and labour status. These include China's Urban Labour Survey (2000 and 2005), Brazil's *Pesquisa Nacional por Amostra de Domicilios* (1992, 2000 and 2004) and India's National Statistical Survey (1990 and 2000).

## Wage shares

The wage share measures the share of total income or gross domestic product (GDP) that goes to labour. Broadly speaking, GDP can be decomposed into three income components: capital, labour and taxes. Labour income (wages) usually comes under the heading of "compensation of employees" in national accounts, with total income measured using "gross value added at factor costs".

To adjust for the fact that "compensation of employees" only captures the income of salaried workers (not of self-employed persons), for a number of countries, "compensation of employees" was divided by the ratio of employees to total employment. As such, the assumption is that self-employed persons earn, on average, the same as employees.

For OECD countries, wage shares are calculated using OECD detailed national accounts data for Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Republic of South Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The wage share is calculated as:

Total labour cost divided by nominal output, where:

> Total labour cost = (compensation per employees * number of employees * hours worked employment)/ (hours worked employees)[34], and nominal output refers to annual current price value added compiled according to the System of National Accounts 93.

For Argentina, Brazil, China, Egypt, Nigeria and Thailand, data from national statistics offices and, in some cases, ILO KILM data (ratio of employees in total employment) were used.

- *Argentina*: wage share = (remuneración al trabajo asalariado / valor agregado bruto (VAB) a precios corrientes de productor) *1/ (ratio of employees in total employment). All data come from Dirección Nacional de Cuentas Nacionales (INDEC), except for the ratio of employees in total employment (ILO KILM).
- *Brazil*: wage share = (remuneração dos empregados / produto interno bruto) *1/ (ratio of employees in total employment). All data come from national accounts (ftp://ftp.ibge.gov.br), except for the ratio of employees in total employment (ILO KILM).
- *China*: wage share = total wages of staff and workers / nominal GDP. Statistics are drawn from the Statistical Yearbook (http://www.stats.gov.cn).
- *Egypt*: wage share is calculated as compensation of employees divided by net operating surplus from Annual National Account data (http://www.mop.gov.eg/English/english.html).
- *Nigeria*: wage share is calculated compensation of employees divided by operating surplus using National Account data (http://www.nigerianstat.gov.ng/index.php).
- *Thailand*: wage share = (Compensation of employees / GDP at factor cost)*1/ (ratio of employees in total employment). All data come from National Account data (http://www.nesdb.go.th/Default.aspx?tabid=94), except for the ratio of employees in total employment (ILO KILM).

For the remainder of countries (*Asia*: Bahrain, Hong Kong (China)[λ], India, Islamic Republic of Iran, Israel[λ], Jordan, Kuwait, Oman and Sri Lanka[λ]; *Eastern Europe and Russian Federation*: Armenia[λ] Azerbaijan, Belarus, Bulgaria[λ], Estonia[λ], Kyrgyzstan[λ], Latvia[λ],

34. If the variable "hours worked" is not available, the adjustment for the self-employed is made by making using the self-employment ratio (total employment divided by the number of employees.

Lithuania[λ], Republic of Moldova[λ], Romania[λ], Russian Federation[λ]; *Latin America*: Chile[λ], Colombia[λ], Costa Rica[λ], Panama[λ], Venezuela[λ], Peru[λ]; *North Africa*: Algeria[λ], Tunisia; and *sub-Saharan Africa*: Botswana[λ], Côte d'Ivoire, Kenya, Mauritius[λ], Namibia[λ], Nigeria, South Africa[λ]), wage shares were calculated as the ratio of compensation of employees to gross value added at basic prices, using UN National Accounts data and ILO KILM data for the ratio of employees in total employment.[35]

## Real wages and productivity

Real wages are calculated as nominal wages (ratio of total compensation to total employees), discounted for inflation or the consumer price index (CPI). Productivity is measured by dividing real GDP, or an alternative measure of production, by the number of employees.

For OECD countries, real wage growth is calculated as the ratio of compensation per employee to the consumer price index (CPI). Real productivity growth is calculated as the real output at constant prices divided by total employment. For Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Republic of South Korea, the United Kingdom and the United States, wage and productivity annual growth rates are calculated for the following periods: 1990-2006, 1990-2000, and 2000-2006. For the Czech Republic, Greece, Hungary, Ireland, Poland and Slovakia, annual growth rates are calculated for the following periods: 1996-2006, 1996-2000, and 2000-2006: For Mexico, data begin in 1995 and end in 2004, and for Portugal, begin in 1995 and end in 2005.

For Brazil, India, Russian Federation and South Africa, annual real wage and productivity growth are calculated using data from UNIDO (wages and salaries of employees, number of employees, and value added) and IMF (CPI and GDP deflator).[36]

For China annual real wage growth was calculated as the average wage of staff and workers to CPI and productivity as the ratio of value added to the Number of employed persons at year end times the GDP deflator. Data are taken from Statistical Yearbook (http://www.stats.gov.cn) and from the IMF (for CPI and GDP deflator).

35. Countries marked [λ] are those for which the wage share is corrected for the self employed.
36. To obtain time series for the 1990s and 2000s, two UNIDO databases were merged, namely INDSTAT3 2006 ISIC Rev 2 and INDSTAT3 2008 ISIC Rev 34. The baseline series is INDSTAT3 2008 ISIC Rev 34, which is completed by applying growth rate calculated from INDSTAT3 2006 ISIC Rev 2.

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# 2 The role of financial globalization

## Main findings

- Financial globalization has accelerated since the early 1990s, with advanced countries investing financial assets in international markets amounting to several times their GDP. However, despite these substantial capital flows around the globe, financial globalization has failed to improve global productivity or employment growth. This stands in stark contrast to the benefits brought by domestic financial development.
- Moreover, despite accelerating financial globalization, less developed economies are not receiving their share of global savings. On the contrary, savings continue to flow from less to more developed economies, in contrast with theoretical predictions (the "Lucas paradox"). The presumption is that this may have to do with a lack of domestic financial market development, with adverse effects on the rates of return necessary to attract international investors and to prevent capital outflows of excess savings.
- Partly through the lack of proper regulation or an adequate supervisory framework, the frequency of financial crises has increased in both developed and emerging economies as a consequence of financial globalization. Worldwide, systemic banking crises have been 10 times more likely throughout the 1990s than during the late 1970s, which was hardly a period of calm economic activity. Such increased instability has come at a steep cost to inequality, as low-income households have been particularly affected by repeated boom-bust cycles. There is also evidence offered in this chapter that financial globalization is associated with higher unemployment. From a longer-term perspective, however, and at least as regards economic growth, the benefits of financial liberalization outweigh the costs of crises.
- Financial globalization has also led to a depression of the share of wages in GDP, reinforcing the downward trend recorded in most countries, as documented in Chapter 1. This effect is over and above any trend decline in the wage share that may have resulted from sectoral shifts, rising labour demand elasticities from trade openness or changes in labour market regulations and institutions. There is empirical evidence that financial globalization has led to an increase in income inequality,

owing both to a trend increase in financial assets (relative to GDP) and to a growing incidence of crises.

- Financial liberalization has had a disciplining effect on macroeconomic policies in both developed and emerging countries, although it has also led to a reduction in the margin for redistributive policies, as discussed in detail in Chapter 5. However, certain countries – in particular in Northern Europe – have demonstrated that it is possible to build complementarities between strong and well-designed welfare policies, on the one hand, and a competitive economy, on the other. In this way, the threat to redistribution policies posed by financial globalization is reduced.
- Developments in corporate governance mechanisms have led to an increasing use of performance-related pay systems for executive managers and directors. Nevertheless, empirical studies show that such systems have only a very moderate effect, if any, on company performance. Moreover, wide variations exist, with some countries displaying virtually no relation between performance-related pay and company profits. This suggests that managers are in a dominant wage-bargaining position with respect to company owners, partly as a result of institutional flaws.

## Introduction

Trade liberalization, and its impact on economic growth, employment and inequality, has come under considerable scrutiny in recent years, but much less attention has been paid to the effect of financial market liberalization.[1] Now that the recent financial market turmoil in the United States has turned into the "first global financial crisis of the twenty-first century" (Felton and Reinhart, 2008), however, the labour market fall-out from such crises deserves renewed interest. The spillover of US financial market stress to other developed and emerging markets, in the form of interest rate hikes and the loss of liquidity, has demonstrated yet again that events in international financial markets can have a substantial impact on domestic economic and social development, with adverse consequences for employment growth and income opportunities. This chapter presents a review of the existing evidence, with a particular focus on the impact of financial liberalization on growth, employment creation and income inequality.

In theory, financial liberalization and the free allocation of global capital flows should generate substantial macroeconomic benefits for both capital exporters and recipient countries. Global trend productivity and employment are believed to grow faster, thereby lifting less developed countries out of poverty and helping to maintain (or further improve) living standards in the developed world. Low-income households are expected to benefit in particular, with the result that both global and within-country inequality are decreased. It has been suggested that financial globalization can both boost average per capita income and – potentially – lower income and wealth inequality in the following three ways:

- It can provide low-income countries with access to capital and help to improve the allocation of funds. It should also make it easier for low-income households to access the capital market and thereby lower income inequality within countries.

1. Financial liberalization refers to de jure measures aimed at both international financial markets (the removal of restrictions on capital import and export – "capital account opening" and exchange restrictions) and domestic capital markets (the removal of interest rate freezes or credit controls, as opposed to financial globalization, which refers to the de facto development of international capital flows. Financial openness refers to the de facto openness of the capital account (free entry and exit of capital flows to and from abroad).

- By imposing discipline on governments, it can improve macroeconomic policy-making and encourage the implementation of pro-growth reforms. This would improve income prospects across the board but would be particularly beneficial for low-income households ("pro-poor growth").
- By strengthening corporate governance (for instance, through a more competitive market for corporate control), the argument goes, financial globalization helps to put capital flows to the most efficient and productive use and ensure that executives are performing at their best. This improves the business environment in both emerging and developed countries.

The experience of the past two decades has, however, shed significant doubt on whether these benefits have materialized. Trend productivity growth rates have accelerated – but not necessarily in the countries that opened their capital accounts the widest. Regular boom-bust cycles have wiped out earlier income gains to a large extent – mainly in middle-income countries – despite a global trend towards less volatility in economic activity. Low-income households do not seem to have benefited from improved access to financial markets to insure themselves against shocks. As a consequence, global inequality has, at best, remained constant, while inequality within countries seems to be rising, regardless of their level of economic development (see Chapter 1).

This chapter reviews the empirical evidence for the macroeconomic effects of financial globalization and discusses why several of the expected benefits have failed to materialize, in terms of both long-term economic growth and the vulnerability of low-income households. The indirect effects that financial liberalization may have on inequality are discussed in the light of its impact on domestic policy-making. Lastly, one specific dimension of financial globalization, namely the spread of modern corporate governance practices, is considered, and in particular the links between executive pay and performance.

## A. Development of financial globalization and wealth inequality

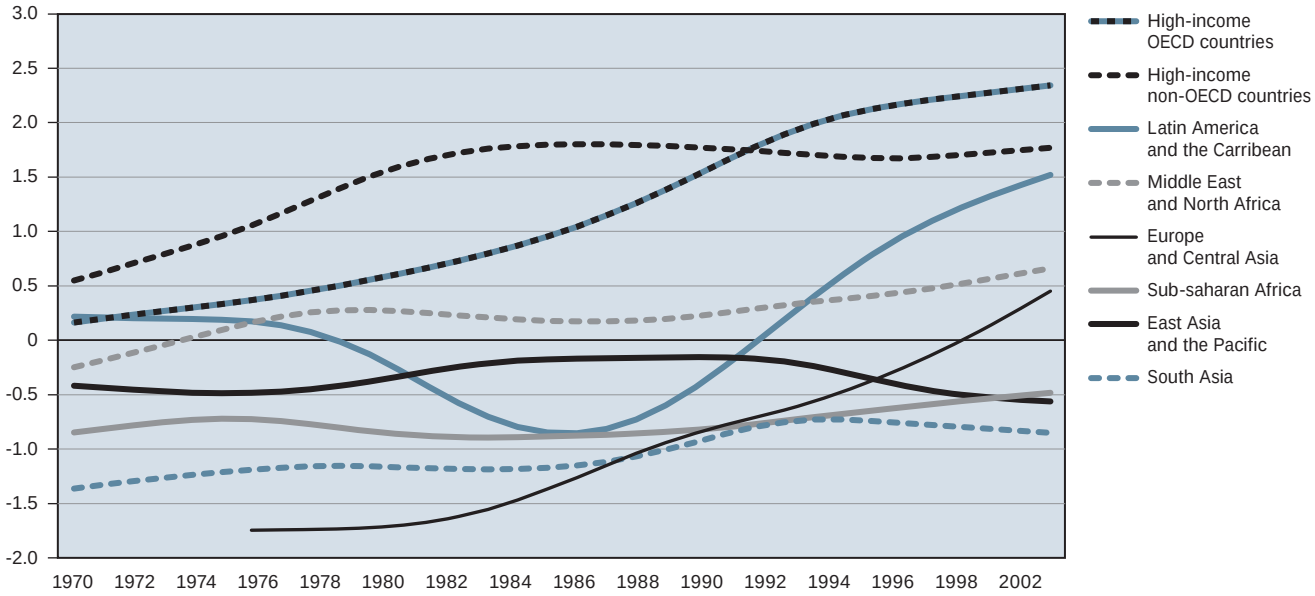
### Uneven progress in opening capital accounts…

The opening of capital accounts has progressed unevenly across the globe (see fig. 2.1). The developed economies of Asia were among the first to embark on financial liberalization but gradually re-introduced restrictions, in particular in the aftermath of the Asian financial crisis in 1997. High-income OECD countries have opened their capital accounts more gradually but eventually became the most financially open economies around the globe. Most other regions have shown only very limited efforts to follow suit, although, among these, Latin American countries have recently progressed the most. There are also significant intra-regional differences in financial liberalization. Except for high-income OECD countries – where there has been a convergence of policies– most of the countries with the least open capital accounts have not adopted any financial liberalization measures.

### ...has led to uneven acceleration of financial globalization…

Like financial liberalization, financial globalization has progressed unevenly across the world over the past two decades (fig. 2.2). The sum of gross financial assets and liabilities exceeded the (nominal) GDP of High-income OECD countries by 200 per cent at the end of the 1990s, whereas it had been at par with GDP at the end of the 1980s. An acceleration of financial market development has also been observed in High-income Non-OECD countries and East Asia and the Pacific. There has been no such acceleration in

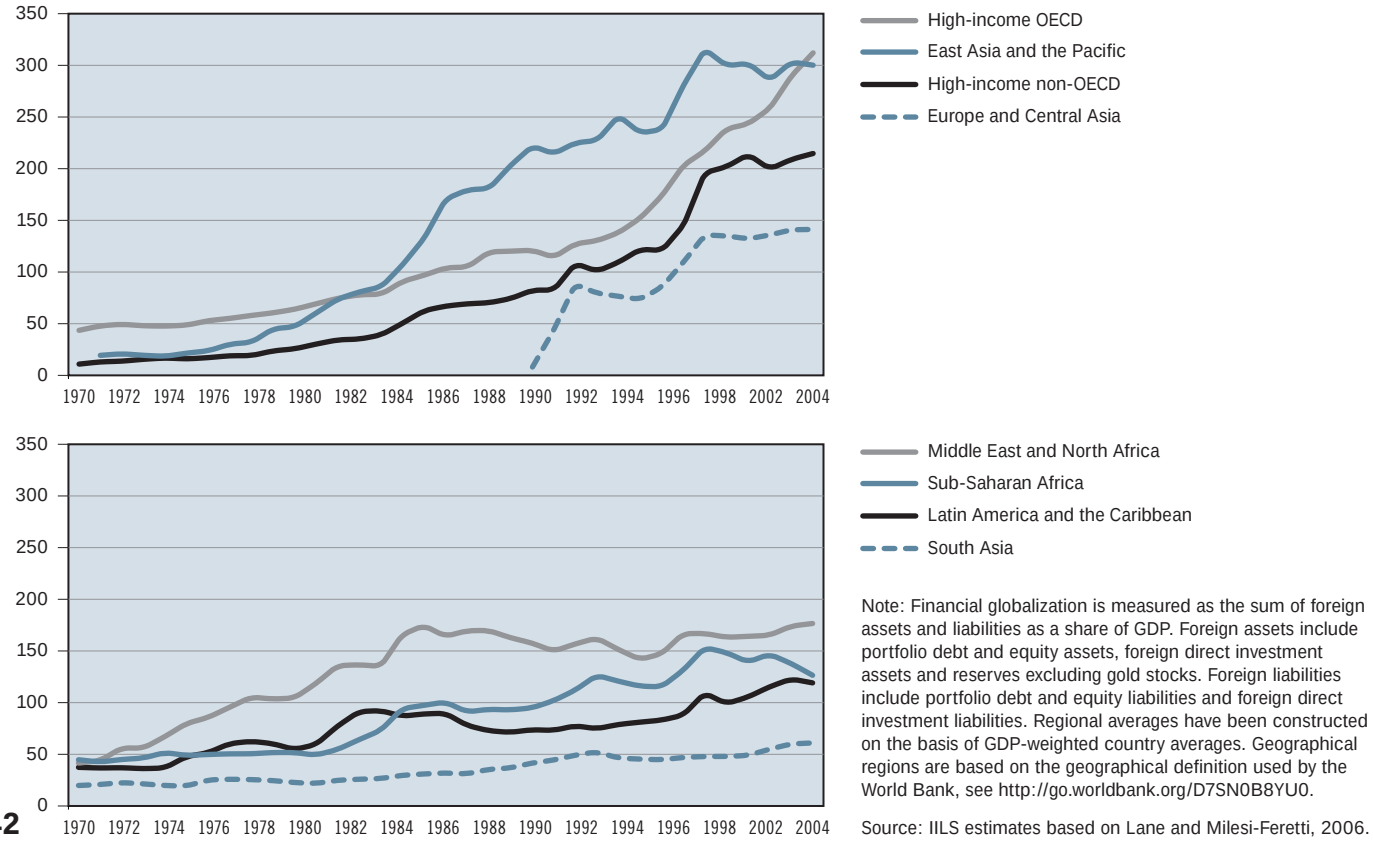
## Figure 2.1. De jure measures of capital account opening




The figure displays the country median of a de-jure measure of capital account openness for eight world regions (based on the geographical definition used by the World Bank, see http://go.worldbank.org/D7SN0B8YU0 ). The measure is based on the first principal component of (i) a variable indicating the presence of multiple exchange rates, (ii) a variable indicating restrictions on current account transactions, (iii) a variable indicating restrictions on capital account transactions and (iv) a variable indicating the requirement of the surrender of export proceeds. All variables are based on information contained in the IMF Annual Report on Exchange Arrangements and Exchange Restrictions.

Source: IILS estimates based on Chinn and Ito (2007).

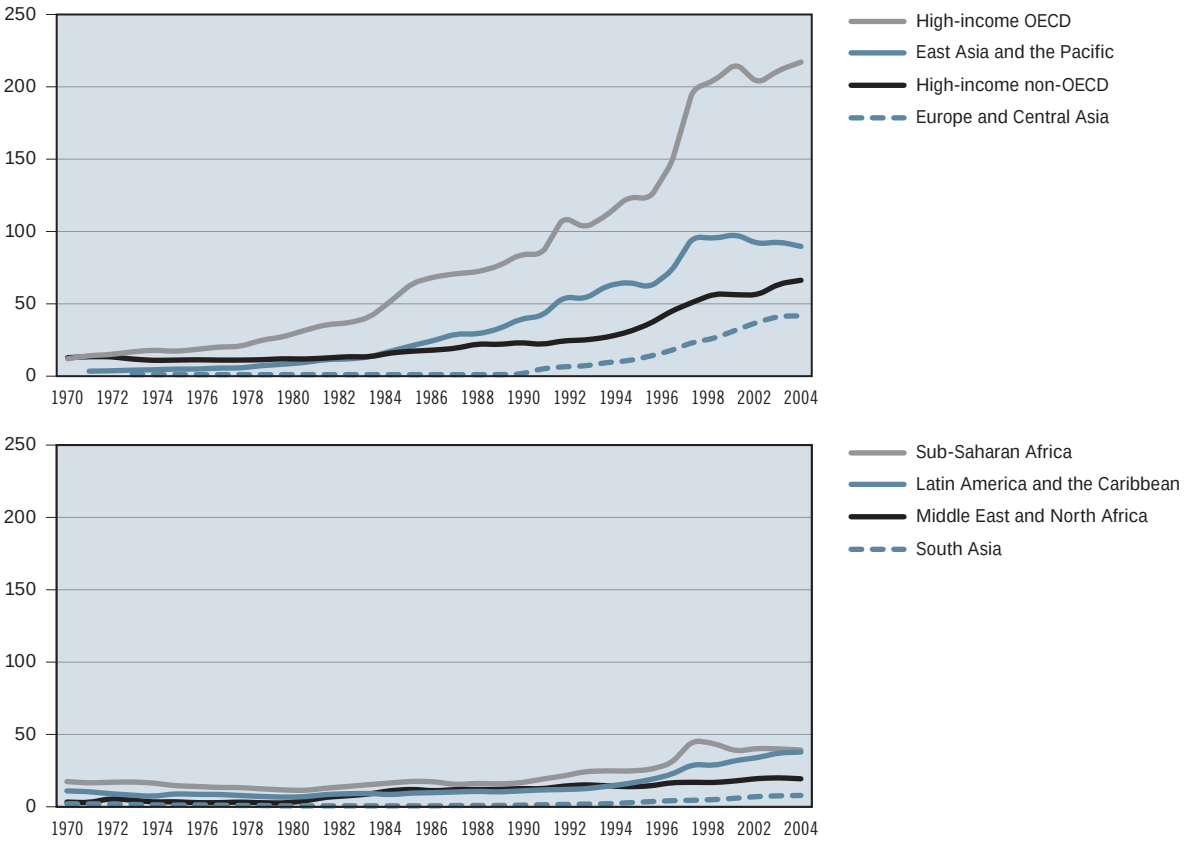
## Figure 2.2. Financial globalization in seven world regions (% of GDP)




Note: Financial globalization is measured as the sum of foreign assets and liabilities as a share of GDP. Foreign assets include portfolio debt and equity assets, foreign direct investment assets and reserves excluding gold stocks. Foreign liabilities include portfolio debt and equity liabilities and foreign direct investment liabilities. Regional averages have been constructed on the basis of GDP-weighted country averages. Geographical regions are based on the geographical definition used by the World Bank, see http://go.worldbank.org/D7SN0B8YU0.

Source: IILS estimates based on Lane and Milesi-Feretti, 2006.

**Figure 2.3. Foreign direct investment in seven world regions (% of GDP)**




Note: Financial globalization is measured as the sum of foreign assets and liabilities as a share of GDP. Foreign assets include portfolio debt and equity assets, foreign direct investment assets and reserves excluding gold stocks. Foreign liabilities include portfolio debt and equity liabilities and foreign direct investment liabilities. Regional averages have been constructed on the basis of GDP-weighted country averages. Geographical regions are based on the geographical definition used by the World Bank, see http://go.worldbank.org/D7SN0B8YU0.

Source: IILS estimates based on Lane and Milesi-Feretti, 2006.

other regions, in particular in the emerging markets of South Asia and Latin America; and their financial market openness has barely changed over the past decade.

The picture changes only slightly when foreign direct investment (FDI) is considered (fig. 2.3). High-income Non-OECD countries again stand out as the main force behind financial globalization, followed by East Asia and High-Income OECD countries. Europe and Central Asia also benefited from a rapid increase in investment flows following the widespread privatization after the fall of the communist regimes. More recently, Sub-Saharan Africa and Latin America and the Caribbean also seem to gained ground in integrating with global financial markets, with the rapid inflow of foreign capital in African countries being expected to accelerate further over the coming years, partly as a result of large investments in the mining and extracting industries (Nellor, 2008). There was no such increase in FDI in Middle Eastern and North African countries or – notably – in South Asian economies.

### …and has not helped to reduce wealth inequality

The different rates of development of financial openness have so far prevented a convergence of wealth inequalities between developed and emerging countries (table 2.1). Indeed, despite the potential of capital flows to alleviate borrowing constraints for low-income households, their rise has been so disjointed, geographically speaking, that they have not yet

**Table 2.1. Wealth inequality in selected countries**

| | Wealth Gini (2000) | Income Gini | Year |
|---|---|---|---|
| Argentina | 74.0 | 50.1 | 2005 |
| Australia | 62.2 | 31.2 | 2003 |
| Bangladesh | 65.8 | 33.5 | 1996 |
| Brazil | 78.3 | 56.6 | 2004 |
| Canada | 66.3 | 31.5 | 2000 |
| China | 55.0 | 44.9 | 2003 |
| France | 73.0 | 27.8 | 2000 |
| Germany | 67.1 | 31.1 | 2004 |
| India | 66.9 | 36.5 | 1997 |
| Indonesia | 76.3 | 39.6 | 1996 |
| Italy | 60.9 | 33.3 | 2000 |
| Japan | 54.7 | 31.9 | 1998 |
| Republic of Korea | 57.9 | 37.2 | 1998 |
| Mexico | 74.8 | 49.9 | 2004 |
| Nigeria | 73.5 | 52.2 | 1996 |
| Pakistan | 69.7 | 39.8 | 1996 |
| Spain | 56.5 | 33.6 | 2000 |
| Taiwan (China) | 65.4 | 33.9 | 2003 |
| Thailand | 70.9 | 42.7 | 2001 |
| United States | 80.1 | 46.4 | 2004 |
| Viet Nam | 68.0 | 37.3 | 1998 |

Source: Davies et al., 2008; World Bank, 2008.

affected wealth inequalities in developing countries, which remain – on average – higher than in developed economies. Moreover, global wealth inequality as measured by the global Gini coefficient stands at 89.2, substantially higher than most measures for global income inequality (Anand and Segal, 2008) and higher than would be suggested by the relationship between wealth and income inequality within developed countries. In short, the current dynamics of financial globalization have prevented a further convergence of wealth both across and within countries, with income inequality in low-income countries remaining unaffected by financial openness. This is in marked contrast with the sanguine predictions of some proponents of financial globalization.

## B. Financial markets and pro-poor growth

### Financial liberalization has the potential to improve trend growth…

Standard growth theory predicts that financial liberalization helps to accelerate growth in low-income countries by raising domestic savings and giving access to global capital flows (Fisher, 2003; Obstfeld, 1998; Summers, 2000) and at the same time developing the domestic financial market, which is itself conducive to the more efficient allocation of resources and higher growth (King and Levine, 1993). The increase in available funds also brings interest rates down in emerging economies, thereby fostering investment and employment growth, and helps to alleviate poverty and reduce between-country income inequality by lowering the borrowing constraints of the households with the least access

to finance. Moreover, with improved opportunities for international risk-sharing, countries may be better able to exploit gains from specialization in international trade (Acemoglu and Zilibotti, 1997; Kalemi-Özcan, Sørensen and Yosha, 2001). Lastly, additional, indirect benefits may be expected from the transfer of technology and knowledge that comes with foreign direct investment, which improves total factor productivity (Bonfiglioli, 2007; Kose, Prasad and Terrones, 2008).

The least controversial of these claims relates to a basic aspect of financial liberalization, that is, the liberalization of the domestic financial system. This typically involves dismantling systems of credit rationing and interest rates controls. The case for such liberalization was made in the early 1970s in the literature on development economics (McKinnon, 1973; Shaw, 1973). It was argued, that in the context of the import substitution strategies that were then prevalent in most developing countries, controls that repressed the growth of the financial system lowered growth and exacerbated general inefficiency in the allocation of resources. They also increased inequality in the distribution of income by supporting increased industrial concentration and limiting access to credit for enterprises that were not favoured by the economic planners. Removing these distortions, the argument went, would both increase economic growth and reduce income inequality.

A basic way in which this could be done is to lift ceilings on interest rates. A rise in interest rates should increase the supply of domestic savings and screen out inefficient investments that had previously been artificially promoted. Although there were some concerns that a rise in interest rates might not lead to the expected increase in growth rates (because of its negative effect on the cost of capital and on the level of effective demand), the macroeconomic case for domestic financial liberalization was, and still is, generally accepted. Even critics of external financial liberalization such as Rodrik and Subramanian (2008) see special benefits in domestic financial liberalization that avoid the costs of external liberalization. For example, domestic financial liberalization, unlike external liberalization, tends to lower the exchange rate, because the increase in domestic saving reduces the need to rely on foreign borrowing. Such an exchange rate outcome is favourable to the growth of the tradeables sector, the main potential engine of growth.

Domestic financial liberalization and development are also essential if countries are to take advantage of their integration into the world economy. Weak financial development and distorted savings incentives at home, combined with substantial gains in international market shares, will lead to increasing current account surpluses. This, in turn, means that low-income countries become exporters of capital to high-income countries. Indeed, the fact is that capital tends to flow from capital-poor to capital-rich countries – the Lucas paradox – in contrast to theoretical predictions. It is only recently, however, that the link between capital account surpluses and (domestic) financial market development has been explicitly recognized (Mendoza, Quadrini and Rios-Rull, 2003). Empirical analysis on the basis of this line of research shows that such a link holds quite consistently, even when account is taken of various other factors that may contribute to current account surpluses.[2] Another interpretation of these results is that financial globalization without proper development of domestic financial markets is likely to increase global wealth and income inequality. It may also increase within-country inequality to the extent that those with the least access to credit markets are likely to be even more credit-constrained following massive capital outflows. On the other hand, those with access to international financial markets – in most cases high-income individuals and international corporations – benefit fully from investment opportunities outside their home country. Whether the emergence of large sovereign wealth funds will resolve these global current account imbalances – as some have suggested (Beck and Fidora, 2008) – remains an open question, as long as the underlying structural problems in capital-constrained countries are not addressed (see box 2.1).

2. See the background paper prepared for this chapter for more details (Ernst and Escudero, 2008).

### Box 2.1. Sovereign wealth funds and global capital flows

Fuelled by the recent surge in the price of oil and other commodities, a group of resource-rich emerging market economies has managed to build up substantial financial funds, often managed by sovereign wealth funds (SWFs). These SWFs are set up primarily to prevent that temporary surges in world market prices for a country's main export commodities lead to overheating, exchange rate appreciation or rapid, unsustainable increases in government expenditure. Although SWFs have been around for several decades, the earliest example being the Kuwait Investment Board set up in 1953, it is only recently that they have attracted more widespread interest, in view of both their impact on capital market developments in individual countries and their effect on global capital flows. In particular, their (presumed) lack of transparency over their investment strategies and the potential consequences of such financial power for global stability have raised concern and caused policy-makers to consider the possibility of intervention.

The optimistic view has it that, given the size of SWFs, they need to make diversified investments on global capital markets, which might correct some of the current account imbalances that have built up over the past decade (Beck and Fidora, 2008). Such a correction would undoubtedly improve the stability of the international financial system. As discussed in the text, however, these imbalances seem to be due to investors' perceptions about distortions on individual financial markets and the relative returns they can receive by investing in different countries. As long as these distortions are not removed, or at least reduced to the low levels as found in advanced economies, SWFs are unlikely to play an important role in equilibrating global current account imbalances.

A more pessimistic outlook on SWFs relates to their financial importance and the potential for political interference in their investment strategies. This is particularly likely in resource-rich countries that suffer from weak governance and might be tempted to use the wealth of the funds to promote their own international political agenda. More importantly, the sheer size of SWFs – often representing several hundred per cent of the GDP of their countries of origin (Mitchell, Piggott and Kumru, 2008) – runs the risk of influencing the market. In particular, in more volatile times, there is a danger that the investment behaviour of such powerful bodies will be used as a public signal for other investors, with the potential to lead to sudden stops and capital flow reversals.

### …but benefits have been slow to materialize…

Despite these theoretical benefits of financial liberalization for trend growth and inequality, empirical studies have so far produced mixed evidence, particularly regarding the impact of financial globalization on productivity and employment growth. A recent review of the literature by the IMF concluded that "[o]ur reading of this large literature based on aggregate data is that it remains difficult to find robust evidence that financial integration systematically increases growth, once other determinants are controlled for" (Kose et. al, 2006). In particular, the level of financial market openness does not seem to play any particular role, whereas there is some indication that the change in financial integration could be a driver of productivity acceleration and employment growth. This debate is by no means over (see Henry, 2007; Rodrik and Subramanian, 2008), but it is sufficient to note for the purposes of this report that it is far from an accepted fact that financial openness increases growth. Instead, there is intriguing counter-evidence from a number of studies that the countries that have grown fastest have relied least on foreign capital (Gourinchas and Jeanne, 2007; Prasad, Rajan and Subramanian, 2007).

Part of the difficulty in finding a definite relationship between financial globalization and growth may lie in the fact that financial market openness interacts with the overall regulatory environment in any particular country. A supporting business environment with efficient governance, productive industrial relations and predictable labour regulation helps foreign investors to identify business opportunities quickly and channel funds towards their most productive use (Mishkin, 2006). On the other hand, the recapitalization of firms through portfolio flows on equity and corporate bond markets may suffer from inadequate corporate governance institutions, badly designed product market regulations or anti-competitive behaviour by executive directors and special interest groups. In

such situations, the over-hasty opening of the capital account, accompanied by loose prudential regulation and distortions in the domestic financial system, has been held responsible for many of the recent difficulties faced by emerging economies in benefiting from financial globalization (Obstfeld, 2007).

Consistent with the mixed evidence found in earlier studies, this report finds conflicting effects of financial market liberalization on labour market outcomes.[3] Financial globalization could have been beneficial for employment growth. Domestic financial liberalization, however, has contributed to a rise in the unemployment rate, partly as a result of increased turbulence on the labour market. In comparison with trade liberalization the average net effect of financial market liberalization (that is, financial globalization and domestic financial liberalization combined) appears to be modest. Moreover, it should be noted that the evidence reveals only the average impact of financial globalization for large country groups over a comparatively longer time period. Individual countries, at specific (short) periods, may not have been affected by financial market liberalization as much as suggested by these estimates.

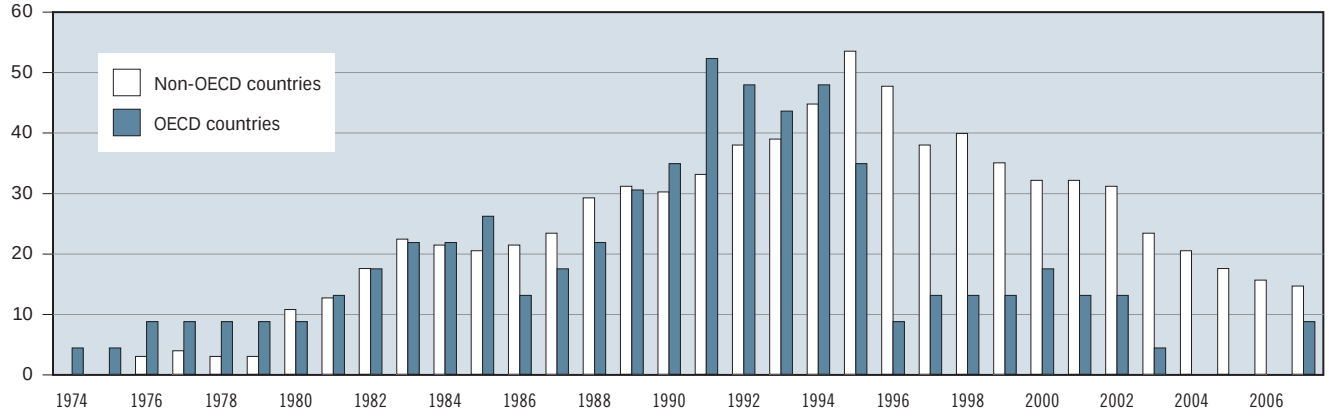
### …and increased the vulnerability of low-income countries to shocks

The increasing frequency of systemic financial crises may have been another reason why the benefits of financial globalization, if any, appear so far to have been limited. In particular, the vulnerability of low-income households in such crises may have largely wiped out earlier gains in the form of reduced income inequality and higher growth. As mentioned above, the theory suggests that financial globalization and access to global capital markets can increase the potential for international risk-sharing, thereby enabling low-income countries and households to mitigate the economic effects of fluctuations in their current account. However, financial liberalization may fail to deliver improvements in living standards if the vulnerability of low-income households and the volatility of output, employment and consumption subsequently increase. There are, indeed, signs that both developed and emerging economies have experienced more frequent financial market crises in recent years, which have increased consumption and employment volatility (Kose et al. 2006). Indeed, data assembled by Laeven and Valencia (2008) show that the incidence of banking crises increased in line with financial globalization worldwide and remained high throughout much of the 1990s, especially in emerging economies (fig. 2.4). A more detailed analysis of the underlying factors suggests that an increase in vulnerability as a result of financial liberalization is particularly likely in emerging economies with relatively fragile financial systems. Developed economies with consolidated financial systems offering a wide range of financial products to insure against a multitude of risks may already take full advantage of their financial integration by experiencing more stable consumption and employment.

A rise in a country's vulnerability to shocks may be, in part, related to its failure to strengthen its domestic financial system prior to liberalization, whatever its level of development. The risk of a financial market crisis is not inherent to financial liberalization, even though the two are closely related, as reiterated recently shown against the evidence presented by Reinhart and Rogoff (2008). Rather, institutional weaknesses in the financial system or the prudential regulation and supervision regime can be held accountable. Inadequate supervision when opening financial markets does not affect only emerging economies, as the recent burst of the sub-prime bubble has demonstrated. Nevertheless, since the vulnerability of low-income households is higher in emerging economies, both inequality and poverty levels typically take a harder hit at the onset of a financial market crisis in such countries than in more developed ones. This occurs through several mutually reinforcing channels.

3. See Ernst and Escudero (2008) for details.

**Figure 2.4. Frequency of banking crises, systemic or otherwise, in OECD countries and the rest of the world (%)**



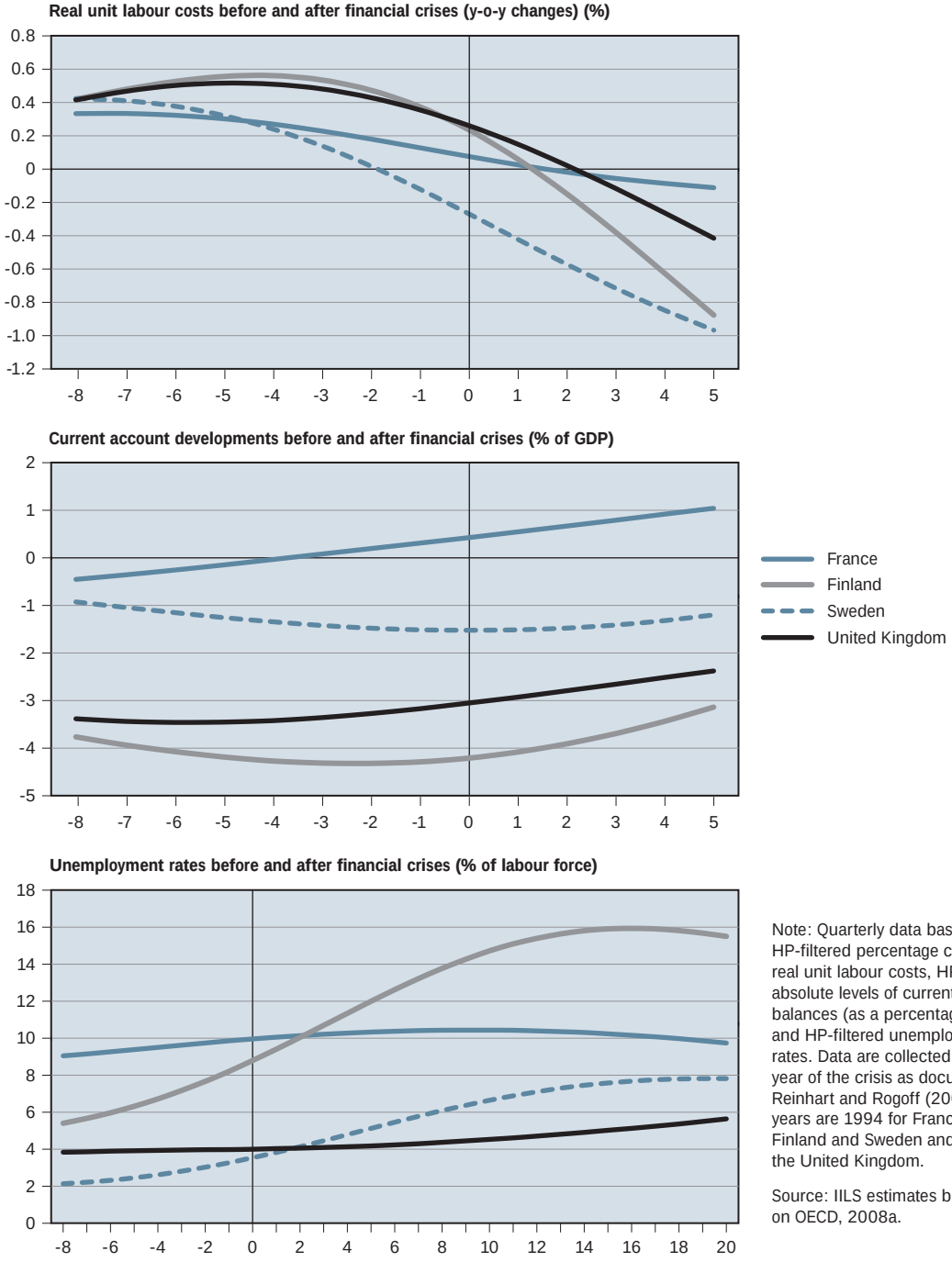

Source: IILS estimates based on Laeven and Valencia, 2008.

The rise in real interest rates that typically occurs as a result of attempts to stem capital outflows at the onset of a crisis tends to favour high-income over low-income households, as central banks try to stabilize the external value of the currency. Similarly, the rise in inflation often associated with financial crises tends to have a negative effect on income distribution and poverty. Real wages decline, and so does the wage share in national income (Diwan, 2001). These effects are over and above the negative impact of the sharp rise in unemployment that occurs at the onset of a serious financial crisis (fig. 2.5). Moreover, the negative labour market consequences of such crises have a particularly long-lasting impact, sometimes reversed only several years later.

These negative primary economic effects of financial crises tend to be reinforced by the effects of policies adopted in their wake. Contractionary fiscal policies usually have a negative impact on income distribution and poverty. Public expenditure on social services such as health and education that are important for the welfare of low-income households is often reduced. Expenditure on agricultural extension services and credit, and on other anti-poverty programmes, suffer a similar fate. In addition, programmes to bail out the country's financial system typically have a regressive effect on income inequality. Large depositors, who are also usually better connected and better informed, benefit most, while small depositors are rarely adequately protected. The same goes for small firms, which have less access to credit markets in the event of financial difficulties then larger firms, which are "too big to fail".

As mentioned above, it is important to note that the negative effects of financial crises on the labour market and on distribution often persist well into the period of economic recovery. The loss of property and productive assets as a result of foreclosure or distress sales is not immediately rectified by an economy's overall recovery after a crisis. Similarly, there are longer-term negative consequences for the low-income households from crisis-induced developments such as the withdrawal of children from school, malnutrition, increased indebtedness and prolonged unemployment. Such negative distributional consequences have to be set against the possible long-term trend improvements brought about by boom-bust cycles. There is evidence, it is true, that sudden stops following periods of rapid economic expansion are characteristic of countries that undergo a fundamental transformation and development of their financial sector, helping to alleviate firms' and households' borrowing constraints (Rancière, Tornell and Westermann, 2008), with a resulting trade-off between higher long-term growth and lower inequality (fig. 2.6). In particular, the acceleration of credit growth seems to fuel both trend GDP

**Figure 2.5. Development of current accounts and wage share during financial crises in four countries**




Note: Quarterly data based on HP-filtered percentage changes of real unit labour costs, HP-filtered absolute levels of current account balances (as a percentage of GDP) and HP-filtered unemployment rates. Data are collected around the year of the crisis as documented by Reinhart and Rogoff (2008). Crisis years are 1994 for France, 1991 for Finland and Sweden and 1974 for the United Kingdom.

Source: IILS estimates based on OECD, 2008a.

per capita growth and inequality. However, the theory that regular boom-bust cycles produce a cleansing effect, by shedding inefficient production units, receives only modest support in our empirical analysis. Indeed, an estimate of the impact of the frequency of crises in the banking sector on both inequality and trend GDP per capita growth indicates that the effect is statistically significant but economically negligible. Rather, it seems that the development of the financial sector and its positive contribution to employment creation, as identified above, has a more substantial effect, resulting in the trade-off between inequality and long-term growth, mentioned above. Such an effect is, however, felt only in the longer term. For individual countries, at the moment when a crisis hits, these costs may be substantial (see box 2.2).

### Box 2.2. Cost of financial crises in individual countries – the Asian crisis

The chapter argues that, from a longer-term perspective, the benefits of financial development outweigh its costs, in terms of both inequality and job creation. In individual countries that have been hit by a financial crisis, the temporary costs can be substantial with long-lasting consequences that may wear off only in the very long run.

Following the Asian crisis, GDP contracted on average by 7.7 per cent between 1997 and 1998 in the five hardest hit countries (Indonesia, Malaysia, the Philippines, the Republic of Korea, Thailand) and took between two and seven years to recover to pre-crisis levels. With the notable exception of Indonesia, labour force participation rates declined by up to 2 per cent but recovered in most cases to previous levels after three to eight years. More importantly, (formal) employment rates fell by up to 3.1 per cent and took between five to 10 years to return to pre-1997 levels. No international comparison exists as to the impact of the Asian crisis on income inequality and poverty, but data for Indonesia – admittedly the country that had been hit the hardest – suggest that the incidence of poverty took around seven years to return to pre-crisis levels (OECD, 2008b). This has to be set against the fact that, before the financial crisis, poverty had fallen continuously by around 1 percentage point per year. Cumulatively, therefore, the gains in poverty reduction have still not caught up with the increase in poverty due to the crisis.

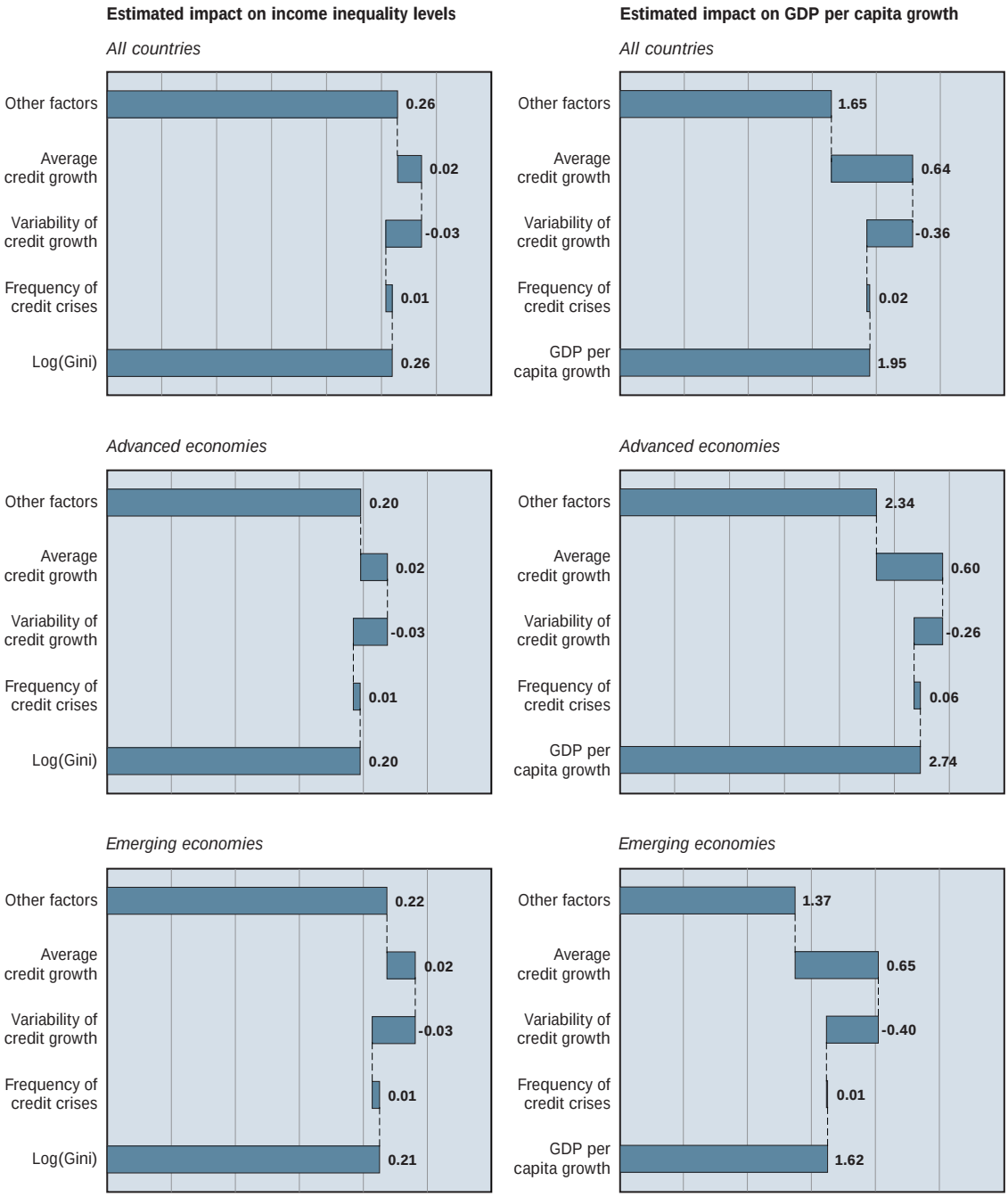
In sum, the effects of a financial crisis have proved in the past to cause substantial damage that takes several years to wear off. The differences in the speed with which countries recover show, however, that policies can and do have an effect on a country's ability to cope. The implementation of proper labour and product market policies to help countries adjust quickly in the aftermath of a shock therefore remains an important way of enhancing the benefits of financial globalization and limiting its costs (Duval, Elmeskøv and Vogel, 2007).

## C. Financial globalization, union bargaining power and the wage share

Financial liberalization has contributed significantly to the spectacular rise in the income of the top 1 per cent of income earners in the United States, a major proportion of which is finance-derived. This includes not only the income of rentiers but also that of a growing number of people that are nominally classified as employees, such as investment bankers, CEOs with stock options, financial advisers and analysts, and lawyers and accountants in the financial sector. At the same time, regulatory failures and supervisory negligence have led to financial excesses, with the burden of adjustment borne by the less well-off and the average tax-payer, as is the case at present. For example, the sub-prime borrowers in mortgage markets are at the lowest end of the income spectrum and risk crippling losses from falling property prices and repossession of their homes. In the case of the United States, the crisis has caused a significant reversal of the gains of earlier programmes that aimed at increasing home-ownership among low-income households. In some cases whole communities have been affected, suffering not only the loss of their homes but also increased crime and declining local tax revenues and public services.

Another side effect of financial liberalization that has contributed to growing inequality in some industrialized countries is the even greater importance attached to "shareholder value" maximization and to private equity funds in corporate management. The demand for higher dividend payouts by active shareholders has made managers more resistant to claims for wage increases than in the past, while the threat of outsourcing and downsizing has weakened the bargaining position of workers (Choi, 2001). Meanwhile, the increasing role of private equity funds that are not subject to the regulatory controls faced by public companies has led to greater "short-termism" and increased risk in corporate management. In their bid to satisfy shareholders who seek short-term profit maximization, managers are no longer able to share the benefits of long-term cooperation with employees that would result in higher productivity and stronger investment in firm-specific capital (Ernst, Amable and Palombarini 2005; Pagano and Volpin, 2005).

## Figure 2.6. Impact of financial development and crises on inequality and growth



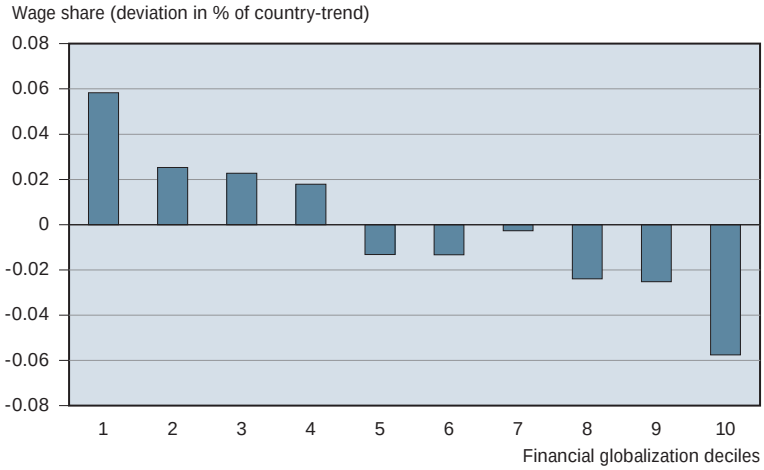

Note: The contributions are based on FGLS estimates, including regional dummies (see Appendix A for a discussion of the methodology).

Source: IILS estimates.

Rather, they align themselves with their shareholders by selecting investment projects that promise tangible profits over the short term and restrict incentives established to reward employees over the long term.

This trend, which is caused by financial globalization, has been detrimental to workers' wages and employment security and has in some cases led to the unnecessary dismantling of firm-specific assets, such as organizational capital. The effect on the wage share has also been quite sizeable, with an estimated elasticity of around 0.3 (in other

**Figure 2.7. Financial globalization and the evolution of the wage share**




Note: The graph displays the deviation of the wage share from country-specific trends for 71 countries against deciles of financial globalization.

Source: IILS estimates based on IILS Database on Labour Shares and Lane and Milesi-Feretti, 2006.

words, an increase of financial openness by 1 percentage point reduces the labour income share by 0.3 percentage points). This contrasts with evidence on the effects of openness to trade, offshoring and immigration on the wage share (Jaumotte and Tytell, 2007), which seem to have had a smaller impact than other external factors such as (skill-biased) technological change. In sum, over and above the downward trend in the wage share that may have been induced by sectoral shifts, rising labour demand elasticities or changes in labour market regulations and institutions, financial globalization has had a distinct effect on the labour income share in both developed and emerging economies (fig. 2.7).

Not only has workers' bargaining position been weakened, but, in addition the benefits of financial liberalization may be distributed unequally, thereby increasing within-country inequality. Indeed, the rapid increase in foreign direct investment observed in emerging economies in particular may have contributed to a global increase in the skill premium for high-skilled workers (IMF, 2007), despite the potential of trade openness to reduce economic inequality by improving opportunities on the labour market. Through the transfer of technology that creates particular employment opportunities for high-skilled workers foreign direct investment causes inequality to increase as the upper tail of the wage distribution moves further eastwards.

## D. Financial globalization and the convergence of capitalisms

Financial liberalization also has indirect effects on macroeconomic performance and income inequality, by imposing additional constraints on the ability of governments to pursue redistributive policies. The increased mobility of capital further restricts still the extent to which it can be taxed without provoking the relocation of production and reversing capital flows. It also reduces the bargaining strength of workers and increases the temptation for governments to shift tax burdens on to this relatively immobile section of society. Analysis presented in Chapter 5 suggests that this process is probably under way already. On a more positive note, however, risky macroeconomic policies that result in overvalued exchange rates and rampant inflation, with adverse implications for inequality, are becoming much more costly for governments. It would therefore seem that the effects of financial liberalization on inequality are mixed, when such indirect factors are taken into account.

In many emerging countries, low-income households can make significant gains from the macroeconomic discipline imposed on their governments. High inflation hits low-income households particularly hard, as they spend most of their income on primary

**Table 2.2. Redistribution: inequality before and after taxes**

| | Market income inequality | Inequality after transfers | Disposable income inequality (after transfers and taxes) |
|---|---|---|---|
| Argentina | 50.0 | 48.6 | 48.1 |
| Australia | 46.0 | na | 31.2 |
| Austria | 37.5 | 30.4 | 24.8 |
| Belgium | 46.5 | 36.4 | 29.2 |
| Bolivia | 56.0 | 54.1 | 54.3 |
| Brazil | 47.2 | 45.8 | 45.6 |
| Canada | 42.9 | na | 31.5 |
| Chile | 56.8 | 53.3 | 52.2 |
| Denmark | 48.6 | 34.9 | 28.5 |
| Finland | 49.3 | 36.3 | 31.6 |
| France | 42.0 | 34.5 | 30.9 |
| Germany | 43.0 | 33.3 | 28.2 |
| Greece | 47.4 | 40.0 | 36.3 |
| Ireland | 53.1 | 38.9 | 33.8 |
| Italy | 47.5 | 41.0 | 37.4 |
| Luxembourg | 41.3 | 30.1 | 23.8 |
| Mexico | 51.0 | 50.3 | 49.4 |
| Netherlands | 38.7 | 29.7 | 26.1 |
| Norway | 37.2 | na | 23.1 |
| Peru | 48.6 | 48.8 | 47.9 |
| Portugal | 49.4 | 43.0 | 38.1 |
| Spain | 46.8 | 39.6 | 34.8 |
| Sweden | 45.2 | 32.8 | 29.0 |
| Switzerland | 39.2 | na | 27.4 |
| United Kingdom | 52.3 | 38.8 | 34.3 |
| United States | 48.1 | na | 37.2 |

Note: na = not available.

Source: Mahler and Jesuit, 2006; OECD, 2008c.

commodities, for which there are practically no alternatives (see Chapter 1, Appendix 1). Moreover, overvalued exchange rates (such as that of the Argentine peso before the 2001/2002 crisis) mainly benefit the middle- and high-income groups, easing their consumption of cheap imported goods, but hurt the employment prospects of low-income households in the exporting sector. This is important, because many low- and middle-income countries hardly redistribute to start with, in part because of the existence of a large informal sector (table 2.2). In such countries, more stable and predictable macroeconomic policies will have beneficial effects not only on trend growth but also on inequality. It should be stressed, however, that some measures dictated by financial liberalization, which are meant to address lax macroeconomic policies, come at a high cost, in terms of both economic growth and inequality (see box 2.3). More importantly, they usually do not address the underlying structural problem, namely huge income inequalities (see Chapter 1).

Financial globalization is also said to put pressure on national policy-makers to adjust their structural policies to favour capital owners. Over and above sound macroeconomic policies and a lower tax burden for richer households – a topic discussed in Chapter 5 – such adjustments also involve implementing specific accounting rules and supervisory standards and striking a balance between creditor and equity owner rights. Having similar standards across countries facilitates the activities of global investment

## Box 2.3. Importing macroeconomic discipline: Economic and social costs and benefits in Argentina and Ecuador

Financial and currency crises have hit Latin American countries at regular intervals. In order to respond to the resulting threat to macroeconomic stability, several countries in the region have, at times, sought to import monetary stability through various forms of fixed exchange rate regimes. Some have experimented with linking the domestic currency to the US dollar or to a basket of internationally recognized currencies, while few others have taken the more radical step of replacing the domestic currency by the US dollar altogether (among them El Salvador, Panama and – more recently – Ecuador). Although it involves the loss of monetary sovereignty, dollarization avoids some of the negative consequences that fixed exchange rates may have in terms of risky international speculation and thus contributes to macroeconomic stability. This box discusses the Argentine and Ecuadorian experiences with these two strategies to foster currency stability and compares the costs and benefits of the two approaches.

### Argentina: the failure of the Convertibility Plan

Argentina introduced a fixed peg (the "Convertibility Plan") in 1991 as a reaction to macroeconomic instability that had caused 15 years of economic stagnation and inflation. The Plan included a requirement for the Central Bank to ensure that every peso issued was matched by a US dollar in its accounts and structural reforms to strengthen the domestic financial sector, open the economy to international capital markets and boost microeconomic efficiency through trade liberalization and the privatization of state enterprises.

In its initial phase, the Plan successfully stabilized the economy, achieving a fast reduction of inflation and interest rates, which brought the misery index down by over 60 per cent (fig. B1).[a] Output growth soared between 1992 and 2000, reaching 4.2 per cent per year, partly driven by strong export growth (5.1 per cent per year) and the favourable international financial environment. The number of households living below the poverty line fell in tandem with the misery index.

Signs of weakness first appeared during the Mexican crisis of 1995, when capital flows went into reverse gear, but it took the Asian and Russian crises to make the limitations of the Plan openly visible. By the end of 1998, Argentina was back into recession, mainly owing to an overvalued real exchange rate and a current account deficit of 3 per cent of GDP, which led to a rapid build-up of short-term foreign liabilities ("hot money"). Moreover, the increasing use of deficit spending to create economic stimulus and boost employment creation led to a steady rise in general government net debt, which fuelled concerns among both foreign and domestic investors regarding the credibility of the currency peg. In early 2002, after having lost 12 billion pesos in trying to stabilize the currency, the Central Bank was forced to abandon the peg. The Plan was repealed by Congress and the peso was allowed to float freely again.

The ensuing rapid capital outflow and run on the banks made the economic recession even worse (between 1999 and 2002 GDP per capita contracted by more than 21 per cent). Unemployment jumped from 15 per cent to 21 per cent over the four years of the crisis. More importantly, the level of absolute poverty increased from 2.6 per cent of the total population in 1998 to 8.4 per cent in 2003 (World Bank, 2008). Similarly, the incidence of poverty based on a measure indicating whether a household could afford a basket of basic commodities (the poverty gap) almost doubled in the first year after the peg had been abandoned (INDEC, 2008).

Most macroeconomic indicators have recovered since the end of the crisis and labour market outcomes have improved, with unemployment having returned to its previous levels. The financial sector has stabilized but lending activity lags behind pre-crisis levels, with loans still below 11 per cent of GDP, compared to 25 per cent of GDP in 1998 (EIU, 2006). Finally, inflation – the main reason for the Convertibility Plan – has returned as an important policy issue, reaching double figures in 2006.

[a] The misery index measures the sum of inflation and unemployment rates.

**Ecuador: mixed effects of dollarization**

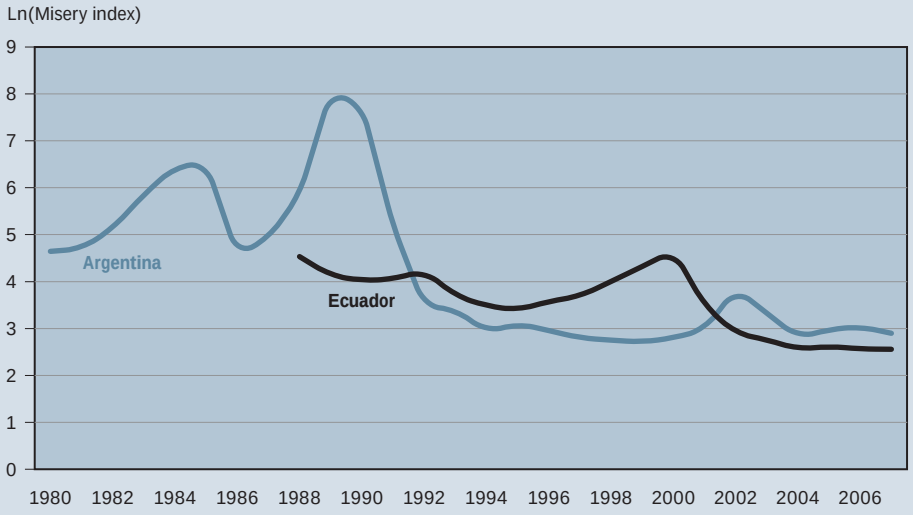
In Ecuador, policy-makers replaced the national currency (the sucre) by the dollar in 2001, in the aftermath of the 1999 financial crisis that had caused GDP to contract by 7 per cent, inflation to accelerate to over 50 per cent per year and the currency to depreciate by 200 per cent. Against the background of social unrest, a lack of congressional support for structural reform and the spectre of a run on the banks, dollarization brought immediate benefits by helping the macroeconomy to stabilize rapidly. The misery index fell by 45 per cent within 4 years (fig. B1).

Replacing the national currency by the dollar, however, caused the Ecuadorian government to lose revenues from seigniorage of around 7 per cent per year of GDP (Ecuador does not benefit from a seigniorage-sharing agreement with the United States). In addition, deposit insurance is now the responsibility of a government agency, with an annual budget of around 0.2 per cent of GDP, further rising fiscal costs of dollarization.[b] It is issued with an unlimited guarantee (Demirgüç-Kunt et al., 2006), creating a moral hazard bias that may have caused this contingent liability to generate a substantial fiscal burden in case another banking crisis hits the economy.[c]

More importantly, even though macroeconomic instability declined rapidly, real lending rates remain high and sovereign bond spreads are no lower than they were before the crisis period (and are still far higher than those observed in other Latin American countries). On the other hand, price competitiveness does not seem to have suffered from dollarization, as (non-oil) exports started to expand following a sharp contraction during the crisis, thus helping to reduce the (non-oil) current account deficit by 3 per cent between 2000 and 2005 (IMF, 2006).

So far, the benefits of dollarization have far outweighed its costs. Nevertheless, the macroeconomic environment needs to be strengthened further to lower the country's vulnerability to shocks. With only one policy instrument left, and against the background of a persistently high level of foreign debt, fiscal policies could play a more important role in helping to lower sovereign bond rates and improve financing conditions for domestic enterprises. This would further strengthen export growth securing the monetary base and could help bring down the unemployment rate, which is still high.

**Figure 2.B1. Misery index**




Source: IILS estimates based on IMF, World Economic Outlook database, 2007

[b] Originally, it was.
[c] Since 2003, the guarantee has been restricted to 400% of GDP per capita, i.e. around $6600.

funds, which lobby for ever greater uniformity across the globe. The introduction of the legal framework of the European public company and the evolution and convergence of prudential regulation regimes towards the Basel II accord may be seen as evidence of their success. More broadly, financial globalization is expected to lead to a convergence of capitalisms, as capital owners will not accept differences in rates of return between countries when allocating their funds (Lorenzi, 2008).

Whether or not such a convergence of capitalisms or a level playing-field among welfare states actually occur will depend on the interplay between two factors. On the one hand, further policy convergence allows financial investors to exploit economies of scale and to maximise their profit share. On the other hand, different welfare state and policy configurations have been shown to be related to distinct comparative advantages in the tradable sector, producing similar aggregate productivity and employment growth rates (Ernst, 2004). In particular, Northern European countries have weathered their integration into global capital markets remarkably well. Whether or not a country is coming under pressure to reform its welfare state policies towards less redistribution, therefore, depends to a large extent whether policy complementarities within the existing framework can be built up such as to guarantee sufficiently high rates of returns for international investors.

## E. Corporate governance and executive pay

An important microeconomic aspect of financial liberalization concerns the expected positive impact of a deeper, more competitive market for corporate control over executive performance and the quality of corporate governance. A key issue, in this regard, is the extent to which the level and growth of executive compensation corresponds to corporate performance. The following section reviews the empirical evidence regarding the link between a firm's performance and executive pay and discusses country specificities.

### Does executive pay respond to performance?

The question of whether executive compensation reflects economic performance is very controversial; the results partly depend on the geographical focus of a given study. Research originally concentrated on the United States, where the bulk of studies reported a positive relation between pay and performance (Jensen and Murphy, 1990; Joskow and Rose, 1994; Kaplan, 1994; Boschen and Smith, 1995; Hallock, 1998; Hall and Liebman, 1998). Yet the validity of the findings has been questioned. A number of studies have found a statistically significant link, which is, however, financially unattractive and therefore fails to provide a strong incentive for executives (Jensen and Murphy, 1990; Garen, 1994). Other studies have found an even stronger link between compensation and performance (Hall and Liebman, 1998, Boschen and Smith, 1995). Several papers providing a meta-analysis of existing research (Tosi et al., 2000; Dalton et al, 2003) suggest that no widespread, strong link between compensation and performance has been established so far.

The pay-performance relation has also been examined in companies outside the United States. A statistically significant pay-performance relation has been reported with regard to Canada (Zhou, 1999). The findings of research focusing on Asia are more complex. Kato and Long (2005) document a positive relation between pay and performance among Chinese companies. According to Firth et al. (2006), however, the pay-performance link is weak, which – in their view – raises questions about the effectiveness of firms' incentive systems. Kato and Kubo (2006), Kato et al. (2006) and Unite et al. (2008)

also identify a positive relationship with regard to Japanese, Korean, and Philippine firms, respectively. Evidence from European countries presents a mixed picture. A number of studies relating to the United Kingdom find a low pay-performance sensitivity (Gregg et al., 2005; Conyon and Murphy, 2000; Ozkan, 2007). Bruce et al. (2007) come to the same conclusion with regard to bonuses within UK companies. For Germany, Haid and Yurtoglu (2006) report a weak relation between compensation and performance, whereas Conyon and Schwalbach (2000) find that the relation is positive in both Germany and the United Kingdom. By contrast, recent studies on Portugal (Fernandes, 2008) and the Netherlands (Dufhues et al., 2007) do not find any such relation. In Australia, the findings vary. While Defina et al. (1994) do not find a significant connection between pay and performance, Matolcsy (2000) reports that such a connection exists at times of economic growth but not during an economic slowdown. Recently, Merhebi et al. (2006) have documented a statistically significant link between pay and performance but concede that its economic relevance is rather low.

Overall, a stable and significant relation between pay and performance has yet to be established; where such exists, it may be expected to be country-specific, depending largely on a country's economic, institutional and cultural peculiarities. Moreover, various studies focusing on Asian countries emphasize that a positive pay-performance relation holds only for a certain type of firms. No such relation could be identified in Chinese state-owned companies (Firth et al., 2006, Kato and Long, 2005), in Korean non-chaebol companies (Kato et al., 2006) or in companies with an affiliation to a family group (Unite et al., 2008). In Japanese companies, Abe et al. (2005) find that compensation is less sensitive to performance in firms with a main bank relationship or a bank-appointed member of the board of directors.

## Diversity of corporate governance models and executive pay

Three factors have been found to shape the evolution of executive pay: (a) the role of directors; (b) the role of institutional investors and employee representatives; and (c) the role of consultancy firms.

A number of studies, in particular those using the managerial power approach, have devoted considerable attention to the link between compensation and performance and to the presence (or absence) of institutional factors restricting (or increasing) executives' managerial discretion. Among other things, these studies highlight the role of the composition of the board of directors. Evidence relating to US and Portuguese firms suggests that compensation is higher when the board is larger, since this renders organized opposition by directors against executives more difficult (see Core et al, 1999, Fernandes, 2008). This finding has recently been confirmed in a cross-national study by Otten and Heugens (2007) of executive salaries and bonuses in 17 countries. Similarly, compensation is higher if the appointment of the majority of the executives has been influenced by the CEO. The CEO's relationship with the other executives and with the bodies in charge of determining executive compensation also seems to be a relevant factor. As far as the United States is concerned, it has been argued that directors' and executives' interests are closely intertwined, as directors have an interest in being reappointed to the board (for financial and social reasons). Since the slate containing the list of candidates to be nominated in the management is normally the only slate for elections, CEOs in the United States have significant influence over re-appointment. Directors therefore have an interest in maintaining a good relationship with the CEO. This may, however, affect their capacity to supervise decisions on the compensation of executives (Bebchuk and Fried, 2003). Evidence confirming this assumption is provided by Core et al. (1999), who show that CEO compensation is higher when directors have been appointed by the CEO directly.

Secondly, the presence of institutional investors has been identified as having an influence on executive compensation. A study by Hartzell and Starks (2002) covering a large number of firms in the United States between 1991 and 1997 finds that the higher the number of institutional investors, the lower the compensation of executives, and vice versa. David, Kochar and Levitas (1998) distinguish between institutional investors that have other business relationships with the firm and those that have not. They find that the level of executive compensation is positively related with the former and negatively with the latter. Comparable findings are reported in the case of the United Kingdom, where, in their study of a large number of companies, Dong and Ozkan (2007) document that, while the mere presence of institutional investors neither constrains the level of executive pay nor strengthens the pay-performance relationship, "dedicated investors with long-term horizons" do have a positive influence on both factors.

A final factor in the shaping of executive compensation is the role played by compensation consulting firms providing companies with data and advice regarding compensation. Bebchuk and Fried (2003) argue, with regard to the United States, that since it is typically the human resources departments of companies that select such consultancy firms (which are in turn accountable to the executive board) a conflict of interest may arise: consultants have an interest not only in providing the best advice regarding executive compensation but also in being rehired by the company (or hired by other companies). Crystal (1991) has also documented that consultants who provide CEO compensation advice frequently conduct work in the same firms in other areas. This may create an incentive for the consultants to avoid giving advice that may be regarded as inconvenient by the executive board, in order not to lose additional contract opportunities (ibid.). Other studies show that consultancy firms may propose an increase in executive compensation even when the company performance is below par. According to Gillan (2001), they usually propose compensation packages that are either performance-driven or peer group-driven, that is, based on a comparison with compensation packages in other firms. They can thus shift from one method of calculation to another, depending on the circumstances, but not necessarily on the basis of corporate performance. Moreover, a memorandum of the House of Representatives of the United States, dated 6 March 2008, provides evidence of a case where, after one consultancy firm had recommended a reduction in CEO pay, the management of the company had hired another which was more compliant with the CEO's interests (House of Representatives, 2008).

## Policy developments

In many countries, proposals have been put forward with a view to mitigating the problems of executive compensation illustrated above. Understandably, given the wide variations that exist, proposals are highly country-specific.

A number of the proposals deal with the institutional framework in which executive compensation is determined. In the United States, some urge that the share holder meeting, usually referred to as "say on pay", should have an enhanced role, in the form of a non-binding vote on executive compensation. While not having a veto, shareholders would thus have an institutional platform at which to express their disagreement with a company's remuneration policy (Gopalan, 2007). Similarly, the Austrian trade unions recently proposed stronger information rights for shareholders on executive compensation (Arbeitnehmerkammer Wien, 2008). Another proposal is to strengthen the committee in charge of determining compensation. For instance, German trade unions suggest that supervisory boards in that country should have more power and, in particular, that employee representatives should be involved more closely in determining compensation (German Trade Union Federation, 2008).

Secondly, there are also proposals relating to the criteria used to set executive compensation. German and Austrian trade unions have proposed that not only personal performance and firm performance but also social and environmental sustainability should be taken into account (ibid.; Arbeitnehmerkammer Wien, 2008).

A third group of proposals – in the United States, Austria and elsewhere (Anderson et al., 2007 and Arbeitnehmerkammer Wien, 2008) – calls for more rigid taxation, the suggestion being that companies should no longer be able to deduct executive compensation as a business expense. This would discourage excessively high executive compensation by increasing the costs to the company.

## F. Policy considerations

Financial globalization has not lived up to its promises. True, financial globalization can contribute to improve the allocation of savings and investment and thus support growth and incomes –this is why it would be wrong to close the economy to international capital flows. However, the chapter has argued that benefits have been slow to emerge even in countries that opened up more quickly and have often been reversed by financial crises that wiped out earlier income and employment gains. Moreover, financial globalization seems to have eroded bargaining power of employees, contributing to the trend decline in the wage share over and above any effect resulting for instance from trade integration or sectoral change. Financial globalization under insufficiently developed domestic banking markets will increase the risk of financial crises.

The main policy implication from these findings is that governments should take into account the social impacts of financial globalization before engaging in an all-embracing opening of capital markets. A cautious approach to financial globalization is especially important in countries where financial markets are not sufficiently developed and where supervision mechanisms are weak. But in all countries, it is crucial to reinforce prudential regulation so as to reduce irresponsible risk-taking on the part of certain financial actors. Indeed there is a "moral hazard" problem in that these actors grasp all the gains from irresponsible financial positions, while the losses from such operations are partly shifted to society. However, foreign direct investment should be allowed to enter, especially in the case of emerging economies and developing countries, which can benefit the most from such investments in terms of technological transfer and productivity growth.

There is also a role for coordinated action among countries. As the recent sub-prime crisis has demonstrated, financial turbulence in one country (especially if it is a large one) tends to spill over to other countries. Several policy options have been put forward in this respect, such as a more wide-spread use of regional currency areas with "seigniorage" sharing agreements. Though the merits and de-merits of each proposed solution could not be analyzed in this chapter, it is interesting to note that most of the proposals involve some form of regulation of financial practices.

## Appendix A

# The impact of financial market crises on growth and inequality: An empirical assessment

The purpose of this Appendix is to present baseline evidence of the link between financial crisis and growth and financial crisis and inequality. This is done by means of panel regressions estimated by FGLS using five eight-year non-overlapping windows for the period 1960-2006. The sample used in the regressions consists of 127 countries in the analysis of economic growth and 105 countries in the case of inequality. The difference in the number of countries taken into account by both regressions is explained by the difficulty in finding information on inequality for all countries for the period studied.

The methodology employed is similar to that presented in Rancière et al. (2008), but adding an equation to test for the effect of banking crisis on inequality. The following equations have been estimated:

$$(1)\quad \Delta Y_{it} = \gamma X_{it} + \beta_1 \mu_{\Delta B,it} + \beta_2 \sigma_{\Delta B,it} + \beta_3 sk_{\Delta B,it} + \varepsilon_{it}$$
$$(2)\quad G_{it} = \gamma X_{it} + \beta_1 \mu_{\Delta B,it} + \beta_2 \sigma_{\Delta B,it} + \beta_3 sk_{\Delta B,it} + \varepsilon_{it}$$

Growth ($\Delta Y_{it}$) is measured by the average growth rate of per-capita GDP and inequality ($G_{it}$) by the Gini coefficient (expressed in logs). Regarding the explanatory variables, the three moments of credit growth: the mean ($\mu_{\Delta B,it}$), the standard deviation ($\sigma_{\Delta B,it}$), and the skewness ($sk_{\Delta B,it}$), are used as a measure of financial development and financial crisis. The

**Table 2.A1. Definitions and Sources of Variables used in the Regression Analysis**

| Variable | Definition | Source |
|---|---|---|
| GDP per capita growth | Annual growth rate. | World Development Indicators (2007). |
| Gini coefficients | | World Development Indicators (2007). |
| Initial GDP per capita | Initial value of ratio of total GDP to total population (in logs). GDP is in 2000 constant US$. | World Development Indicators (2007). |
| Initial secondary schooling | Ratio of total secondary enrolment, regardless of age, to the population of the age group that officially corresponds to that level of education. Expressed in logs. | World Development Indicators (2007). |
| CPI Consumer price index | Consumer price index (2000 = 100) at the end of the year. | IFS data – line 64 ZF and 64 XZF. |
| Real credit growth | Annual growth rate of real domestic bank credit claims on the private sector. | Institute calculations based on data from IFS – line 22: Claims on Private Sector. Domestic bank credit claims are deflated with end of the year CPI index. |
| Government consumption | General government final consumption expenditure as a % of GDP. Expressed in logs. | World Development Indicators (2007). |
| Inflation rate | Annual % change in CPI. | World Development Indicators (2007). |
| Trade openness | Trade (Exports + Imports) as a % of GDP. | World Development Indicators (2007). |

**Table 2.A2. Regression results**

| | Baseline regression | | Reduced sample | | Weighted regression | | Outlier control | |
|---|---|---|---|---|---|---|---|---|
| | GDP per capita growth | Gini (log) | GDP per capita growth | Gini (log) | GDP per capita growth | Gini (log) | GDP per capita growth | Gini (log) |
| Bank credit growth | 0.079 | 1.2E-03 | 0.079 | 1.2E-03 | 0.026 | 6.9E-04 | 0.123 | 7.5E-04 |
| | (26.40)** | (27.55)** | (26.40)** | (27.55)** | (9.25)** | (12.37)** | (50.80)** | (7.33)** |
| Bank credit variance | -0.021 | -1.2E-03 | -0.021 | -1.2E-03 | 0.005 | -3.0E-04 | -0.035 | -1.6E-03 |
| | (-20.74)** | (-41.00)** | (-20.74)** | (-41.00)** | (2.13)* | (-4.24)** | (-36.95)** | (-20.16)** |
| Bank credit skewness | -0.183 | -4.4E-03 | -0.183 | -4.4E-03 | -0.134 | -2.2E-02 | -0.244 | -4.6E-03 |
| | (-5.35)** | (-2.64)** | (-5.35)** | (-2.64)** | (-3.28)** | (-10.41)** | (-7.90)** | (-2.63)** |
| Initial level of GDP per capita | -0.662 | 3.3E-02 | -0.662 | 3.3E-02 | -1.53 | -4.7E-03 | -0.447 | 2.9E-02 |
| | (-10.94)** | (14.70)** | (-10.94)** | (14.70)** | (-16.83)** | (-2.18)* | (-8.59)** | (9.22)** |
| Initial level of secondary schooling | 0.032 | | 3.2E-02 | | 2.9E-02 | | 2.7E-02 | |
| | (13.27)** | | (13.27)** | | (8.85)** | | (18.15)** | |
| Inflation rate | -0.003 | 1.6E-05 | -0.003 | 1.6E-05 | -0.004 | -5.4E-05 | -0.002 | 7.7E-06 |
| | (-32.98)** | (3.79)** | (-32.98)** | (3.79)** | (-10.46)** | (-11.06)** | (-13.85)** | (1.12) |
| Government consumption | -1.39 | -0.032 | -1.39 | -0.0322 | -1.102 | -0.190 | -0.799 | -2.1E-02 |
| | (-13.63)** | (-8.09)** | (13.63)** | (-8.09)** | (-7.34)** | (-32.46)** | (-11.18)** | (-3.02)** |
| Trade openness | 0.018 | -1.2E-04 | 0.018 | -1.2E-04 | 0.013 | -1.0E-03 | 0.011 | 8.1E-05 |
| | (14.30)** | (-3.70)** | (14.30)** | (-3.70)** | (10.64)** | (-32.94)** | (12.75)** | (2.24)* |
| Constant | 6.33 | 3.46 | 5.88 | 3.39 | 13.42 | 4.08 | 4.81 | 3.33 |
| | (13.72)** | (408.28)** | (13.10)** | (212.42)** | (19.92)** | (209.57)** | (13.16)** | (92.33)** |
| Observations | 559 | 236 | 559 | 236 | 559 | 236 | 509 | 223 |
| Number of countries | 146 | 102 | 146 | 102 | 146 | 102 | 135 | 96 |

Note: Estimated based on feasible generalized least squares. All regressions are controlled for regional-fixed effects. Absolute value of z statistics in parentheses. The error terms are corrected for heteroskedasticity and autocorrelation. Significance levels: * significant at 5%; ** significant at 1%.

Source: IILS estimates

variable used for this purpose is the growth rate of real bank credit to the private sector. Finally, $X_{it}$ is a vector of control variables and $\varepsilon_{it}$ is the error term. In this analysis, the control set used includes initial per-capita GDP (in logs), the initial ratio of secondary schooling, the inflation rate, the ratio of government consumption as a percentage of GDP (in logs) and a measure of trade openness (X+M / GDP). An overview of the different variables used and their sources and definitions can be found in table 2.A.1.

The moments of credit growth and the variables measured in averages are computed over each of the five different periods considered (1960-1969; 1970-1978; 1979-1987; 1988-1996, and; 1997-2006) and the initial variables are measured in the first year of each period. All panel regressions are estimated with fixed-effects and controlled for heteroskedasticity and auto-correlation of the error terms.

Robustness tests include the restriction of the country sample by excluding emerging Europe and Central Asian countries due to their more limited coverage over time. Moreover, the estimates have also been run by weighting observations with GDP per capita levels and by excluding outliers to ensure that no particular data point is driving the regression. Outlier detection has been based on the Cook statistics. Table 2.A.2 summarizes the different equations and robustness checks.

## Appendix B

# Empirical studies regarding pay for performance

| Author and country | Reference | Findings on the link between executive compensation and firm performance | Method used |
|---|---|---|---|
| Dardour, A. (2008) France | Forthcoming. | Finds a positive but weak and insignificant link between executive compensation and firm performance. | Examines 250 companies for the period of 2002-2005.<br>Analyzes fixed and variable cash compensation and share-based compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Fernandes, N. (2008) Portugal | Board compensation and firm performance: the role of "independent" board members, *Journal of Multinational Financial Management* 78, 30–44. | Does not find a link between executive compensation and firm performance and documents that not even the variable component is related to firm performance. | Examines 58 companies for the period of 2002-2004.<br>Analyzes fixed and variable cash compensation and share-based compensation.<br>Takes into account stock market based performance measures. |
| Ozkan, N. (2008) United Kingdom | CEO Compensation and Firm Performance: An Empirical Investigation of UK Panel Data, available at SSRN: http://ssrn.com/abstract=1102703. | Finds a weak positive link between executive compensation and firm performance. | Examines 390 companies for the period of 1999-2005.<br>Analyzes fixed and variable cash compensation and share-based compensation.<br>Takes into account stock market based performance measures. |
| Unite, A.A., Sullivan M.J., Brookmann, J., Majadillas, M.A., and Taningco, A. (2008) Philippines | Executive pay and firm performance in the Philippines, *Pacific-Basin Finance Journal* forthcoming, Available in the final version as accepted by the journal under: https://sciencedirect.com. | Finds a positive link between executive compensation and firm performance.<br>This holds, however, only for companies that are not affiliated to a corporate group. | Examines 125 companies for the period of 2001-2002 and 148 firms for the period of 2002-2003.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Duffhues, P. and Kabir, R. (2007) Netherlands | Is pay-performance relationship always positive? Evidence from the Netherlands, *Journal of Multinational Financial Management* 18, 45-60. | Does not find a link between executive compensation and firm performance. | Examines 135 companies for the period of 1998-2001.<br>Analyzes fixed and variable cash compensation, but also includes a smaller sample of companies in order to analyze share-based compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Firth, M., Fung, P., Rui, O. (2006) China (mainland) | Corporate performance and CEO compensation in China, *Journal of Corporate Finance* 12, 693–714. | Finds a positive but weak link between executive compensation and firm performance, and only for firms whose major shareholder is not a state agency. | Examines 549 companies for the period of 1998-2000.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Haid, A., Yurtoglu, B. (2006) Germany | The impact of ownership structure on executive compensation in Germany, *Journal of Multinational Financial Management*, forthcoming. | Finds a "negligibly" weak link between executive compensation and firm performance. | Examines 160 companies for the period of 1987-2001.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based performance measures. |
| Kato, T., Kim, W. and Lee, J.H. (2006) South Korea | Executive compensation, firm performance and chaebols in Korea: evidence from new panel data, *Pacific-Basin Finance Journal* 15, 36–55. | Finds a positive link between executive compensation and firm performance.This does, however, not apply to chaebol firms. | Examines 246 companies for the period of 1998-2001.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based and accounting-based performance measures. |

| Author and country | Reference | Findings on the link between executive compensation and firm performance | Method used |
|---|---|---|---|
| Kato, T., Kubo, K. (2006) Japan | CEO compensation and firm performance in Japan: evidence from new panel data on individual CEO pay, *Journal of Japanese and International Economies* 20, 1–19. | Finds a positive link between executive compensation and firm performance. | Examines 51 companies for the period of 1986-1995.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Merhebi, R, Pattenden, K., Swan, P.L. and Xianming, Z. (2006) Australia | Australian chief executive remuneration: pay and performance, *Accounting and Finance* 46, 481-487. | Finds a positive link between executive compensation and firm performance, admitting that the link is statistically but not economically relevant. | Examines 722 companies for the period of 1990-1999.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based performance measures. |
| Abe, N., Gaston, N. and Kubo, K. (2005) Japan | Executive pay in Japan: the role of bank-appointed monitors and the main bank relationship, *Japan and the World Economy* 17, 371–394. | Finds a positive link between executive compensation and firm performance.<br>The pay-performance relation in Japan is weaker for companies with a Main Bank link or a bank-appointed member of the board of directors, but executive compensation in those companies is also lower. | Examines 55 companies for the period of 1989-1999.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Paul Gregg, P., Jewell, S.,Tonks, I. (2005) UK | Executive Pay and Performance in the UK 1994-2002, CMPO Working Paper Series No. 05/122. | Find a weak positive link between executive compensation and firm performance.<br>Also identify an asymmetric link between pay and performance: In years and for companies in which stock returns are relatively high, pay-performance elasticities are high, but executive pay is less sensitive to performance in those cases when stock returns are low. | Examines 415 companies for the period of 1994-2002.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Kato, T. and Long, C. (2005) China (mainland) | Executive compensation, firm performance, and corporate governance in China: evidence from firms listed in the Shanghai and Shenzhen stock exchanges, *Economic Development and Cultural Change* 54, 945-983. | Finds a positive link between executive compensation and firm performance.<br>Chinese executives are penalized for making negative profits although they are neither penalized for declining profits nor rewarded for rising profits insofar as it is positive.<br>The pay-performance link is weaker with regard to companies whose major share-holder is a state agency. | Examines 942 companies for the period of 1998-2002.<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based and accounting-based performance measures. |
| Dalton, D.R., Daily, C.M., Certo, S.T. and Roengpitya, R. (2003). | Meta-analysis of Financial Performance and Equity: Fusion or Confusion? *Academy of Management Journal* 46, 13-26. | Reports that only a few studies find a systematic link between executive compensation and firm performance. | Provides a meta-analysis of 229 empirical studies on the link between executive compensation and firm performance. |
| Conyon, M., Murphy, K. (2000) UK | The prince and the pauper? CEO pay in the United States and United Kingdom, *Economic Journal* 110, 640–671. | Documents a stonger pay-performance link for the US than for the UK. | Examines 510 companies for 1997.<br>Analyzes fixed and variable cash compensation and share-based compensation.<br>Takes into account stock market based performance measures. |
| Conyon and Schwalbach (2000) UK Germany | Conyon, M.J. and Schwalbach, J.. (2000). Executive Compensation: Evidence from the UK and Germany, *Long Range Planning* 33, 504-526. | Finds a positive link between executive compensation and firm performance in both countries. | Examines 102 companies for the period of 1969-1995 (UK) as well as 48 companies for the period of 1968-1994 (Germany).<br>Analyzes fixed and variable cash compensation.<br>Takes into account stock market based performance measures. |

| Author and country | Reference | Findings on the link between executive compensation and firm performance | Method used |
|---|---|---|---|
| Matolcsy, Z.P. 2000 Australia | Executive cash compensation and corporate performance during different economic cycles, *Contemporary Accounting Research*, 17, 671-688, also available at SSRN: http://ssrn.com/abstract=167068. | Finds a positive link between executive compensation and firm performance during periods of economic growth but no link during periods of economic downturn. | Examines 100 companies for the period of 1988-1995. Analyzes fixed and variable cash compensation. Takes into account accounting-based performance measures. |
| Zhou, X. (2000) Canada | CEO pay, firm size, and corporate performance: evidence from Canada, Canadian Journal of Economics 33, 213–252. | Finds a positive link between executive compensation and firm performance. | Examines 755 companies for the period of 1991-1995. Analyzes fixed and variable cash compensation and share-based compensation. Takes into account stock market based performance measures. |
| Hall, B., Liebman, J. (1998) USA | Are CEOs really paid like bureaucrats?, *Quarterly Journal of Economics* 113, 653–691. | Finds a strong positive link between executive compensation and firm performance, pay-performance sensitivity increased over the period studied. | Examines 426 companies for the period of 1980-1994. Analyzes fixed and variable cash compensation and share-based compensation. Takes into account stock market based and accounting-based performance measures. |
| Tosi , H.L., Werner, S., Katz, J.P. & Gomez-Mejia, L.R. (2000). USA | How much does performance matter? A meta-analysis of CEO pay studies. *Journal of Management*, 26, 301-339. | Reports that the empirical research has only documented a weak link between executive compensation and firm performance. | Provides a meta-analysis of 137 empirical studies on the link between executive compensation and firm performance. |
| Boschen, J.F. and K.J. Smith (1995) USA | You can pay me now and you can pay me later: the dynamic response of executive compensation to firm performance, *Journal of Business* 68, 577–608. | Finds a positive link between executive compensation and firm performance, pay-performance sensitivity increased over the four decades studied. | Examines 16 companies for the period of 1948-1990. Analyzes fixed and variable cash compensation and share-based compensation. Takes into account stock market based measures. |
| Defina, A, Harris, T.C., Ramsay, I.M. 1994 Australia | What is Reasonable Remuneration for Corporate Officers? An Empirical Investigation into the Relationship between Pay and Performance in the Largest Australian Companies *Company and Securities Law Journal* 12, 6, 341-356. | Does not find a significant link between executive compensation and firm performance. | Examines 89 companies for the period of 1989-1990. Analyzes fixed and variable cash compensation and share-based compensation. Takes into account stock market based and accounting-based performance measures. |
| Garen, J.E., 1994, USA | Executive Compensation and Principal-Agent Theory, *Journal of Political Economy*, 102, 6, 1175-1199. | Finds a weak link between firm-performance and executive compensation. | Examines 415 companies for 1988. Analyzes fixed and variable cash compensation. Takes into account stock market based and accounting-based performance measures. |
| Joskow, P. and Rose, N. (1994) USA | CEO pay and firm insurance: dynamics, asymmetries, and alternative performance measures. NBER Working Paper No. 4976, National Bureau of Economic Research. | Finds a positive link between executive compensation and firm performance. | Examines 678 companies for the period of 1970-1990. Analyzes fixed and variable cash compensation and share-based compensation. Takes into account stock market based and accounting-based performance measures. |
| Kaplan, S. (1994) USA Japan | Kaplan, S. (1994), Top executive rewards and firm performance: a comparison of Japan and the United States, *Journal of Political Economy* 102, 510–546. | Finds a positive link between executive compensation and firm performance. | Examines 119 Japanese companies and 146 US companies for 1980. Analyzes fixed and variable cash compensation and share-based compensation. Takes into account stock market based and accounting-based performance measures. |
| Jensen, M. and Murphy, K. (1990) USA | Jensen, M. and Murphy, K.J. (1990), Performance pay and top-management incentives, *Journal of Political Economy* 98, 225–264. | Finds a statistically significant but weak positive link between executive compensation and firm performance. | Examines 73 Japanese for the period of 1969-1983. Analyzes fixed and variable cash compensation and share-based compensation. Takes into account stock market based performance measures. |

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# 3 Labour institutions and inequality[1]

## Main findings

- There has been a considerable decline in unionization over the past two decades. Union density declined in almost all the 51 countries considered in this analysis. The decline was dramatic in Central and Eastern European countries, where levels had initially been very high. On the other hand, changes in collective bargaining structure were less spectacular, according to the data that were collected. In most countries, the basic level of collective bargaining did not change. There was, however, a modest trend towards more decentralization and/or less coordination of collective bargaining.
- While, as shown in chapter 1, income inequality increased in almost all the countries under consideration, there is no evidence to support the claim that this increase was caused by changes in labour institutions. In particular, the decline in trade union density does not explain the rise in income inequality, except in the Central and Eastern European countries, where it seems to have been a significant factor. Elsewere, there is no statistical association between changes in union density, and other labour institutions, and changes in inequality within countries, when other determinants are taken into account.
- The analysis carried out for the purposes of this chapter suggests that recent changes in inequality seem better predicted by economic factors than by changes in labour institutions. Thus, technology-induced shifts in the demand for skilled labour, as illustrated by the incidence of investment in information and communication technology (ICT) tend to increase inequality, as does higher foreign direct investment (FDI). Tariff liberalization also seems associated with greater income inequality, but the impact of this variable seems less robust. By contrast, a larger supply of human capital – as expressed in average years of education – lowers income inequality.

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- Despite the above, labour institutions continue to play a redistributive role in the majority of the countries under consideration, with the notable exception of Latin America, where labour institutions generally fail to address inequality concerns. In advanced countries, in particular, high trade union density, a more coordinated collective bargaining structure, and wider coverage of collective bargaining agreements tend to be associated with a larger welfare state. Large welfare states, in turn, are associated with lower inequality. For instance, the analysis suggests that if the country with the highest level of inequality in the sample (the United States) had raised its welfare state levels to those of the average country during the period under consideration, it would have reduced its predicted level of inequality by 48 per cent in 1978-1989 and by 70 per cent in 1990-2002.[2] What diminished, from the 1990s on, was the capacity of labour institutions to reduce inequality directly by compressing market earnings. In particular, centralized collective bargaining seems to have become much less redistributive than it once was.

## Introduction

The promise held out by globalization is to increase standards of living for all by virtue of greater specialization and higher productivity, cheaper goods and services, better access to credit and capital, and quicker diffusion of technological innovation. At the same time, there is growing concern in international policy circles, and among the general public, that in its current form globalization is not working (Wade 2004; Goldberg and Pavcnik 2007 p. 39). Increasingly, there is a suspicion that its benefits accrue only to a small portion of the population (the very rich), while others gain little, except greater anxiety and a growing sense of precariousness (Luebker 2004). It is also feared that the adverse distributional consequences of globalization may lead to a political backlash against it, and even to its undoing (Berger 2000; Scheve and Slaughter 2004; OECD 2007; Scheve and Slaughter 2007; Rodrik 1997). Chapter 2 of this World of Work Report sheds further light on this issue by considering the impact of financial globalization on income inequality.

Concerns about the sustainability of the current globalization regime are not to be taken lightly: the first wave of globalization, before the First World War, resulted in some respects, in even closer economic integration across countries than today, for example as far as migration flows were concerned (O'Rourke 2001; Berger 2003). Yet, in the years before the Second World War, this wave of globalization gave way not only to economic protectionism but, more importantly, to fascist regimes in some countries. One of the reasons for the failure of the first globalization was the inability of governments to solve the "Polanyi problem": how to manage the social disruption associated with unfettered economic competition and a global free-market economy (Polanyi 1957; Munck 2004).

It has been argued repeatedly, – among others by the ILO (2004), – that, in order to be sustainable and bring positive outcomes for all, globalization needs a new regulatory framework, which requires the introduction of an appropriate governance structure at the international level. However, as there is no consensus on how exactly to proceed, few positive steps have so far been taken to this end and, in all likelihood, few will be taken in the foreseeable future. As a consequence, the international governance regime will probably remain under-institutionalized and the task of protecting societies from the potentially undesirable consequences of globalization will still fall largely, if not exclusively, on national-level institutions, however weakened these may be at the moment. This chapter focuses on some of these institutions, in particular on those that have to do with workers' rights, trade unionism and collective bargaining.

2. This simulation exercise is based on the regression coefficients in tables 3.C5 and 3.C6, column 1.

The research question driving the chapter is whether the institutions with which the ILO is traditionally associated, especially trade unionism and collective bargaining, can be said to contribute to the reduction of inequality in the current globalization era and, if so, to what extent. It is known from previous research on advanced countries that trade unionism and collective bargaining have redistributive effects. This chapter seeks to ascertain whether such inequality-reducing effects were still present at a more recent period (the 1990s and early 2000s) than those considered in previous studies and looks also at the record of developing countries.

There is reason to suspect that the same institutions that once improved earnings and income distribution may have recently become much less adept at doing so. Indeed, given that one of the effects of globalization is to increase competition among firms and workers, for example by increasing product and labour demand elasticities (Rodrik 1997; Scheve and Slaughter 2004; OECD 2007 pp. 130-7), so that firms cannot afford to deviate from market outcomes without running a serious risk of going out of business, and workers – particularly low-skilled workers – cannot, without jeopardizing their jobs, push for wages higher than those prevailing in a competitive equilibrium, the impact of unions and collective bargaining on distributional outcomes is likely to be reduced.[3]

Among the developments that may have contributed to this state of affairs is the emergence in several countries, predominantly but not exclusively European, of a particular kind of centralized collective bargaining, known as a social pact, which, although apparently similar to past arrangements as far as its institutional form is concerned, has rather different outcomes and, in particular, is more focused on national competitiveness than on redistribution (Rhodes 1996; Fajertag and Pochet 1997; idem 2000; Streeck 2000; Rhodes 2001; Berger and Compston 2002; Hassel 2003; Baccaro and Lim 2007). Other suggestive evidence comes from a recent shift in union wage policies: in several advanced countries, trade union confederations no longer explicitly seek the compression of wage differentials, as they did in the past, but have moved to more distributionally neutral wage policies (Edin and Holmlund 1995; Baccaro and Locke 1998; Schulten 2002). Even in a country like Sweden, often considered a beacon of egalitarian capitalism, its very high trade union density and – despite a recent shift from the national to the industry level (Pontusson and Swenson 1996; Swenson and Pontusson 2000) – relatively centralized collective bargaining structure have not prevented inequality from growing in the past few years (Smeeding 2002; Gustavsson 2007, pp. 85-7; Atkinson 2008; Bjorklund and Freeman 2008).

Any attempt to answer the question whether labour institutions still reduce inequality in the current era presents considerable empirical challenges. Country estimates of inequality are often based on different income concepts, population coverage, age coverage, thus making both cross-sectional and longitudinal comparisons problematic (Atkinson and Brandolini 2001). Also, and perhaps more importantly, unlike advanced countries, for which full-time series data on union density and collective bargaining structures are available,[4] data on labour rights and industrial relations institutions for non-advanced countries are sparse, to say the least. For this chapter, the available evidence was collected from various sources and an effort was made to fill in as many gaps in the data as possible. Based on the availability of trade union, inequality and other data, the analysis focuses on 51 countries – advanced, Asian, Central and Eastern European and Latin American – between 1989 and 2005.

3. To use the words of Richard Freeman: "When firms do not have 'rents' to share with workers, institutions cannot affect redistribution" (Freeman 2007a, p. 15).
4. This is thanks to the data collection efforts of Jelle Visser over the years.

## A. Review of earlier studies

There was a general consensus in the previous literature that trade unionism and associated institutions reduced inequality. In a recent literature review, Richard Freeman, one of the key scholars in this domain, argued not only that unions and collective bargaining improved income distribution but also that this was the only robust effect of labour institutions on outcomes: "For all of the difficulties in pinning down the impact of institutions on aggregate economic performance across countries, analyses have found that institutions have a major impact on one important outcome: the distribution of income" (Freeman 2007a, pp. 19-20).

Yet what now seems almost received wisdom was controversial only a few years ago. In his influential *Capitalism and Freedom*, Milton Friedman (1962, p. 124), for example, articulated a powerful argument as to why unions, far from acting as a "sword of justice," according to Flanders' famous expression (Flanders 1970; Metcalf, Hansen and Charlwood 2001), were to be regarded as "vested interests", as far as their distributional consequences were concerned:

> "If unions raise wage rates in a particular occupation or industry, they necessarily make the amount of employment available in that occupation or industry less than it otherwise would be – just as any higher price cuts down the amount purchased. The effect is an increased number of persons seeking other jobs, which forces down wages in other occupations. Since unions have generally been strongest among groups that would have been high-paid anyway, their effect has been to make high-paid workers higher paid at the expense of lower-paid workers."

According to Friedman's argument, unions create inequality between two identical workers by pushing up wages in the union sector and thus, because there is a larger supply of workers who cannot find jobs in the unionized sector, depressing wages in the non-union sector. If the workers' skill levels are not identical, but, as Friedman believes, union members are more highly skilled, then unions contribute still further to increasing inequality by pushing up the skill premium.

In a classic study on the effect of unionism in the United States, using microdata, Freeman and Medoff (1984, chapter 5) reversed this argument. They showed that the effect of unions was theoretically ambiguous (see also Gottschalk and Smeeding 1997, p. 647), in that although unions did, as argued by Friedman, push up the wages of their members relative to non-members, this "monopoly" (or "between") effect was in fact counteracted by three other factors that reduced inequality. First the dispersion of earnings within establishments was lower in union than non-union establishments; second, the dispersion across establishments was also lower, owing to the coordinated wage policies pursued by unions in collective bargaining; and, third, the skill premium (as between blue-collar and white-collar workers) was lower in unionized establishments. Because the union wage premium benefited blue-collar workers more than others, the "monopoly" effect operated in the opposite direction from the one hypothesized by Friedman: it reduced rather than increased inequality. As to mechanisms, the authors pointed to two in particular. In the first place, unions are democratic organizations, whose policy decisions may be expected to reflect the preferences of the median union member. If such a member is less skilled, and therefore less well paid, than the average worker, the union will pursue redistributive wage policies that reduce the skill premium. Secondly, union wage policies attach wages to occupations rather than to individual workers on the basis of supervisors' assessments. Since the distribution of supervisors' assessments of workers is probably wider than the distribution of occupations, union establishments have lower within-group dispersion than non-union establishments.

Twenty years after Freeman and Medoff (1984), these empirical findings still appeared very solid, having been corroborated by numerous subsequent studies (see Freeman 2007b

for a review). For example, Card, Lemieux and Riddell (2007) conducted a similar analysis to Freeman and Medoff (1984) based on microdata for three countries – the United States, Canada and the United Kingdom – which were all characterized by a sharp divide between union and non-union sectors. They found that the dispersion of wages was lower for union than for non-union workers, even within narrowly defined skill categories, thus confirming one of Freeman and Medoff's key results, and that unions also contributed to reducing the skill premium but only for male workers. The net effect was to decrease income inequality for men but not for women. For the female workers, the inequality-increasing "monopoly" (or "between") effect prevailed over the inequality-decreasing "within" effect. This divergence was due to the different distribution of union membership according to skill between the two sexes: whereas male union members were concentrated in the middle of the skill distribution, so that the "monopoly" effect boosted their wages in relation to those of more highly skilled workers, female union members were positioned closer to the top. This was because a higher proportion of female union members was in the public sector (Card, Lemieux and Riddell 2007, p. 134). Interestingly, this analysis also revealed that the wage premium enjoyed by unionized workers over their non-organized counterparts had declined between the early 1980s and early 2000s and, consequently, that the ability of unions to compress the distribution of wages had also been declining over time (ibid. pp. 137 and 149-150). Overall, the analysis suggests that the impact of unionism on inequality is empirically dependent on whether the equalizing within-group effect prevails over the disequalizing between-group effect, which in turn depends on whom the unions represent: if they predominantly represent the most skilled workers, the net effect could be (as in Friedman's passage above and as in the case of women in the United States, Canada and the United Kingdom) to increase the dispersion of wages. Also, according to this analysis, the union impact on wages seems to be declining over time. In other words, unions seem less and less capable of affecting either the level or the distribution of wages relative to a competitive scenario. This theme will be considered further in the analysis below.

The work of Blau and Kahn (1996) has an important place in the comparative literature on institutions and inequality, because theirs seems to be the only study in which the comparison relies on microdata relating to workers rather than on aggregate cross-section time-series data at the country level. The data these authors used came from various sources, but principally from the International Social Survey Programme (ISSP). The authors examined ten advanced countries in the mid- to late-1980s, with particular reference to differences between the United States and the other countries. They found that the most important determinants of the greater dispersion in the bottom half of the wage distribution in the United States relative to other countries were not demand and supply conditions but institutional differences in wage-setting. Focusing on the wage gap between two workers in the 50$^{th}$ and in the tenth percentile of the wage distribution, respectively, they found that while the difference in dispersion between the United States and the rest was not so great for the unionized sectors (union workers in the United States had almost the same degree of wage compression as in other countries), the dispersion of wages for non-union workers was much greater in the United States than in other countries. The authors interpreted this difference as due to institutional differences in the structure of collective bargaining which allowed unions to influence the wage structure of non-union workers to a much greater extent than in the United States, through various mechanisms like extension clauses, industry floors, or (given the greater power of unions outside of the United States) spontaneous adoption of union rates by non-union companies. In other words more centralized wage setting institutions in other countries brought about more wage compression than in the United States not so much among union members, but among workers that were not affiliated to trade unions. Consistent with these results, the authors also found that the union/non-union gap was greater in the United States than in other countries.

Partly as a result of the difficulty of collecting and standardizing microdata sets for a large number of countries, most comparative research on the determinants of inequality takes a given country in a given year as the unit of analysis. This approach exploits the variation in union density rates and degrees of collective bargaining centralization across countries and/or within time to identify the effects of industrial relations institutions. The results almost always suggest that institutions make a difference to inequality; but opinions are divided as to exactly which institutions play the most important role. The main problem with the country/year approach – which is also the approach adopted in this chapter – is that, while it makes it possible to estimate net effects, it does not allow for analysis of the different and possibly contradictory channels by which unionization and collective bargaining have an impact on inequality.

Wallerstein (1999) examined the effect of wage-setting institutions on earnings inequality in 16 OECD countries between (roughly) 1980 and 1992. This study used a rich data set of industrial relations institutional characteristics (measuring, for example, the locus of bargaining, the degree of government involvement in wage bargaining, the degree of union confederation involvement in wage bargaining, the internal concentration of union confederations and the concentration across union confederations). This data set was developed by the author and two of his colleagues, and, updated afterwards, was to become an essential reference for quantitative comparative studies on industrial relations systems (Golden, Lange and Wallerstein 2006). Wallerstein pooled observations across countries at three points in time and estimated a model that had a measure of wage dispersion as the dependent variable,[5] several institutional predictors as independent variables (including the level of wage-setting and the union density rate), and controlled for additional political and institutional determinants that could affect the distribution of earnings. Owing to the small sample size, limited number of economic controls like trade exposure and measures of human capital supply were also included. Wallerstein found that the degree of collective bargaining centralization was by far the most important predictor of cross-country within-time differences in wage inequality, so much so that "it [was] difficult to find other variables that matter[ed] once the institutional variation in wage-setting [was] controlled for" (Wallerstein 1999, p. 650).

A similar study was performed by Rueda and Pontusson (2000), who examined the determinants of earnings inequality in the period between 1973 and 1995 in 16 OECD countries by using a dynamic model with country fixed effects and an instrumental variable approach (the Anderson-Hsiao estimator) to address the problem of the endogeneity of the lagged dependent variable. The model tested the effects of union density and collective bargaining centralization. This model went further than the Wallerstein (1999) specification in attempting to control for economic conditions, since it included the share of government employment and the partisan composition of governments among the institutional predictors. The choice of a fixed-effects estimator implied an exclusive focus on within-country changes in earnings inequality, controlling for time-unchanging differences in the average level of inequality across countries. The theoretical set-up also assumed that the effects of both economic and institutional effects varied systematically across different "varieties of capitalism" (Hall and Soskice 2001) and were potentially very different in "liberal" market economies (United States and other Anglo-Saxon countries) and in "coordinated" market economies (Germany and the Nordic countries). The econometric results suggested that trade union density was the only predictor whose within-country variation was unconditionally negatively correlated with earnings dispersion, regardless of the political economy of the country in question, while the effects of all other variables varied across regimes. Bargaining centralization, for example, contributed to a reduction in inequality far more

5. This measure of wage inequality was drawn from the OECD Earnings Database.

in coordinated economies than in liberal ones.[6] Rueda and Pontusson (2000) ultimately agreed with Wallerstein (1999) that institutions reduced inequality, but they gave greater emphasis to trade union density than to collective bargaining structure.[7]

In a recent article, Koeniger, Leonardi and Nunziata (2007) improved on previous analyses by considering the impact of a wider array of labour market institutions: not just collective bargaining structure and trade union density rates, but also employment protection, replacement rates of unemployment insurance, duration of unemployment insurance and size of the tax wedge. For data on labour market institutions, they relied on a database assembled by Nickell and Nunziata and used previously to analyse the impact of labour market institutions on unemployment in OECD countries (Nickell et al. 2001). The data on earnings inequality came from the OECD database on earnings. Greater richness in institutional detail came at the expense of a smaller number of advanced countries included in the analysis: a total of 11. The time frame was 1973-1998. The analysis sought to build on the previous Wallerstein (1999) analysis. As in Rueda and Pontusson (2000), the focus was on within-country changes. The basic theoretical premise was that labour market institutions reduced wage inequality by improving the bargaining position of unskilled workers more than that of skilled workers, thus bringing about wage compression. The models also controlled for trade- and technology-induced demand shocks and for skill supply. The theoretical predictions were largely confirmed by econometric results, which showed that all institutional variables were negatively associated with wage dispersion, except collective bargaining coordination, which, depending on specification, often had a positive effect. The authors concluded that changes in institutions explained the trajectory of wage inequality within countries at least as well as economic variables did. Some of the econometric results were counterintuitive, however. For example, the proxy for labour demand shifts favouring the more highly skilled appeared to reduce, not increase, wage inequality, while a greater supply of skilled labour seemed associated with an increase rather than a reduction in inequality. As acknowledged by the authors, these unexpected coefficients possibly signalled specification problems.

Within this literature, the work of Bradley et al. (2003), while similar in style and methodological approach to others, stands out because, unlike the studies reviewed above, which focus on earnings inequality alone, it investigates the determinants of inequality both in market income and in post-tax and transfer income. The dependent variables (market income and disposable income) are measured using aggregate microdata from the Luxembourg Income Study (LIS),[8] a collection of country-based microdata sets harmonized to increase their comparability both across countries and over time.[9] In the study by Bradley et al. (2003), the sample covered 14 advanced countries. Most data points used in the analysis were placed at approximately 5-year intervals between the early 1980s and the mid-1990s. Although the specifications included a number of controls for economic conditions, the institutional variables considered were the union density rate and collective bargaining centralization. Moreover, since the main focus was on effects of the political parties, the cumulative shares of social democratic and Christian democratic parties in government were included among the predictors.

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6. These results concerning the heterogeneity of institutional effects across models of capitalism do not seem very robust. For example, Wallerstein, too, (1999, p. 670) tested for different effects in coordinated as against liberal market economies (albeit with a smaller sample size) but could find no essential differences.
7. However, in a related article relying on very similar data and specifications, Pontusson, Rueda and Way (2003) found that both union density and bargaining centralization were important. These slightly different findings may be due to the different estimator used in the second analysis: a least squares dummy variable estimator (which is inconsistent with a dynamic model with a small time dimension).
8. Market income includes wages and salaries, self-employment earnings, property income and private pension income. Disposable income is market income after cash transfers and taxes. The unit of analysis is the household, not the individual, and the analysis is restricted to households where the head is of working age, i.e. between 25 and 59.
9. For information, see: http://www.lisproject.org/.

Like Rueda and Pontusson (2000), the authors found that trade union density was a more important determinant of inequality in market earnings than collective bargaining centralization and that, while redistribution through taxes and transfer was substantial in all countries, including those, like the Anglo-Saxon countries, characterized by a smaller welfare state (Esping-Andersen 1990), it was greatest in countries where governments were dominated by social democratic parties. Interestingly, the study found that trade union density and collective bargaining coverage did not just determine market incomes but were also statistically associated with the extent of redistribution through taxes and transfer. Indeed, the authors argued that, owing to collinearity among institutional and political indicators, a model in which redistribution was a function of the partisan composition of governments was statistically indistinguishable from models in which the main institutions considered were trade union density or collective bargaining centralization. However, a comparison of historical situations – in Australia, for example, a strong labour movement failed to reduce inequality because of the lack of social-democratic political dominance – led the authors to concentrate on political factors. On the basis of this study, one may hypothesize that trade unions have an effect not just on market earnings but also, indirectly, on post-tax and transfer redistribution. Strong trade unions may proxy for other political variables, such as social democracy and associated policies, that reduce inequality by other means than the compression of market earnings.

All the cross-country longitudinal studies on the relationship between industrial relations institutions and inequality reviewed so far are based on a limited number of advanced countries. There is at least one exception to this, however: a study by Calderón, Chong and Valdés (2004) on the impact of labour market regulation on income inequality in 121 countries between 1970 and 2000. This study draws on various indices of labour regulations, both de jure (by counting the cumulative number of ILO core conventions ratified by the country concerned for the year in question) and de facto. Most of the institutional information is drawn from an unpublished database assembled by Rama and Artecona (2002) for the World Bank.[10] Another source of information is the cross-sectional data set of Botero et al. (2003) on the legislative protection of employment, industrial relations and social security. Owing to a concern that, given the long time period, labour institutions may respond endogenously to income inequality, the authors use a dynamic generalized method of moments (GMM) estimator and control for country and time effects. Despite the much larger sample size and the inclusion in the analytical framework of a number of developing countries, the econometric results are in line with other studies. In particular, trade union density is found to diminish income inequality. The number of core ILO conventions ratified does not seem to have an impact on inequality.

The research reviewed so far (see table 3.1 for a summary) suggests that industrial relations institutions are important determinants of cross-country differences in inequality. Several studies find that high trade union density rate is associated with lower inequality. A centralized collective bargaining structure also seems associated with greater equality, but not all the studies bear this out. Trade unions and collective bargaining exert a net effect, resulting from various forces that may operate at cross-purposes. Indeed, as shown by micro-studies, the question of whether trade unions reduce or increase inequality depends strongly on whom the unions represent, and particularly on whether union members are on average more skilled than other workers. Also, trade unions not only affect market earnings directly, by compressing the wage distribution, but also indirectly affect final incomes by being associated with other institutional and political variables, such as social-democratic regimes and associated economic policies, whose effect is either to compress

10. Many thanks to Martin Rama of the World Bank for making this database available. The information on trade union density contained therein was not used in this chapter for two reasons: 1) the data in the database are aggregated in five-year averages; 2) they are expressed as a percentage of the total labour force rather than of wage and salary earners.

**Table 3.1. Cross-country time-series studies of the relationship between industrial relations institutions and inequality**

| Authors | Dependent variable | Country coverage | Time coverage | Estimator used | Impact of institutions |
|---|---|---|---|---|---|
| Wallerstein (1999) | Earnings inequality | 16 advanced countries | 1980-1992 | Feasible generalized least squares (FGLS) error correction model, with and without country effects | Significant negative coefficient for level of wage setting |
| Rueda and Pontusson (2000) | Earnings inequality | 16 advanced countries | 1973-1995 | Anderson-Hsiao estimator, dynamic model with country effects | Significant negative coefficient for union density |
| Bradley et al. (2003) | Market income inequality; post-tax and transfer reduction in inequality | 14 advanced countries | Early 1980s-mid-1990s (for most countries) | Pooled ordinary least squares (OLS) with cluster-robust standard errors, no country effects | Significant negative coefficient for union density |
| Calderón, Chong and Valdés (2004) | Income inequality | 121 countries | 1970-2000 | System GMM (dynamic model with country and time effects) | Significant negative coefficient for union density; insignificant coefficient for ratifications of ILO core conventions |
| Koeniger, Leonardi and Nunziata (2006) | Earnings inequality | 11 advanced countries | 1973-1998 | Panel-weighted least squares, with country and time effects | Significant negative coefficient for union density |

further the distribution of market earnings or to redistribute disposable incomes through progressive taxes and transfers.

The analysis that follows examines whether these conclusions remain valid for a more recent period (from the late 1980s to the early 2000s) than those considered in previous studies. It includes not just advanced countries but also Latin American, Central and Eastern European, and a number of Asian countries, and considers various dimensions of economic globalization that may have an impact on within-country inequality.

## Expected effects of globalization variables

While the focus of the analysis in this chapter is the impact of labour institutions on inequality, it is nonetheless helpful to review briefly the expected effects of globalization measures (for recent reviews, see Brady, Beckfield and Zhao 2007; Goldberg and Pavcnik 2007). According to the Stolper-Samuelson theorem, the consequences of trade openness should differ systematically across countries, depending on their relative endowment of skilled and unskilled labour.[11] Countries that are relatively rich in skilled labour should thus specialize in skilled-intensive productions. This should increase the effective demand for skilled labour and depress the demand for unskilled workers in skilled-endowed countries, and vice versa for countries rich in unskilled labour. To the extent that unskilled labour is the abundant factor in developing countries, and skilled labour the abundant factor in advanced countries, Stolper-Samuelson predicts that trade openness will reduce inequality in developing countries by compressing skill differentials and increase inequality in advanced countries by widening skill differentials. This pattern is, however, not

11. The paragraphs that follow draw on Goldberg and Pavcnik (2007).

exactly in line with the available evidence. Indeed, inequality has been growing in various developing countries commensurately with their increased exposure to trade (Goldberg and Pavcnik 2007, p. 55).

One argument about the effects of globalization that is compatible with the current trend of growing inequality in both advanced and developing countries is the one advanced by Feenstra and Hanson (2001), to the effect that one of the main features of globalization is the current international restructuring of production processes in global supply chains (Gereffi, Humphrey and Sturgeon 2005; Barrientos 2007). According to this model, firms in advanced countries outsource particular phases of the production process to developing countries, those phases being less skill-intensive from the point of view of developed countries but relatively skill-intensive in the receiving countries. Thus the effect of global production-sharing is to shift labour demand away from unskilled workers and towards skilled workers in both developed and developing countries.

One of the most visible aspects of economic globalization is the increase in foreign direct investment (FDI). In theory, the impact of FDI on inequality should be similar to the Stolper-Samuelson prediction for trade: if FDI is attracted to a country because of the relative abundance of a particular factor of production, then it should, by increasing demand for unskilled labour (the abundant factor), in developing countries lead to more equitable distribution in those countries (Cornia 2004; Vivarelli 2004) but the opposite in developed countries. However, there are also various ways in which FDI may worsen distribution. As pointed out by Feenstra and Hanson (2001), FDI may increase the demand for skilled labour in both advanced and developing countries, even if the transferred technology is neutral. Another factor is what Cornia (2004, p. 197) calls "systemic effect": in order to attract a greater share of FDI, a country may relax a series of policy and regulatory constraints (relating to working conditions or taxation, for example) that are associated with a more compressed income distribution. A third factor may be linked to the complementarity between capital and skilled labour (Acemoglu 2002). This also pertains to another dimension of globalization: capital liberalization. To the extent that capital and skilled labour are complementary, and capital liberalization facilitates access to capital, there should be an increase in the relative demand for skilled workers.

Another channel by which globalization may affect inequality is by facilitating the transmission of skill-biased technological change from advanced to developing countries (Lee and Vivarelli 2006, p. 7). Such change increases both the relative price and the relative quantity of skilled labour (Berman and Machin 2004). If greater international competition forces companies to restructure and upgrade to defend themselves against competitors (in which case technological change would be an endogenous response to globalization), or if the technology transferred with FDI is itself skill-biased, trade and financial liberalization may push out the relative demand for skilled labour and increase inequality.

In brief, there are multiple channels by which different features of economic globalization may lead to greater within-country inequality. Some of these channels may operate at cross-purposes: for example, trade openness may reduce inequality in a developing country by Stolper-Samuelson effects, while capital openness increases it. Moreover, net effects may vary from one country to another (Goldberg and Pavcnik 2007). A recent analysis of the impact of globalization on inequality by the International Monetary Fund (IMF 2007) finds that, while trade liberalization has contributed to reducing within-country inequality, financial globalization – and particularly a growing share of FDI liabilities as a percentage of gross domestic product (GDP) – has increased it.

## B. Cross-country patterns of labour institutions and income inequality

This chapter considers the role of three labour institutions 1) trade union density, namely the percentage of workers affiliated to trade unions in a given country in a given year; 2) collective bargaining structure, particularly the degree to which collective bargaining is centralized or coordinated and whether if takes place at levels above the enterprise (for example at the industry or national level), or is coordinated through other mechanisms, including powerful and internally cohesive employer and worker organizations; and 3) labour law, and in particular the extent to which national regulations comply with international labour standards. Data for each of these dimensions were collected from various sources. In total, a comprehensive data set covering 51 countries has been gathered for the purposes of this report (see Appendix A for the sources and definitions of these indicators).

### Trade union density has tended to decline over the past two decades…

Table 3.2 summarizes the change in union density since 1990 or so. Between 1989 and 2005, union density declined in the 51 countries or territories for which data could be collected, with the exception of seven – Brazil, China, Hong Kong (prior to reunification with China), India, Paraguay, Singapore, and Spain – in which union density increased, and three – Belgium, Finland and Pakistan – in which it was stable. The decline was dramatic in Central and Eastern European countries: more than 50 per cent in the Czech Republic, Estonia, Hungary, Latvia and Lithuania, where there was almost universal union affiliation in the Communist years.

### …but collective bargaining structures have remained broadly stable in a majority of countries

Besides union density, the way employers and workers bargain over wages and working conditions is also crucial for understanding the functioning of labour markets. Collective bargaining can be more or less centralized and coordinated. In some countries, such as the Nordic countries and Uruguay, employer and trade union federations agree on national guidelines, which serve as a benchmark for lower-level negotiations. By contrast, bargaining is more decentralized in other countries, such as the Republic of Korea, the United Kingdom and the United States.

Table 3.3 shows estimates of the extent of coordination of collective bargaining in the 51 countries under consideration. These estimates, graded in value from 1 (in cases where bargaining is mainly confined to individual enterprises) to 5 (where bargaining is centralized and coordinated by national federations, are provided as averages for the period between 1989 and 2005, so that collective bargaining structures may be compared across countries. It will be seen that there are significant cross-country differences. Coordination is greatest in Ireland, closely followed by Norway. Among the largest economies, Germany, Italy and Japan appear to have relatively coordinated bargaining structures. By contrast, bargaining is strongly decentralized in China, the United Kingdom and the United States. Brazil, France and India lie somewhere in between these groups, with bargaining taking place between the plant and the sectoral level.

The third column of the table shows changes in the structure of collective bargaining between 1989 and 2005. For 31 countries, there is no apparent change. For 8 (Belgium, Finland, Hungary, Ireland, Italy, Portugal, Slovenia and Spain), collective bargaining seems to have become more coordinated or centralized. These are the countries that saw the emergence in the 1990s of social pacts. For 12 countries (Argentina, Australia, Czech Republic,

## Table 3.2. Change in union density rates, 2005-1989

| Country | Union density change | Last/initial year |
|---|---|---|
| Singapore | 0.08 | 2005/1989 |
| Paraguay | 0.06 | 2004/1994 |
| China | 0.04 | 2005/1989 |
| Hong Kong | 0.04 | 1999/1989 |
| Spain | 0.04 | 2005/1989 |
| India | 0.03 | 2002/1991 |
| Brazil | 0.01 | 2005/1991 |
| Finland | 0.00 | 2005/1989 |
| Belgium | 0.00 | 2005/1989 |
| Pakistan | 0.00 | 2005/1989 |
| Chile | -0.01 | 2005/1989 |
| Jamaica | -0.01 | 2005/1991 |
| Turkey | -0.01 | 1999/1989 |
| Taiwan (China) | -0.02 | 2005/1989 |
| Netherlands | -0.02 | 2005/1989 |
| France | -0.02 | 2005/1989 |
| Norway | -0.03 | 2005/1989 |
| Philippines | -0.03 | 1998/1989 |
| Canada | -0.03 | 2005/1989 |
| Denmark | -0.04 | 2005/1989 |
| United States | -0.04 | 2005/1989 |
| Argentina | -0.04 | 2005/1989 |
| Dominican Republic | -0.04 | 2005/1990 |
| El Salvador | -0.04 | 2005/1990 |
| Switzerland | -0.05 | 2005/1989 |
| Italy | -0.05 | 2005/1989 |
| Mexico | -0.05 | 2002/1989 |
| Sweden | -0.07 | 2005/1989 |
| Japan | -0.07 | 2005/1989 |
| Costa Rica | -0.08 | 2003/1993 |
| Republic of Korea | -0.08 | 2003/1989 |
| Uruguay | -0.08 | 2005/1990 |
| Germany | -0.11 | 2005/1989 |
| United Kingdom | -0.12 | 2005/1989 |
| Honduras | -0.13 | 2001/1990 |
| Greece | -0.14 | 2005/1989 |
| Austria | -0.15 | 2005/1989 |
| Australia | -0.17 | 2005/1989 |
| Venezuela | -0.19 | 2005/1989 |
| Portugal | -0.20 | 2005/1989 |
| Ireland | -0.22 | 2005/1989 |
| Peru | -0.31 | 2005/1989 |
| New Zealand | -0.32 | 2005/1989 |
| Slovenia | -0.32 | 2005/1989 |
| Poland | -0.42 | 2005/1990 |
| Slovakia | -0.53 | 2005/1990 |
| Hungary | -0.54 | 2005/1989 |
| Latvia | -0.61 | 2005/1991 |
| Czech Republic | -0.62 | 2005/1990 |
| Lithuania | -0.82 | 2005/1989 |
| Estonia | -0.83 | 2005/1989 |

Source: see Appendix A.

## Table 3.3. Average collective bargaining structure and change, on a scale of 1 to 5, 1989-2005

| Country | Collective Bargaining Structure | Change |
|---|---|---|
| Slovenia | 3.47 | 3 |
| Italy | 3.65 | 2 |
| Belgium | 4.35 | 1 |
| Finland | 3.71 | 1 |
| Hungary | 1.76 | 1 |
| Ireland | 4.71 | 1 |
| Portugal | 2.88 | 1 |
| Spain | 3.24 | 1 |
| Austria | 4.00 | 0 |
| Brazil | 2.00 | 0* |
| Canada | 1.00 | 0 |
| Chile | 1.00 | 0 |
| China | 1.00 | 0 |
| Costa Rica | 1.00 | 0 |
| Denmark | 3.29 | 0 |
| Dominican Republic | 1.00 | 0 |
| El Salvador | 1.00 | 0 |
| France | 2.00 | 0 |
| Germany | 4.00 | 0 |
| Greece | 3.94 | 0 |
| Honduras | 1.00 | 0 |
| Hong Kong (China) | 1.00 | 0 |
| India | 2.00 | 0 |
| Jamaica | 1.00 | 0 |
| Republic of Korea | 1.00 | 0 |
| Mexico | 2.12 | 0 |
| Netherlands | 4.00 | 0 |
| New Zealand | 1.00 | 0 |
| Norway | 4.65 | 0 |
| Pakistan | 1.00 | 0 |
| Paraguay | 1.00 | 0 |
| Philippines | 1.00 | 0 |
| Poland | 2.00 | 0 |
| Singapore | 2.00 | 0 |
| Taiwan China | 2.00 | 0 |
| Turkey | 1.00 | 0 |
| United Kingdom | 1.00 | 0 |
| United States | 1.00 | 0 |
| Venezuela | 2.00 | 0 |
| Argentina | 2.35 | -1 |
| Peru | 1.59 | -1 |
| Slovakia | 4.24 | -1 |
| Sweden | 3.29 | -1 |
| Switzerland | 3.41 | -1 |
| Uruguay | 3.29 | -1 |
| Australia | 2.82 | -2 |
| Japan | 3.59 | -2 |
| Czech Republic | 2.59 | -3 |
| Estonia | 2.38 | -3* |
| Latvia | 2.71 | -3 |
| Lithuania | 2.35 | -3 |

* 2005/1990. Source: See Appendix A.

Estonia, Japan, Latvia, Lithuania, Peru, Slovakia, Sweden, Switzerland and Uruguay), the index signals a trend towards more decentralized or uncoordinated bargaining.

In parallel with the trend rise in income inequality documented in Chapter 1, unionization has followed a downward trend, while collective bargaining structures have remained broadly stable – or, in some countries, become somewhat more decentralized or less coordinated. The next step is to establish whether, side by side with this temporal coincidence between declining unionism and growing inequality, there is also a causal relationship between the two. We begin with a simple examination of bivariate correlation and follow with a more detailed analysis.

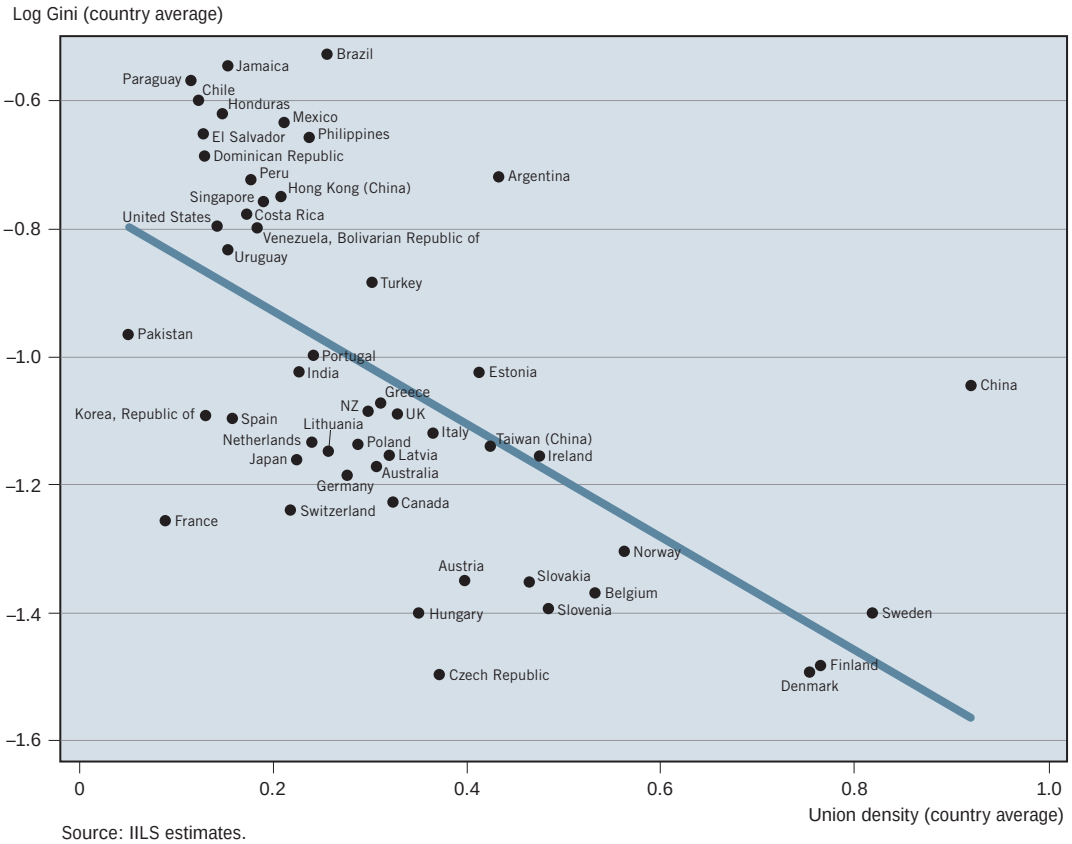
### Highly unionized countries and countries where collective bargaining is more coordinated tend to have low income-inequality…

Figure 3.1 shows a clear negative correlation between unionization and inequality: the countries in which income inequality is on average lower in the period 1989-2005 tend to be those in which a greater proportion of workers is affiliated to trade unions.

The structure of collective bargaining is also associated with income inequality: as Figure 3.2 shows, the more collective bargaining takes place at levels above the enterprise, the less unequal the distribution of income. Conversely, the countries in which collective bargaining is on average more highly centralized or coordinated are those in which inequality tends to be lower.

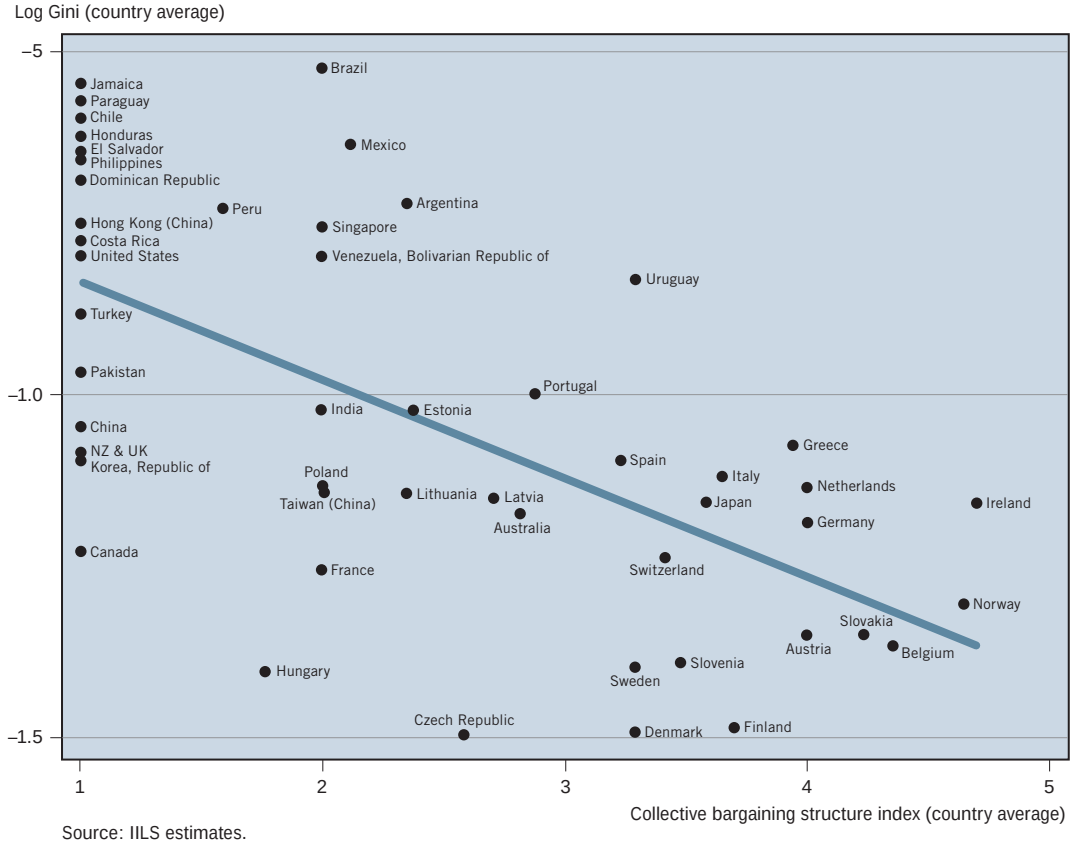
However, it is not the case that the change in bargaining structure within countries is negatively related to inequality or that the more collective bargaining becomes decentralized or uncoordinated, the more inequality grows within a country, or vice versa. This is somewhat at odds with conventional wisdom. Indeed, historically, centralized collective

**Figure 3.1. Bivariate correlation between average Gini coefficient and average union density, 1989-2005**




Source: IILS estimates.

**Figure 3.2. Bivariate correlation between average Gini coefficient and average collective bargaining structure index, 1989-2005**




Source: IILS estimates.

bargaining has contributed to the reduction of inequality by reducing wage dispersion across sectors and skill levels, as suggested by the literature reviewed above. The countries in which the indicator of collective bargaining structure has changed the most are the advanced countries.

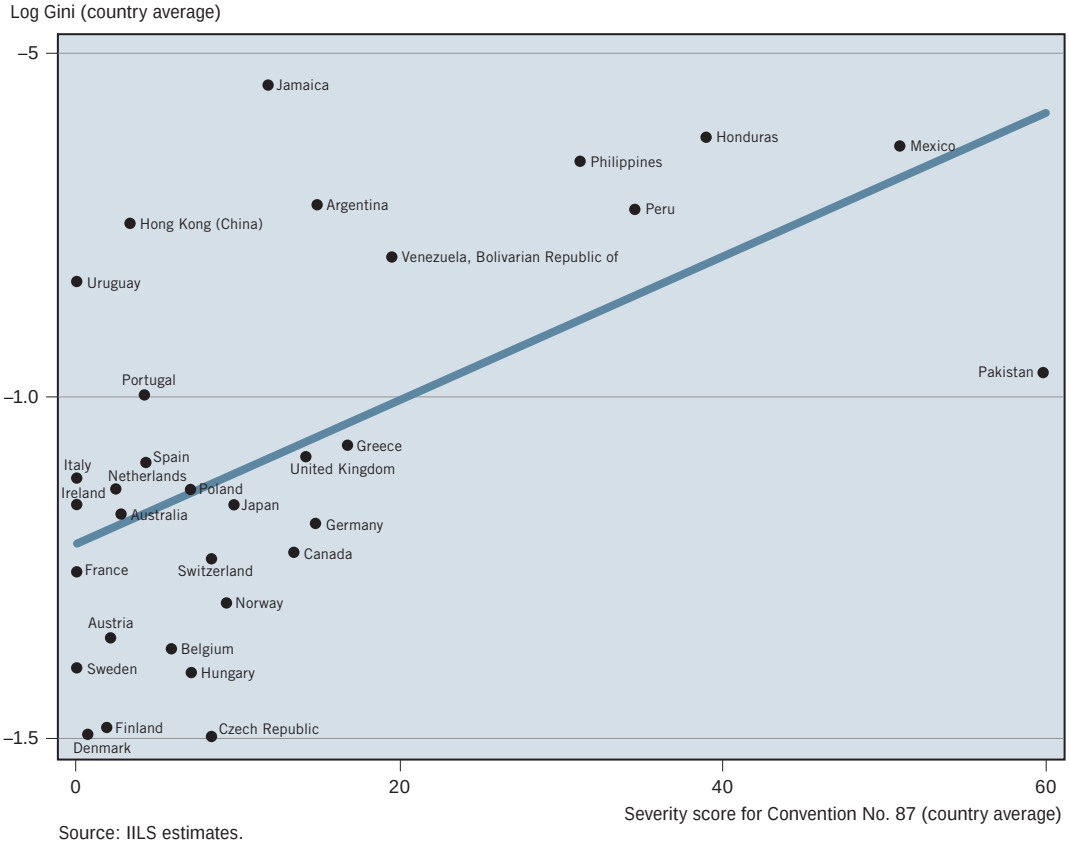
### … and greater compliance with the Freedom of Association and Protection of the Right to Organize, 1948 Convention (No. 87) and the Right to Organize and Collective Bargaining Convention, 1949 (No. 98) tends to be associated with lower inequality

There seems to be a marginally negative relationship between the average number of core conventions ratified by a given country and income inequality in that country. On the other hand, when one looks at the relation between changes in the ratification of core conventions and changes in inequality within countries over time, the slope of the curve is positive.[12] This relationship is, however, not only statistically very weak but also, in all likelihood, spurious. It is probably due to the fact that both indicators – namely, ratifications and inequality – tend to grow over time for unrelated reasons. At any rate, the bivariate associations suggest that the ratification of core conventions is not significantly linked to income inequality.

More important seems the degree of compliance with the specific norms contained in Conventions No. 87 and No. 98. Figures 3.3 and 3.4 plot average compliance with the two Conventions (the "severity score") against average inequality and reveal a positive

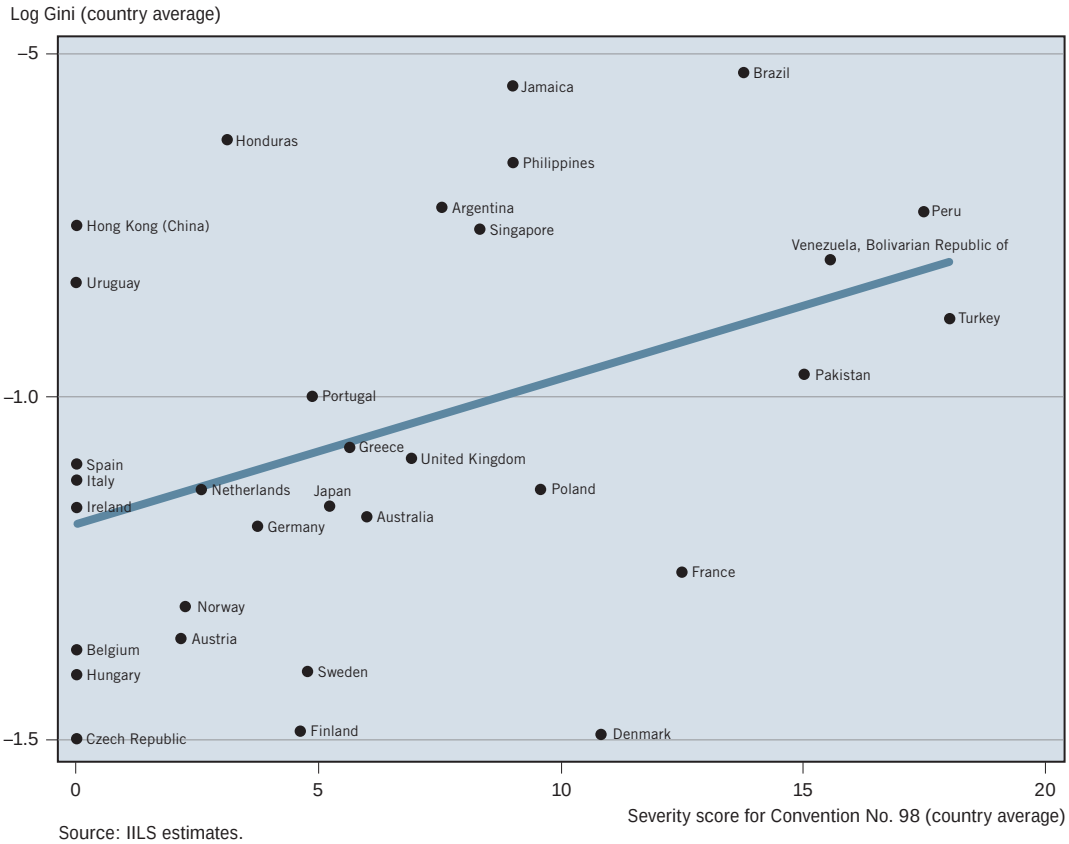
12. Similar conclusions (both cross-sectionally and longitudinally) are reached if one focuses on ratification of Conventions No. 87 and No. 98 alone.

**Figure 3.3. Bivariate correlation between average Gini coefficient and average severity score for Convention No. 87, 1990-2000**




Source: IILS estimates.

**Figure 3.4. Bivariate correlation between average Gini coefficient and average severity score for Convention No. 98, 1990-2000**




Source: IILS estimates.

relationship for both: the more serious, on average, the violation of fundamental norms relating to freedom of association and collective bargaining, the greater the average level of inequality in the country in question.[13] The positive association seems stronger for Convention No. 87 than for Convention No. 98.

If one were to plot changes in severity scores against changes in inequality within countries, however, a much smaller positive relationship would emerge (though it would be larger for Convention No. 98 than for Convention No. 87). Hence, again, cross-sectional differences in institutions seem more closely associated with income inequality than do changes over time.

The simple bivariate correlations discussed above suggest that labour institutions are important determinants of inequality, not so much over time (with the possible exception of the union density rate) as across countries. Cross-country differences in institutions are likely to reflect a constellation of factors that historically have led, either directly or indirectly, to a more compressed distribution of incomes. Labour institutions tend to come together as parts of a system.[14] The countries in which union density rates are higher are also the ones in which the welfare state is more developed, taxation levels higher and more progressive, collective bargaining more centralized and labour law both closer to international labour standards and better implemented. What is more surprising is that changes in these institutions seem less clearly associated with the increase in inequality. That conclusion is also valid when other potential determinants of income inequality are taken into account on the basis of econometric analysis.

### Detailed analysis confirms that changes in labour institutions are not strongly related to changes in income inequality, which are due rather to technical change and globalization…

Appendix B presents the findings of what is probably the first comparative assessment of the impact of domestic and external factors of inequality. It shows that changes through time in income inequality are robustly associated with an increase in the stock of FDI as a percentage of GDP and somewhat less robustly with trade liberalization (in the form of tariff reductions). Other facets of globalization such as capital openness do not seem significant predictors of income inequality. Technology-induced shifts in the demand for skilled labour, as captured by the share of information and communication technology (ICT) investment in the capital stock, also tend to increase inequality. By contrast, changes in labour institutions within countries do not seem responsible for growing inequality over time, with the exception of trade union decline in the Central and Eastern European countries, which seems to have contributed to the growth in inequality in that region.

### …while labour institutions are more systematically related to differences in income inequality across countries…

Rather different results concerning the impact of industrial relations institutions are reached if one focuses on differences across countries as opposed to differences within a given country. Differences in average levels of income inequality across countries seem to depend entirely on institutional differences, while the economic predictors are hardly ever statistically different from zero.

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13. These unpublished data on severity of violations were elaborated by the OECD Secretariat. Many thanks to Douglas Lippoldt of the OECD Secretariat for providing them. For more information on the construction of the index, see OECD (2000: 85-7).

14. Statistically, this phenomenon manifests itself as positive correlation among the labour institutions indicators.

On average, the countries in which trade union density is higher are those in which the income distribution is less unequal on average. Consistently with results from the within country analysis, there seem to be regional differences in the impact of unionization. Greater union density in Latin American countries is not associated with lower inequality: although the coefficient is positive, it is insignificant. This may be due to the historical corporatist nexus linking trade unions to the state in some Latin American countries (Zapata 1998; Murillo 2001). Also, if trade unions represent predominantly skilled (for example, public sector) workers, then the "monopoly" effect (the enhancement of skill differentials) may effectively dominate the "within" effect (more compressed distribution), thus leading to a more unequal income distribution. On the other hand, union density is associated with lower inequality in advanced, Central and Eastern European and Asian countries.

The effects of collective bargaining structure also seem regionally specific: in Latin America, more centralized collective bargaining is associated with greater inequality, whereas the opposite is true in advanced, Central and Eastern European and Asian countries. Overall, collective bargaining coefficients seem less robustly significant than union density rates. It is telling that the more politically illiberal the government, the greater the inequality is on average. This is not surprising and may be due to the fact that illiberal governments may be less disposed than democratic ones to correct inequality through redistributive policies (Meltzer and Richard 1981; Sen 1999). Other institutional measures having to do with labour law (the core conventions, severity of violations of international norms for Conventions No. 87 or No. 98) do not seem to have a significant cross-sectional association with inequality.

Overall, econometric analysis suggests the following: despite a rather impressive bivariate association, it cannot be said that the pronounced fall in trade union density in the last two decades, or the more modest trend towards collective bargaining decentralization, has caused income inequality to rise. There seems to be no robust statistical association between changes in inequality within countries and changes in the labour institutions considered here, when other possible determinants of inequality are taken into account.

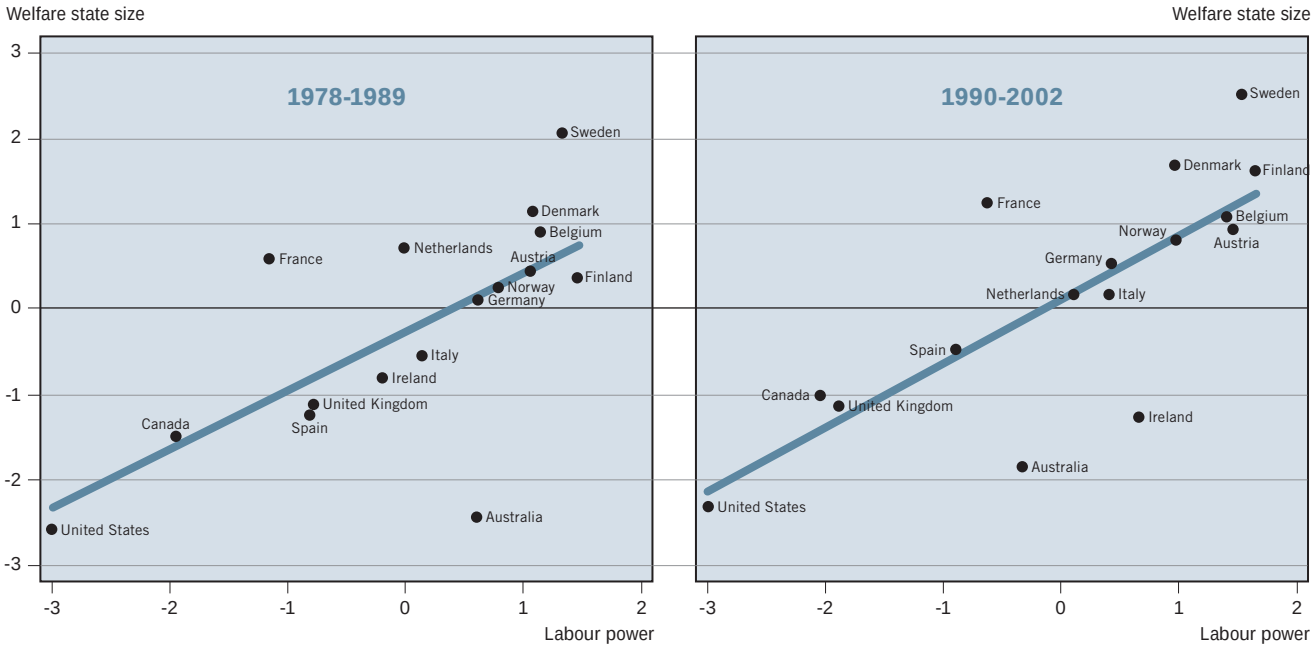
The increase in inequality in the past 15 years seems due mostly to economic forces, particularly a technologically induced shift in the demand for skilled labour and the increase in FDI as a percentage of GDP. Tariff liberalization may also have contributed, although less markedly than other predictors.

When it comes to explaining differences in average levels of inequality across countries, however, it remains the case that labour institutions play a substantial role. On average, the countries in which trade unions are stronger have lower levels of inequality than others. It is also the case that a more centralized or coordinated structure of collective bargaining and more extensive political rights are associated with more income equality. These results do not seem very surprising: labour institutions are generally parts of social systems, and high trade union density and centralized collective bargaining structures are likely to be associated with other features (such as social democratic governments in some countries, or redistributive social policies), which in turn are likely to be conducive to a more egalitarian distribution of incomes. Interestingly enough, the estimation results suggest that labour institutions may function differently in different regions of the world. In Latin American countries, for example, high trade union density and a more centralized collective bargaining structure may not be conducive to greater equality.

### …and the inequality-reducing effect of labour institutions seems to have weakened in advanced countries over the pas few years

Appendix C contains the findings of an analysis of inequality trends in 16 advanced countries for which longer time-series data on institutions and other variables are available: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy,

**Figure 3.5. Relationship between labour power and welfare state size in the periods 1978-1989 and 1990-2002**




Source: IILS estimates.

the Netherlands, Norway, Spain, Sweden, the United Kingdom, and the United States. This analysis also takes account of total public social expenditure as a percentage of GDP, thus showing the effect that labour institutions exert on income inequality, directly, by compressing the distribution of market earnings. The indirect effect of labour institutions, by being associated with a more generous welfare state, is controlled for.

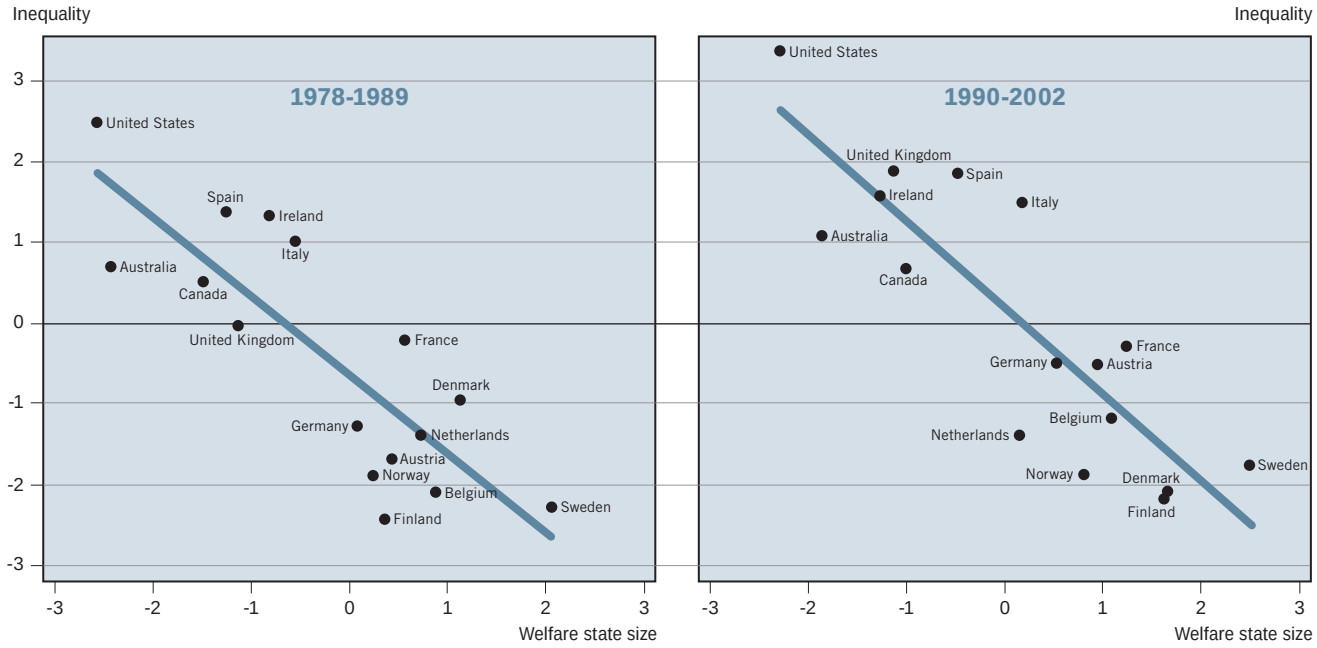
Figure 3.5 displays the bivariate correlation between a summary indicator of labour power and a summary indicator of welfare state size before and after 1990.[15] The relationship is positive in both periods. The countries with lower degrees of labour power, and above all the United States, tend to be characterized by a smaller welfare state, whereas the opposite is true of countries with high labour power (the Scandinavian and Central European countries). The relative position of some countries changes over time. Australia, for example, was clearly an outsider in the former period, in that it had a smaller welfare state than the strength of its labour movement would suggest, but less so in the second, whereas the United Kingdom shifted closer to the United States in the second period. The shapes of the two curves, however, remain remarkably similar across both periods.[16]

Figure 3.6 examines the relationship between the composite indicator of welfare state size and a composite indicator of inequality during the two periods. This relationship is negative, as might be expected: the greater the size of the welfare state, the lower the inequality. The two opposite poles are, once again, the United States – a country with a residual welfare state and high levels of inequality – and Sweden, where extensive social

15. Labour power is a linear combination of collective bargaining coordination, trade union density rate and collective bargaining coverage. The weights are the factor loadings of the first principal component of these three variables. Welfare state size is composed of the total tax wedge as a percentage of GDP, including social security and indirect taxes, and total public social expenditure as a percentage of GDP. Further details are contained in Appendix C.

16. With a collective bargaining system characterized by compulsory arbitration, generally considered a functional substitute for centralized bargaining (Lansbury and Wailes 2004), Australia scored almost as high as Central and Northern European countries on the labour power index before 1990, but the welfare state size was similar to that of other Anglo-Saxon countries.

**Figure 3.6. Relationship between welfare state size and inequality in the periods 1978-1989 and 1990-2002**



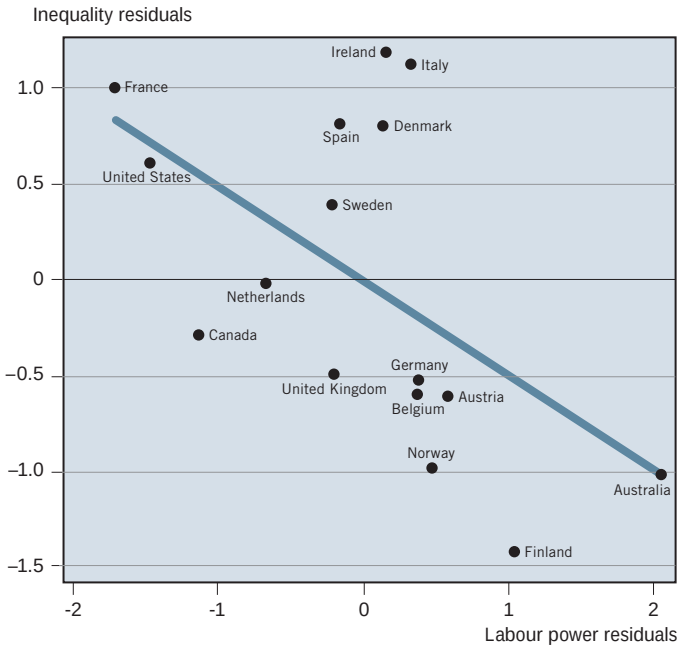

Source: IILS estimates.

protections is accompanied by a much more egalitarian distribution of incomes. The slope of the two curves remains similar over time. However, the second graph seems to have shifted rightwards compared to the first: both the size of the welfare state and inequality grew on average during the period 1990-2002. The increase in the size of the welfare state is due to the well-known phenomena of population ageing and the coming to maturity of various social programmes (see Pierson 2001). Also, the graphs in figure 3.5 confirm that, over time, the United Kingdom shifted its relative position in the direction of the United States.

Figures 3.7 and 3.8 display the partial correlation of the inequality indicator and the labour power indicator, controlling for welfare state size, over the two periods. The graphs plot the residual of a regression of inequality on welfare state size against the residuals of a regression of labour power on welfare state size. The linear fit becomes much less steep in the period between 1990 and 2002 than in the previous period between 1978 and 1989.

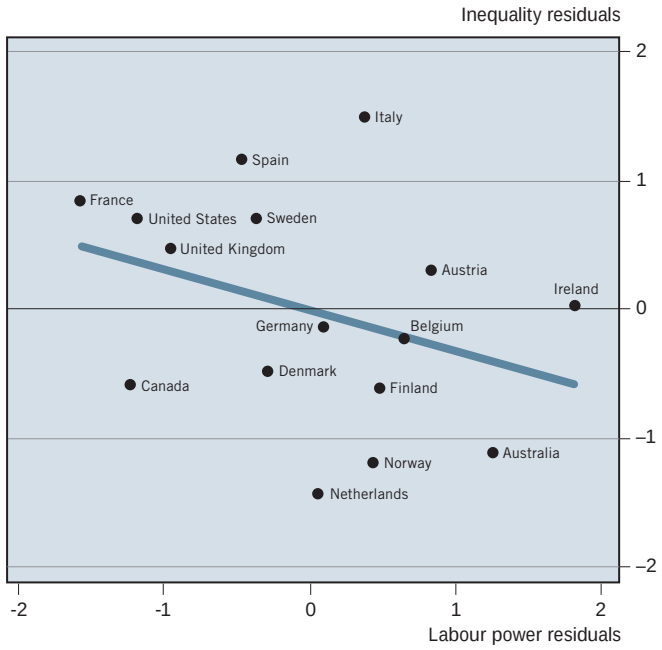
These graphs suggest that, from the early 1990s on, the institutions associated with labour power – high trade union density, high collective bargaining coverage, and a coordinated bargaining structure (particularly coordinated bargaining) – largely forfeited their capacity to reduce inequality directly by compressing market earnings, and retained only an indirect effect on inequality thanks to the welfare state size factor. This is consistent with micro-evidence suggesting that the ability of unions to compress the distribution of wages has been declining over time (Card, Lemieux and Riddell 2007, pp. 137 and 149-150). It is also consistent with case study evidence on recent developments in some of the countries included in this analysis. Some time ago, unions participating in national collective bargaining engaged in explicit attempts to compress skill differentials through various means, including requests for lump-sum wage increases, which tend to favour low-paid workers; tapered percentage wage increases, with the highest increases for low-paid workers; and skewed indexation mechanisms (like the Italian *scala mobile*), which assured those on low earnings a greater degree of protection from inflation and which, particularly in times of double digit inflation, helped to compress earnings (Edin and Holmlund 1995; Erickson and Ichino 1995; Baccaro and Locke 1998; Schulten 2002).

**Figure 3.7. Partial correlation between inequality and labour power, controlling for welfare state size, 1978-1989**




Source: IILS estimates.

**Figure 3.8. Partial correlation between inequality and labour power controlling for welfare state size, 1990-2002**




Source: IILS estimates.

Over time, these strategies and institutional arrangements were largely discarded. In Sweden and other Scandinavian countries, the egalitarian wage policies pursued by the unions from the late 1960s on created considerable problems for employers, who found it difficult to recruit and motivate highly skilled labour (Pontusson and Swenson 1996; Swenson and Pontusson 2000). They also generated problems for unions. For example, in the early 1980s the Swedish blue-collar union Metall found itself losing many members to the white-collar union where workers who did similar jobs were paid more, and had eventually to drop the policy of wage compression as well as the whole model of national bargaining associated with it, which was replaced by sectoral bargaining (Thelen 1993, p. 39).

Centralized bargaining used to be one of the key institutions in "social corporatist" countries (Korpi 1978; Pekkarinen, Pohjola and Rowthorn 1992; Rowthorn 1992; Pontusson 2005), with unions negotiating at the national level and exchanging wage moderation for both a more equitable distribution of earnings and more extensive social protection networks (Pizzorno 1978; Mares 2006). It suffered a temporary decline in the 1980s, but, in the 1990s, it surprisingly resurfaced in a number of countries, primarily but not exclusively European (Fajertag and Pochet 1997; idem 2000; Berger and Compston 2002; Hassel 2003; Baccaro and Lim 2007). However, the social outcomes of these new forms of centralized bargaining, also known as social pacts, were quite different; they were markedly less redistributive than in the past and much more concerned with increasing country competitiveness (Rhodes 1996; Streeck 2000; Rhodes 2001). In Ireland, for example, the collective bargaining system has been strongly recentralized in the past two decades, yet there is little evidence that this has contributed to reducing wage differentials (Barrett, Gerald and Nolan 2000; Baccaro and Simoni 2007). In Italy, the *scala mobile* was abolished in 1992 and the unions negotiated with employers and the government a new architecture of nationally coordinated sectoral bargaining, which did not, however, prevent wage and income inequality from rising (Erickson and Ichino 1995; Brandolini, Cipollone and Sestito 2001; Baccaro 2002).

In short, faced with new market constraints – more elastic labour demand, particularly for the low-skilled, and high skill premiums as a result of skill-biased technological change – union behaviour seems, over time, to have started to conform more closely with market outcomes and in so doing to have lost much of its redistributive impetus. Large welfare states, on the other hand, continued to play an important redistributive role well into the 1990s. Indeed, an even greater proportion of the cross-country variation in inequality was due to differences in welfare state size during this period than it was earlier. This may seem surprising, given the current debate on the crisis of the welfare state; but it is in line with the findings of other scholars as well (Bradley et al. 2003; Kenworthy and Pontusson 2005; Pontusson 2005, chap. 7).

## C. Policy considerations

The Chapter shows that countries that have stronger tripartite institutions are better placed to ensure that the gains from globalization are distributed in a balanced manner. However, the income distribution effects of tripartite institutions have become weaker. This reflects mainly the inequality-increasing impacts of rapid technological change and globalization – and the fact that such underlying trends are difficult to arrest directly through tripartite institutions.

The policy issue is how tripartite institutions can continue to shape income distribution, consistent with economic realities. This is an area where country specificities are important, so there is no one-size-fits-all model of industrial relations. Yet, policies can promote the involvement of employers and workers in various ways.

First, governments may engage with social partners –and revitalise social dialogue where needed – to discuss reforms of labour markets and, particularly, social protection. Experience shows that this may be a helpful way to ensure that the interests of all parties are well understood. The involvement of social partners in the reform process may also facilitate implementation of any agreed measures. And experience shows that strong tripartite institutions tend to be associated with social protection designed in a way which protects workers, and yet is consistent with high employment (see evidence in this Chapter, as well as Chapter 6).

Second, in the case of skill development policies, evidence suggests that the involvement of social partners is crucial for an efficient design of the measures. This may help enhance workers' skills, and thus achieve better income distribution outcomes.

## Appendix A

# Measures of labour institutions

Information on the three labour institutions considered here – trade union density, i.e. the percentage of wage and salaried workers affiliated to trade unions, collective bargaining structure more or less centralized or coordinated, and labour law – is drawn largely from the database assembled by Jelle Visser for advanced and Central and Eastern European countries.[17] This was then supplemented by data from various sources for Latin American and Asian countries.[18] Table 3.A1 reports the sources of union density data.[19]

**Table 3.A1. Sources of trade union density data**

| | Frequence | % |
|---|---|---|
| OECD.Stat | 26 | 3.22 |
| Jelle Visser | 438 | 54.21 |
| Institute estimates | 344 | 42.57 |
| Total | 808 | 100.00 |

For the index of collective bargaining structure, Visser's database – which was complemented by our own research for other countries[20] – provides an index of collective bargaining coordination, which in turn updates a previous index elaborated by Kenworthy (2003). This 1-to-5 index is coded as follows:

1 = Fragmented wage bargaining, confined largely to individual firms or plants.

2 = Mixed industry- and firm-level bargaining, with little or no pattern-setting and relatively weak elements of government coordination, such as setting of basic pay rate or wage indexation.

3 = Industry-level bargaining with somewhat irregular and uncertain pattern-setting and only moderate union concentration.

4 = Centralized bargaining by peak confederation(s) OR government imposition of a wage schedule/freeze, without a peace obligation OR informal centralization of industry- and firm-level bargaining by peak associations OR extensive, regularized pattern-setting coupled with a high degree of union concentration.

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17. Many thanks to Jelle Visser for making this database available.

18. Initially, data on union density were collected for 139 countries from various sources, but the analysis ended up focusing on only 51 countries, those in which there was a meaningful time variation and for which information on other variables was available. For Asian countries, an important source was Kuruvilla et al. (2002). Many thanks to Pascal Annycke and Melissa Luongo for the excellent work they did in assembling some of the data and, in the case of Melissa Luongo, for her research on a number of countries. The data from the Visser database are adjusted density rates: the number of union affiliates who are not wage and salary workers is subtracted from the numerator, and the number of wage and salary workers who do not have the right to organize (such as public sector workers in some countries) is subtracted by the denominator. For the other countries, such adjustments were not possible. However, the denominator was kept constant as far as possible.

19. The union density variable was linearly interpolated. This increased the number of data points from 719 to 808.

20. Again, many thanks to Melissa Luongo for providing the information needed for the coding through various secondary sources.

5 = Centralized bargaining by peak confederation(s) OR government imposition of a wage schedule/freeze, with a peace obligation OR informal centralization of industry-level bargaining by a powerful, monopolistic union confederation.

For the non-advanced countries, however, there was often not enough information on the degree of coordination brought about by institutional features other than the structure of wage-setting. For these countries, therefore, the index is really an index of collective bargaining centralization, and the coding is simplified as follows (Golden, Lange and Wallerstein 2006):

1 = Plant-level wage-bargaining

2 = Mixed industry- and firm-level wage bargaining

3 = Industry-level wage bargaining

4 = Centralized wage-bargaining without sanctions

5 = Centralized wage-bargaining with sanctions.

It should also be added that most of the variation in this index is cross-sectional. This is not surprising, since the institutional structure of collective bargaining tends to be resilient over time; but it may also be due to measurement error. Moreover, most of the within-country, longitudinal variation in the index is provided by the advanced countries. For the Asian countries, the index is entirely time-invariant.

The third dimension of labour institutions considered in this analysis is compliance with international labour standards. Three indicators were used: 1) the number of core ILO conventions ratified by a given country in a given year;[21] 2) the number of ratifications of Convention No. 87 and Convention No. 98; and 3) unpublished violation severity scores elaborated and kindly made available to us by the OECD Secretariat.[22] The severity scores are based on the biannual reports on Convention No. 87 and Convention No. 98, the two core conventions on freedom of association and collective bargaining, respectively, by the ILO Committee of Experts on the Application of Conventions and Recommendations (CEACR). For the countries that have ratified either convention, CEACR writes a report every two years, which measures the distance between the norms contained in the convention and the de jure (and, to a lesser extent, also de facto) situation in each country. The OECD Secretariat coded the CEACR reports for a number of countries between 1990 and 1999 and elaborated a violation severity index for each Convention[23] These indices (which are not available for all countries in the sample) tell us not just whether one of the conventions has been ratified but also the extent of a country's compliance with it.[24] Figures 3.A1 and 3.A2 plot the average severity scores over time. For Convention No. 87 the graph reveals first an increase in the severity of violations in the early 1990s and then a decrease. For Convention No. 98 there seems to be a constant increase over time.

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21. The ILO core conventions are eight in number and pertain to: the Forced Labour Convention, 1930 (No. 29) and the Abolition of Forced Labour Convention, 1957 (No. 105); Conventions No. 87 and No. 98); the Equal Remuneration Convention, 1951 (No. 100) and the Discrimination (Employment and Occupation) Convention 1958 (No. 111); and the Minimum Age Convention, 1973 (No. 138) and the Worst Forms of Child Labour Convention, 1999, (No. 182).

22. Many thanks to Douglas Lippoldt of the OECD Secretariat for providing these data.

23. The index weights the perceived severity of the labour violation (based on the OECD Secretariat's assessment) against the severity of the CEACR evaluation of the situation. For more information on the construction of the index, see OECD (2000, pp. 85-87). The data have been linearly interpolated.

24. The number of countries for which the Convention No. 87 severity score is available is 30 in 1990 and 32 in 2000. For the Convention No. 98 severity score, these numbers are 29 and 32, respectively. It needs to be taken into account that several countries in the sample have not ratified either or both Conventions. For these countries, the severity scores are obviously not available.

**Figure 3.A1. Average severity score over time, Convention No. 87**

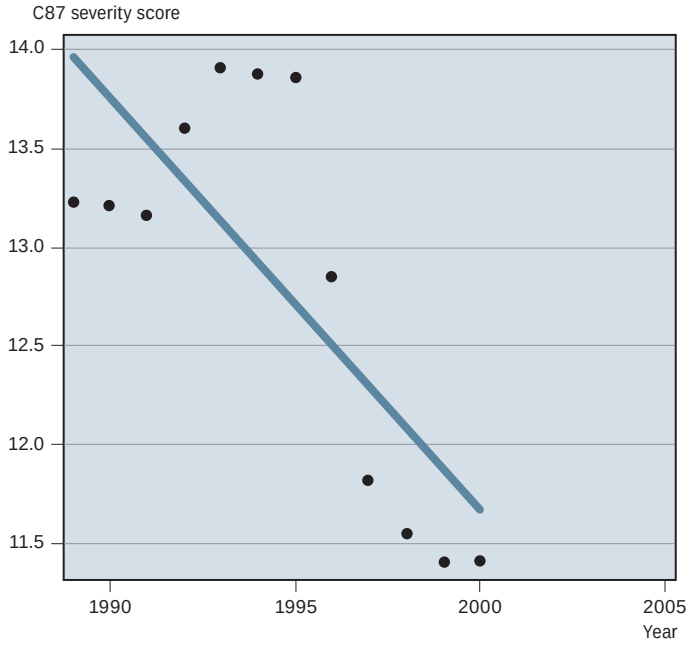
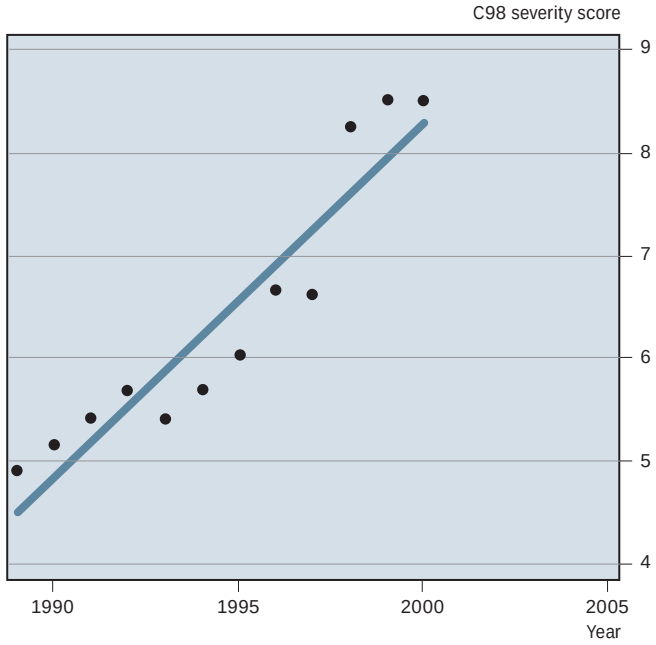



**Figure 3.A2. Average severity score over time, Convention No. 98**




## Appendix B

# Do labour institutions reduce inequality? An econometric analysis

The purpose of this appendix is to examine how closely unionization and inequality are related, when various dimensions of globalization and other demand and supply factors are taken into account. The dependent variable is the measure of inequality (Gini coefficient) described in Chapter 1.[25] The list of predictors includes the labour institutions described in Appendix A (trade union density, collective bargaining structure and measures of compliance with international labour standards), as well as various measures of economic globalization. For all information relating to globalization and other economic controls (human capital and technology-induced demand for skilled labour), the analysis relies on a database used by the IMF for a recent report on globalization and inequality (IMF 2007)[26] and made available by the IMF Secretariat.

The data distinguish between trade and financial globalization. For trade globalization, there are two indicators, one de facto and the other de jure: 1) trade openness, that is, the sum of imports and exports (excluding oil-related transactions) as a percentage of GDP; and 2) de jure tariff openness, which is equal to 100 minus the tariff rate.[27] There are also two indicators, one de facto and one de jure, for financial globalization: 1) the ratio of inward

25. The Gini coefficient estimates were linearly interpolated. This increased the number of data points from 409 to 622.
26. Many thanks to Patrick Hettinger and Subir Lall of the IMF Secretariat for providing these data.
27. The tariff rate is an average of the effective tariff rate (tariff revenue/import value) and of the average unweighted tariff rate; see IMF (2007, p. 57).

FDI stock as a percentage of GDP (Lane and Milesi-Ferretti 2006);[28] and 2) Menzie D. Chinn and Hiro Ito's measurement of capital openness, which, based on the coding of information from the IMF Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) (Chinn and Ito forthcoming),[29] captures the extent of capital controls.

In addition, the econometric analysis reported below also controls for the degree of development of the credit market,[30] for human capital supply[31] and for the technological intensity of the capital stock.[32] A more developed credit market may reduce income inequality by facilitating access to credit by the less wealthy. Similarly, a greater relative supply of skilled labour is likely to reduce inequality by reducing skill premiums. Finally, the higher the (technology-induced) demand for skills, the higher the inequality, all other things being equal.

Among the institutional predictors, in addition to the ones whose effects are discussed in chapter 3 – trade union density and collective bargaining coverage, both of which the previous literature considered to be negatively related to inequality – two other indicators relating to labour law indicators are considered: core convention ratification and compliance with the rights of association and collective bargaining. While there is no clear guidance in the literature concerning their effects, they should theoretically operate in the same way as other institutions: to the extent that they strengthen the bargaining position of less skilled workers or proxy for a government's favourable attitude towards redistribution, they should be associated with a more equal distribution. The analysis also controls for political regime, and specifically for political rights violations, by using the Freedom House indicator.[33] This is done for two reasons. First, it is more than likely that the effects of trade unionism and collective bargaining are contingent on the prevailing political regime: trade unions in non-democratic countries (where membership may be compulsory, or effectively so) may not redistribute as much as in democratic countries if at all. Also, to the extent that, in democratic regimes, political parties are pushed by the logic of electoral competition to compensate for increasing market inequality (where the income of the median voter falls below average income) with redistributive taxes and transfers (Meltzer and Richard 1981), it may be assumed that countries with fewer violations of political rights would have lower income inequality than others.[34] Table 3.B1 summarizes the list of predictors included in the econometric analysis and theoretical expectations about their effects. The analysis begins by examining changes within countries over time.[35]

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28. The Lane and Milesi-Ferretti data set on gross foreign asset and liability positions for 145 countries is available online at: http://www.tcd.ie/iiis/pages/people/planedata.php/.
29. The Chinn-Ito de jure measure of capital openness is available online at: http://www.web.pdx.edu/~ito/kaopen_2006.xls/.
30. The measure of financial sector development is private credit provided by deposit money banks and that provided by other financial institutions as a percentage of GDP. See Beck, Demirguc-Kunt and Levine (2007). The measure is available online at: http://siteresources.worldbank.org/INTRES/Resources/469232-1107449512766/FinStructure_60_06_final.xls/.
31. The measure of human capital is Barro and Lee's average number of schooling years in the population aged 15+ (Barro and Lee 2000). These data, which are available at five-year intervals until 2000, have been interpolated and extrapolated to cover the 2001-2005 period. The Barro and Lee database is available online at: http://www.cid.harvard.edu/ciddata/barrolee/appendix_data_tables.xls/.
32. The proxy used is the ratio of the stock of ICT capital to total capital. For more information on this variable, see IMF 2007, p. 58).
33. The Freedom House scores are available at: http://www.freedomhouse.org/uploads/FIWAllScores.xls. The political rights index is graded 1 to 7, with the higher scores indicating more serious violations of political rights.
34. Owing to lack of data, it was not possible to consider the impact of other institutional predictors, such as the minimum wage, which is likely to pull up the lower tail of the distribution, or labour market institutions like employment protection and generous unemployment insurance, which are likely to improve the position of less skilled workers. However, in so far as such institutions are closely correlated with unionization and collective bargaining, the latter proxy for the missing institutions as well. Data on 18 advanced countries between 1960 and 1998 suggest that this may indeed be the case: the correlation between union density rates and/or collective bargaining coordination scores, on the one hand, and measures of employment protection, unemployment benefit replacement and unemployment benefit duration, on the other, is always positive and significantly different from zero (Baccaro and Rei 2007).
35. The software used for all analyses is Stata 10 SE.

**Table 3.B1. List of predictors and expected impact on inequality**

| Variable | Description | Expected |
|---|---|---|
| **Globalization measures** | | |
| FDI | Ratio of inward FDI stock to GDP | Ambiguous |
| Tariff openness | 100 minus tariff rate | Ambiguous |
| Capital account openness | Index capturing extent of de jure capital controls | Ambiguous |
| Trade openness | Sum of imports and exports (excluding oil-related transactions) as a percentage of GDP; | Ambiguous |
| **Other factors** | | |
| Average education | Average number of schooling years in the population aged 15+ | Negative |
| ICT share | Stock of ICT capital as a percentage of total capita | Positive |
| Financial sector development | Private credit by deposit money banks and other financial institutions as a percentage of GDP | Negative |
| **Institutional factors** | | |
| Trade union density | Union membership as a percentage total wage and salary earners | Negative |
| Collective bargaining structure | Growing incidence of coordination/centralization | Negative |
| Core convention ratification | Number of ILO core conventions ratified | Negative |
| Convention No. 87 severity index | Index capturing compliance with provisions in Convention No. 87 | Negative |
| Convention No. 98 severity index | Index capturing compliance with provisions in Convention No. 98 | Negative |
| Reversed democracy index | Freedom House political liberty index | Negative |

## (a) Within-country regression analysis

The model estimated is as follows:[36]

$$\ln(gini_{i,t}) = a + X_{i,t}\beta + Z_{i,t}\gamma + \delta_i + \tau_t + \varepsilon$$

where ln(*gini*) is the natural logarithm of the Gini coefficient in country $i$ at time $t$; $X$ is a vector of labour institutions variables, including the trade union density rate, the index of collective bargaining centralization/coordination, the number of core convention ratifications, particularly of Conventions No. 87 and No. 98, and the OECD indices of the severity of violations of those Conventions; and $Z$ is a vector of economic and social controls, which includes the measures of trade discussed above (trade openness, tariff liberalization) and financial globalization (FDI stock as a percentage of GDP, capital account

36. The econometric model assumes that there is no reversed causation (and hence endogeneity) from income inequality to the right-hand side predictors. This assumption seems warranted, as far as institutional variables are concerned: institutions are highly path-dependent and, to the extent that they change, the motivation is often more political than economic. It also seems unlikely that inequality causes globalization, especially the more de jure dimensions of it, such as tariff and capital account liberalization. One possible source of endogeneity may be found in human capital supply: the individual's decision to invest in human capital may be related to skill premiums. For this reason, the measure used is average years of education, rather than the percentage of population with higher education (which is more likely to depend on skill differentials). There could be endogeneity on the right-hand side of the model, since some of the predictors may be causally related to one another. The analysis below tests explicitly for the possible endogeneity of union density to globalization. Endogeneity on the right-hand side of the statistical model is likely to manifest itself as multicollinearity, which makes it more difficult to reject hypotheses about zero coefficients.

openness), as well as the average number of years of education, credit by banks and other financial institutions as a percentage of GDP.[37] The insertion of the country dummies $\delta_i$ ensures that the focus is exclusively on the time variation within countries. The time dummies ($\tau_t$), which relate to shocks affecting all countries simultaneously, seek to capture any cross-sectional dependence in the errors and to account for the cyclical behaviour (around a growing trend) of all the globalization variables. Since the series are trended, it seems implausible that a shock (captured by the error term) should be absorbed in only one year. For this reason, the econometric model allows for first-order serial correlation in the errors:

$$\varepsilon_{i,t} = \rho\varepsilon_{i,t-1} + \nu_{i,t}$$

where $\nu_{i,t}$ is assumed to be independent and identically distributed (i.i.d.) and $|\rho|<1$.[38]

The econometric analysis reported below covers 42 countries for which there are data on all variables. There are 13 in Latin America and the Caribbean: Argentina, Brazil, Chile, Costa Rica, Dominican Republic, El Salvador, Honduras, Jamaica, Mexico, Paraguay, Peru, Uruguay and Venezuela; 21 advanced countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Turkey, United Kingdom and United States; 2 Central and Eastern European countries: Hungary and Poland; and 6 Asian countries: China, India, Republic of Korea, Pakistan, Philippines and Singapore[39] The time frame is 1989-2003, since in no instances is the capital openness indicator available for 2004-2005. All variables, except tariff liberalization, capital openness, union density and collective bargaining structure, are transformed to natural logarithms in order to make them more normally distributed.[40]

Columns 1 to 4 in table 3.B2 present the results of estimations in which the within-country variation in the Gini coefficient is solely a function of economic variables (globalization measures and controls). Column 1 includes FDI, the index of tariff liberalization, the index of capital account openness, the average number of years of education and a measure of the development of the financial sector. Column 2 replaces the tariff-based

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37. Separate specifications not reported here also control for the share of ICT investment in total capital stock, which acts as proxy for relative labour demand. This measure is available for a subset of countries and turns out to have substantial positive relation to inequality. See Baccaro (2008) for these additional results.
38. The time series are too short for meaningful tests of stationarity and cointegration. However, while the series are certainly long-memoried (De Boef 2001), a unit-root problem is unlikely. Inspection of the coefficient of the lagged dependent variable in a specification including labour institutions, globalization variables and other economic controls (the right-hand variables are the same as in column 1 of table B2 below, except that the lagged dependent variable is also included) but excluding the country dummies indicates that not even with this estimator, which is known to bias the coefficient of the lagged dependent variables upwards, does the 95 per cent confidence interval of the lagged dependent variable cover one (Bond 2002).
39. Data on the capital account openness index are unavailable for Taiwan (China) and several Central and Eastern European countries Czech Republic, Estonia, Latvia, Lithuania, Slovakia and Slovenia). For Estonia, Latvia, Lithuania and Taiwan (China), data on average number of years of education are also unavailable. There are no data on the variable credit by bank and other financial institutions as a percentage of GDP for Taiwan (China) and the reversed democracy index is not available for Hong Kong (China).
40. The Stata command used for estimation is *xtregar, fe*. This routine estimates time-series cross-section regressions when the error term is first-order autoregressive (AR(1)). It is based on Baltagi and Wu (1999) and is appropriate for unbalanced panels and for observations that are unequally spaced over time. The option *onestep* – used to estimate the autoregressive parameter $\rho$ – implements the method proposed by Baltagi and Wu (1999). After $\rho$ is estimated, the data are transformed in two stages: first to remove the Ar(1) component and then to remove the fixed effects ("within" transformation). In this second transformation, the first observation of each panel is dropped (see Stata Corporation 2007, pp. 421-427). Note that the AR(1) component estimated to be around 0.6 in all specifications, which is a sizeable figure. This implies that ignoring serial correlation of the errors, especially in the presence of heavily trended independent variables, is likely to underestimate severely the standard errors of the coefficients and overestimate the $R^2$, which would give over-generous significance levels (see Gujarati 2003, pp. 449-460). Indeed, estimates of fixed-effects models identical to the ones reported in table 3.5 that disregard (first-order) serial correlation in the error term show up many more economic variables significantly different from zero and the $R^2$ is more than 20 per cent higher.

**Table 3.B2. Determinants of Gini: fixed-effects models, with AR(1) errors, intercept and time dummies not reported**

| Dependent variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| FDI | 0.0243[b] | 0.0209[b] | 0.0215[b] | 0.0275[a] | 0.0237[b] | 0.0260[b] | 0.0263[b] | 0.0263[b] | 0.0264[b] | 0.0266[b] |
| | (0.0101) | (0.0104) | (0.0105) | (0.0105) | (0.0104) | (0.0107) | (0.0106) | (0.0107) | (0.0106) | (0.0106) |
| Tariff liberalization | 0.00133 | — | — | 0.00130 | 0.00147 | 0.00150 | 0.00183[c] | 0.00190[c] | 0.00184[c] | 0.00196[c] |
| | (0.00102) | — | — | (0.00102) | (0.00106) | (0.00107) | (0.00108) | (0.00112) | (0.00109) | (0.00109) |
| Capital account openness | -0.00342 | -0.00341 | -0.00347 | -0.00326 | -0.00331 | -0.00337 | -0.00408 | -0.00413 | -0.00429 | -0.00376 |
| | (0.00338) | (0.00337) | (0.00338) | (0.00339) | (0.00348) | (0.00351) | (0.00351) | (0.00354) | (0.00352) | (0.00354) |
| Education years (average) | -0.256 | -0.238 | -0.239 | -0.207 | -0.212 | -0.201 | -0.194 | -0.197 | -0.203 | -0.200 |
| | (0.186) | (0.188) | (0.189) | (0.190) | (0.192) | (0.193) | (0.187) | (0.187) | (0.187) | (0.185) |
| Credit to private sector | -0.0118 | -0.0108 | -0.0107 | -0.0123 | -0.00956 | -0.0102 | -0.0106 | -0.0109 | -0.0115 | -0.0106 |
| | (0.0111) | (0.0111) | (0.0111) | (0.0111) | (0.0114) | (0.0115) | (0.0114) | (0.0114) | (0.0114) | (0.0113) |
| Trade openness | — | 0.00831 | 0.0121 | — | — | — | — | — | — | — |
| | — | (0.0195) | (0.0209) | — | — | — | — | — | — | — |
| Trade openness in advanced countries | — | — | -0.0208 | — | — | — | — | — | — | — |
| | — | — | (0.0409) | — | — | — | — | — | — | — |
| GDP | — | — | — | -0.0412 | — | — | — | — | — | — |
| | — | — | — | (0.0432) | — | — | — | — | — | — |
| GDP squared | — | — | — | 0.00532 | — | — | — | — | — | — |
| | — | — | — | (0.00421) | — | — | — | — | — | — |
| Union density (UD) | — | — | — | — | -0.0159 | -0.0203 | 0.0526 | 0.0515 | 0.0529 | 0.0513 |
| | — | — | — | — | (0.0628) | (0.0633) | (0.0749) | (0.0764) | (0.0751) | (0.0752) |
| Reversed Democracy index | — | — | — | — | — | 0.000228 | 0.00154 | 0.00163 | 0.00168 | 0.00129 |
| | — | — | — | — | — | (0.00473) | (0.00479) | (0.00484) | (0.00480) | (0.00481) |
| UD in advanced | — | — | — | — | — | — | 0.0123 | 0.0212 | 0.00715 | 0.0325 |
| | — | — | — | — | — | — | (0.190) | (0.190) | (0.190) | (0.190) |
| UD in Central and East European countries | — | — | — | — | — | — | -0.356[b] | -0.357[b] | -0.353[b] | -0.346[b] |
| | — | — | — | — | — | — | (0.152) | (0.150) | (0.151) | (0.151) |
| UD in Asia | — | — | — | — | — | — | -0.231 | -0.222 | -0.218 | -0.220 |
| | — | — | — | — | — | — | (0.359) | (0.362) | (0.360) | (0.361) |
| Collective bargaining structure | — | — | — | — | — | — | — | -0.00114 | — | — |
| | — | — | — | — | — | — | — | (0.00521) | — | — |
| No. of ratifications of core conventions | — | — | — | — | — | — | — | — | 0.00295 | — |
| | — | — | — | — | — | — | — | — | (0.00425) | — |
| No. of ratifications of Conventions No. 87 and No. 98 | — | — | — | — | — | — | — | — | — | -0.0130 |
| | — | — | — | — | — | — | — | — | — | (0.0138) |
| Time dummies | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 435 | 441 | 441 | 435 | 422 | 417 | 417 | 416 | 417 | 417 |
| Number of countries | 43 | 44 | 44 | 43 | 43 | 42 | 42 | 42 | 42 | 42 |
| Coefficient of determination ($R^2$) (within) | 0.158 | 0.147 | 0.147 | 0.165 | 0.156 | 0.157 | 0.188 | 0.193 | 0.191 | 0.194 |
| Estimated $\rho$ | 0.633 | 0.643 | 0.643 | 0.628 | 0.621 | 0.621 | 0.592 | 0.583 | 0.589 | 0.585 |

Figures in brackets represent standard errors. [a] $p < 0.01$. [b] $p < 0.05$ [c] $p < 0.1$

measure of trade liberalization with trade openness. Column 3 tests whether trade openness has different impacts in advanced and developing countries, as suggested by the Stolper-Samuelson theorem (see Perry and Olarreaga 2007), by introducing an interaction between the trade openness variable and a dummy that captures whether a country is advanced or developing. Column 4 estimates a Kuznets (1955)-type model by checking whether the trajectory of within-country inequality is affected by levels of income. To this end, GDP and its square are entered.

Of all economic controls, the only one that seems robustly associated with inequality is FDI levels as a percentage of GDP: the greater the growth in FDI, the greater the increase in inequality within a country. There may be at least two reasons for this. First, FDI may increase demand for skills in the receiving country at the same time as it decreases the relative demand for semi-skilled workers in the sending country (Feenstra and Hanson 2001), the assumption being that FDI replaces low-skill activities in the sending country, with activities that are relatively skill-intensive in the receiving country, for example in such sectors as textiles and apparel (IMF 2007, p. 45). Second, the need to attract FDI may induce a country to reduce taxes and adopt less redistributive social policies (Cornia 2004). Of the other economic variables, tariff liberalization seems positively associated with income inequality, while capital account liberalization, average years of education and credit to the private sector are negatively signed. However, one cannot reject the hypothesis of zero coefficients for these variables, with the exception of the tariff liberalization index which is often significant at the 10 per cent level.

Columns 4 to 10 examine the impact of labour institutions, taking other economic determinants into account. Column 5 includes union density and column 6 the reversed democracy score (the higher the score, the more undemocratic the country concerned in year in question). Column 7 examines possible variations in the impact of unionization and to this end introduces specific terms for advanced countries, Central and Eastern European countries, and Asian countries, the reference category being unionization in Latin American countries. It is conceivable that, in an economy characterized by a large informal sector, a high degree of organization among formal-sector workers may increase income inequality, especially if trade unions represent predominantly skilled workers (Heckman and Pagés 2000). Column 8 includes collective bargaining structure, the assumption being that a more centralized/coordinated collective bargaining structure tends to reduce inequality.[41] Column 9 checks whether an increase in the number of ratifications of core conventions has a significant impact on income inequality. Column 10 focuses exclusively on the two core conventions on freedom of association and collective bargaining (FACB).[42]

The pattern of results in table 3.B2 remains valid even when a number of robustness checks (not shown here), including the use of alternative estimators, are performed (Baccaro 2008). In particular, the introduction of an important additional control – the share of ICT investment in the capital stock – does not seem fundamentally to change conclusions concerning other predictors. Although available only for a subset of countries and for no Central or Eastern European country, which precludes any estimation of the effect of union density in the region[43], this proxy, which captures technology-induced demand for skilled labour, turns out to be a significant predictor of inequality: the higher the share

41. The collective bargaining structure index is entirely time-invariant for Asian countries; any time variation that does appear is due to variation within the advanced countries. An analysis of regional heterogeneity similar to that conducted for trade union density would therefore make little sense in this case.

42. The regression coefficient on the FACB variable depends only on Hong Kong (China), the Netherlands and New Zealand, which were the only countries for which the 0-2 index of ratifications of Conventions No. 87 and No. 98 changed in the period under consideration. The overall number of core conventions ratified, however, had greater time variation.

43. Data on IT investments as a percentage of capital stock are unavailable for the following countries and territories: Czech Republic, Dominican Republic, Estonia, Greece, Hong Kong (China), Hungary, Jamaica, Latvia, Lithuania, New Zealand, Poland, Portugal, Slovakia, Slovenia, Switzerland and Taiwan (China).

of ICT, the higher the inequality. With this alternative specification, the coefficients of FDI and tariff liberalization become insignificant. Also, the number of years of education emerges as a significant negative predictor of inequality.

Table 3.B3 examines possible endogeneity on the right-hand side of the Gini equation. Specifically, it considers whether the reason why union density has no significant effect on income inequality, even when globalization forces are taken into account, is that union density is itself affected by globalization. The results of two fixed-effects models with AR(1) errors, where the dependent variable is unionization and within-country changes in unionization are regressed on globalization variables, suggest that the increase in FDI stock as a percentage of GDP within countries is associated with a decline in union density in those countries. There is case-study evidence on Ireland (a country in which FDI plays a key role) suggesting that as FDI was attracted to the country in large quantities in the 1990s, multinational corporations (particularly those from the United States) increasingly went back on their previous practice and refused to recognize trade unions. This was possible because the public agency responsible for attracting FDI waived the union recognition requirement for location grants (Roche and Geary 1997; Gunnigle and McGuire 2001). These examples suggest possible channels through which an increase in FDI may thus lead to lower unionization. Other facets of globalization (tariff liberalization, capital openness, trade openness) do not seem to have a significant impact on unionization. When the models in table 3.B2 are re-estimated by dropping the FDI factor and thus allowing union density a potentially greater impact on inequality, not mediated by FDI, the results do not change much (Baccaro 2008). Both trade union density and other institutional variables remain insignificant predictors of inequality, again with the exception of trade union density in Central and Eastern European countries.

Overall, the results of the within-country analysis suggest that, generally speaking, changes in union density are not significantly associated with changes in income inequality in the period under investigation. If one distinguishes by region, however, one finds that in the Central and Eastern European countries, the precipitous decline in unionization after the collapse of the Berlin Wall seems to have significantly contributed to an increase in inequality.[44] Interestingly enough, while they are not significantly different from zero, the coefficients for unionization in Latin American and advanced countries are positive rather than negative. The political freedom index is positive (indicating that the more political rights are violated, the greater the inequality) but statistically insignificant. Nor does the centralization or coordination of collective bargaining reduce inequality: the coefficient is negative but statistically insignificant.[45] Finally, the ratification of core conventions, including Conventions No. 87 and No. 98, is not significantly associated with inequality.[46]

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44. Since the capital openness and education variables are not available for a number of Central and Eastern European countries – only Hungary and Poland have data on the former – and these variables seem insignificant according to the previous analysis, they are removed from the econometric model, using an alternative specification not shown here (see Baccaro 2008, table 9), in order to demonstrate the impact of union density for a greater number of countries in the region. With this alternative specification, the coefficient of unionization can refer to a much larger sample of countries: Czech Republic, Estonia, Latvia, Lithuania, Slovakis and Slovenia, in addition to Hungary and Poland. It remains negative, approximately of the same magnitude as before and highly significant.

45. As argued above, the coefficient of the collective bargaining structure largely depends on developments in advanced countries, which are the only regional groups with substantial within-country variation.

46. Additional models have been estimated to assess the impact on inequality of variations in the severity of violations of Conventions No. 87 and No. 98, with controls for other determinants. None of these additional institutional variables seems to have a significant impact on inequality. These additional results are available upon request.

**Table 3.B3. Impact of globalization on union density rates: fixed-effects models with AR(1) errors, intercept and time dummies not reported**

| Dependent variable | 1 | 2 |
|---|---|---|
| FDI | -0.000930[a] | -0.000966[a] |
| | (0.000358) | (0.000359) |
| Tariff liberalization | 0.000348 | 0.000385 |
| | (0.000570) | (0.000572) |
| Capital account openness | 0.00111 | 0.00108 |
| | (0.00240) | (0.00240) |
| Trade openness | | 0.00680 |
| | | (0.0135) |
| Time dummies | Yes | Yes |
| Observations | 564 | 564 |
| No. of countries | 43 | 43 |
| $R^2$ (within) | 0.0919 | 0.0950 |
| Estimated $\rho$ | 0.714 | 0.708 |

Figures in brackets represent standard errors. [a] $p < 0.01$. [b] $p < 0.05$ [c] $p < 0.1$

## (b) Between-country regression analysis

Having examined how the change in labour institutions within countries has affected the change in inequality in the past few years, the goal of this subsection is to examine whether countries that are more institutionally dense – that is, having a higher unionization rate, a more centralized collective bargaining system and greater respect for political rights and core labour rights— tend to be associated with lower average levels of inequality, taking into account various features of globalization.

Table 3.B4 estimates essentially the same specifications as table 3.B2, but focuses on the cross-sectional variation in the data. Columns 1 and 2 contain only economic controls. Columns 3 to 8 check for the impact of institutional predictors, thus enabling the effects of trade unionism (columns 5 and 6), of collective bargaining structure (column 7) and of the two together (column 8) to be regionally-differentiated.

The results of the between-country estimators are rather different from those of the within-country estimators. Differences in average levels of income inequality across countries seem to be due entirely to institutional differences. The economic predictors are hardly ever statistically different from zero. The two exceptions are the measure of human capital, which (as expected) is negatively associated with inequality in the model including only economic controls (table 3.12, column 1), although its coefficient declines dramatically in absolute value, and becomes statistically insignificant, once the institutional predictors are inserted; and the extent of FDI, which is positive but rarely significantly different from zero.

As stated in the body of the chapter, labour institutions make a significant difference to average levels of inequality across countries; yet they do not seem to significantly affect recent changes in inequality. There are several possible reasons for this. One reason could be measurement error: since the institutional variables are not measured very precisely – probably less precisely than the economic variables – their impact may be

**Table 3.B4. Determinants of Gini coefficients: between effects (constant not reported)**

| Dependent variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| FDI | 0.0639[c] | 0.0467 | 0.0648[b] | 0.0397 | 0.0326 | 0.0231 | 0.0270 | 0.0253 |
| | (0.0377) | (0.0458) | (0.0312) | (0.0295) | (0.0226) | (0.0231) | (0.0253) | (0.0240) |
| Tariff liberalization | 0.00647 | 0.00735 | 0.00466 | 0.00446 | 0.00207 | 0.00257 | 0.00434 | 0.00214 |
| | (0.00769) | (0.00819) | (0.00641) | (0.00560) | (0.00442) | (0.00434) | (0.00491) | (0.00468) |
| Capital account openness | -0.0470 | -0.0725 | -0.0469 | -0.00747 | -0.0192 | -0.0103 | -0.0237 | -0.00575 |
| | (0.0419) | (0.0501) | (0.0347) | (0.0320) | (0.0266) | (0.0266) | (0.0284) | (0.0279) |
| Education years (average) | -0.0566[a] | -0.0297 | -0.0308 | -0.00429 | 0.00288 | -0.00240 | -0.00342 | -0.00667 |
| | (0.0207) | (0.0275) | (0.0183) | (0.0176) | (0.0141) | (0.0142) | (0.0157) | (0.0149) |
| Credit to private sector | -0.0862 | -0.120 | -0.0691 | -0.0748 | -0.00655 | -0.0000386 | -0.0109 | 0.0160 |
| | (0.0666) | (0.0751) | (0.0559) | (0.0487) | (0.0554) | (0.0545) | (0.0518) | (0.0574) |
| ICT share capital (%) | | -0.00865 | | | | | | |
| | | (0.0129) | | | | | | |
| Union density (UD) | | | -0.660[a] | -0.822[a] | 0.348 | 0.462 | -0.598[a] | 0.421 |
| | | | (0.161) | (0.149) | (0.322) | (0.323) | (0.143) | (0.489) |
| Reversed democracy index | | | | 0.0909[a] | 0.0638[b] | 0.0542[c] | 0.0542[b] | 0.0535[c] |
| | | | | (0.0262) | (0.0268) | (0.0270) | (0.0261) | (0.0281) |
| UD • in advanced countries | | | | | -1.137[a] | -1.152[a] | | -1.067[b] |
| | | | | | (0.283) | (0.277) | | (0.490) |
| • in Central and Eastern European countries | | | | | -1.707[a] | -1.716[a] | | -3.835[b] |
| | | | | | (0.345) | (0.338) | | (1.824) |
| • in Asia | | | | | -0.964[b] | -1.016[a] | | -0.980[c] |
| | | | | | (0.372) | (0.366) | | (0.535) |
| Collective bargaining structure | | | | | | -0.0317 | 0.0715[c] | -0.0164 |
| | | | | | | (0.0213) | (0.0392) | (0.0545) |
| • advanced countries | | | | | | | -0.114[a] | -0.0200 |
| | | | | | | | (0.0358) | (0.0558) |
| • in Central and Eastern European countries | | | | | | | -0.226[a] | 0.395 |
| | | | | | | | (0.0613) | (0.326) |
| • Asia | | | | | | | -0.103 | -0.00743 |
| | | | | | | | (0.0625) | (0.0760) |
| Year[d] | -0.0216 | -0.0172 | -0.000853 | 0.0257 | 0.0226 | 0.0220 | 0.0184 | 0.0229 |
| | (0.0266) | (0.0338) | (0.0230) | (0.0217) | (0.0164) | (0.0161) | (0.0180) | (0.0170) |
| No. of countries | 43 | 35 | 43 | 42 | 42 | 42 | 42 | 42 |
| $R^2$ | 0.449 | 0.487 | 0.627 | 0.730 | 0.860 | 0.870 | 0.845 | 0.879 |

Figures in brackets represent standard errors. [a] $p < 0.01$. [b] $p < 0.05$ [c] $p < 0.1$ [d] Since the sample is unbalanced, and the countries are observed at different points in time, the variable "Year" checks whether the period in which the countries are observed affects the assessment of their average inequality.

diminished. Secondly, changes in institutions take a long time to affect income distribution, so, given the short time frame of the analysis here, their effects perceptible. Thirdly, labour institutions may have begun to function differently: whereas in the past: stronger trade unions and a more centralized structure of bargaining led to a more compressed income distribution through various means, more recently they no longer do so, or do so to a much lesser extent. The results of a more detailed analysis of inequality trends reported in Appendix C seem to support this third hypothesis.

## Appendix C

# Is the inequality-reduction effect of industrial relations institutions withering away in advanced countries?

This appendix addresses the question of whether the impact of labour institutions has been changing over time by taking a closer look at 16 advanced countries for which longer time-series data on institutions and other variables are available (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, Spain, Sweden, United Kingdom and United States). The analysis begins by re-estimating essentially the same within-country model as in table B2, over the same time frame, but controlling for the proportion of ICT investment in total capital – a measure which is available for all the above countries (columns 1 and 3 in table 13). The reversed democracy index is not included, as it is entirely time-invariant for the 16 countries in question.[47] Another predictor for which time-series data are available – total public social expenditure as a percentage of GDP – is added (column 3). Thus the focus is on the effects that labour institutions exert directly on income inequality. Those that these institutions exert indirectly, by being associated with a more generous welfare state are now controlled for.[48]

There are some interesting changes in the globalization variables when the focus is on advanced countries: FDI comes out as a significant predictor only when technology-induced demand for skilled labour is not explicitly taken into account (column 2), which suggests that the FDI term is likely to act as proxy for this omitted variable and that FDI in developed countries probably leads to greater demand for skilled labour (Feenstra and Hanson 2001). Moreover, an increase in de jure capital openness seems to lead to greater income inequality in these countries, whereas a greater supply of skills is associated with lower inequality. The higher the share of ICT investment (signalling greater relative demand for skilled labour), the more inequality increases. Total public social expenditure emerges as a highly significant predictor: the more social expenditure declines in a country, the more inequality (measured by the Gini coefficient of equivalized net household disposable income) increases.[49]

In line with previous results changes in unionization and collective bargaining coordination are both negatively signed but not significantly different from zero. This runs counter to previous research findings – all relating to an earlier period – reported in this chapter, which suggested that industrial relations institutions had an equalizing effect on earnings and hence on income distribution. To check whether the effects have indeed changed compared to the past, the remainder of this appendix considers a longer time frame – 1978-2002 – for the 16 advanced countries in question.

The analysis that follows is freely inspired by a theoretical paradigm known as power resource theory (PRT), which was elaborated to explain the historical trajectory of the Scandinavian countries, advanced capitalist societies characterized by a highly egalitarian distribution of incomes (Korpi and Shalev 1979; Stephens 1979; Korpi 1983; Esping-Andersen and Korpi 1984; Esping-Andersen 1990). According to PRT, there are

47. All 16 countries score 1 (minimum level of political rights violation) throughout the period under consideration.

48. The data, which cover the period up to 2003, come from the OECD Social Expenditure Database.

49. One legitimate concern about the social expenditure variable has to do with possible reversed causation (from inequality to social expenditure) and hence endogeneity. However, if high inequality leads governments to increase social expenditure, then the correlation between the two should be positive rather than negative, as it appears in column 3 of table 3.C1. The coefficient of social expenditure can thus be considered a lower bound.

**Table 3.C1. Determinants of the Gini coefficient in 16 advanced countries (fixed effects with AR(1) errors, time dummies and constant not reported)**

| Dependent variable | 1 | 2 | 3 |
|---|---|---|---|
| FDI | 0.0157<br>(0.0151) | 0.0293[c]<br>(0.0152) | -0.00214<br>(0.0147) |
| Tariff liberalization | 0.00271<br>(0.00402) | 0.00498<br>(0.00413) | 0.00397<br>(0.00385) |
| Capital openness | 0.0192[c]<br>(0.0105) | 0.0132<br>(0.0109) | 0.0229[b]<br>(0.00963) |
| Education years | -0.707<br>(0.460) | -1.124[b]<br>(0.475) | -0.838[b]<br>(0.404) |
| Credit to private sector | -0.0154<br>(0.0138) | -0.0197<br>(0.0143) | -0.00426<br>(0.0132) |
| ICT share | 0.197[a]<br>(0.0554) | | 0.0922[c]<br>(0.0540) |
| Union density | -0.283<br>(0.179) | -0.226<br>(0.186) | -0.230<br>(0.169) |
| Collective bargaining coordination | -0.00312<br>(0.00541) | -0.000705<br>(0.00555) | -0.000978<br>(0.00525) |
| Public social expenditures | | | -0.0113[a]<br>(0.00261) |
| Time dummies | Yes | Yes | Yes |
| Observations | 175 | 175 | 174 |
| No. of countries | 16 | 16 | 16 |
| Adjusted $R^2$ | 0.168 | 0.0894 | 0.292 |
| Estimated $\rho$ | 0.595 | 0.611 | 0.532 |

Figures in brackets represent standard errors. [a] $p < 0.01$. [b] $p < 0.05$ [c] $p < 0.1$

substantial variations in the organization of capitalist societies that ultimately lead to different levels of equality or inequality in the distribution of incomes (Korpi 2006). The crucial factor determining these differences is the power of organized labour. The argument is that at crucial moments in history – the period between the First and Second World Wars and then in the early post-war years – in some countries, although not in others, the labour movement and its political allies were able, through mobilization and industrial action, to force capital into a compromise, whereby, in exchange for accepting capitalist organization of the economy, labour obtained not only a recognition of its prerogatives as the labour market intermediary, by means of protective regulations on trade unionism and collective bargaining, but also protection against various social risks and an increasing range of social rights.

Over time, this historical compromise crystallized into a specific type of organized capitalism, quite unlike the model prevailing in the United States and subsequently in other Anglo-Saxon countries: a highly institutionalized labour market structure, in which a large percentage of the workforce belonged to trade unions, wages and working conditions were determined through collective bargaining at the national level and there was an extensive welfare state whose provisions were a matter of citizenship rights, not of the individual's ability to pay. There was consequently a relatively equitable distribution of incomes.

In brief, according to PRT, labour power is responsible both for the establishment of a large welfare state and for a highly institutionalized structure of the industrial relations system. It thus affects inequality through both channels. On the one hand, it contributes to the direct compression of market earnings (the industrial relations channel), because trade unionism is historically associated with egalitarian wage policies ("equal pay for equal work") and centralized wage bargaining further contributes to wage compression by reducing inter-establishment and inter-sector dispersion. On the other hand, it also reduces inequality indirectly by contributing to the establishment and gradual development of a large, redistributive welfare state, which corrects market-generated inequality through redistributive taxes and transfers. The PRT argument incorporates an element of path-dependency (Thelen 1999; Pierson 2004): the events that shaped organized capitalism took place far back in history. However, since institutions are resilient and tend to change only slowly over time, those formative events still shape cross-national differences in industrial relations and welfare systems.

In this appendix, the applicability of the theoretical framework summarized above is tested through the simple empirical strategy of comparing cross-sectional regressions at two points in time: the decades 1978-1989 and 1990-2002.[50] The year 1990 was selected as a cut-off point simply because it divides the sample more or less in two. Moreover, the 1990s were when the economic processes associated with globalization started to become most visible and when the whole globalization debate began.

One obvious shortcoming of such an empirical approach is that the sample size is very small. As hypothesized by PRT, institutions are likely to form part of a system. In effect, this means that their individual features will be highly correlated and that it is difficult to separate out their respective contributions to inequality patterns. The analysis here relies on principal component analysis (PCA) to summarize the information underlying multiple indicators. PCA assumes that the data are visible manifestations of underlying hidden constructs, to which they are related, and expresses these hidden constructs as linear combinations of standardized observed variables.

To operationalize labour power, three related indicators were used: 1) the bargaining coordination index described in Appendix A ("BargCoord"); 2) the collective bargaining coverage rate ("BargCov"), namely the percentage of workers covered by collective bargaining agreements (see Ochel 2001); and 3) the trade union density rate ("TUDens"). These indicators are all positively correlated and the pairwise correlation coefficient is always higher than 0.5 as well as highly significant.

The results of the PCA given in table 3.C2 suggest that the three indicators belong together: only one component has higher eigenvalue than 1 and captures about 63 per cent of the total variance. The composite indicator of labour power uses the factor loadings of the first component as weights. These are all positively signed, with bargaining coordination carrying a little more weight than collective bargaining coverage or trade union density in determining a given country's score. Labour power is thus high in countries with more coordinated bargaining, higher collective bargaining coverage and greater trade union density.

Encouraging results are also obtained from the PCA of the other two constructs. For welfare state size (table 3.C3), two indicators are used: 1) the total tax wedge as a percentage of GDP, including social security and indirect taxes, which, as a proxy for state intervention, indicates how far a state can extract resources from its citizens for its

50. A time series cross-sectional model (TSCS) with annual data was not estimated for a number of reasons: 1) all indicators of inequality, which are drawn from the LIS database – and some institutional indicators, too, such as collective bargaining coverage – are annual interpolations from five-year data; 2) while a TSCS approach generally requires fixed effects to control for time-invariant omitted variables, the labour institutions under consideration do not vary much over time but rather across countries; and 3) the series are long-memoried and seem highly serially correlated. Given the short duration of the series, no reliable tests of stationarity and cointegration are available.

**Table 3.C2. Principal component analysis of labour power: one component retained, 366 observations**

| | Component | Eigenvalue | Difference | Proportion of variance | Cumulative |
|---|---|---|---|---|---|
| | 1 | 1.90205 | 1.21004 | 0.6340 | 0.6340 |
| | 2 | 0.692015 | 0.286083 | 0.2307 | 0.8647 |
| | 3 | 0.405932 | — | 0.1353 | 1.0000 |
| | **Variable** | **Component 1** | | | |
| | BargCoord | 0.6235 | | | |
| | BargCov | 0.5897 | | | |
| | TUDens | 0.5133 | | | |

**Formula:** Labour power = 0.6235std(BargCoord) + 0.5897std(BargCov) + 0.5133std(TUDens)

**Table 3.C3. Principal component analysis of welfare state size: one component retained, 352 observations**

| | Component | Eigenvalue | Difference | Proportion of variance | Cumulative |
|---|---|---|---|---|---|
| | 1 | 1.8608 | 1.7216 | 0.9304 | 0.9304 |
| | 2 | 0.139199 | — | 0.0696 | 1 |
| **Eigenvector** | **Variable** | **Component 1** | | | |
| | Tax wedge | 0.7071 | | | |
| | SocExp | 0.7071 | | | |

**Formula:** Welfare state size = 0.7071std(TaxWedge) + 0.7071std(SocExp)

**Table 3.C4. Principal component analysis of inequality**

| | Component | Eigenvalue | Difference | Proportion of variance | Cumulative |
|---|---|---|---|---|---|
| | 1 | 2.77657 | 2.56678 | 0.9255 | 0.9255 |
| | 2 | 0.209797 | 0.196167 | 0.0699 | 0.9955 |
| | 3 | 0.01363 | — | 0.0045 | 1 |
| **Eigenvector** | **Variable** | **Compenent 1** | | | |
| | D9/D1 | 0.5964 | | | |
| | D9/D5 | 0.5605 | | | |
| | PovRatio | 0.5746 | | | |

**Formula:** Inequality = 0.5664std(D9/D1) + 0.5605std(D9/D5) + 0.5746std(PovRatio)

activities;[51] and 2) total public social expenditure ("SocExp") as a percentage of GDP, which is a direct reflection of social transfers. In this case, the first principal component captures almost the totality of variance (93 per cent). The two variables are weighted equally in the composite indicator, the conclusion being that the greater the percentage of total taxes and of public social expenditure, the greater the welfare state size.

51. Many thanks to Andrea Bassanini of the OECD Secretariat for providing this variable.

**Table 3.C5. Determinants of inequality in 16 advanced countries (1978-1989), between regressions (constants not reported)**

| Dependent variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Welfare state | -0.650[a] | -0.659[a] | -0.844[a] | -0.845[a] | -0.716[a] | -0.642[a] | -0.887[a] | -0.643[a] | -0.707[a] | -0.576[a] | -0.646[a] | -0.647[a] |
| | 0.0993 | 0.101 | 0.144 | 0.160 | 0.153 | 0.122 | 0.265 | 0.111 | 0.150 | 0.139 | 0.108 | (0.136) |
| Labour power | -0.492[a] | -0.522[b] | | | | -0.488[a] | -0.384[c] | -0.620[a] | -0.516[a] | -0.595[a] | -0.472[a] | -0.617[a] |
| | 0.131 | 0.198 | | | | 0.127 | 0.201 | 0.130 | 0.133 | 0.165 | 0.116 | (0.139) |
| Left power | | 0.00418 | | | | | | | | | | |
| | | 0.0203 | | | | | | | | | | |
| Collective bargaining coverage | | | -0.0180 | | | | | | | | | |
| | | | 0.0109 | | | | | | | | | |
| Union density | | | | -1.571 | | | | | | | | |
| | | | | 1.109 | | | | | | | | |
| Collective bargaining coordination | | | | | -0.446[b] | | | | | | | |
| | | | | | 0.180 | | | | | | | |
| FDI | | | | | | 0.0605 | | | | | | |
| | | | | | | 0.336 | | | | | | |
| Tariff liberalization | | | | | | | 0.136 | | | | | |
| | | | | | | | 0.104 | | | | | |
| Capital openness | | | | | | | | -0.428[b] | | | | -0.415[c] |
| | | | | | | | | 0.141 | | | | (0.227) |
| Education years | | | | | | | | | -0.209[c] | | | -0.0152 |
| | | | | | | | | | 0.102 | | | (0.146) |
| Credit to private sector | | | | | | | | | | -0.442 | | |
| | | | | | | | | | | 0.459 | | |
| ICT Share | | | | | | | | | | | 0.252 | |
| | | | | | | | | | | | 0.497 | |
| Adjusted $R^2$ | 0.748 | 0.729 | 0.685 | 0.682 | 0.732 | 0.728 | 0.760 | 0.846 | 0.781 | 0.741 | 0.730 | 0.832 |

Figures in brackets represent standard errors. [a] $p < 0.01$. [b] $p < 0.05$ [c] $p < 0.1$

The third PCA captures the level of inequalities in a given country. For this purpose, it uses three highly correlated indicators from the LIS database: 1) the D9/D1[52] ratio of net disposable income, 2) the D9/D5[53] ratio of net disposable income; which captures inequality in the upper part of the distribution, where, according to some analyses (Atkinson 2007; Atkinson 2008) inequality has grown the most; and 3) the poverty ratio ("Pov-Ratio"), which applies to people with less than 50 per cent of the median net disposable income. Once again, the first principal component captures most of the information in the data (93 per cent). All three factor loadings are positive, with approximately the same weight. A more unequal country is one in which the D9/D1, D9/D5 and poverty ratios are higher.

Table 3.C5 contains estimates of the impact that labour power and welfare state size had on inequality, separately and jointly, in the period 1978-1989. Additional specification (column 2) take account of the power of left-oriented parties (measured through the proportion of seats that they held in the lower chamber of parliament), which, it has been argued, affected redistributive stance of governments (Stephens 1979; Bradley et al.

52. D9/D1 is the ratio of the upper limit of earnings of workers in the ninth decile of the earnings distribution to the upper limit of earnings of workers in the first decile.
53. D9/D5 is the ratio of the upper limit of earnings of workers in the ninth decile of the earnings distribution to median earnings.

**Table 3.C6. Determinants of inequality in 16 advanced countries (1990-2002), between regressions (constant not reported)**

| Dependent variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Welfare state | -0.816[a] | -0.800[a] | -0.873[a] | -0.899[a] | -0.948[a] | -0.851[a] | -0.886[a] | -0.753[a] | -0.857[a] | -0.799[a] | -0.823[a] |
| | 0.196 | 0.210 | 0.180 | 0.162 | 0.157 | 0.240 | 0.170 | 0.181 | 0.200 | 0.231 | 0.208 |
| Labour power | -0.314 | -0.306 | | | | -0.303 | -0.365[b] | -0.411[b] | -0.348[b] | -0.393 | -0.340 |
| | 0.187 | 0.187 | | | | 0.214 | 0.135 | 0.168 | 0.143 | 0.248 | 0.201 |
| Left power | | -0.00365 | | | | | | | | | |
| | | 0.0144 | | | | | | | | | |
| Collective bargaining coverage | | | -0.00287 | | | | | | | | |
| | | | 0.0135 | | | | | | | | |
| Union density | | | | -1.678 | | | | | | | |
| | | | | 1.026 | | | | | | | |
| Collective bargaining coordination | | | | | -0.219 | | | | | | |
| | | | | | 0.158 | | | | | | |
| FDI | | | | | | -0.228 | | | | | |
| | | | | | | 0.387 | | | | | |
| Tariff liberalization | | | | | | | 0.244 | | | | |
| | | | | | | | 0.182 | | | | |
| Capital openness | | | | | | | | -0.765 | | | |
| | | | | | | | | 0.607 | | | |
| Education years | | | | | | | | | -0.317[b] | | |
| | | | | | | | | | 0.117 | | |
| Credit to Private Sector | | | | | | | | | | -0.595 | |
| | | | | | | | | | | 0.966 | |
| ICT share | | | | | | | | | | | -0.341 |
| | | | | | | | | | | | 0.849 |
| Adjusted $R^2$ | 0.739 | 0.718 | 0.744 | 0.739 | 0.731 | 0.726 | 0.741 | 0.751 | 0.821 | 0.730 | 0.720 |

Figures in brackets represent standard errors. [a] $p < 0.01$. [b] $p < 0.05$ [c] $p < 0.1$

2003), as well as of other economic determinants (columns 6 and following), which are entered individually, in view of the small sample size. The main goal of the analysis is to see whether the coefficients of the two main predictors change over time and, if so, in which direction.

The compact model with only two predictors in table 3.C5, column 1 – welfare state size and labour power – performs remarkably well in explaining cross-country differences in inequality in the 1978-1989 period, accounting for almost 75 per cent of the variance in the dependent variable. All the regression coefficients are beta coefficients and therefore directly comparable. The most important determinant is the size of the welfare state: one-standard deviation increase in the size of the welfare state reduces inequality by 0.65 standard deviations. Another predictor that has a consistent impact is the labour power indicator, one-standard deviation increase in which is associated with lower inequality of about 0.5 standard deviations. The electoral strength of the parliamentary left is insignificant in comparison with welfare state size and labour power (column 2). The models in columns 3 to 5 estimate separately the impact of different elements in the labour power indicator. The coefficient of the collective bargaining coordination term is significantly different from zero (column 5), while the others are not. The models in columns 6 to 11 relate to the same economic and globalization factors as examined above (FDI stock, tariff liberalization, capital openness, years of education, credit to the private sector and share of ICT investment in capital stock): they are considered individually in view of the small

size of the sample. Both capital openness and years of education have a negative value and are of significant size. Yet, when they are entered in the specification simultaneously in column 12, the years of education factor becomes insignificant in comparison with welfare state size and labour power; indeed the coefficient of the latter even increases in absolute value. These regression results suggest that institutional features of both the welfare state and of the labour market are the most important predictors of cross-country differences during inequality levels in the 1978-1989 period.[54]

In table 3.C6 the same models are re-estimated for the period 1990-2002 to see if coefficients change. The most important difference is that labour power is much less robustly associated with inequality than in the previous period.[55] The coefficient of labour power is still negative, but its magnitude is smaller in absolute value and often not significantly different from zero. Conversely, the welfare state size variable now plays a greater role in explaining cross-country differences. A closer look at the individual components of labour power reveals that the biggest change pertains to the collective bargaining coordination index, whose coefficient is practically halved and no longer significant (column 5). Thus it looks as though, from the 1990s on, coordinated bargaining no longer significantly reduced inequality. In controlling economic determinants one by one, as before, one notices that capital openness is no longer significantly associated with lower inequality (column 8). The effect in the previous period was probably due to small, open societies like the Scandinavian countries, which simultaneously had high capital openness and an egalitarian income structure. As more countries opened up their capital markets, the effect disappeared in the later period. The human capital control (years of education) remains significantly negative (column 9). Even taking that into account, however, the impact of labour power is lower than in the previous period.[56]

These results suggest that, from the early 1990s on, the institutions associated with labour power – high trade union density, high collective bargaining coverage and, in particular, a coordinated bargaining structure – largely forfeited their capacity to reduce inequality directly by compressing market earnings and only retained an indirect influence on inequality by virtue of the size of the welfare state.

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54. These results hold good if the dependent variable is the Gini coefficient of net disposable income. The main differences using these alternative specifications are that the union density rate coefficient is significantly different from zero and that the capital openness and years of education variables are both insignificant in column 12. The results also apply if the equation in column 1 is re-estimated after one country is extracted at a time. These additional analyses are available upon request.

55. It is worth mentioning that a previous analysis found that the impact of bargaining centralization on reducing wage dispersion was "virtually identical" in 1973 and 1985 (Rowthorn 1992, p. 111).

56. Again, these results remain valid when the Gini coefficient is used as the dependent variable. The main peculiarity is that union density does have a significant negative association with the use of the Gini coefficient, with a magnitude only slightly smaller than in the previous period. As suggested above, it is bargaining coordination rather than union density that seems to have lost its inequality-reducing effects. The results also hold good overall if the equation in column 1 is re-estimated after the extraction of one country at a time. Interestingly, the labour power term is significant if Canada, Ireland and Italy are taken out of the sample. This suggests that in the above-mentioned countries labour power is less conducive to redistribution than elsewhere. Ireland and Italy experienced a marked increase in collective bargaining coordination in the 1990s, with the establishment of "social pacts," but in both countries inequality not only did not decline but may even have increased. These additional analyses are available upon request.

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# Changing employment patterns

4

## Main findings

- No clear link emerges between overall changes in employment and inequality. Some countries have created many jobs and at the same time income inequality increased significantly. Other good employment performers saw stable or even declining income inequality. The chapter shows that, to some extent, this reflects the diverse nature of the jobs created.
- Over the past 15 years or so, the incidence of non-standard employment has tended to increase in the majority of countries for which information could be collected. In Advanced Economies, part-time and temporary employment are generally on the rise, although the patterns differ significantly from country to country. In Central and Eastern European countries, however, the trend is for a decline in the incidence of part-time and self-employment and only a marginal increase in temporary employment. The incidence of informal employment in the few African, Asian and Latin American countries for which data exist remains significant and is on the rise. This includes populous, high-growth countries like Brazil, China and India, where informal employment, already common, is becoming even more widespread.
- Non-standard jobs are generally less well remunerated than standard jobs. In European countries, temporary jobs pay, on average, 20 per cent less than permanent jobs. In Latin America, workers with informal jobs earn, on average, 43 per cent less than workers with formal jobs, while in India, casual workers (who form the bulk of informal employment) earn 45 per cent less than regular employees. These findings rest on a small set of countries and do not cover all forms of non-standard employment, so further analysis is needed in this area. If confirmed, however, the existence of a wage gap between non-standard and standard employment, combined with the rising incidence of non-standard employment, would be a factor to take into account when analysing the income inequalities described in Chapter 1.
- The income effects of rising non-standard employment depend crucially on the extent to which low-income households increase their work effort in order to compensate for the low earnings obtained from employment. In most countries, increased

work effort has probably been insufficient to offset the income effect of rising non-standard employment. There are exceptions, however. For instance, in Brazil, despite increasing wage differentials between formal and informal workers and an increase in the incidence of informal employment, income inequality has declined over the past two decades. This could be due to additional work effort among low-income households, but could also reflect state support in the form of social programmes (see Chapter 5).

- For policy-makers, it is crucial to avoid too great a gap between standard and non-standard employment. In this respect, reforms in some Latin American countries aimed at making the formal sector more attractive to employers are an interesting recent example of what can be done.

## Introduction

Globalization holds out the promise of enhanced economic growth and employment creation. The latter, in particular, with the improvement in living standards that it brings, is the primary means through which individuals may share the benefits of economic growth. As Chapter 1 shows, the recent period of economic expansion has been accompanied by fairly substantial employment growth in most regions of the world. However, the type of employment being created has given rise to some concern.

Changes in employment patterns may reflect the fact that the world of work is characterized by intense competition and constant change, in which both employers and employees face increasing risk and uncertainty. In order to retain markets, producers have to be more responsive to consumer demand through constant innovation and attractive prices. This process may also involve sharing economic risks between firms and workers through subcontracting and other arrangements (Reich 2001). Non-standard forms of employment – temporary, part-time or informal employment[1] – have thus become more common.

With that in mind, the purpose of this chapter is to assess the extent to which changes in employment patterns are associated with rising income inequality. It was not possible to integrate this question into the analysis carried out in Chapter 3, owing to lack of information on countries' policies on non-standard employment. More specifically, this chapter examines the potential linkages between trends in income inequality and total employment growth (Section A); and presents the trends in non-standard employment, looks at the extent to which non-standard jobs pay less than standard ones and considers the implications in terms of income inequality (Section B). The final section (Section C) examines a number of policy considerations to address any linkages between patterns of employment and income inequality.

1. This includes both the informal sector and informal employment in the formal sector.

**Figure 4.1 Average annual changes in income inequality and employment**


Note: The Figure shows how income inequality (proxied by the Gini index) and employment grew in the countries for which data are available for the relevant periods.

Source: IILS estimates.

## A. No clear link between income inequality and employment growth

Over the past two decades, the world of work has been characterized by relatively robust employment growth in most regions. At the same time, however, as Chapter 1 shows, income inequality, as measured using the Gini index, has also risen in the majority of countries where data are available. Of course, as this report and others studies demonstrate, the linkages among globalization, economic growth, employment and income inequality are difficult to disentangle. Policy makers may be concerned that, by limiting income inequality, employment performance may worsen. But if employment growth is plotted against changes in income inequality since the early 1990s, there is no apparent relationship between the two (fig. 4.1). In other words, it is not the case that more (or less) employment growth is necessarily associated with more (or less) income inequality.

Perhaps more importantly, though, this simple correlation shows that few countries managed to experience both an improvement in labour market performance, as measured by employment growth, and a reduction in income inequality. In fact, for the period 1990-2000, this occurred in only 24 of 85 countries, and the figure was 20 of 44 countries for the most recent period, 2000-2005.

The complex relationship between employment gains and income inequality may reflect the increasingly diverse nature of the jobs which are created – an issue addressed in the next section.

## B. Rising non-standard employment as a factor of income inequality

### The incidence of non-standard employment has increased in many countries, especially among women

"Non-standard" employment refers to employment other than permanent salaried employment and comprises part-time or temporary work and self-employment. Temporary work comprises employment on fixed-term contracts, agency work and seasonal work. This section looks at trends in such forms of employment, particularly part-time and temporary work in Advanced Economies and informal employment in developing countries.[2] It makes no value judgements as to whether such work is precarious or not, whether it is socially harmful or, whether on the contrary it is a useful stepping-stone to the labour market. These are matters that lie beyond the scope of this report. Instead, the aim is to examine whether the incidence of these forms of employment has increased, as is often argued. Later sections will look at the implications of observed trends as they affect income inequality, which is the theme of the report.

In Advanced Economies, standard employment – full-time, permanent work arrangements – has long been regarded as the norm and the framework within which labour law, collective bargaining and social security systems developed. The past two decades, however, have witnessed a rise in non-standard work arrangements.

- The incidence of part-time employment has increased significantly since the early 1990s in most Advanced Economies, especially among women (fig. 4.2, panel A). This trend could reflect demand-side developments, such as the need for greater flexibility in the workforce; but supply-side factors, such as the desire to strike a better balance between work and family life or study, have also been influential (Fagan and Ward, 2003). Part-time employment is often voluntary.
- The incidence of temporary employment has also tended to increase over the past two decades (fig. 4.2, panel B), particularly among women, largely because firms needed to be able to respond to rapid changes in supply and demand conditions in the face of stiffer product-market competition (Kalleberg, 2000; Dorantes, 2005). In addition, new technology has made it possible to fragment the production process and outsource certain tasks, a trend that has been associated with less stable employment. Some authors also argue that badly designed employment regulations make employers reluctant to recruit under permanent contracts (Atkinson, Morris and Williams, 1999; Davis-Blake and Uzzi 1993).
- By contrast, the share of self-employment in total employment declined in most of the advanced economies, especially among female workers. This trend largely reflects the declining incidence of employment in the agricultural sector, where self-employment is typically dominant.

In transition economies by contrast, non-standard employment has not shown a clear trend over the past few years.[3] First, the share of part-time employment in total employment has tended to decline, especially among men (fig 4.3, Panel A).[4] The majority of part-time jobs in transition economies are voluntary, as in advanced economies, the only exceptions being Bulgaria, Lithuania and Romania, where they are mainly involuntary.

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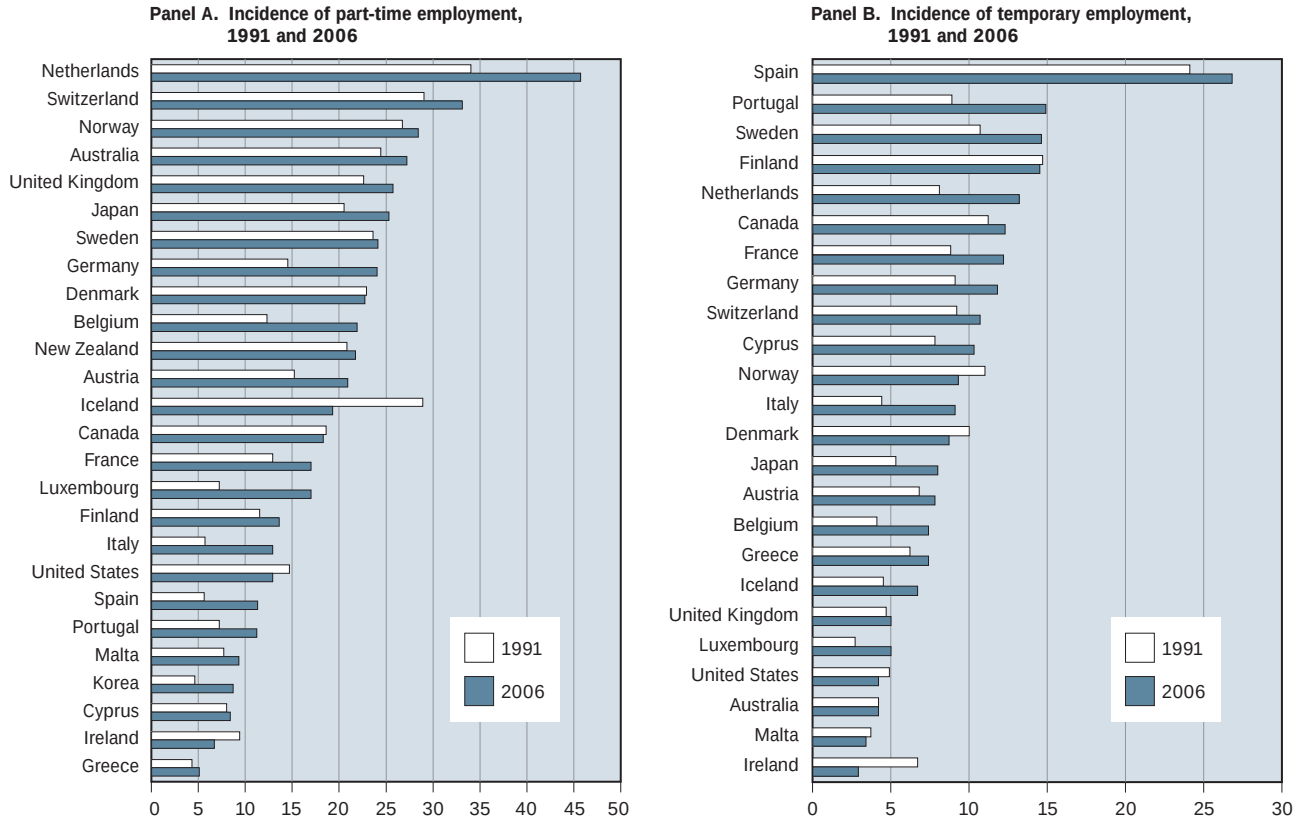
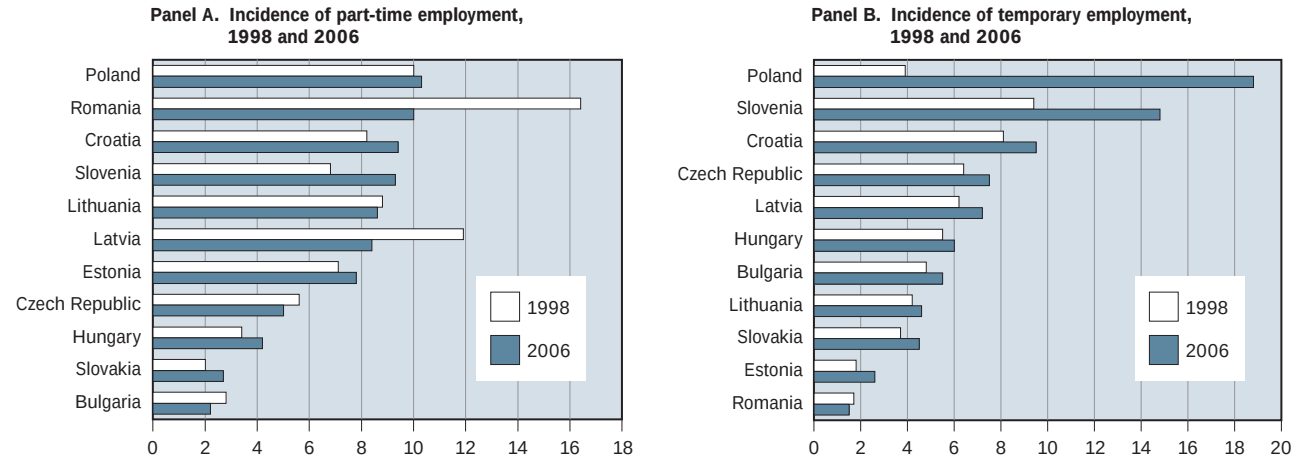
2. See Chapter 1, Appendix A for a list of country groupings.
3. The data for the transition economies are available on a continuous basis only from 1998, so the analysis is restricted to the short period 1998-2006.
4. The country differences in the incidence of part-time employment may be due to the various degrees of underemployment in each country (Cazes and Nesporova, 2004).

**Figure 4.2 Part-time and temporary work are on the rise in advanced countries**




Source: IILS estimates based on Eurostat Labour Force Survey and OECD.

**Figure 4.3 Trends in non-standard employment in Central and Eastern European countries are mixed**

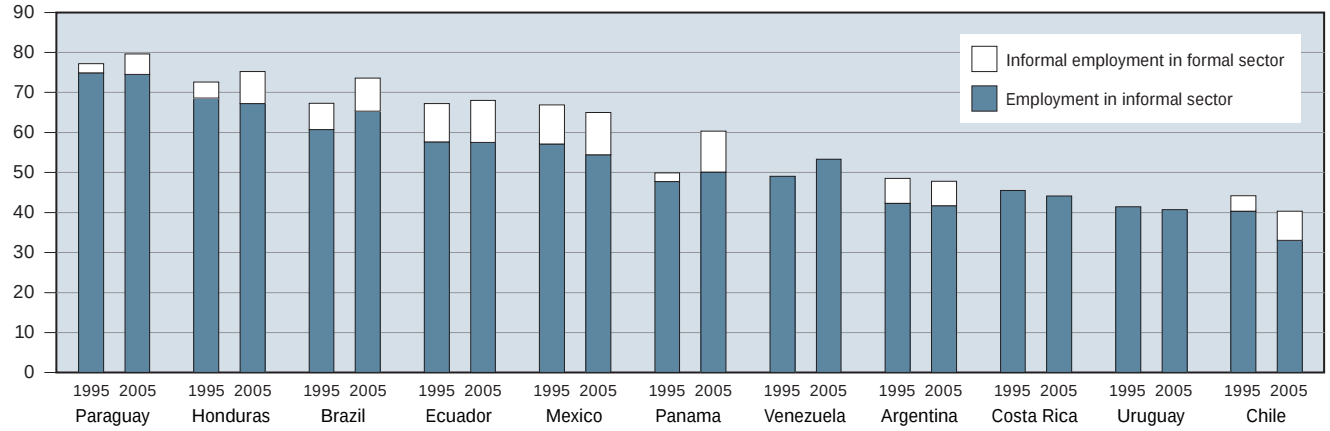



Source: IILS estimates based on Eurostat Labour Force Survey and OECD.

Second, the share of temporary employment in total employment has increased only marginally (fig. 4.3, Panel B). Third, there has been a decline in the share of self-employment in total employment among both male and female workers. According to a recent study (Cazes and Nesporova 2004), this trend reflects persistent administrative and other barriers to small business development.

In emerging economies and developing countries, non-standard work mainly takes the form of informal employment, that is, workers in very small firms (fewer than five

**Figure 4.4. Informal employment in Latin American countries**




Note: Informal employment in the formal sector includes those workers who do not have a proper contract. Informal-sector employment includes workers in small firms (less than five workers), self-employed (other than administrative, professional and technical workers), unpaid family workers and domestic workers.

Source: IILS estimates based on data processed by the ILO's Information System and Labour Analysis in Panama.

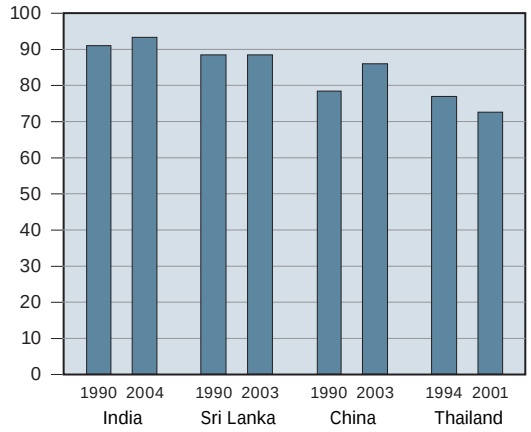
workers), self-employment, unpaid family work and salaried employment without a proper work contract in the formal sector. Unfortunately, data on informal employment are scarce and difficult to compare across countries. Such data that exist, covering a relatively long time span, are shown in figures 4.5 to 4.7. In the majority of the countries in question, the incidence of informal employment has increased.

- In most of the Latin American countries shown in figure 4.4, informal employment represented over half of total employment in 2006. The incidence of informal employment has risen over the past decade or so. This trend has been recorded even in the countries that experienced high economic and employment growth, which suggests that employment informality is a structural phenomenon. Interestingly, higher employment informality in Latin America reflects two opposing trends. On the one hand, there is less employment in the informal sector [5], owing to a decline in the number of very small firms as a result of pension and labour legislation reform, which has both increased the advantages for firms gaining formal status and raised the penalties of staying informal (Saavedra and Chong, 1999) [6]. On the other hand, the extent of informal employment in the formal sector has grown: a growing proportion of the new jobs in the formal sector are of a casual nature and come without a work contract. According to some studies, this trend reflects various reforms that have facilitated the use of temporary contracts and subcontracting arrangements (Pianto and Pianto, 2002).
- In all the Asian countries for which data could be gathered (China, India, Myanmar, Sri Lanka and Thailand), the incidence of informal employment has increased, or at least, remained high (fig. 4.5). Only in Thailand did it decline somewhat, and that from high levels.

5. "Informal sector" means employment in small firms (with fewer than five workers), self-employed (other than administrative, professional and technical workers), unpaid family workers and domestic workers.

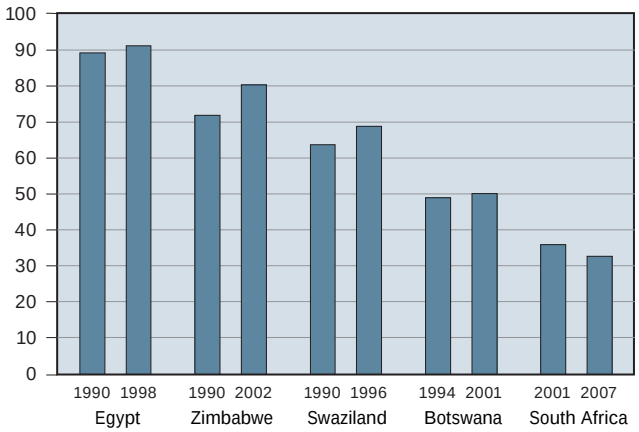
6. "The policies that affected the relative costs and benefits of entering or staying in the informal sector took many forms, such as: binding minimum wage regulations, specific mandated benefits, forced savings schemes, extremely high hiring costs, job stability rules, and an array of other required administrative procedures and tax rules and regulations" (Saavedra and Chong, 1999: 97).

**Figure 4.5. Informal employment in selected Asian countries**




Source: IILS estimates based on Ghose, Majid and Ernst, 2008, Appendix Table A4.1.

**Figure 4.6. Informal employment in selected African countries**




Source: IILS estimates based on Ghose, Majid and Ernst, 2008, Appendix Table A4.1 and data compiled by Jacque Charmes from household survey data sets.

- A large proportion of the workforce in Africa[7] is also engaged in informal work. And the trend is towards further informality (fig. 4.6). Most jobs are characterized by greater insecurity, low remuneration and lack of social security (Devey, Skinner and Valodia, 2003; ILO, 2002; Van der Hoeven, 2000). The only notable exception to the trend is South Africa.

### Non-standard jobs tend to pay less than standard jobs

The rise in non-standard employment observed in the majority of the countries for which data could be collected has been a source of earnings inequality, in that non-standard jobs pay less than standard ones.

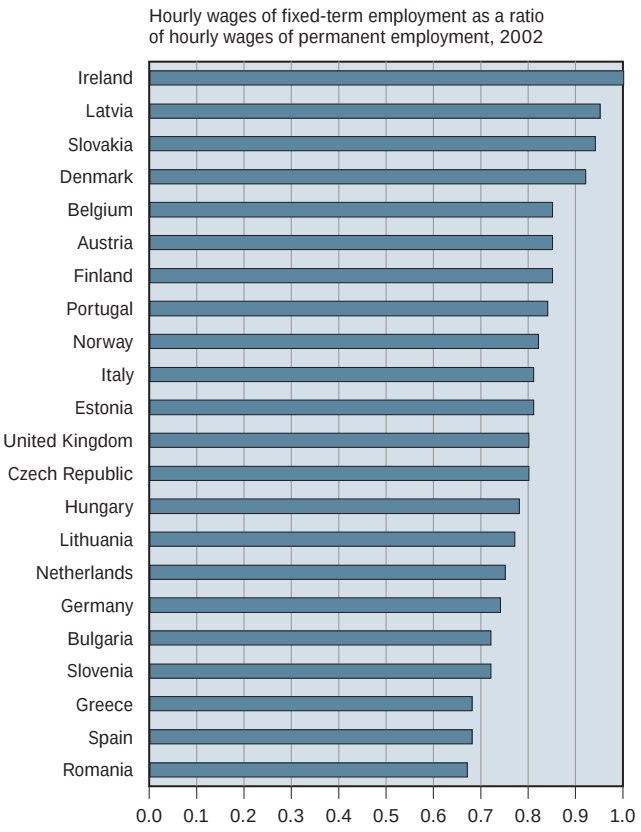
In European countries, fixed-term employment pays much less than permanent employment (fig. 4.7) the only exception being Ireland, where the two are remunerated equally. Such comparisons should be treated with caution: fixed-term jobs may differ from permanent jobs in terms of the sectoral location of the job, the seniority of the wage earner or skill intensity and such differences may explain the wage gap up to a point. Even controlling for these factors, however studies have found that fixed-term jobs pay less than permanent ones (Gash and McGinnity, 2005)

There is also evidence from Latin America that informal jobs pay significantly less than formal ones (fig. 4.8) not only in the informal sector but also within the formal sector, where workers who have informal arrangements are paid less than their permanent counterparts. The wage gap between the two is found to be statistically significant, even after controlling for a number of personal and household characteristics (Gindling (1991) for Costa Rica; Funkhouser (1996) for the five Spanish-speaking Central American republics; Marcouiller, Ruiz de Castilla and Woodruff (1997) for Mexico, El Salvador and Peru; Saavedra and Chong (1999) for Peru; and Pianto and Pianto (2002) for Brazil).

Interestingly, over the past decade, the wage gap between informal and formal sector employment has widened in all the countries shown in figure 4.8 except Chile, Mexico and Venezuela. The hourly wage differential between workers who have an informal arrange-

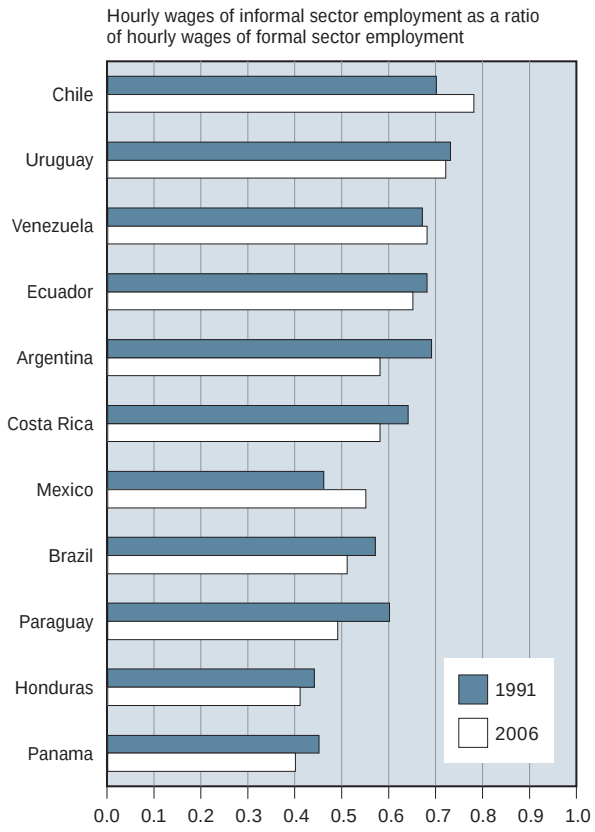
7. Data on informal employment in African countries are very scarce. The only source the household labour force surveys, where they exist at all are carried out at irregular intervals.

**Figure 4.7 Fixed-term contracts pay less than permanent contracts**




Source: IILS estimates based on Structure of Earnings Survey, 2002.

**Figure 4.8. Informal sector jobs pay less than formal sector jobs**




Source: IILS estimates based on data processed by the ILO's Information System and Labour Analysis in Panama.

ment in the formal sector and their permanent counterparts has also widened over the same period.[8]

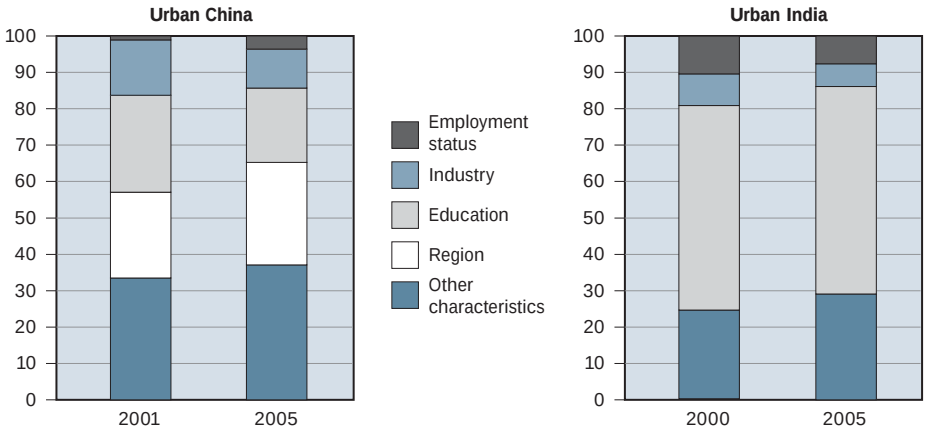
Outside Latin America, it has not been possible to gather comparable data on wages by employment status. However, some information exists. For instance, in India, the wages of casual workers who make up a substantial share of the large informal sector in that country constituted about 44 per cent of the wages of a regular salaried worker in 2004-2005 as against 62 per cent in 1983, which shows that wage differentials between informal and formal employment have grown much wider.

### Changes in employment patterns have had an impact on income inequality

As suggested by evidence from earlier studies the rise in non-standard employment, with the concomitant increase in wage gaps has been a factor behind the growing income inequalities described in Chapter 1. For instance, Gregg and Wadsworth (1996) found increased income inequality in Britain among households with multiple earners and households with single or multiple adults with no work. They also found that part-time employment as the prime income source had risen over the period. This explained around one quarter of the relative deterioration in the position of workless families. Tachibanaki and Yagi (1992) showed that the degree of income inequality in Japan was closely related to whether there were working wives or double earners within a household. Leibbrandt

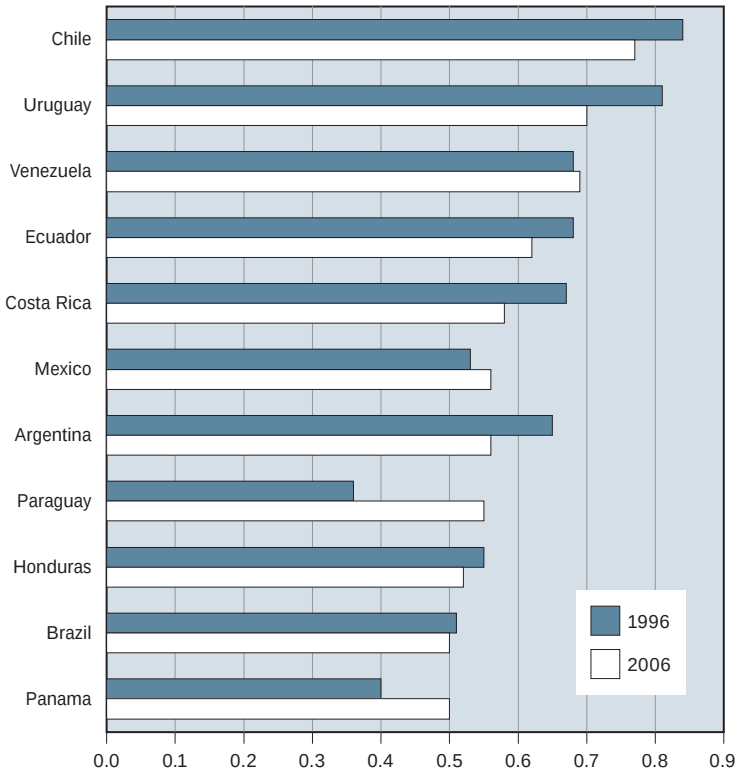
8. The data are not shown in figure 4.8 but are available upon request.

**Figure 4.9 Decomposition of income inequality by household characteristics, urban China and India**




Source: IILS estimates based on computations prepared by Du Yang, Institute of Population and Labour Economics, Chinese Academy of Social Sciences, Beijing and data obtained from National Sample Survey Organization, Ministry of Statistics, Government of India.

**Figure 4.10 Income gap between formal sector and informal sector households in Latin America**




Source: IILS estimates based on data processed by the ILO's Information System and Labour Analysis in Panama.

and Woolard (2001), in their study on South Africa, demonstrated that wage income was the primary cause of income inequality and that at least half of this wage inequality was attributable to households with no labour income at all. A detailed decomposition of the factors of income inequality in China and India has been carried out for the purposes of this report.[9] As can be seen from figure 4.9, the main finding is that, on average,

9. For a detailed analysis, see the background paper to this chapter (Rani, 2008).

a household's income depends mainly on the level of education of its members, the sector in which they are employed and other household characteristics, such as the age and sex of household members, and, in China, the regional location. The employment status of household members is a far less important factor although its role has recently increased in significance in both China and India.

However, such labour market trends are not automatically translated into greater income inequality. Much depends on whether low-wage households increase their work effort in order to compensate for their low earnings.

This may be illustrated by looking at the total income of the average household where the main earner works in the informal sector. "Total income" means not only the wages of the main earner but also earnings by other household members, social benefits – less any taxes paid by the household – and other sources of income. For instance, in Latin America, the total income of a household where the main earner has a job in the informal sector is lower than one where the job is in the formal sector. However, this income gap is smaller than the wage gap between informal-sector employment and formal-sector employment (fig. 4.10), the reason being that households with low earnings probably have more members in the labour market or engaged in multiple jobs to increase their incomes. In other words, low informal sector wages encourage a higher additional work effort in order to improve income levels and thus compensate for the low wages paid in the informal sector. This strategy helps such households increase their incomes, and at the same time reduces income inequality across households. A case in point is Brazil, where, despite increasing wage differentials between formal and informal workers and an increase in the incidence of informal employment, income inequality has declined by 2.3 per cent over the past two decades. This could be due to the additional work effort among low-income households. The narrowing of the income gap (as opposed to the wage gap) may also be due to support from the state in the form of social programmes like cash transfers, public works and wage subsidies, which have been implemented in several Latin American countries.

## C. Policy considerations

Against the backdrop of relatively strong employment growth in most regions and countries, this chapter has shown that in the majority of countries with available data, there has been a shift – in some cases structural – towards non-standard forms of employment. This has meant more part-time and temporary employment in Advanced Economies and more informal employment in developing countries. Putting aside normative statements regarding the issue of non-standard employment, the evidence presented here suggests that the increased trend towards these forms of employment has contributed to rising income inequality. This is due, in part, to lower levels of remuneration among non-standard workers when compared to regular employees. In many cases, this holds, even after the effect of increased work effort associated with lower wages is taken into consideration.

The challenge for policy makers is therefore to arrest the increase in labour market duality, while maintaining labour market dynamism. This means that consideration should be given to both the quantity and quality of jobs when formulating reforms of employment regulations, wage formation systems and social protection. There are examples of how this can be achieved in Advanced Economies (OECD, 2006). The experience of conditional cash transfers in some Latin American countries, where employment informality and income inequality declined in a context of rapid job creation, offers a basis from which to consider a number of policy options.

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# Redistribution through taxes and social transfers

## Main findings

- This chapter examines the extent to which taxes and social transfers have managed to redistribute the gains and losses from economic growth over the past 15 years or so. As shown in Chapter 3, the tax/transfer system can be a powerful redistribution mechanism and this is confirmed by more detailed analysis set out in this chapter. A key finding is that, despite increasing income inequality, the redistributive impact of taxes and social transfers has generally not been able to reverse this raising trend.
- One reason for this is that taxation has become less progressive and therefore less likely to address the growing income inequality found in the majority of ILO member states (see Chapter 1). Generally speaking, indirect taxes – which are typically regressive – have become a more important source of government revenue. By contrast, tax rates both on corporate income and on top personal incomes have, on average, declined over the past 15 years or so. Between 1993 and 2007, the average corporate tax rate (for all countries for which data exist) was cut from 37.5 per cent to 27.1 per cent. In the case of top personal income taxes, the average rate was cut from 37 per cent to 34 per cent over the same period.
- Another factor is that the weaker progressivity of tax systems has in general not been offset by increased recourse to social transfers for redistribution. Over the past 15 years, social transfers as a percentage of GDP have declined in developed countries and in Africa and slightly increased in the rest of the developing world. Although targeted social assistance is much more progressive than other social transfers, especially in developing countries, the budget allocated to assistance is too small to make any significant difference to inequality. On the other hand, spending on social insurance programmes has grown relatively quickly in many developing countries, but often with little effect on reducing income inequality. Indeed, such programmes tend to be only slightly progressive (as is the case in many developed countries and those countries with universal non-contributory social protection) or actually regressive, as in many developing countries they exclude workers from the informal sector.

- Any policy using taxes and benefits as instruments to address income inequality needs to ensure that it is effective. Taxes and benefits, if badly designed, can affect growth and job prospects, and in some cases even increase inequality. The analysis in this chapter shows, however, that it is possible both to meet growth and employment objectives and reduce inequality. Brazil, Mauritius and Malaysia are interesting cases in point.

## Introduction

The widening income inequalities seen around the world have triggered a debate over the extent to which taxes and/or social transfers should be used more actively for redistribution. Income redistribution can be justified not only on ethical, but also on economic or political grounds. For instance, by reinforcing perceptions that economic growth is advantageous for all groups, redistribution policies may enhance political support for pro-growth policies (Boadway and Keen 2000; Commission on Growth and Development 2008). Chapter 3 of this report showed that the welfare state, in its broadest sense, is a powerful mechanism for redistribution. This chapter focuses on the issue in further detail.

Government-led redistribution uses three principal mechanisms: progressive taxation; social transfers that favour the poor; and public provision of social services, such as education and health care. While all three will be considered, this chapter will focus most closely on taxation and social transfers.

Progressive taxation, by definition, contributes to income redistribution, as wealthier individuals pay proportionately more taxes than those on lower incomes. Personal income taxes and property taxes are generally believed to be progressive, whereas corporate taxes tend to be "U-shaped", being regressive at low levels of corporate income and progressive beyond a certain threshold. Indirect taxes such as consumption taxes are generally regressive and tend to fall disproportionately on people with low incomes.[1]

However, great care needs to be taken in using the tax instrument for redistribution purposes. It is crucial that taxes should not distort incentives to work, invest and create wealth. Any recourse to tax reform to reduce income inequalities should therefore take into account the possible impact on economic growth and employment.

Redistribution can also take place through social transfers, including social assistance benefits and social insurance programmes. The former typically target the needy and can therefore be expected to have a strong redistributive effect. In developing countries, however, social insurance programmes (such as pensions and unemployment insurance) may be regressive rather than progressive; and this tendency is exacerbated by the fact that such programmes tend to exclude workers in the informal economy, who disproportionately comprise the poor.

Lastly, investment in education, health and other social services can also exert a redistributive effect (box 5.1). While taxes and social transfers have an immediate effect on income distribution, public provision of social services tends to have a more long-term impact. Government programmes in primary education or health care and infrastructure investment in areas such as water and sanitation may help alleviate the deep-rooted aspects of inequality by creating opportunities (or what Amartya Sen calls capabilities).

Inequality can thus be addressed through a combination of social service provision, social transfers and taxation; and ideally, the redistributive effects of taxes and social

1. In developing countries, as will be seen below, the tax system as a whole is generally regressive (Gemmell and Morrissey 2005)

expenditure should be analysed in tandem (Burgess and Stern 1993).[2] Such an analysis should take into account the effects of redistribution policies on economic incentives. As emphasized by the Commission on Growth and Development (2008), excessive or badly designed redistribution efforts will damage growth prospects and hinder development.

The aim of this chapter is to examine how far recent changes in national tax systems and government expenditure on social transfers have affected inequality over the past few years. First, the chapter discusses trends in the composition and levels of social transfers and taxes and explores how these trends relate to income inequality. Second, it addresses in detail the extent to which taxes and social transfers are effective in redistributing income. This is done by comparing income inequality before and after the payment of taxes and benefits.[3] In the final section, country examples will be presented to show how different government policy frameworks have made it possible to maintain income inequality at reasonable limits, while at the same time supporting economic growth and job creation.

## A. Social transfers, taxation and income inequality: what are the trends?

In the following section, simple associations between various redistribution instruments and income inequality are presented. Obviously, these associations do not necessarily imply causality and the next section will examine in greater depth the causal links at work.

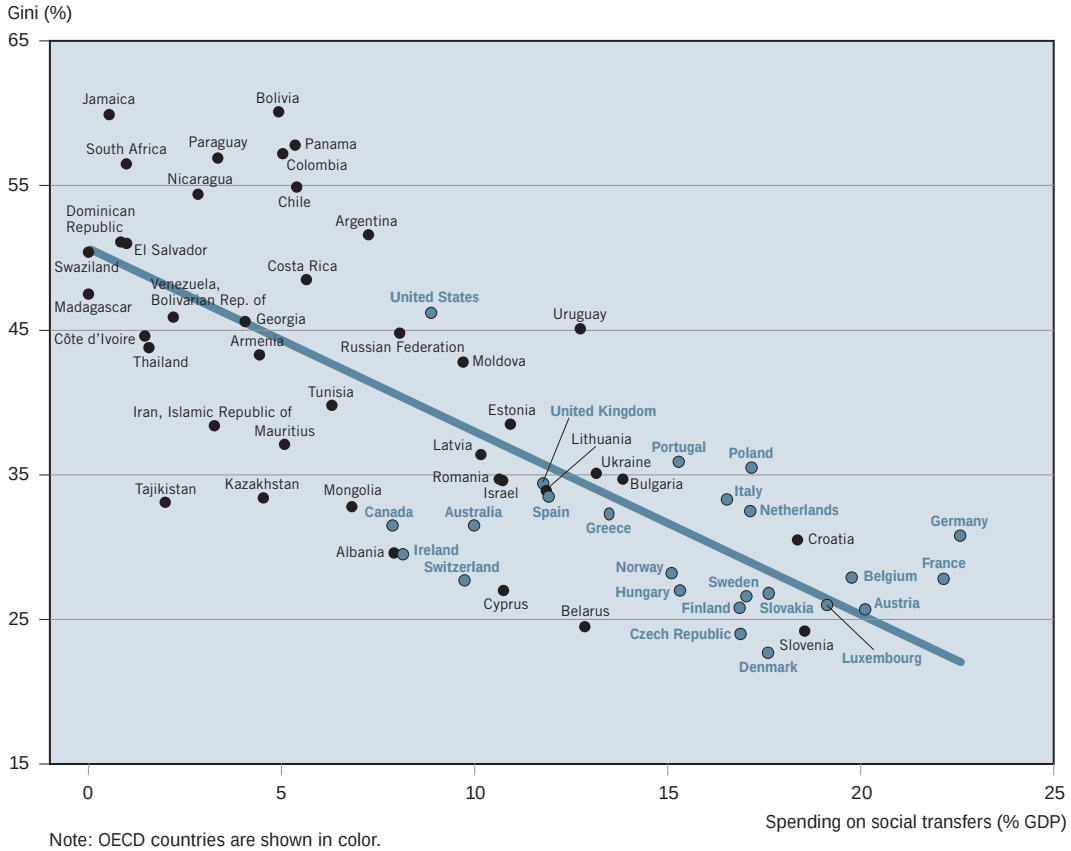
### Social transfers and inequality

There is a relatively strong negative association between spending on social transfers and inequality (fig. 5.1).[4] The correlation between social benefit spending by central government and income inequality is -0.75 for the 64 countries for which data are available. In other words, countries that spend more on social transfers tend to have lower income inequality. For example, among developed countries, income inequality is relatively high in the United States, where spending on social transfers is limited. By contrast, the countries that spend the most on social transfers (mostly European countries, such as Austria, Belgium, Denmark[5], France, Germany and Sweden) have relatively low income inequality.

The negative relationship between income inequality and social transfers can be interpreted as evidence that high-inequality countries lack the economic or political means to

2. Historically, there were only two kinds of redistributive tax-based social spending: poor relief and public schools (Lindert 2004). Lindert argues that social transfer increased in all developed countries in the twentieth century and that by the 1980s most of them devoted 10 per cent of their revenue to social transfers. In other words, "the history of taxing and transferring is not just a miscellany of separate and unique national histories, but a common pattern" (p. 11).
3. Pre-tax income is usually defined as all sources of "market income" or "private sector income", including wages and salaries (before social security contributions), bonuses and exercised stock-options, employer and private pensions, self-employment income, business income, dividends, interest, rents and realized capital gains. Disposable income is calculated as pre-tax income + social benefits – taxes.
4. Social benefit spending (consolidated central government) is defined by the IMF's Government Financial Statistics Manual (2001) as transfers to protect the entire population against certain social risks such as medical services, unemployment compensation, social security pensions, and social assistance benefits. Social security benefits include sickness and invalidity benefits, maternity allowances, children's or family allowances, unemployment benefits, retirement and survivors' pensions, and death benefits. Subsidies, grants and other social benefits include all unrequited, non-repayable transfers on current account to private and public enterprises; grants to foreign governments, international organizations and other government units; and social security, social assistance benefits and employer social benefits in cash and in kind.
5. General government spending on social transfers

**Figure 5.1. Social transfers and income inequality**




Note: OECD countries are shown in color.

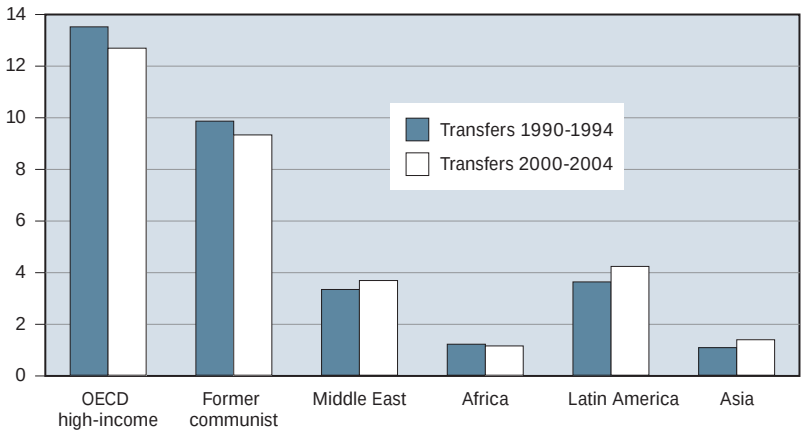
Source: IILS estimates; social transfer spending from International Monetary Fund 2007.

fund social programmes. Some authors have referred to the so-called "Robin Hood paradox", whereby redistribution is least when it is most needed (Lindert 2004). In fact, however, the reverse causality may be true: the low spending on social transfers in a high-income country like the United States may help explain its above-average income inequality.

### *Spending on social transfers has tended to decline as a percentage of GDP, except in Latin America and some Asian and Middle Eastern countries*

There are wide regional variations in social transfer spending (fig. 5.2). OECD high-income countries spend the most, on average, though their spending decreased slightly over the period 1990-2004, from 13.5 per cent to 12.7 per cent of GDP. Spending on social transfers was also relatively high in the former communist countries, at around 9 per cent of GDP, although there, too, there was a marked decline in spending over the period 1990-2004. Among the developing countries, spending on social transfers is highest in Latin America, where it increased over the period 1990-2004 from 3.6 per cent to 4.2 per cent. Latin America is closely followed by the Middle East and North Africa. Developing countries in Asia and sub-Saharan Africa spend the least, at around 1 per cent of GDP, although within the sub-Saharan Africa region, two countries defy the regional trend: Mauritius and Seychelles. Mauritius devoted 3.6 per cent of its GDP to social transfers in 1990-94 and 5.2 per cent in 2000-04, while in Seychelles the figure stayed stable at around 7.55 per cent. If we exclude these two small island countries, however, the average for sub-Saharan Africa is reduced to 0.83 per cent of GDP for the first period and 0.73 per cent for the second.

**Figure 5.2. Trends in spending on social transfers (% GDP)**




Source: IILS estimates based on International Monetary Fund 2007 and Global Development Network Growth Database, available at: http://www.nyu.edu/fas/institute/dri/global%20development%20network%20growth%20database.htm [18 July 2008]; GDP from World Bank, World Development Indicators 2008.

These data show that social transfers as a percentage of GDP declined in developed countries but increased in most developing countries over the 15-year period, with the exception of Africa, where average spending on social transfers slightly decreased.

## The role of taxes

Taxes are generally used to raise revenues for government, provide incentives for certain activities and correct market failures. Of particular relevance to this report is their role in redistributing income for the benefit of people on low incomes.[6]

The approach to taxation has changed over time. During the 1950s and 1960s, the distributive and developmental role of taxes was widely acknowledged. From the 1970s on, however, there has been growing attention to the perverse effects of excessively high taxes on economic activity and incomes. In addition, the international dimension of taxes has become increasingly visible. In particular, taxes may affect the location decisions of firms and high-income groups. As a result, it is argued that there may be a risk of tax competition among countries that try to attract foreign capital and wealthy individuals.

### *The tax system relies increasingly on indirect taxes and less on income taxes*

The data reveal that the contribution of the various taxes to total government revenue has changed since the early 1990s.

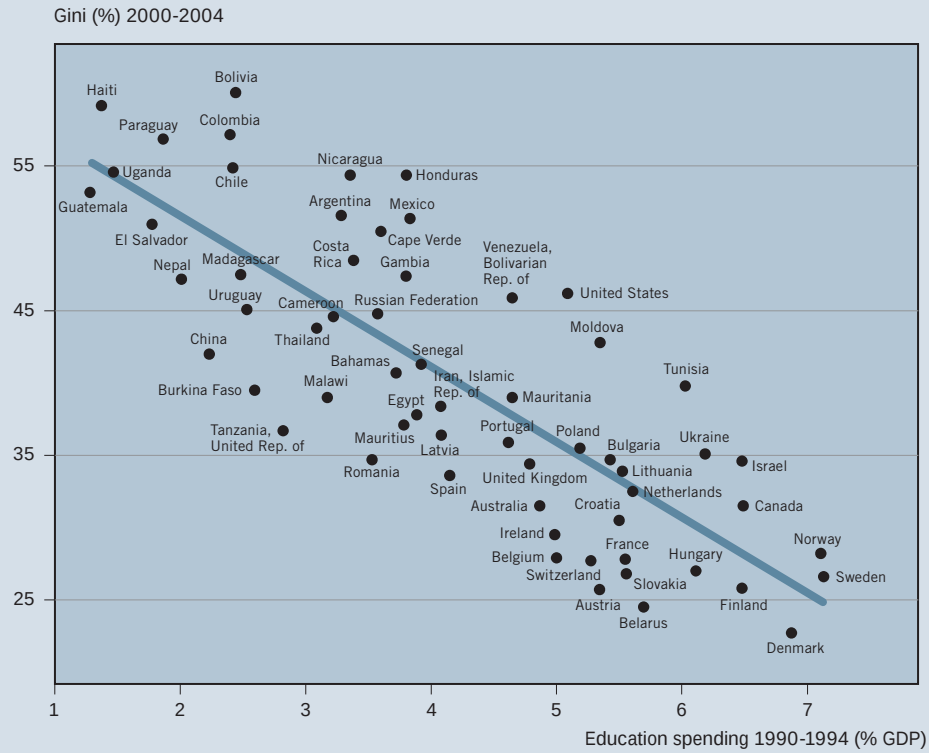
First, the revenue contribution of taxes on goods and services – including value added tax (VAT) – has increased in a majority of countries, whatever their level of economic development. In high-income countries, the share of taxes on goods and services in total government revenues grew by 8.5 percentage points between the periods 1990-94 and 2000-04. In middle-income and low-income countries, the increase was 11.5 percentage points and 4 percentage points, respectively.

6. Musgrave (1959) described taxation as playing various roles: stabilization, allocation and distribution. Stabilization refers to counter-cyclic roles that governments engage in to smooth economic activity and consumption. Allocation refers to the provision of public goods and distribution refers to transferring income from the rich to the poor for a more equitable society.

## Box 5.1. The role of education and health

Although this chapter is primarily concerned with social transfers, other government programmes may also have a significant effect on income inequality. This is particularly the case with education and health programmes, which directly support low-income groups, since they tend to benefit all individuals more or less equally and replace private spending on health care and schooling. In addition, education and health programmes may help redistributive opportunities over the long run, enhancing human capital in all groups and thus changing income capabilities. Moreover, spending on education and health is unlikely to create significant economic distortions: on the contrary, it is likely to be associated with higher economic potential, while also addressing existing inequalities. The fact is that countries that spent more on education in the early 1990s tend to have lower income inequality in the 2000s (see fig. 5.3).

**Figure 5.3. Education spending and inequality**




Source: IILS estimates; education spending from World Bank 2008

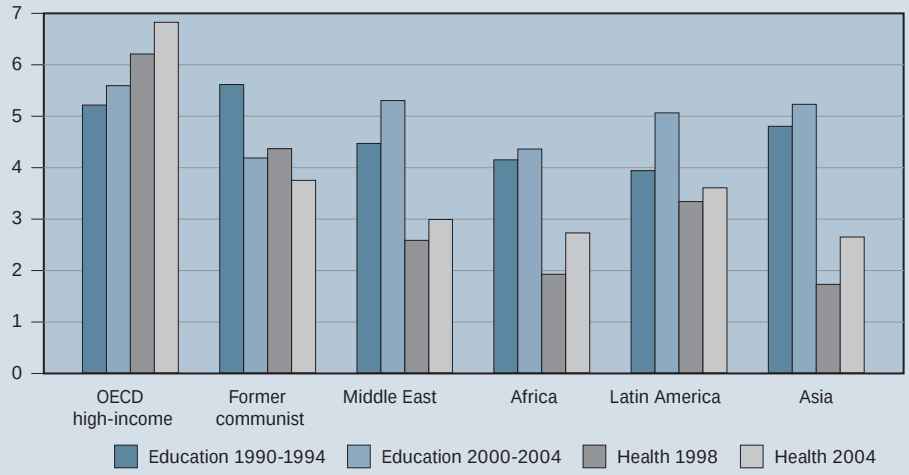
Second, the share of taxes on income, profits and capital gains in total government revenues has decreased in all the country groups. For high-income countries, this figure decreased by 1 percentage point between the periods 1990-94 and 2000-04. In middle-income and low-income countries, the decrease was 3.5 percentage points and 1.7 percentage points, respectively.

Third, the contribution of taxes from international trade also decreased considerably in all the groups. It used to be an important source of revenue for most of the developing countries, but, as a result of trade liberalization, revenues from trade taxes as a percentage of total government revenues fell by 6.5 percentage points between the periods 1990-94 and 2000-04, and by as much as 8.5 points in developed countries and 10.7 points in middle-income countries.

The above trends seem to reflect deliberate policy choices. For example, the average corporate tax rate for the world as a whole decreased from 38 per cent in 1993 to less than

Many countries have tried to provide universal health and education services in order to reduce inequality. Access to basic education and primary health care has even become a "right" enshrined in the Constitution of several countries. Education and health spending has increased in all regions, except in the former communist countries (Eastern Europe and Central Asia) where both education and health spending declined over the 1990s and 2000s from 5.6 per cent to 4.2 per cent of GDP (see fig. 5.4). Over the same period, education spending increased from 3.8 per cent to 5.1 per cent in Latin America, from 4.6 to 5.4 per cent in the Middle East and from 4.1 per cent to 5.1 per cent in Asia. Africa saw the smallest increase (from 4.2 per cent to 4.4 per cent of GDP). As for health spending, the OECD high-income countries spend around 7 per cent of GDP on health, while the figure in the developing world is around 3 per cent . Among the developing countries, Latin America spends the most, at 3.6 per cent of GDP. The figure is the same for the former communist countries.

**Figure 5.4. Trends in education and health spending (% GDP)**



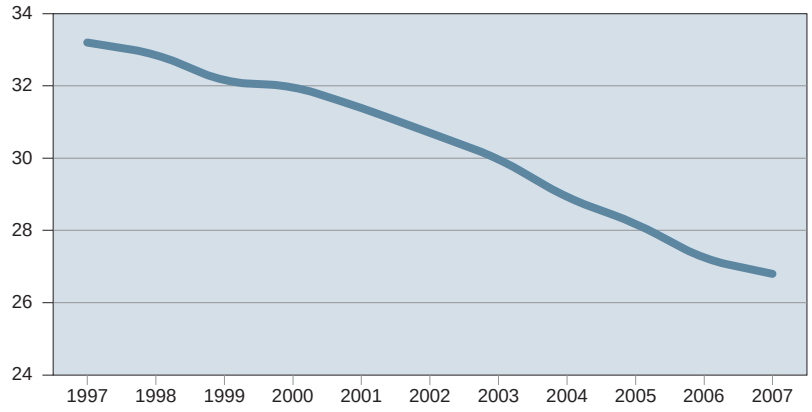

Source: Education spending from World Bank, World Development Indicators 2008 (average for each period); health spending from World Health Organization (WHO) national health accounts (http://www.who.int/nha/en/).

Where redistribution is concerned, the design of education and health programmes is important. For instance, research has shown that public spending on primary and secondary education is generally progressive, especially in developing countries, as is spending on primary health care. Such spending, which mainly benefits poor households, can therefore reduce inequality. By contrast public spending on tertiary education and hospital services is generally of disproportionate benefit to the rich.

26.8 per cent in 2007 (KPMG 2008) (fig. 5.5).[7] Remarkably, the rate declined in 78 of the 97 countries for which data are available.[8] The reduction was more homogeneous and pronounced in OECD countries than in the developing countries of Asia and Latin America, where it also declined but not uniformly. For the Africa region, there are data only for South Africa, Mauritius, Zambia, Mozambique and Botswana. In South Africa, corporate tax rates decreased from 37.8 per cent in 2001 to 36.9 per cent in 2007; in Mauritius, they decreased from 25 per cent in 2005 to 22.5 per cent in 2007, and Zambia, Mozambique and Botswana, they remained stable at 35 per cent, 32 per cent and 25 per cent, respectively.[9]

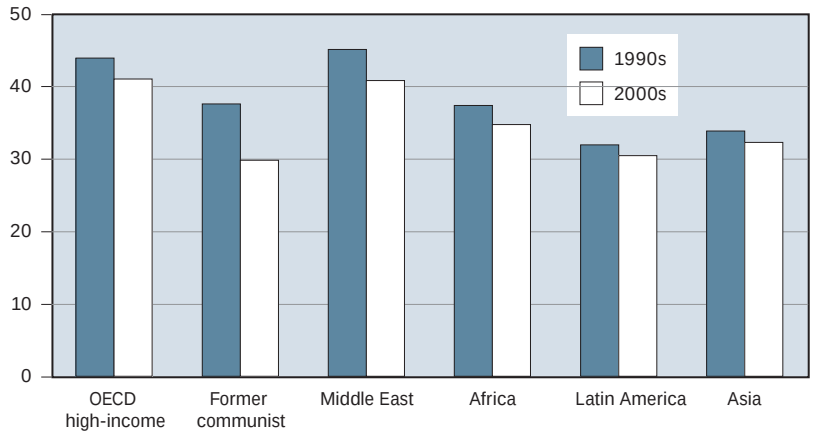
7. As earlier noted, however, data are mainly available from 1993 for OECD countries and from 1997 for other countries. Globally, corporate tax decreased from 32.2 per cent in 1997 to 26.8 per cent in 2007.
8. It increased in only seven countries and remained the same in 12 countries.
9. Corporate tax rates have been declining since the mid-1980s, a trend which started in the United Kingdom (KPMG 2008). It is argued that countries reduce corporate taxes in order to compete for business, tax receipts and job creation.

**Figure 5.5. Global corporate tax rates, 1997-2007 (%)**



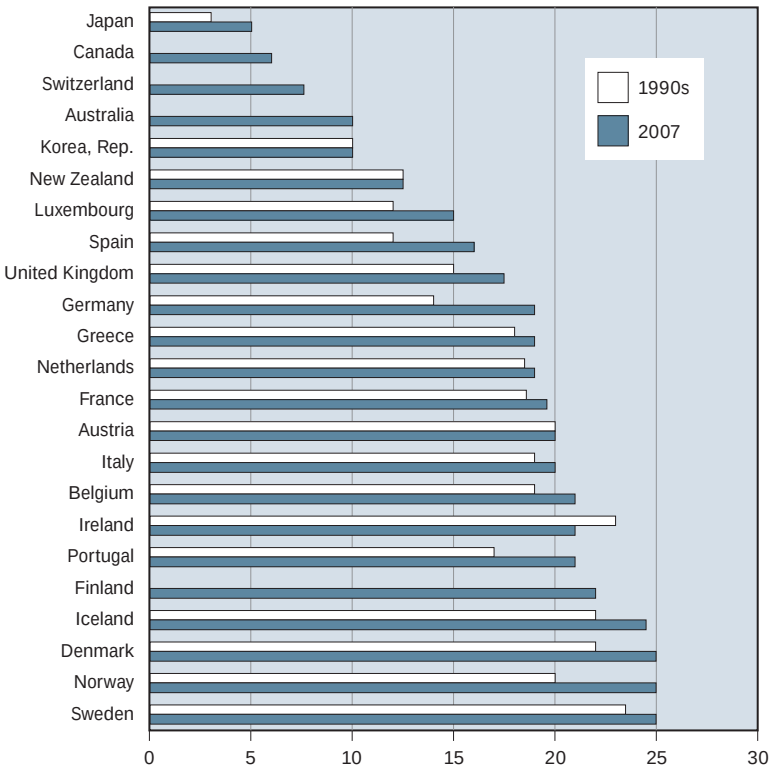

Source: KPMG 2008

**Figure 5.6. Top marginal individual income taxes, worldwide (%)**




Source: World Bank, World Development Indicators 2008 (average for each period).

**Figure 5.7. VAT Trends in OECD countries, 1990-2007 (%)**




Source: KPMG 2008 and OECD database (http://www.oecd.org/dataoecd/12/13/34674429.xls)

The lowest corporate tax rates in 2007 were found in Cyprus, Bulgaria and Paraguay at 10 per cent followed by Ireland at 12.5 per cent. The highest rates – 55 per cent – are found in the oil-producing countries, Kuwait and United Arab Emirates, followed by the OECD countries Japan (41 per cent), USA (40 per cent) and Germany (38 per cent). The high-spending welfare states (Denmark, Finland, Norway and Sweden) have taxes at around 28 per cent. This confirms Lindert's (2004) argument, that welfare states generally have a more pro-growth tax system and business-friendly environment than low-spending countries like the United States and Japan. Corporate tax rates are generally higher in low-income than in high-income countries. In the seven low-income countries for which data are available,[10] corporate tax rates have remained stable at about 33 per cent since 1997. No country has increased corporate tax rates since 2000, although some OECD countries did so slightly in the mid-1990s (these being Australia, Canada, Finland, France, Greece, Italy and Luxembourg). Only seven countries have increased their corporate tax rate since 1997: Argentina, Brazil, Chile, Dominican Republic, Hong Kong, China Pakistan, and Papua New Guinea. The general decline in corporate taxes worldwide is based on the assumption that higher corporate taxes discourage private sector investment and are therefore harmful for economic growth (Johansson et al. 2008).

Taxes on the highest personal incomes have also decreased (see fig. 5.6). Since the early 1990s, they have fallen by 3 percentage points, on average. Decreases have been recorded in 66 of the 110 countries for which data are available. There were slight increases in 28 countries and rates were stable in the remaining 16. The former communist countries tend to have the lowest top individual taxes, followed by Latin America and Asia, while the OECD high-income countries and the Middle Eastern countries have the highest rates, averaging over 40 per cent.

Cuts in corporate tax and top personal income tax have been accompanied by increased indirect taxation, in particular by higher VAT rates.

In 2007, the global average VAT rate was 17 per cent. The European countries have the highest rates, at around 20 per cent, followed by the OECD countries at 18 per cent (see fig. 5.7). The average rate is 11 per cent in the Asia and Pacific region and 14 per cent in Latin America. Among individual countries, Denmark, Norway and Sweden have the highest rate, at 25 per cent, followed by Iceland at 24.5 per cent, Uruguay at 23 per cent, Finland, Croatia and Poland at 22 per cent, and Argentina, Belgium and Portugal at 21 per cent. The lowest rates – 5 per cent – are found in Japan, Canada, Panama and Taiwan (China). Some countries, including the United States, still do not have VAT.

VAT rates generally increased in the 1990s, except in Ireland, but stabilized in the 2000s. In Germany, it has increased continually, rising from 13 per cent in 1980 to 19 per cent in 2007; the same is true in Norway, where it increased from 20 per cent to 25 per cent. In the Latin American region, the rate rose steadily, from 10 per cent in 1980 to 15 per cent in 2007. In other developing countries, it stayed stable over the period 1990-2007.

In many countries, social spending is funded not only through taxation, but also through social contributions, including social security contributions by employees, employers and self-employed individuals. This is significant, in that social contributions are regressive in some countries and thus tax low-paid employment disproportionately. Looking at the trend since the 1990s, we find that social contributions as a percentage of revenue have increased from an average of 18 per cent to 20 per cent in 2004. The proportion is much higher in developed countries, rising from 25 per cent in the 1990s to over 27 per cent in 2004. In the developing countries, it increased from 13 per cent to 16 per cent.

10. These are Bangladesh, India, Mozambique, Pakistan, Papua New Guinea, Viet Nam and Zambia.

## B. To what extent do taxes and social transfers shape income distribution?

The previous section presented general trends in social transfers and taxes, and their relationship with income inequality. This section examines in detail the extent to which social transfers and taxes shape income distribution in different regions and countries. It focuses on countries for which data exist on individuals' market income (that is, income before taxes and social transfers) and final income (income after taxes and social transfers).

### Redistribution in developed countries

#### *The extent of fiscal redistribution has remained broadly constant*

Taken as a whole, taxes and social transfers have failed to stop the trend of rising market income inequality in developed countries. Data for 14 developed countries based on the Luxembourg Income Study (LIS) show that, since the 1980s, the Gini coefficient on final income has risen almost as much as that on market income.[11]

Except in Switzerland where it remained stable, income inequality before tax increased in the countries surveyed between the early 1980s and late 1990s. The average Gini coefficient before tax for all 14 countries rose from 0.41 in the 1980s to 0.45 in the late 1990s, increasing by 3.4 per cent points (see fig. 5.8).

Inequality in terms of disposable income also increased for most of the countries (except for Denmark, the Netherlands and Switzerland, where it decreased, and France where it remained stable). The Gini index for disposable income inequality averaged 0.26 in the 1980s and increased by 0.9 percentage points to reach 0.28 in the late 1990s.

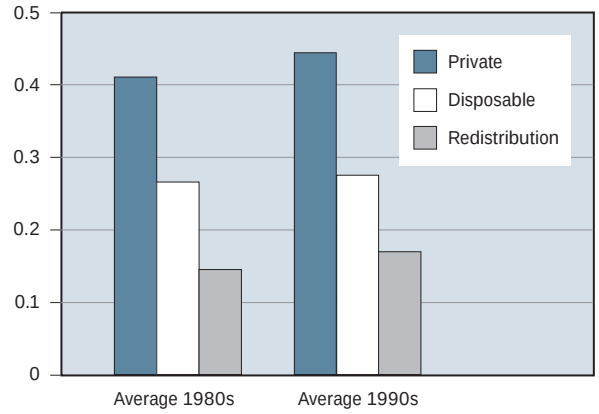
As a result, the extent of fiscal redistribution also increased, on average, only slightly over the same period from 0.15 to 0.17 (increasing by 2.5 percentage points [12] and actually decreased in two countries, Sweden and the Netherlands, where both private income inequality and disposable income inequality have decreased. These two countries, together with Belgium, Denmark and Finland, redistribute the most, compared to the OECD average. Meanwhile, the lowest level of distribution takes place in Australia, Canada, Switzerland and the United States. The slight average increase in fiscal redistribution has not generally kept pace with the rapidly increasing levels of inequality. In other words and to be precise, the private income Gini increased by 3.4 per cent, while redistribution only increased by 2.5 per cent, resulting in a net increase of inequality by 0.9 percentage points.

These findings on redistribution are supported by the literature, such as Estes (2004), which identified the Nordic countries (Denmark, Finland, Norway and Sweden) as "social leaders" within the developed countries, and Esping-Andersen (1990), which posited three models of the welfare state: the socio-democrats (the Nordic countries and the Netherlands), the liberal (Australia, Canada, Japan, Switzerland and the United States) and the

11. LIS is an impressive and very valuable data set on fiscal redistribution (see Mahler and Jesuit 2006). The data set, which contains 68 data points for 14 OECD countries, covering the period from the late 1970s to 2004, includes: a measure of fiscal redistribution (pre-tax minus after-tax Gini index); the share of redistribution explained by progressive taxation; the share of redistribution explained by social transfers (disaggregated by pensions, unemployment and other benefits); a measure of the overall size of social transfers (average transfers / pre-tax household income); a measure of how well social transfers are targeted towards low-income groups (Kakwani's "index of concentration"); and the extent to which taxes and social transfers reduce poverty. There are, however, some shortcomings in the data set. For example, it includes only direct taxes (income taxes and payroll taxes). Indirect taxes, such as VAT, which are likely to be more regressive, are omitted.

12. Fiscal redistribution is represented by the difference between the Gini index for final income and the Gini index for market income.

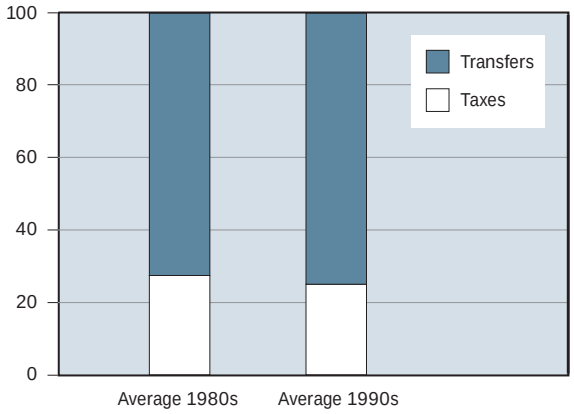
**Figure 5.8 Inequality and redistribution in OECD countries, 1980s and 1990s**




A definition of private sector income is given in footnote 3. Disposable income means private income plus social transfers (retirement benefits, child and family allowances, unemployment compensation, sickness, maternity, disability, accident or other social insurance and benefits in cash or in kind), once direct taxes – income taxes and mandatory social insurance contributions – have been deducted. Fiscal distribution is the difference between the Gini coefficient in private and in disposable income.

Source: Mahler and Jesuit 2006

**Figure 5.9. Share of taxes and transfers in redistribution (%)**




Source: Mahler and Jesuit 2006

conservative (Austria, Belgium, France, Germany and Italy). Esping-Andersen's work is one of the most important and most frequently cited contributions to recent debates on social policy and welfare. Other researchers using the LIS data set drew similar conclusions (Kenworthy and Pontusson 2005; Pontusson 2005; Mahler and Jesuit 2006).

The fact that the Nordic countries perform well on redistribution conforms with their reputation as generous welfare states (Esping-Andersen 1990; Kangas and Palme 2005). France too, as the literature shows, stands out as a generous welfare state in terms of its net public social spending, at 30 per cent of GDP (OECD 2006, p. 79).

### *Social transfers, not taxes, are the main source of redistribution*

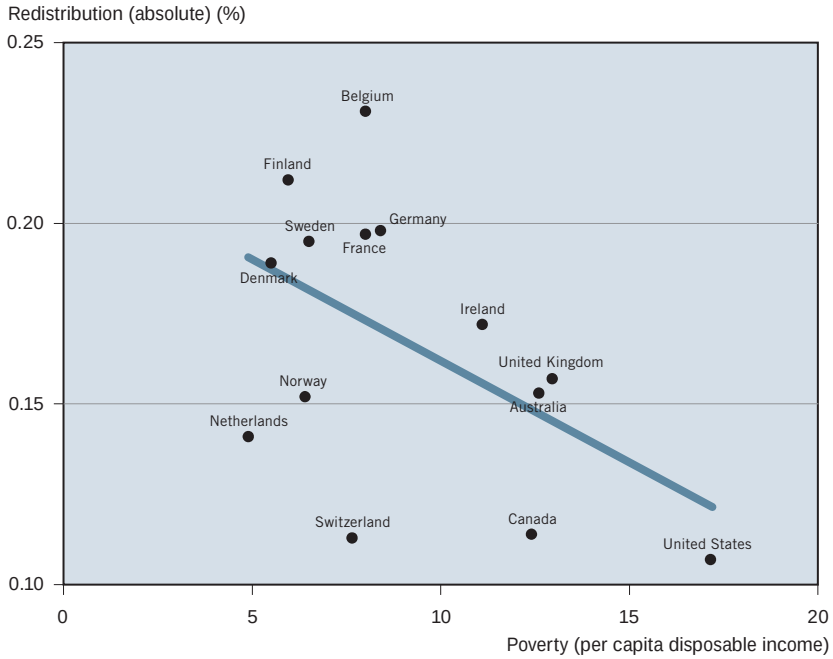
According to a study (Mahler and Jesuit 2006), social transfers generally have a greater impact on redistribution than taxes. On average, transfers contribute to 75 per cent of fiscal distribution in OECD countries, compared to only 25 per cent for taxes (see fig. 5.9). Moreover, the share of fiscal distribution through taxes decreased from 27 per cent in 1980s to 24 per cent in the late 1990s, while the contribution of transfers increased in the same proportion.

Low-inequality countries (the Nordic countries, Germany, Belgium and the Netherlands) rely heavily on social transfers as a redistribution device. By contrast, countries with higher inequality (Australia, Canada and the United States) rely more heavily on taxes.

The strong redistributive effects of social transfers can also be illustrated by considering the links between transfers and poverty (see fig. 5.10). Countries that have higher levels of poverty –individuals with lower disposable income – tend to redistribute less. For example, the United States, which has the highest level of poverty in the developed world redistributes the least, while Denmark, Finland and Sweden, which have low levels of poverty, redistribute the most.[13]

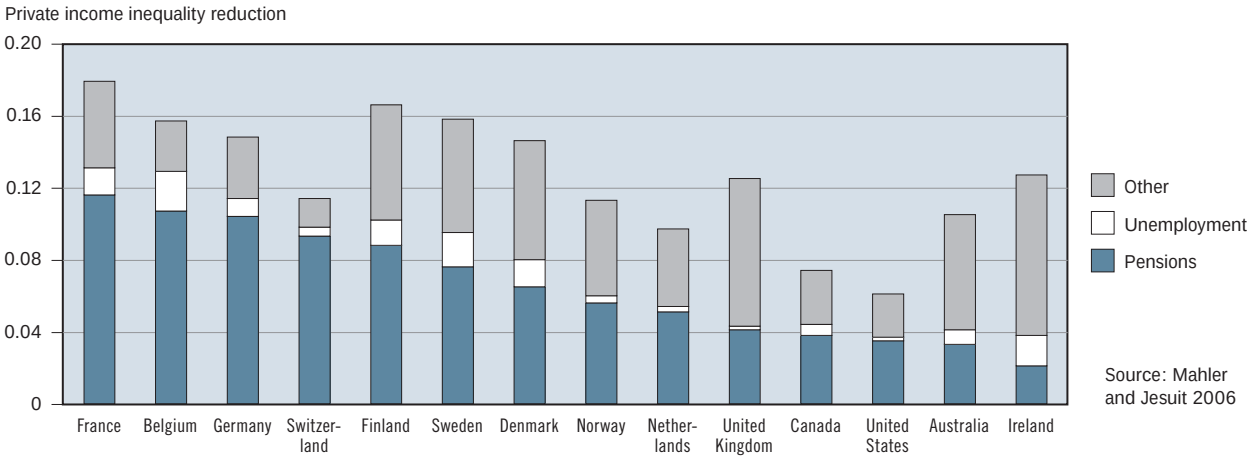
13. See Prasad (2008) for more details.

### Figure 5.10. Redistribution and poverty



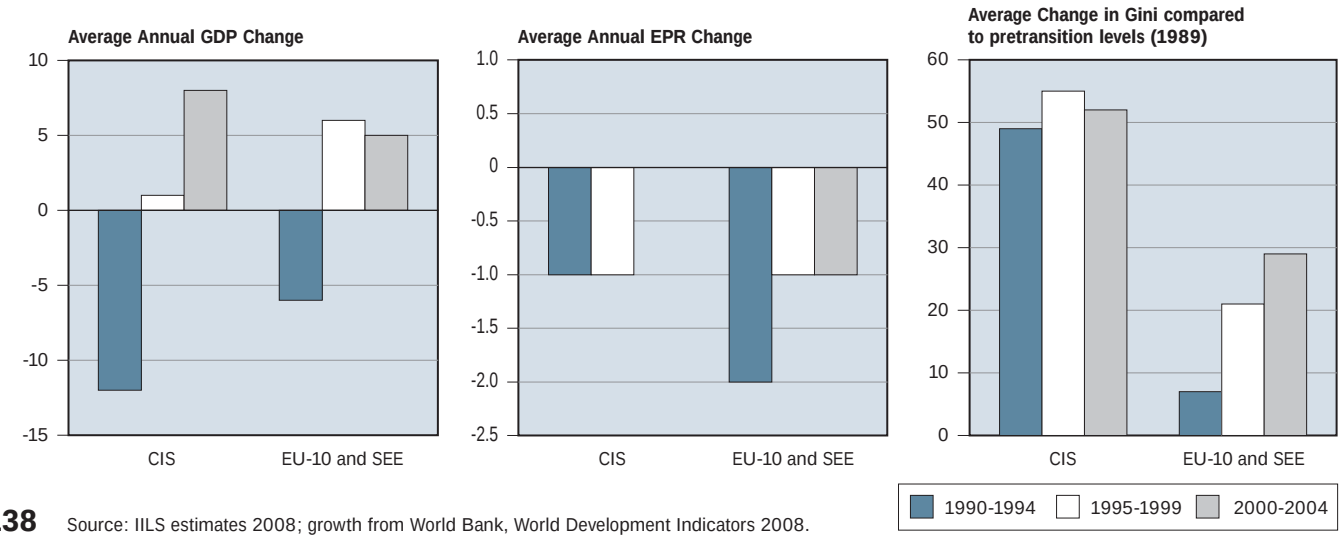

Source: Mahler and Jesuit 2006 on the basis of LIS for latest years.

### Figure 5.11. Sectoral contribution to reduced income inequality, latest available data




Source: Mahler and Jesuit 2006

### Figure 5.12. Change in inequality, EPR and growth in countries with economies in transition, 1990-2004 (%)




Source: IILS estimates 2008; growth from World Bank, World Development Indicators 2008.

### *Pensions have a strong redistributive effect in developed countries*

More than half the redistributive impact of social transfers comes from pension benefits (and as much as 80 per cent or more in Switzerland and 70 per cent in Germany) (see fig. 5.11). As for unemployment transfers, their contribution to redistribution is around 7 per cent. Other benefits such as social assistance and sickness benefits are responsible for around a third of redistribution.

## Redistribution in countries with economies in transition

In countries with economies in transition, inequality has typically increased since the 1990s (though Slovenia is a notable exception to this trend). In Central and Eastern Europe, inequality has grown at a gradual and steady rate on average, whereas in the Commonwealth of Independent States (CIS) inequality initially increased sharply, peaked in the late 1990s and, since this time, stabilized or even moderately declined (see fig. 5.12).

After the initial economic crisis brought on by transition, many Central and Eastern European states were able to stimulate growth and some, employment; despite these successes, slow or non-existent employment growth and high unemployment continue to be problems in the region. By contrast, while the CIS economies were harder hit by transition, since the late 1990s they have been able to increase growth and create employment.

The factors that contributed to increased income inequality are beyond the scope of this chapter, which primarily focuses on redistributive policies. Different regions chose different paths with social protection spending. The EU-accession countries and South Eastern Europe (SEE) focused on social security and approached social assistance as a residual benefit for those not covered by the broadly-based pensions, unemployment and child allowance benefits. Countries like Poland and Hungary retained their safety nets in an attempt to make the economic reforms more palatable. Their broad coverage has meant that the programs have strong political support, but lack funds.[14] Middle-income CIS countries have also retained social insurance schemes, in addition to a wide range of subsidies for various goods and an array of benefits targeted at particular groups, like war veterans. By contrast, low-income CIS countries faced drastic reductions in government revenue and, thus, had to reduce their safety nets and focus spending more intensely on targeted social assistance.

Utilizing a variety of different inequality indicators, Giammetteo (2006) finds that social transfers and taxes reduced income inequality in Poland, Hungary, and to a lesser extent Russia (see table 5.1). Similar results have been found for other central European countries (Cerami 2003).

**Table 5.1 Inequality and redistribution in countries with economies in transition**

| | Poland | | | Russia | | | Hungary | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1992 | 1995 | 1999 | 1992 | 1995 | 2000 | 1991 | 1994 | 1999 |
| Market income Gini | 0.341 | 0.391 | 0.372 | 0.418 | 0.499 | 0.493 | 0.386 | 0.422 | 0.478 |
| Disposal income Gini | 0.27 | 0.301 | 0.284 | 0.393 | 0.445 | 0.435 | 0.28 | 0.32 | 0.291 |

Source: Giammatteo 2006

14. Indeed, most countries in this region had to reform their social insurance schemes in the late 1990s to address fiscal constraints.

In most former communist countries, pensions dominate public transfer spending. For example, in 2005 they made up 70% of social protection spending in the EU-8 countries and 50% in the poorest CIS countries (World Bank 2005). While pensions are generally not distributed equally, their distribution is more equitable than market incomes, thus they help reduce inequity (Mitra and Yemtsov 2006). Family and child assistance benefits tend to be progressive in the region, especially in CIS countries (Fox 2003).[15] Generous pre-transition expenditure on health and education and other services left a legacy of high human development.

Limited evidence suggests that post-transition tax reforms have been in the favour of more equality (Mitra and Yemtsov 2006). Looking at Poland, Hungary and Russia, Giammetteo (2006) finds that direct taxes reduce income inequality, though their impact is less than that of transfers (see table 5.1). In Central Asia and Russia, economic transition brought an implosion of tax revenues, with a shrinking tax base and poor tax collection.[16] In response, many countries reduced social spending and some reformed their tax system. For instance, in Russia in 2000, a flat income tax of 13% was introduced, along with higher flat taxes for corporations. The implications of such reforms for income inequality have not been thoroughly explored.

New challenges lie ahead for the transition economies. Unemployment must be addressed across the region. With the energy sector boom in Russia and Central Asia, regional inequality has increased, with some provinces benefiting from the new wealth disproportionately.[17] On a more positive note, there appears to be a way forward for the region: tellingly in these countries, increased employment has typically coincided with increased equality (World Bank 2005), suggesting the answer may be found in a more holistic approach – one that uses economic and social policy together to pursue growth and equity.

## Redistribution in developing countries

In the developing countries, not only is the tax base narrow, but the bulk of employment is in the informal sector, while social transfers are very limited (except in Latin America, where social transfers are higher than in other developing countries). The redistributive role of tax in developing countries is negligible, because tax revenue is dominated by indirect taxes (such as consumption taxes), which are regressive. While social transfers have the potential of reducing inequality, progressive programmes (such as universal pension schemes, social assistance) are underfunded and regressive transfer schemes are dominant.

There is no data set comparable to LIS for developing countries and very few studies have been conducted to analyse welfare regimes and social policy.[18] The combined results of a number of different studies will therefore be used to show the impact of taxation and social transfers on inequality.

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15. However their small size in the EU-accession countries limits their impact.
16. Some exceptions to this trend exist in the CIS countries. For instance, Belarus has been able to maintain its level of tax revenue (Gerry and Mickiewicz 2008).
17. Notably, in many CIS countries, low labour mobility may not be able to counteract such regional inequity.
18. Exceptions include Gough and Wood (2004), Haggard and Kaufman (2008) and United Nations Research Institute for Social Development (UNRISD) research on "Social policy in development contexts" which produced several regional and thematic books including one for Africa, one for Latin America and one for East Asia.

### *Latin America*

Latin America is one of the most unequal regions of the world in terms of income, access to assets, social services and even political participation. There are extensive social insurance programmes with wide employment protection and public provision of education and health care, but minimal social assistance programmes (Barrientos 2004). As pointed out in the first section, Latin America's social transfers are higher than other developing countries. Looking through a historical lens, Lindert (2004) showed that Latin America was indeed unusual in the developing world: it "spen[t] more on social transfers than did the Europeans before 1930, when their income levels and age distributions were comparable" (p. 219). Latin American tax systems are "slightly progressive at best", but, within the region, some systems are regressive overall, if indirect taxes are included (Lindert, Skoufias and Shapiro 2006).

What is the impact of social transfers on income inequality in Latin America? Goni et al. (2008) address this question and find that in six countries (Argentina, Brazil, Chile, Colombia, Mexico and Peru) the impact is minimal, reducing the Gini coefficient by around 1.4 points, on average (see fig. 5.13). (This stands in stark contrast to the average 12-point reduction in the Gini coefficient in OECD countries resulting from public transfers as shown above.) Colombia is the most successful of the six countries in this regard, having managed to reduce its inequality by 3.4 points by virtue of such public transfers as cash transfers, pensions, unemployment insurance and social assistance. Brazil is next, with a Gini reduction of 1.9 points (see box 5.2), and then comes Chile with 1.5 points, closely followed by Argentina. In Peru, inequality actually increased by 0.2 points after social transfers.

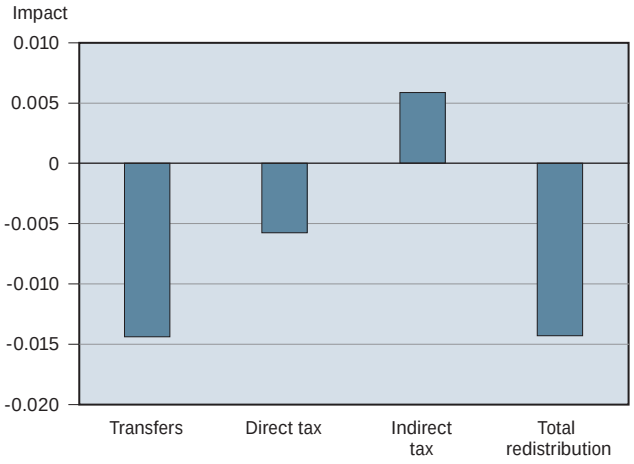
Redistribution through direct taxes has even less of an impact on inequality, with an average 0.6 per cent decline in the Gini coefficient for the six countries (see fig. 5.13). The highest amount of redistribution through taxes takes place in Colombia, followed by Mexico, Peru, Argentina and Chile. As in most countries, income taxes in the six countries are progressive but their contribution to government revenue is smaller than that of indirect taxes.

Redistribution through the fiscal system is also hampered by the effect of indirect taxes and the tax burden on the poor. For example, if indirect taxes such as VAT, excise tax, and import tariffs are included in the analysis, income inequality increased in all the countries, by 0.5 points on average by around 1.4 points in Peru, 0.5 in Brazil, 0.8 in Chile and 0.7 in Colombia.

Looking at individual cases, we see that the tax system slightly increased income inequality in Chile, where the Gini coefficient increased from 0.488 in 1993 to 0.496 in 1996 (Engel, Galetovic and Raddatz 1999). One reason for this is the effect of indirect taxes such as VAT, excise tax and import tariffs. The poorest devote around 11 per cent of their income to VAT, the rich only 6 per cent. It should be noted, however, that, as stated earlier, indirect taxes in some developed countries like the United Kingdom are even more regressive, increasing inequality by around 4 per cent. If direct and indirect taxes are taken together for the Latin American countries, the post-tax effect on inequality becomes neutral, on average. Only Mexico, Argentina and Colombia have a tax system that is progressive overall and slightly reduces inequality, with a reduction of the Gini coefficient of less than 1 point (Goni et al. 2008).

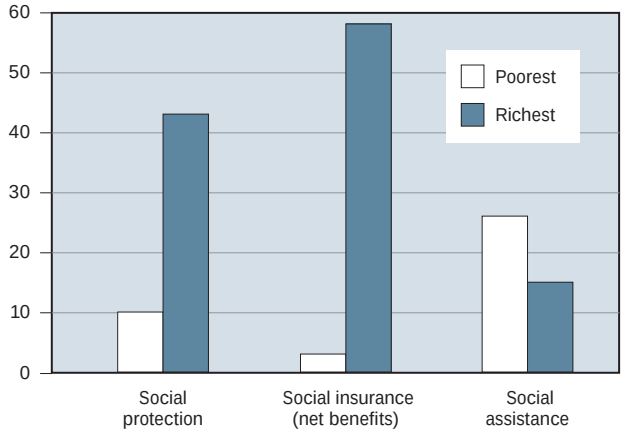
The tax burden on the poor also reduces the impact of redistribution. For example, Goni and his co-authors (ibid.) find that the bottom quintiles have a comparatively higher tax burden than the top quintiles. In Argentina, the bottom quintile devotes over 20 per cent of its household revenue to taxes (income, VAT and others), compared to 19 per cent for the top quintile. In other countries a similar trend is observed: in Chile, the poor pay 15 per cent and the rich 12 per cent, while in Peru the poor pay over 20 per cent, the rich pay 13 per cent and the middle-income groups pay around 8 per cent. Colombia and

**Figure 5.13. Redistributive impact (average) of transfers and taxes on inequality in six Latin American countries**




Source: Goni, et al. 2008

**Figure 5.14. Absolute incidence of social security provision in eight countries in Latin America (%)**




Source: Lindert, Skoufias and Shapiro. 2006

Mexico have a more or less equal tax burden (13 per cent for both rich and poor, while the middle-income groups pay around 8 per cent.)

Thus, if taxes (both direct and indirect) and public transfers are taken into account, we find that overall redistribution in Latin America is minimal. On average, the six Latin American countries considered are able to reduce income inequality through taxes and transfers by only 1.4 point (see fig. 5.13) as against to around 16 points in OECD countries (if only public transfers and direct taxes are included). The reduction in inequality ranges from over 4 per cent in Colombia to 2 per cent in Argentina and 1.5 per cent in Mexico, and even less in Brazil and Chile. In Peru, inequality actually increases by 0.8 per cent after taxes and public transfers are taken into account.

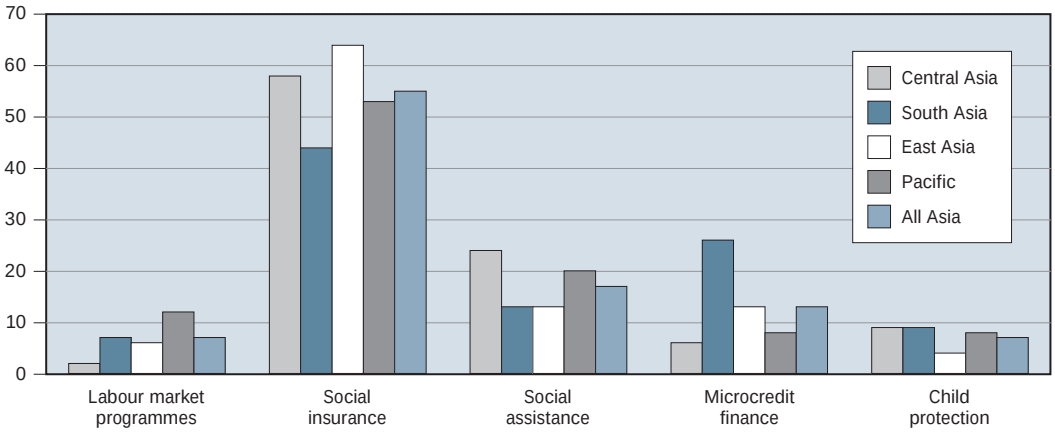
### *Which kind of social transfers?*

The data reveal that public social protection transfers mostly benefit richer people (Lindert, Skoufias and Shapiro 2006; United Nations 2006). In Latin America, most of the poor are in informal sector employment and not included in any social protection scheme. For example, in eight Latin American countries[19], only 10 per cent of social protection transfers go to the poorest quintile, compared to 43 per cent that go to the richest (see fig. 5.14). Social insurance is even more regressive, as the poorest quintile receives only 2 per cent of transfers, whereas the richest receives 58 per cent. This is not unexpected, since it is formal sector workers who contribute to social security, through social insurance programmes. There is no universal pension coverage system in the developing countries of Latin America, although in Brazil there are attempts to incorporate poor households into the pension system (see box 5.2) (Uruguay and Bolivia have near-universal pension systems).

This does not mean that all social transfers are regressive. Social assistance spending is progressive and pensions may be provided for low-income households, as in Brazil. About 26 per cent of social assistance transfers go to the lowest quintiles. However, of the 7.3 per cent of GDP that is spent on social transfers programmes in the countries under consideration, 6.3 per cent goes to social insurance (pensions and unemployment insurance)

19. Argentina, Brazil, Chile, Colombia, Dominican Republic, Guyana, Mexico and Peru.

**Figure 5.15. Social protection expenditure, by category, in Asia and the Pacific (%)**




Source: Baulch et al. 2008

and only 1 per cent to social assistance programmes (Goni et al. 2008). Such a low level of public spending suggests that the impact on inequality and poverty is minimal.

Conditional cash transfers to poor families have been regarded as an effective means of reducing poverty in Latin America. These programmes started in Mexico and Brazil in the mid-1990s, focusing on school attendance and health care. Similar initiatives were adopted subsequently in other countries in the region – in Argentina, Chile, Colombia, Dominican Republic, Ecuador, Honduras, and Jamaica – and other parts of the world, such as Bangladesh, Burkina Faso, Cambodia, Ethiopia, Lesotho, Pakistan and Turkey. Conditional cash transfers are very progressive, in that about 75 per cent of the spending goes to the two bottom quintiles (ibid.).

### *Asia and the Pacific*

Income inequality is relatively high in the Asia and Pacific region. There are some countries which have managed to reduce inequality through economic growth and employment generation: this is the East Asian productivist model, where social policy is an instrument for economic growth and nation building, social security is largely provided by the extended family network (Gough 2004; Lindert 2004) and social spending is relatively low, compared with other developing countries (see box 5.3 on Malaysia.) The South Asia region, on the other hand, represents a different redistributive model, based on "informal security", where reliance on networks, linkages, informal rules and personal favours is widespread (Gough and Wood 2004). This model is also characterized by a highly organized community-based welfare system and involvement of development organizations in the provision of welfare, together with high levels of remittance flows.

According an Asian Development Bank report (Baulch et al 2008), only 17 per cent of social protection expenditure in the Asia and Pacific region goes on social assistance programmes (ibid.).[20] Fiji has the highest proportion, at around 49 per cent, whereas

20. The Asian Development Bank (ADB) recently ventured into creating a social protection index for 31 countries from the Asia and Pacific region. The ADB defines social protection as "the set of policies designed to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people's exposure to risks, and enhancing their capacity to protect themselves against hazards and the interruptions/loss of income" (Ortiz 2001). Consequently, it used data from five broad areas: labour market policies and programmes, social insurance, social assistance, micro- or area-based schemes, and child protection. In its final calculation, the ADB used the following indicators to construct the social protection index:

## Box 5.2. Brazil

Brazil has received praise for its economic and social development performance between 1990 and the 2000s. It managed to reduce income inequality by around 2 per cent, and at the same time increase employment by around 2 per cent per year and generate economic growth (see fig. 5.16). Its employment to population ratio has been constant at around 62 per cent. How has it managed to do this?

**Figure 5.16. Brazil: Change in inequality, employment and growth, 1990-2006 (%)**


Source: IILS estimates 2008; growth from World Bank 2008

Brazil has a relatively high level of social spending, at around 25 per cent of GDP (pensions alone account for 11 per cent). Social policy has been a key component of the developmental welfare system, which is organized under three pillars: universal provision of education and health; some social assistance for the poor; and contributory social security schemes and provision by the private sector (Draibe 2007). Health and education expenditure represents around 40 per cent of total public spending on social programmes, while social insurance programme expenditure represents around 50 per cent.

Social benefits largely take the form of contributory social insurances programmes, while social assistance programmes are very limited. It is estimated that pensions alone account for 85 per cent of total cash transfers to households, with other contributory benefits making

Bhutan has no social expenditure budget. Although, overall, 55 per cent of social expenditure goes on social insurance programmes – generally pension schemes in many countries make up the bulk of their social expenditure. In Malaysia, for example, pensions accounts for 90 per cent of total social protection expenditure (see box 5.3) and in many other countries over 70 per cent. Labour market and child protection are allocated roughly 7 per cent of the social protection budget and microcredit financing on average 13 per cent. Only 35 per cent of the population as a whole is covered by any form of social protection; and as for the poor, the average for Asia and the Pacific is only 57 per cent, with individual shares ranging from 1 per cent in Papua New Guinea to 100 per cent in the Cook Islands, India, Japan and the Republic of Korea.

- Total expenditure on all social protection programmes ( percentage of GDP)
- Beneficiaries of social protection programmes targeted at key groups (unemployed, elderly, sick, poor/social assistance, poor/micro-credit, disabled, children with special needs)
- Number of social protection beneficiaries who are poor
- Average social protection expenditure for each poor individual.

up 11 per cent of the total and non-contributory benefits 4 per cent. Non-contributory benefits include the very well-targeted Bolsa Escola (school attendance benefit) for low-income families and old-age and disability benefits for low-income individuals.

Since pensions account for the bulk of transfers, it is worthwhile looking closer at the Brazilian pension system. The social security system was originally designed to cater for those in formal sector employment and so excluded informal sector workers. It has, however, been reformed to include low-income households. Around 64 per cent of employed workers are currently covered by social security (Ansiliero and Paiva 2008). There are two mandatory public pensions, one for private sector workers and the other for civil servants. The private sector pension covers both urban and rural workers. Unlike urban workers, rural workers are not required to contribute in order to be eligible, but only have to provide evidence of 15 years of rural activity (in a way, this becomes a type of social assistance, since it is basically non-contributory). The rural workers have been gradually incorporated into the scheme since the 1970s. Their inclusion on a non-contributory basis is perhaps one of the most redistributive aspects of the scheme. The civil service pension is much more generous than the private sector one, providing around seven times the benefits, on average. Successive governments have tried to reform the system to make it universal.

**What is the impact of social transfers and taxation on income inequality?**

Private income accounts for 70 per cent to 80 per cent of a household's disposable income, while the rest comes from social benefits (mainly pensions) (Soares et al. 2006). Pensions increase the revenue of those who earn less than the minimum wage by 5 per cent in 2004, as compared with 2.3 per cent in 1995. As most pensioners live in households with virtually no market income, pensions thus contribute to the reduction of inequality. Indeed, poverty levels are lower among the elderly than the national average.

Brazil has a complex tax system that hurts the poor the most. Although the income tax is progressive, indirect taxes (consumption taxes and VAT) neutralize this effect. For example, in 2004 households with an income of up to twice the national minimum monthly wage spent 46 per cent of their income on indirect taxes, compared with 16 per cent for those who earned more than 30 times the minimum wage (Zockun 2007). Moreover, this tax burden increased by 21 per cent for the poorest between 1996 and 2004.

The case of Brazil shows that universal non-contributory pension schemes are possible for developing countries (Willmore 2007; Arza 2008). It also shows that such schemes, and targeted social transfers generally, especially social assistance, can help reduce income inequality. The Brazilian case demonstrates that the current tax system is a poor redistributive tool and therefore it needs to be reformed. More emphasis should however be placed on redistribution policies, such as social transfers, universal pension coverage and the provision of social services.

### *Africa*

Much of Africa's welfare and redistributive system is classified as a generalized "insecurity regime" based on families, clans and patrimonial relations, together with increased intervention by international organizations (Gough and Wood 2004).

As shown above, fiscal policy, including taxation and social transfers, is becoming more and more important in reducing poverty and inequality in many developing countries, including those in Africa. However, data on redistribution in Africa is very difficult to obtain. There have been some studies done on social spending and taxation in a few selected countries, including South Africa and Cameroon. For example, taxation and social spending reduced Gini inequality by 10 points in the 1990s in South Africa (McGrath, Janisch and Horner 1997; Nattrass and Seekings 2001). In Cameroon, Tabi, Akwi and Anzah (2006) showed that income tax, indirect taxes (VAT, commodity-specific excises and import duties) and other individual taxes (gasoline, petroleum products and excises) tend to be progressive. Mauritius is perhaps the only country in the Africa region which has sufficient data and in which numerous studies have been done to understand the high level of economic growth and its impact on social welfare (see box 5.4).

### Box 5.3. Malaysia

Since the mid-1970s, Malaysia has combined high economic growth and increased employment with reduced inequality. Between 1990 and 2007, the Gini coefficient has fluctuated, but on average it has remained fairly stable, dropping only slightly (0.005) over this period. Economic growth in the 1990s averaged over 7 per cent and in the 2000s around 5 per cent (see fig. 5.17). Similarly, employment has grown around 3 per cent per year since 1990, while the employment to population ratio has increased steadily reaching 62 per cent in 2006. Despite Kuznets' widely acknowledged theory that an increase in economic growth leads to increased income inequality, Malaysia has shown otherwise. How has it managed to achieve this?

Malaysia's economic development policy and economic management has been described as unconventional and unorthodox. The state-led development plans and the New Economic Policy were meant to reduce poverty and serve as tools for nation-building or "restructuring society". The government has been active in developing infrastructure and creating human capital through increased investment in education and health facilities, prerequisites for economic growth. In addition, it has given priority to the rural areas and traditionally disadvantaged ethnicities through targeted programmes and a focus on the agricultural sector.

Economic growth and structural transformation are considered to be the main contributors to the reduction of poverty and inequality. The state-led shift to labour-intensive export-orientated industrialization has created new, well-paid employment, while high growth rates have reduced absolute poverty. Rural-urban remittances and migration, together with training and education initiatives, have helped ensure that the benefits of this growth are equitable.

Malaysia has given priority to the education and health sectors as a way of increasing human capital. This has led to impressive results in literacy rates and general health outcomes. Its expenditure on health and education accounts for around 10 per cent of GDP, compared to a mere 1 per cent for social protection and welfare (since 90 per cent of the social protection budget is used for social insurance schemes). Within social protection, the compulsory saving schemes, especially the Employees Provident Fund, may also have contributed to the decrease in inequality.

Social security is generally taken care of by the family, and to some extent by the private sector. The high level of intra-family transfers, both across generations and between

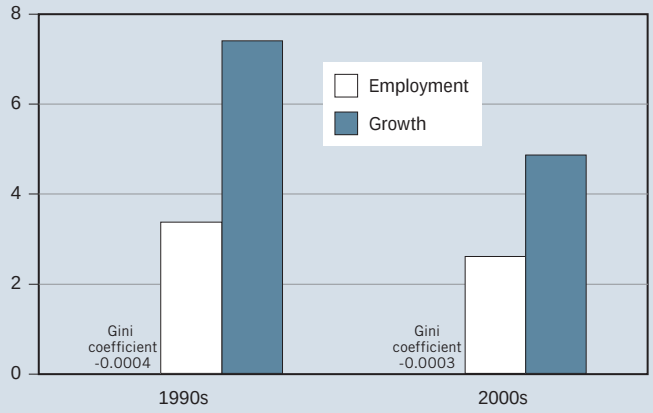
Only two other countries in Africa have tried to set up a universal welfare system: Botswana and Namibia have both tried to implement a universal pension system.

By contrast with the developed countries, developing countries have never taken the taxation system seriously as an instrument for redistribution, regarding it merely as a way of raising revenue (Chu, Davoodi and Gupta 2000). Although income tax is generally progressive, the magnitude of indirect taxes reduces or neutralizes this progressivity. Even if tax revenue increases, it is unlikely that governments will spend it on

rural and urban areas, has been a key facilitator of Malaysia's equitable growth. Extended nuclear families have acted as a means of social protection and have invested heavily in social services, with private spending making up roughly 40 per cent of health and education expenditure.

New challenges exist for equitable growth in Malaysia. Improvements in sexual equality – commendable though they are – and decreasing fertility may undermine the ability of families to continue providing social security. Intra-ethnic inequality is increasing, as is inter-regional inequality (Ragayah forthcoming). The labour-intensive industrialization of the past may be unsustainable, given Malaysia's labour shortage; indeed, since 1990, Malaysia has begun to shift to capital- and technology-intensive industrialization, which may have an impact on equity and employment creation. Together these factors help explain the fluctuations seen in Malaysia's Gini coefficient over the past two decades; they serve as a warning and demand continued policy innovation if equitable growth is to be sustained.

**Figure 5.17. Malaysia: Change in inequality, employment and growth, 1990-2007 (%)**




Source: Gini coefficient and employment data from IILS estimates 2008; latest Gini data from Ragayah 2008; growth data from World Bank, World Development Indicators 2008.

reducing inequality or poverty, since the poor have little or no influence on any budget decisions. Nonetheless, it is important that governments have a judicious progressive expenditure policy, since social transfers, especially social assistance and universal pension coverage, will help reduce inequality more than taxes will. Countries in the developing world should thus give priority to a progressive expenditure policy in order to reduce inequality.

## Box 5.4. Mauritius

The case of Mauritius throws an interesting light on how economic development can take place hand in hand with effective redistribution policies. Between 1980 and 2006, the Mauritius economy grew, on average, 4.1 per cent per year – much faster than the average for developing countries as a whole (see table 5.2). It also managed to increase both its employment rate – by 2 per cent per year between 1990 and 2007 – and the employment to population ratio, which reached over 55 per cent in 2006. At the same time, poverty rates were cut significantly, dropping from 20 per cent in 1997 to 8 percent in 2006, while the share of national income for the poorest 20 per cent of households grew from 5.6 per cent in 1987 to 6.2 per cent in 2002 (see table 5.3).

**Table 5.2. Average growth rates**

| | 1980-1989 | 1990-1999 | 2000-2006 |
|---|---|---|---|
| Growth (%) | 4.9 | 4.2 | 3.1 |

Source: World Bank 2008

**Table 5.3. Income inequality and poverty in Mauritius, by household**

| | 1986/87 | 1991/92 | 1996/97 | 2001/02 | 2006/07 |
|---|---|---|---|---|---|
| Income share (% GDP) | | | | | |
| Lowest 20 per cent | 5.6 | 6.4 | 5.9 | 6.4 | 6.1 |
| Highest 20% | 44.2 | 43.5 | 46.2 | 44.0 | 45.7 |
| Gini coefficient | 0.396 | 0.379 | 0.387 | 0.371 | 0.389 |
| % below poverty line | 19.5 | 10.6 | 8.7 | 7.7 | 8.0 |

Source: Central Statistics Office of Mauritius, Household Budget Surveys (http://www.gov.mu/portal/goc/cso/eice64/toc.htm)

Social policy in Mauritius dates back to the 1940s, when the Central Development and Welfare Committee was established. In the 1950s, a social security scheme for plantation workers was instituted. Universal access to health and education is available, including free secondary and university education. There is also a non-contributory pension scheme covering all citizens over the age of 60. In addition, the price of essential commodities (notably rice and flour) is subsidized. Social assistance is provided, targeted at vulnerable groups.

Social programmes are funded by general taxation revenues. Personal income tax is markedly progressive: not only are tax rates and the distribution of taxable income progressive in themselves, but exemption limits are high so that low-income earners pay no tax at all.

Although government expenditure has stayed stable at around 25 to 26 per cent of GDP over the past decades, its focus has shifted from public administration and economic services to social services and social transfers. Social transfers increased from 6.1 per cent of GDP in the mid-1980s to 8.2 per cent in the late 1990s, 9.6 per cent in 2000-01 and 9.3 per cent in 2003-04. About 50 per cent of the transfers are used to finance various universal pension schemes and the rest go on education, parastatal bodies and local government Social assistance subsidies are provided for essential commodities (rice and flour) and certain sections of the population (students, the elderly, disabled people and recipients of social assistance enjoy free transport ).

Source: Nath forthcoming, Social policy in Mauritius, Background paper prepared for UNRISD project on “Social policies in small states”.

## C. Policy considerations

Taxes and social transfers can be important tools for redistribution. Yet, despite their potential, they have not been used to the extent needed to keep pace with increasing inequality. To the extent that policy makers consider rising income inequality problematic, several policy options can be considered. The purpose of these policy options is to address increasing income inequality without adversely affecting economic growth.

First, there may be a case for increasing the progressivity of the tax system. To this end, governments could ensure that tax rates on high incomes are not further reduced – an international trend highlighted in this chapter – and limit regressive tax exceptions. In certain countries there may be a case for refraining from further increase in VAT and other indirect taxes (often regressive), introduced to compensate for reductions in government revenue arising from lowered income taxes and trade tariff reductions.

Second, in order to avoid the risk of harmful international tax competition, multilateral action may be needed. Indeed there are many countries that cannot enhance the progressivity of their tax system, because doing so may encourage mobile, high-income groups to leave. Of course, any efforts to curb harmful tax competition must give consideration to cases where countries have legitimately reduced taxes to improve economic efficiency.

Third, tax and social policy need to support employment –a key redistribution mechanism. This means removing tax distortions that affect labour market participation.

Fourth, as this chapter has shown, social policy can be used more actively without sacrificing growth or employment objectives. This was shown to be the case in countries as diverse as Malaysia, Mauritius, Nordic countries and, to a certain extent, Brazil. In some of these countries, social protection was provided for the entire population (or in the case of Brazil, for low-income, rural households) and, at the same time, growth and employment were maintained. Access to basic social services, such as education, health and water, should be universal as these services increase human capital, support economic growth and limit the risk of excessive income inequality. In developing countries, the use of conditional cash benefits may prove to be an interesting innovation.

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# Decent Work as a coherent policy package

6

## Introduction

As earlier chapters have demonstrated, the current pattern of growing income inequalities observed in the majority of countries needs to be addressed. Income inequality is partly driven by factors which are not conducive to greater economic efficiency – such as the manner in which financial globalization has developed over the past two decades or so. Observed patterns of growing income inequality also entail considerable risks from the point of view of social cohesion and continued political support for pro-growth policies. As noted in Chapter 1, perceptions that the existing distribution of income is not fair are growing.

Policy action, however, should take into account the need for rewarding work effort, innovation and skills – key drivers of economic growth and prosperity. In this respect, this report sheds light on policies and approaches for addressing income inequality to help ensure that the gains from economic growth are distributed in a more sustainable manner, while also maintaining economic dynamism. This requires action at the international level, notably as regards reform of the financial architecture. But domestic policies can make a major difference as well. Stronger tripartite institutions, well-designed labour regulations and social protection, and respect for basic workers' rights are particularly important, as earlier chapters have shown.

The purpose of this chapter is to show that the domestic policy response is best conducted as a coherent package. This is the essence of the Decent Work Agenda.

## A. Links between Decent Work and income inequality

The Decent Work Agenda provides an ideal framework for examining, collectively, the relationships and potential trade-offs among the various components discussed in this year's World of Work Report. The Decent Work Agenda is captured along four strategic objectives, namely, (i) fundamental principles and rights at work and international labour standards; (ii) employment opportunities for women and men; (iii) social protection and social security; and, (iv) social dialogue and tripartism.

## Box 6.1. Analysing the links between income inequality and Decent Work

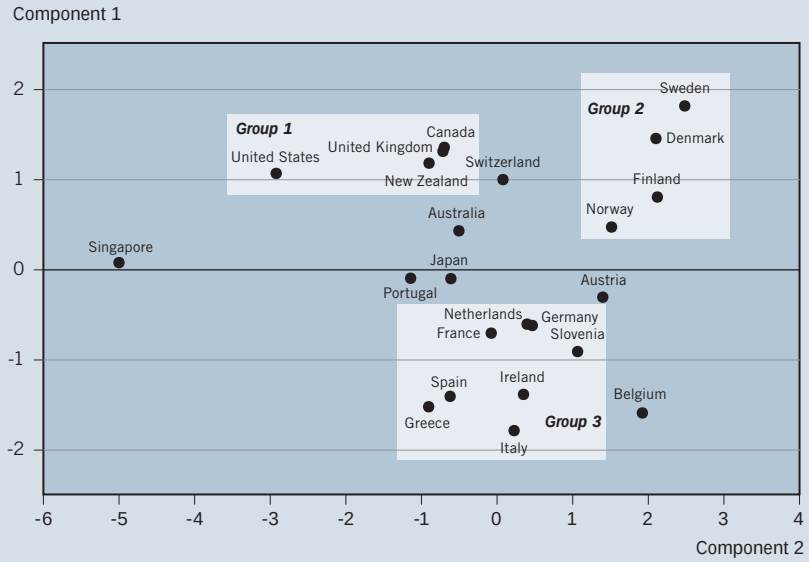
One statistical approach to measuring the relationship between policies and outcomes is the principal component analysis (PCA).[1] This consists of transforming the original data on policies and outcomes into so-called principal components. Each principal component is a linear combination of the original data on policies and outcomes. Principal components are ordered in such a way that the first few retain most of the variation present in all the original data.

For the purposes of this analysis, the PCA has been performed separately on countries with high and with low per-capita GDP.[2]

In high per-capita GDP countries, unionization, welfare state and inequality explain close to half of the variation for the first component while, labour market performance and the coverage of collective agreements explain one fifth of the variation in the second component. The analysis reveals some interesting results vis-à-vis the relationship among the variables (fig. 6.1), which can be broadly categorized into 3 groups, including:

- Group 1: This group includes Canada, New Zealand, the United Kingdom and the United States. These countries have high employment rates but high income inequalities, less regulation and lower unionization,
- Group 2: Comprises the Nordic countries in which the relationship is characterized by more social protection, less income inequality and strong labour market performance;
- Group 3: European countries exhibit more of a balance between protection, rights and income inequality (centred around the mean) but with more regulation and less employment.

**Figure 6.1. Principal component analysis for high per-capita GDP countries**




Source: IILS estimates.

In medium and low per-capita GDP countries, labour market regulation, welfare state, democracy and inequality explain over half of the variation for the first component, while for the second, labour market performance, inequality and democracy explain 15 per cent of the variation (fig. 6.2). Once again, the analysis reveals three broad categories:

- Group 4: Principally composed of transition economies of Central and Eastern Europe and Uruguay, with relatively developed welfare states and labour market regulation, together with average labour market performance;
- Group 5: A group of countries composed of Chile, Costa Rica, Jamaica, Paraguay, the Philippines and Republic of Korea that have strong employment performance, little labour market regulation or social protection and higher income inequalities;
- Group 6: A final cluster of countries (Dominican Republic, Pakistan, Peru and Turkey) characterized as having poor employment performance, high income inequalities and limited social protection.

**Figure 6.2. Principal component analysis for medium and low per-capita GDP countries**


Source: IILS estimates.

[1] The PCA gives a dimensionally reduced image of the original data, while retaining as much as possible the variation present in the data. Detailed calculations are available upon request.

[2] High per-capita GDP countries include countries with per-capita GDP above the average, and vice-versa for the medium and low per-capita GDP countries.

Individually, each of the former three issues, or an aspect of them, and their relationship to income inequality has been examined in greater detail in Chapters 3, 4 and 5, respectively. And while each chapter develops key messages and policy considerations around how best to reverse the trend increase in income inequality, the challenge for policy makers is that many of these issues are inter-related. With that in mind, an attempt is made, using the principal component analysis, to measure the relationship among the various components of the Decent Work Agenda and income inequality (box 6.1). To do so, a set of five variables along the lines of the strategic objectives of the Decent Work Agenda is considered: [1]

- income inequality (expressed by the Gini index as elsewhere in the report);
- trade union density and the number of ratified core ILO conventions;
- the employment rate;
- spending on social protection as a percentage of GDP; and
- respect for political rights, including basic workers' rights.[2]

Some of the main findings of the analysis are illustrated in Table 6.1. In particular, two broad categories are defined as regards high employment rates, i.e. those with relatively high income inequality and those with relatively low income inequality. However, given the complexity of the interactions it is difficult to ascertain the extent to which any one

1. Each variable is expressed as the average over the period 1990-2007 and the data cover 47 countries.
2. As established by Freedom House in 2007.

factor is influencing outcomes related to employment and income inequality. In this regard, it is important to note that the evidence presented here is not intended to be causal in nature but illustrative of the various relationships among the components of the Decent Work Agenda on the one hand, and income inequality on the other.

Nevertheless, the main finding from the analysis is that it is possible to avoid excessive income inequality while achieving a high employment rate. This is the case for both high and medium/low per-capita GDP counties. For example, among high per-capita GDP countries, Austria, Australia, the Nordics and Switzerland have managed to achieve this. These countries – where employment rates are high and income inequalities relatively low – are characterized by relatively strong, employment-oriented social protection, higher than average coverage of collective agreements and well-respected political rights. Among medium and low per-capita GDP countries, countries like the Czech Republic and Uruguay have managed to achieve relatively high employment and limited income inequalities. They too are associated with relatively developed social protection, stronger tripartite institutions than in other countries, and observance of political rights.

In sum, for policy makers concerned about excessive inequalities while also sustaining employment, the Decent Work Agenda is an important tool and framework to consider.

## B. Policy coherence

The above findings highlight the complementary roles of the different components of the Decent Work Agenda. Indeed, it is likely that these objectives work best as a coherent and mutually-reinforcing package. According to the recently-adopted ILO Declaration on Social Justice for a Fair Globalization, "the four strategic objectives are inseparable, interrelated and mutually supportive (...). To optimize their impact, efforts to promote them should be part of an ILO global and integrated strategy for decent work" (ILO, 2008).

The experience of Argentina provides an example of the important role of policy coherence. Argentina's economic and social crisis of 2001-2002 was marked by high unemployment, a regressive distribution of income, and increasing poverty. Novick et al. (2007) explain how Argentina emerged from this recessionary context by mounting a systematic effort to integrate policies and also assert that the policy approach was inspired by the concept of decent work.

In particular, in the wake of the 2001 crisis, Argentina embarked on an effort to link economic, labour and social policies, in order to transform production, boost employment, improve incomes and income distribution, and stimulate social mobility. Key steps taken by the State included the following:

- the promotion of decent work was explicitly mentioned as a priority objective of government policies (a first in Latin America);
- an integrated employment plan entitled More and Better Jobs was launched to promote training of unemployed workers and entry into quality jobs;
- labour legislation was restored, and social protection and social dialogue were promoted;
- a National Plan for the Regularization of Work was launched, and increased staff and resources were dedicated to address high levels of unregistered employment;
- emphasis was placed on analysis and monitoring of labour market developments and on the generation of information to support decision making; and,
- active income policies were established, including the reinstitution of a minimum wage, the encouragement of collective bargaining, and a pensions policy.

**Table 6.1. Successful employment performers: two illustrative models**

| | Welfare state[1] | Tripartite institutions[2] | Violation of Political rights[3] |
|---|---|---|---|
| **High per-capita GDP countries** | | | |
| High employment/low inequalities (e.g. Austria, Denmark, Finland, Norway Switzerland and Sweden) | 16.2 | 3.7 | 1.0 |
| High employment/high inequalities (e.g. New Zealand, United Kingdom and United States) | 11.0 | 1.0 | 1.0 |
| **Medium and low per-capita GDP countries** | | | |
| High employment/low inequalities (e.g. Czech Republic, Estonia, Hungary and Uruguay) | 14.1 | 2.2 | 1.6 |
| High employment/high inequalities (e.g. Costa Rica, Jamaica, Mexico, Paraguay and Philippines) | 2.1 | 1.2 | 2.4 |

Notes: 1. Welfare state is the average share of social protection expenditure as a percentage of GDP. 2. The measure for tripartite institutions ranges from 1 (few collective conventions) to 4.7 (many). 3. Violation of political rights ranges from 1 to 7, 1 being low in terms of violating political rights.

Source: IILS estimates, see box 6.1.

Since 2001, Argentina has achieved strong economic growth, and has made significant improvements in a number of social and labour indicators. Novick et al. (2007) emphasize that the coherent nature of the reforms was a key reason why the country was able to make a rapid recovery from crisis conditions: policy coherence gave rise to a virtuous circle of demand, employment and investment, which led to a reduction in poverty, lower unemployment, a rise in real wages, and wider coverage of collective bargaining. However, it is important to note that other factors were also likely at play. For example, to a large extent, the economic gains realized by Argentina were due to favourable international conditions and the switch to a floating exchange rate, which allowed the country to produce goods that were competitive in the international market.

In many ways Argentina's strategy reflects the spirit of the Decent Work Agenda, in that government combined efforts to boost employment, reduce poverty, and address distributional concerns. This coherent policy suite promoted job creation and a strengthening of social dialogue, while limiting increases in income inequality.

Similarly, in the late 1990s, structural change, job losses, expanding poverty and worsening income distribution in Brazil brought increased demands for new forms of government intervention (Marshall, 2004). This came in the form of labour market measures to support social protection and employment, including unemployment insurance and training schemes, and assistance to small employers and self employed workers. In 1998, a "package against unemployment" was introduced and while a direct employment creation program was not implemented at the national level, several states and municipalities developed programs on a smaller scale. Widespread social security reform was also undertaken; for example, changes were introduced to create incentives for private-sector workers to postpone retirement, based on the length of their contribution to the social security program. Marshall notes that although funding for many of these measures was fairly limited relative to GDP, the new framework of policies constituted a steady, long-term effort not only aimed at job creation but also concerned with job quality.

Beyond implementation of a coherent package of reforms, ensuring the sustainability and permanence of such reforms is necessary for success, but represents an additional challenge. First, given the nature of the interactions of the various policy planks of the Decent

Work Agenda, measuring progress and isolating impacts of various changes is difficult and is likely to depend considerably on initial conditions in each country (an area for further work – see below).

Second, successfully institutionalizing a coherent policy suite also depends on the availability of funding, notably as regards the financing of suitable social protection schemes and the development of well-functioning institutions, e.g. training systems that respond to labour market requirements. This may mean either a re-allocation of resources or raising new funds.

Finally, the level of political will may well determine the long-run sustainability and success of any coherent policy package as, inevitably, there will be difficult choices to be made.

## C. Areas for further analysis

This report has established a number of facts about income inequality, employment and causal factors. It has also paved the way for policy action in order to address excessive income inequalities, while supporting employment and economic growth.

However, more work needs to be done in order to understand what domestic policies work best, where and under what circumstances. The following areas are particularly relevant for further research:

- A better understanding is needed regarding one of the key factors behind excessive income inequality in some countries, namely employment informality. This calls for an examination of the diverse causes of employment informality and possible policy avenues to promote transitions to formal employment.
- Another domestic policy for which additional research is needed concerns tax policy. There is some agreement – reinforced by analysis in this report - that well-designed social protection can serve both employment and social goals. Yet, little is known about arrangements for funding social protection, especially in the context of developing countries where the tax base is limited and further weakened by the presence of a large informal economy. This year's World of Work Report has also shown that taxes of high incomes have tended to decline, which could be problematic in the context of growing income inequalities, while also weakening the ability of countries to undertake redistribution policies. It would be useful to assess whether there is a risk that international tax competition is putting downward pressure on taxation of incomes of high-income groups.
- Finally, it is important to examine in more detail the role of policy coherence between the different planks of the Decent Work Agenda. This can best be done in the context of country reviews, which is ideal to analyse policy interactions and possible trade-offs.

Further analysis is also needed to follow-up on the report's analyses of financial globalization and corporate governance:

- The current financial system calls for reforms in the regulation of the financial architecture, in particular with respect to prudential regulation and financial supervision. However, no consensus exists as to the optimal regulatory framework and proposals vary from tight regulation for money creation by the banking sector (e.g. through high reserve requirements) to only small modifications to the current supervisory framework (e.g. emphasising macro-prudential regulation to detect systemic risks at an earlier stage). These various proposals come with significantly different implications for

job creation and wage growth. Future work in this area should, therefore, focus on those types of regulation that promises a maximum beneficial impact on Decent Work goals.

- Shedding further light on the design of policies for the development of domestic financial systems is also needed, including the role of monetary policy in promoting employment creation in the medium turn. This should help to improve upon distortions in the payment and credit system, allow a better channelling of funds to local entrepreneurs and firms, and help to regulate liquidity growth in line with economic fundamentals, with a view of stimulating sustainable employment creation.
- More work should be devoted to the question of global and regional responses to currency and banking crises. In particular, the setting-up of regional currency areas to allow smaller and more vulnerable countries to benefit from a large, diversified monetary union should be evaluated from the point of view of its labour market implications. Further analysis is needed regarding the conditions that need to be satisfied for currency unions among developing countries to successfully attenuate the risk of external shocks for its members.
- Finally, the issue of executive compensation has attracted considerable attention recently. Some countries have started to take action in this regard, while others are considering several reform options. And, it would be useful to examine the pros and cons of different measures from the point of view of sustainable enterprise development and decent work.

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In the majority of countries, the incomes of rich people have grown faster than is the case for their poorer counterparts. To what extent is this a problem for society and the economy? What are the factors behind observed trends and what can policy makers do to address excessive income inequality?

This report looks at these issues comprehensively and provides answers to some of the key questions of today's international debate, such as:

- To what extent has financial globalization exacerbated economic instability and income inequality? Is there evidence that financial crises hit disproportionately the middle class and low-income groups, while the benefits of financial booms accrue mainly to high-income investors?
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- Are traditional institutions, like trade union-employer negotiations, still able to distribute the economic gains and losses in a balanced manner?
- How to design taxes and welfare benefits so as to limit excessive inequalities while supporting economic growth?
- Is higher income inequality inevitable if countries want to grow fast and create enough jobs?

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