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Chapter IV

CHANGES IN GLOBALIZATION AND TECHNOLOGY AND THEIR IMPACTS ON NATIONAL INCOME INEQUALITY

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A. Introduction

The evidence presented in the preceding chapter suggests that a multitude of factors influence income distribution through their effects on various categories of income at different points in time and at different phases of a country's economic development. The objective of this chapter is to examine the pressures that technological advances and globalization of trade and finance have exerted on the evolution of national income inequality over the past two decades.

Many observers who subscribe to traditional theoretical approaches believe that the negative effects of globalization and technological change on income distribution are inevitable. Thus, as far as they are concerned, the main question is which one of these two forces has been the stronger. However, this *TDR* challenges that position: chapters IV and V aim to show that the rise of income inequality observed in many countries could have been mitigated, if not prevented, by more appropriate macroeconomic and labour market policies that would have had a positive effect on countries' trade and technological progress.

Technological change and the progressive globalization of trade and finance can affect income distribution through various channels. However, it is not clear, *a priori*, which direction this influence takes. Different channels unleash forces that may well pull in opposite directions, and the strength of these forces is likely to depend on country-specific and time-bound factors. Among the country-specific factors, macroeconomic and financial policies, especially exchange-rate management, as well as the organization of labour markets play a decisive role.

Another country-specific factor is the level of industrial and technological development, as discussed in general terms in chapter III. This is because the level of a country's economic and industrial development and how close it has come to the global technological frontier determine whether integration spurs its industrialization process, or whether its greater exposure to globalization causes deindustrialization. Accordingly, the way in which globalization affects income distribution is often seen to depend to a large extent on how economic integration changes the structural composition of a country's economic activities.

Against this background, this chapter addresses the impact of globalization and technological developments on income distribution within countries. Its main objectives are to: (i) identify the channels through which globalization and technological

developments have exerted pressure on national income distribution; (ii) examine differences among countries in their exposure to such channels; and (iii) highlight the economic forces that make such cross-country differences mutually interdependent.

Recommendations for policies designed to ensure a level of income equality that is socially acceptable and conducive to sustained economic growth and development are addressed in the subsequent chapters.

The distributional effects of globalization and technological change are closely interrelated …

Given that many country-specific factors affect changes in income distribution, this chapter cannot cover all countries in the same way. Rather, the distributional impacts of technology and globalization are illustrated through evidence for specific countries and country groups for which the identified channels have been of major importance.

The chapter argues that the ways in which globalization and technological change influence income distribution are closely interrelated, and that the combined effects of these two factors have increased significantly over the past two decades. But whether these combined effects reduce or accentuate income inequality also depends on a country's initial conditions and its level of industrial development. It also depends crucially on its macroeconomic policies, especially exchange-rate management, and arrangements and institutions relating to the labour market and wage determination, as well as on policies that influence the nature and speed of economic integration.

… and their combined impacts have increased significantly over the past two decades.

The evidence presented in the chapter indicates that, in developed countries, the effect of the forces of globalization on income inequality since the early 2000s is also largely due to behavioural changes in the corporate sector in response to greater international competition. Companies have given less attention to upgrading production technology and the product composition of output through productivity-enhancing investment with a long-term perspective; instead, they have increasingly relied on offshoring production activities to low-wage locations, and on seeking to reduce domestic unit labour costs by wage compression. This trend has been associated with a polarization of incomes in developed countries. For the United States, evidence suggests that a new mode of corporate governance aimed at the maximization of shareholder value is pushing corporations to maintain external competitiveness through wage repression and offshoring, and to increase profits through, often speculative, financial investments, rather than by boosting productive capacity.

Finally, the chapter shows that the expansion of global trade and the related increase in developed countries' manufactured imports from developing countries have been associated with growing income inequality in some of the large, rapidly industrializing developing countries, especially in Asia. Distributional changes in these countries are likely to reflect the unequal rate of growth of living standards between rural and urban areas, as well as between interior and coastal regions, as was anticipated by Kuznets (1955) for countries at early stages of industrial development. The evidence for emerging economies, especially economies in transition but also some developing economies, suggests that economic instability related to rapid financial integration has had adverse effects on income distribution. By contrast, several countries with rich natural-resource endowments, both the more and less advanced ones, have seen an improvement in their terms of trade over the past decade. Under certain circumstances, this improvement has facilitated the adoption of policies designed to reduce income inequality.

The next section revisits the literature focusing on the channels through which trade globalization and technological changes have affected income distribution. It starts with a brief account of the trade-inequality debate of the early 1990s, which emphasized the rise in wage inequality between skilled and unskilled labour in developed countries. It then focuses on the more recent trade-inequality debate, which has brought to the fore a number of new facets of the distributional effects of technology and trade globalization. It examines: (i) employment

concerns; (ii) the polarization of wages by considering medium-skilled workers in addition to the traditional high- versus low-skilled dichotomy; (iii) a wider range of countries that covers developing and transition economies in addition to developed countries; and (iv) shifts in employment away from manufacturing towards the primary and services sectors, in addition to employment shifts within manufacturing. Section C discusses the channels through which financial globalization has affected income distribution over and above technology and trade globalization. Section D concludes.

B. Trade, technology and shifts in production structure

In the early 1990s, there was a lively debate on the relationship between trade, technology and income distribution (see also the contribution of *TDR 1997* to this debate). About a decade later, this debate has been revived, mainly for two reasons: the first is the recent increase in income inequality in many countries around the world, and the second arises from theoretical advances (discussed, for example, in Harrison, McLaren and McMillan, 2011) and the availability of more comprehensive data that allow a better understanding of the relationship between changes in income distribution, on the one hand, and technological developments and countries' increasing trade integration on the other. The theoretical advances allow a broadening of the analysis so as to assess the joint influences of trade, technology and foreign direct investment (FDI) on income distribution.

For a full understanding of the rise of inequality in many countries that has accompanied the acceleration of globalization and technical progress, account has to be taken of macroeconomic and labour market policies that have led to persistently higher unemployment and a weakening of labour in the wage bargaining process. These policies are analysed in chapter VI of this *Report*. This section concentrates on the specific channels through which, with given macroeconomic and labour market policies, trade globalization and technological change have exerted pressure on income distribution. It starts with a brief review of the trade-inequality debate of the early 1990s. It then focuses on the main changes in the character of both inequality and countries' exposure to global trade that have prompted the more recent trade-inequality debate.

1. The trade-inequality debate of the early 1990s

Standard international trade theory in the tradition of Heckscher and Ohlin assumes that trade is driven by international differences in factor endowments. In its simplest form, it predicts an increase in real income of a country's abundant factor when that country engages in trade. More precisely, it suggests that the price of unskilled labour-intensive goods falls in more advanced countries that are assumed to have abundant skilled labour, when these engage in trade with developing countries that are assumed to have abundant unskilled labour. In the more advanced countries, this decline in the price of unskilled labour-intensive goods causes a shift in production towards more skill-intensive goods and a decline in the real wages of less educated workers, both in absolute terms and relative to better skilled workers. The latter effect is usually described as an increase in the so-called "skill premium", which represents a growing gap in wages between skilled and unskilled workers and a worsening of wage disparities. The inverse is predicted to hold in developing countries: the movement in prices causes a shift in production

towards unskilled labour-intensive sectors, which boosts the demand for unskilled workers and thus their real wages, both in absolute terms and relative to skilled workers. Given that in developing countries the proportion of unskilled labour in the total labour force is much higher than that of skilled labour, income gaps among wage earners in these countries are expected to decline.

In the 1990s, there was a heated debate as to whether such trade-related effects could explain the increasing income inequality that had been observed in many developed countries over the 1980s and early 1990s (see also *TDR 1997*).[1] Eventually, there was a wide consensus that trade had played a relatively modest role in depressing the relative wages of less-skilled workers in those countries, and that therefore it was not the dominant – or even an important – factor for explaining the increase in income inequality. Rather, this increase in inequality was attributed mainly to skill-biased technological progress (for reviews, see, Anderson, 2005; Goldberg and Pavcnik, 2007; and Harrison, McLaren and McMillan, 2011).

The trade-inequality debate of the 1990s attributed the increase in income inequality mainly to skill-biased technological progress.

The debate discounted international trade as an explanation for two main reasons.[2] First, empirical studies of developed countries (e.g. Lawrence and Slaughter, 1993; Berman, Bound and Griliches, 1994) found that the bulk of the changes in the prices of goods and increases in the skill premiums resulted from shifts *within* industrial sectors, rather than *between* sectors, contrary to what is predicted by standard trade theory. Second, empirical studies for developing countries (e.g. Berman, Bound and Machin, 1998; Desjonqueres, Machin and van Reenen, 1999) noted that the shift towards higher pay for skilled workers that had been observed for developed countries also occurred in developing countries; yet according to standard trade theory, wages in developing countries should have moved in the opposite direction to those in developed countries.[3]

Part of the explanation for the latter finding may be that trade theory assumes free movement of goods, while in the 1980s and 1990s developing-country exports of labour-intensive manufactures faced significant barriers to accessing developed-country markets (*TDR 1997*, Part Two). The major barriers were tariff peaks, which often affected labour-intensive goods, and the Multi-Fibre Arrangement (MFA), which comprised a complex set of quantitative restrictions that allowed the expansion of developing-country exports of textiles and clothing only insofar as it would not entail sizeable short- and medium-term adjustment costs, in particular unemployment, in the importing (i.e. developed) countries.

Attributing the rise in income inequality during the 1970s and 1980s to skill-biased technological change alone has been challenged on the grounds that such a skill bias was not a new phenomenon during that period (Card and DiNardo, 2002). Within the framework of traditional economic theory this issue may be resolved by examining the long-term trend of skill-biased technological change in combination with developments in the availability of skilled workers. Regarding the evolution of the skill premium, there may well be a race between technological progress, on the one hand, which tends to increase the demand for skilled labour, and educational attainment on the other, which increases the supply of skilled labour (Tinbergen, 1975; Goldin and Katz, 2008). Many observers argue that, following a long period of relatively stable technological progress, rapid progress in information technology and the widespread use of computers in the workplace accelerated the rate of technological change in the 1980s and 1990s. They suggest that the resulting increase in the demand for skilled labour outpaced educational advances in developed and developing countries alike, which caused the increase in wage inequality.[4]

Neither conventional trade theory based on simple Stolper-Samuelson relationships nor technological progress alone can fully explain the increase in the relative demand for skilled labour that was observed across countries during the 1980s and early 1990s. An empirical analysis for the United States found the combination of offshoring and technological change to be an important additional explanation (Feenstra and Hanson, 1999).[5] The general rise in unemployment during that period was not considered to be of particular importance, as a rise of unemployment in all skill groups would depress all wages but not relative wages. However, in times of

general high and persistent unemployment, employers may choose to hire relatively well-qualified people even for rather low-skill jobs. This tends to prolong unemployment and the pressure on wages of the low-skilled. Moreover, when unemployment persists, more and more governments put pressure on low-skilled workers, in particular, to accept jobs from which they cannot even earn a decent living.

2. The "new" trade-inequality debate

In the past few years there has been a revival of concerns about trade-related distributional effects. This section addresses this new debate. It first looks at developed countries, where the main reason for this new interest is the significant worsening of income inequality, combined with persistently high unemployment and a change in the character of both income inequality and countries' trade exposure. The section then turns to the many other countries, especially developing countries in Africa and Latin America and a number of economies in transition, where distributional concerns have arisen because of perceptions that the forces of globalization may be causing deindustrialization and an associated worsening of employment and wage-earning opportunities. The section also discusses distributional concerns in some Asian developing countries, which have arisen from the observation that globalization may have spurred rapid industrialization and buoyed up economic growth, but at the same time also caused an increase in income inequality.

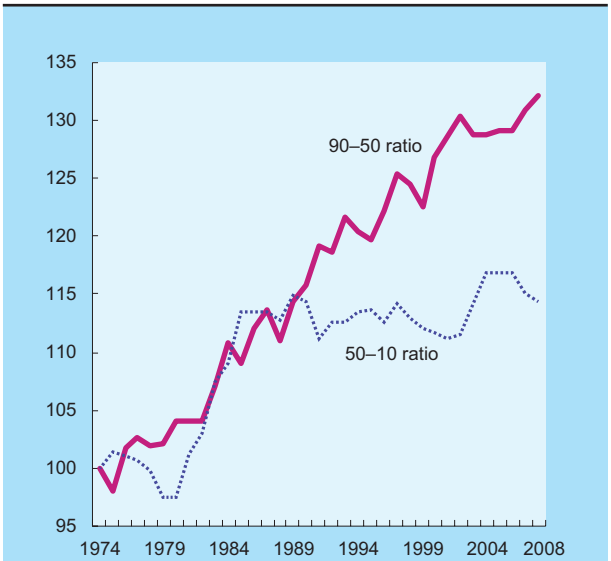
(a) New features of the trade and inequality relationship in developed countries

The new aspect of income inequality in developed countries – also termed "polarization" (Autor, Katz and Kearney, 2006) – concerns employment in addition to wages. The trade-inequality debate in the early 1990s focused on the divergence between the wages of high-skilled and low-skilled workers. However, the more recent period has been characterized by a very different pattern of labour demand that benefits those in both the highest-skill and the lowest-skill occupations, but not workers in moderately skilled occupations (i.e. those involved in routine operations). The moderately skilled workers have been experiencing a decline in wages and employment relative to other workers.

Chart 4.1

RATIOS OF AVERAGE HOURLY WAGES AT VARIOUS PERCENTILES OF THE DISTRIBUTION IN THE UNITED STATES, 1974–2008

(Index numbers, 1974 = 100)



Source: UNCTAD secretariat calculations, based on United States National Bureau of Economic Research, *Current Population Survey Merged Outgoing Rotation Groups* database.

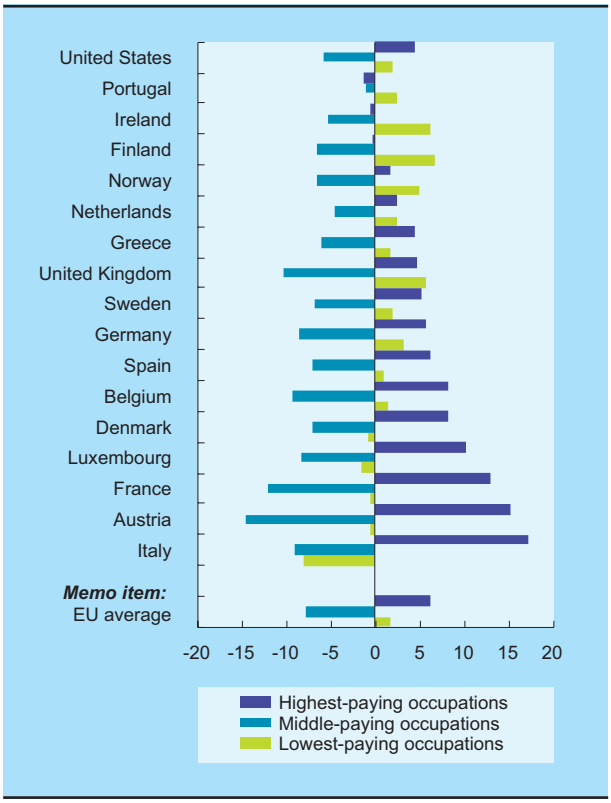
Note: The 50–10 ratio refers to the ratio of the average hourly wage at the 50th percentile of the distribution to that at the 10th percentile, and the 90–50 ratio refers to the ratio of the average hourly wage at the 90th percentile of the distribution to that at the 50th percentile.

To examine the polarization of wages, it is useful to set aside the wages of the top-level income earners, which were addressed in chapter III, as well as those of the bottom-level earners. Decomposing wage developments of earners between the 90th (top) and the 10th (bottom) percentiles allows a comparison of the ratio of wages at the 90th percentile with that of the 50th percentile (the 90–50 ratio) and the ratio of wages at the 50th percentile with that of the 10th percentile (the 50–10 ratio). Evidence for the United States indicates that both these ratios (90–50 and 50–10) were fairly stable in the 1970s and grew rapidly in the 1980s, but also that their evolution diverged sharply after the 1980s (chart 4.1).[6] The 90–50 ratio has been growing steadily, and is now

Chart 4.2

CHANGE IN EMPLOYMENT SHARES BY OCCUPATION LEVEL IN THE UNITED STATES AND SELECTED COUNTRIES IN THE EU, 1993–2006

(Per cent)



Source: Goos, Manning and Salomons, 2011; and Acemoglu and Autor, 2012.

Note: Occupations are grouped by wage terciles. Data points for members of the EU are ordered by changes in the share of highest-paying occupations.

about 35 per cent higher than in 1973. By contrast, the 50–10 ratio has remained fairly stable at a level of about 15 per cent above its level of the early 1970s. More detailed evidence indicates that the gap between the 10th percentile and the median has substantially contracted over the past few years (Acemoglu and Autor, 2012: 13). Further evidence, which includes a gender dimension, indicates that the 50–10 ratio has stagnated for women but has actually declined for men (Lemieux, 2007; Acemoglu and Autor, 2012). Taken together, this evidence indicates that income gains have been concentrated in the higher and lower echelons at the expense of the middle layers of the income distribution.

Polarization of employment has also occurred in virtually every developed country (chart 4.2).[7] In the vast majority of the countries shown in chart 4.2 the employment shares of the highest-paying occupations (such as lawyers, bankers, management consultants, professors and doctors) have risen significantly, and in most of these countries, the employment shares of the lowest-paying occupations (such as hairdressers, cleaners, drivers, waiters and supermarket workers) have also grown. By contrast, the shares of middle-paying occupations (such as office clerks, workers in crafts and related trades, and plant and machine operators and assemblers) have declined in all the countries. This hollowing out of middle-income occupations may be due to automation (i.e. related to technological advances). The greater use of computers in the workplace may have wiped out the jobs of moderately skilled workers and pushed them into lower-paying jobs in services that computers cannot perform (Autor and Dorn, 2012). However, it may also be related to the offshoring of manufacturing activities and services.

Indeed, countries' exposure to trade has assumed a new character with respect to two factors. First, the share of developing countries in global exports crossed 30 per cent in 2000 and reached 40 per cent in 2010, which reflects a significant growth from the average level of 25 per cent during the 1970s and 1980s – the period that was the focus of the earlier trade-inequality debate.[8] Second, the growth of developing countries' exports of manufactures has been concentrated in only a few countries, especially China. China's per capita income and wages are considerably lower than in those economies which accounted for the bulk of manufactured exports from developing to developed countries in the 1970s and 1980s, such as the Republic of Korea and Taiwan Province of China, as well as other countries that had experienced rapid economic catch-up after the Second World War, such as Japan and Germany. Even though data that allow precise cross-country comparisons are available only for the period since 1975, a comparison of the wage levels in manufacturing of countries experiencing rapid economic catch-up relative to United States levels broadly shows that there are still substantial wage differences between some of the main developing-country exporters of manufactures and their developed-country partners (chart 4.3). Indeed, with China's opening up to global trade, this difference has most likely increased, even when adjusted for the higher productivity of

United States workers (Ceglowski and Golub, 2011). This contrasts with the debate of the early 1990s, when the rise in the average wage of the newly industrializing economies (NIEs) relative to that of the United States was used to allay fears about the effect of trade on income inequality.

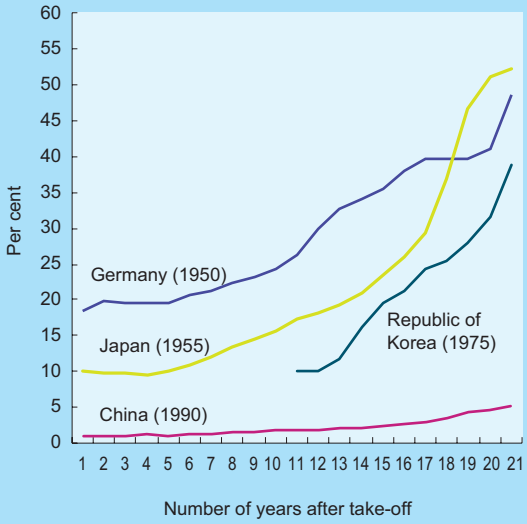
In line with earlier experiences of rapid economic catch-up in Asia, as well as in Germany, China may now have reached the stage in the catch-up process when wages in manufacturing are beginning to rise substantially (chart 4.3). This may be partly due to a declining growth in labour supply and restrictions on geographical labour mobility (*TDR 2010*, chap. II, sect. C). Moreover, the new labour contract law, which came into effect in 2008, stipulates minimum wage requirements and allows a strengthening of the bargaining power of employees.[9] Finally, labour compensation has also increased because of rapidly rising labour productivity. According to Banister and Cook (2011), labour productivity in China's industrial sector (including manufacturing, as well as construction, mining and utilities) increased at an average annual rate of about 10 per cent between 1991 and 2008. The reason for this rapid productivity growth is a combination of sizeable and growing capital investment and improved education and skill levels of Chinese workers, along with the use of advanced technologies by transnational corporations (TNCs) engaged in international production sharing, as discussed below. Labour compensation in Chinese manufacturing has increased at a faster rate in dollar terms than in renminbi because of the appreciation of the Chinese currency by about 25 per cent between 2005 and 2012.[10]

To illustrate the increase in manufactured exports from developing countries, it is useful to focus on a group of "low-wage economies". Following Bernard, Jensen and Schott (2006), this group can be defined as countries with a per capita income lower than 5 per cent of that of the United States before 2007 (i.e. prior to the onset of the current economic crisis). The resulting group of 82 developing and transition economies (see the text at the end of the Notes to this chapter for the full list) includes many small economies but also some of the large economies in Asia, especially China, as well as countries such as India, Indonesia, and the Philippines.

Indeed, much of the debate on the new pattern of countries' exposure to global trade relates to

Chart 4.3

WAGES IN MANUFACTURING OF SELECTED COUNTRIES DURING ECONOMIC CATCH-UP RELATIVE TO THE UNITED STATES



Source: UNCTAD secretariat calculations, based on *United States Bureau of Labor Statistics* database.

Note: The years in brackets indicate when economic take-off began. The dates used to determine the beginning of economic take-off are the result of a breakpoint analysis of productivity growth series, measured by growth rates of GDP per worker.

the rapid expansion of China's exports, especially exports of labour-intensive goods and electronics to the United States, following China's accession to the World Trade Organization (WTO) in December 2001. This event symbolized China's formal entry into the global economic arena. It included, in particular, the granting of Permanent Normal Trade Relations status with the United States – its largest single trading partner. This normalization removed the uncertainties in bilateral trade relations between these two large economies, and played a key role in the rapid increase of FDI to China, which accelerated production-sharing across East Asia.[11] China's accession to the WTO also implied the eventual elimination of discriminatory, WTO-inconsistent measures against its exports within an agreed time frame. For example, China would be covered by the phasing out of the Agreement on Textiles and Clothing, which represented an end to the quota regulations that, through the MFA, had governed international trade in apparel since the mid-1960s.

Empirical evidence points to significant differences across countries in terms of the share of low-wage economies in total imports, the increase of imports from low-wage economies since 1995, and the share of imports originating from China in total imports from low-wage economies (chart 4.4). The share of low-wage economies in the total imports of Japan exceeds 30 per cent, closely followed by their respective shares in the United States and in the group of relatively advanced developing countries in Asia. In the United States, the European Union (EU) and Latin America, China accounts for the bulk of the increase, while the increase in the share of low-wage economies in imports in Africa and the group of Asian countries is more evenly distributed between China and other low-wage economies. Moreover, in all countries, electronic goods have accounted for a major share of the imports from China.[12]

The increase in the distributional effects from trade, especially in developed countries, may have been triggered by deeper, non-trade factors such as international wage competition and changes in corporate behaviour.

Taken together, this evidence on the increase of imports from developing countries, combined with an increase in the wage differentials between the main importers and the main exporters of these goods, suggests that the pressure from globalization of trade on wages and income distribution is greater today than it was 20 years ago, especially in developed countries. However, these trade-related distributional effects may well be triggered by deeper, non-trade factors, such as international wage competition (see chapter VI), as well as changes in corporate behaviour, as discussed in the following section.

(b) Channels of trade-related distributional effects in developed countries

The change in the character of national income inequality and countries' exposure to global trade, discussed in the preceding section, has provoked a new trade-inequality debate. Similar to the earlier one, the recent debate concerns the distributional impact of skill-biased technological change and international trade. There are those who argue that skill-biased technological change has been the cause of changes in wages and employment of different categories of workers because, "information technology complements highly educated workers engaged in abstract tasks, substitutes for moderately educated workers performing routine tasks, and has less impact on low-skilled workers performing manual tasks" (Autor, Katz and Kearney, 2008: 301). The reason is that computers can replace routine tasks such as assembly-line or clerical work, while non-routine tasks are more difficult to digitize, and computers facilitate large-scale data analysis, which complements the tasks of skilled workers.

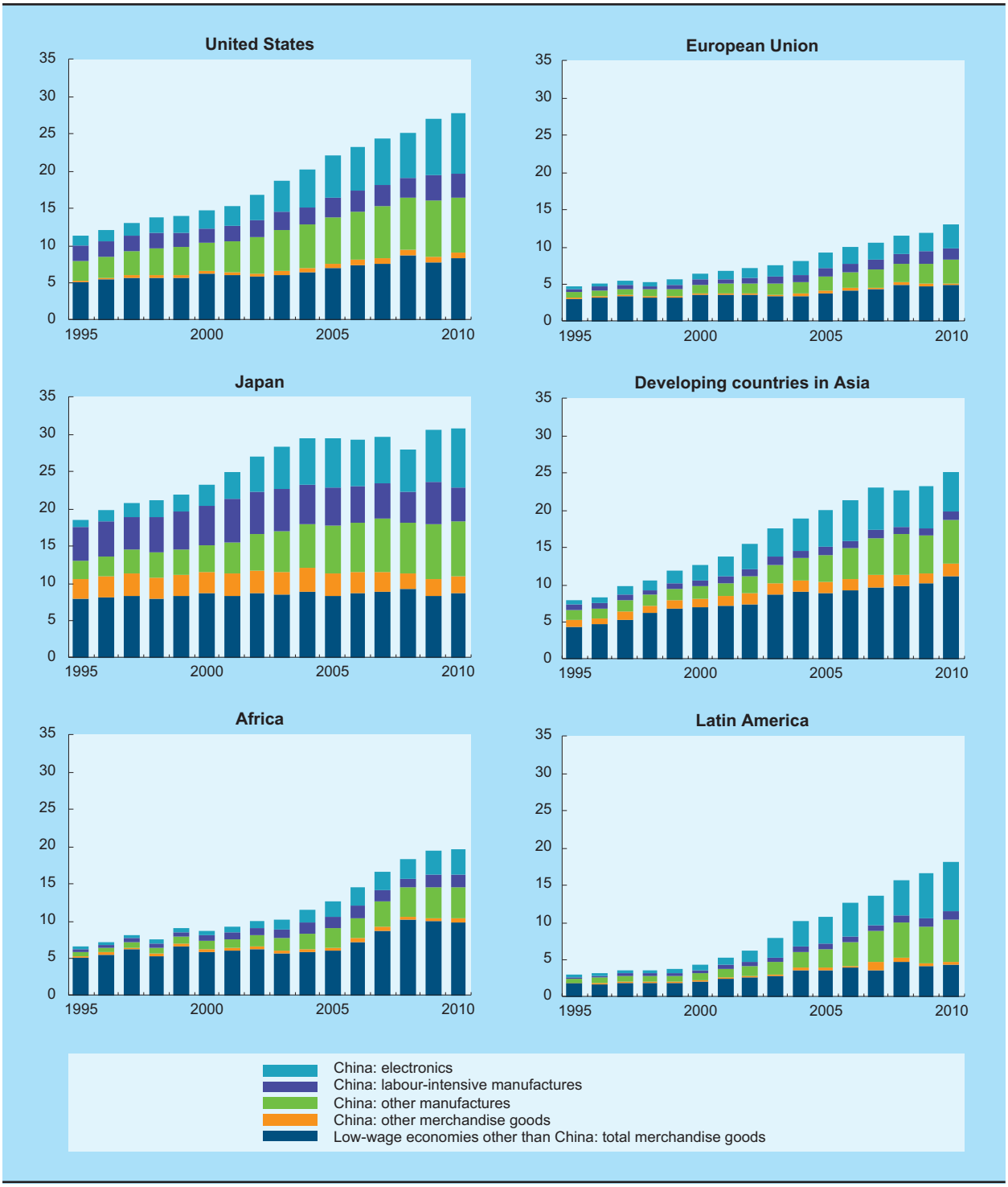
These technology-related changes are considered to be responsible for the evolution in the relative wage and employment positions of different worker categories over the past two decades, as discussed earlier (and shown in charts 4.1 and 4.2). However, these developments can also be explained by trade-related arguments that emphasize the rapid increase of trade in intermediate products, such as parts and components – a key feature in electronics industries – and the offshoring of service activities. Trade in intermediate products and offshoring have often figured prominently in the trade-inequality debate in developed countries.

In addition to the decline in policy-related barriers to trade, there has been a decline in transportation costs and, especially, in communication costs related to information and communication technologies (ICTs). Less costly and more sophisticated ICTs have enabled firms to profitably manage multifaceted procedures and undertake different stages of production in different geographical locations. As a result, some of the production of intermediate goods has moved from developed to developing countries, thereby spurring international trade in those goods. Trade of this type not only has an impact on the relative wages of skilled and unskilled workers, but also affects labour demand in the industries that undertake offshoring. As a result, the impact of trade in parts and components on wages and employment can vastly exceed that of trade in final goods. Moreover, in developed countries, trade in intermediate goods has much the same impact on labour demand and the skill premium as skill-biased technological change: both of them shift demand away from low-skilled activities and increase the relative demand for and the wages of those with higher skills.

Chart 4.4

MERCHANDISE IMPORTS OF SELECTED COUNTRIES AND COUNTRY GROUPS FROM LOW-WAGE ECONOMIES, BY PRODUCT CATEGORY, 1995–2010

(Percentage share in total merchandise imports)



Source: UNCTAD secretariat calculations, based on *UNCTADstat*.

Note: Low-wage countries are defined as countries whose per capita income was lower than 5 per cent of United States per capita income before 2007 (i.e. prior to the onset of the current economic crisis). For the composition of country groups, see the text at the end of the Notes to this chapter. The category "labour-intensive manufactures" includes leather, textiles, clothing and footwear.

This explains why fragmentation and trade in intermediate goods spurs labour productivity, and is therefore akin to technological progress in final goods production. However, the two sources of productivity growth result from substantially different corporate behaviour: while technological progress relies on investment in innovation and the associated dynamic gains in an enterprise's long-term growth strategy, substituting lower-cost imported intermediate products for higher-cost domestic inputs achieves productivity growth through cost reductions from the globalization of production. The ways in which the different corporate strategies may affect changes in income distribution are addressed in more detail below.

The geographical dispersion of the different stages of manufacturing and the associated trade in intermediate products is costly. The manufacture of parts and final goods in different countries entails not only costs of transportation and tariffs, but also of coordination. Therefore, an appropriately skilled labour force, good trading infrastructure and geographical proximity to developed countries have proved to be advantages for developing countries whose firms participate in international production chains. This participation takes the form of inter-firm agreements, networks and alliances of various kinds. But most often it involves hosting affiliates of TNCs, as coordination costs are likely to be minimized when production chains are managed within the same enterprise. Independent of the specific form employed to manage production networks, the internationalization of production has directly influenced income distribution at the top echelon by allowing specific talent to be used everywhere in the world against very high remuneration (Gordon and Dew-Becker, 2007).

The important role played by TNCs in this context relates to their integrating the output from production stages outsourced to a specific country seamlessly into the continuously evolving total production process. TNCs typically achieve this by deploying specific slices of their technology in their foreign affiliates, combining their advanced technology developed at home with cheap labour abroad. This arrangement implies that "the multinational 'lends' a narrow range of technology to a producer located in the developing nation with the aim of getting the offshoring part produced at the lowest possible cost for the requisite quality" (Baldwin, 2011: 21). Such a strategy of "technology lending" implies that TNCs aim at minimizing the transfer of technology and know-how to the host country. This is very different from the paradigm that has usually governed policies designed to attract as much FDI as possible. It views FDI as a bundle of assets, including, most importantly, access to advanced technology and management techniques, which can allow developing countries to leapfrog into more sophisticated areas of production.[13]

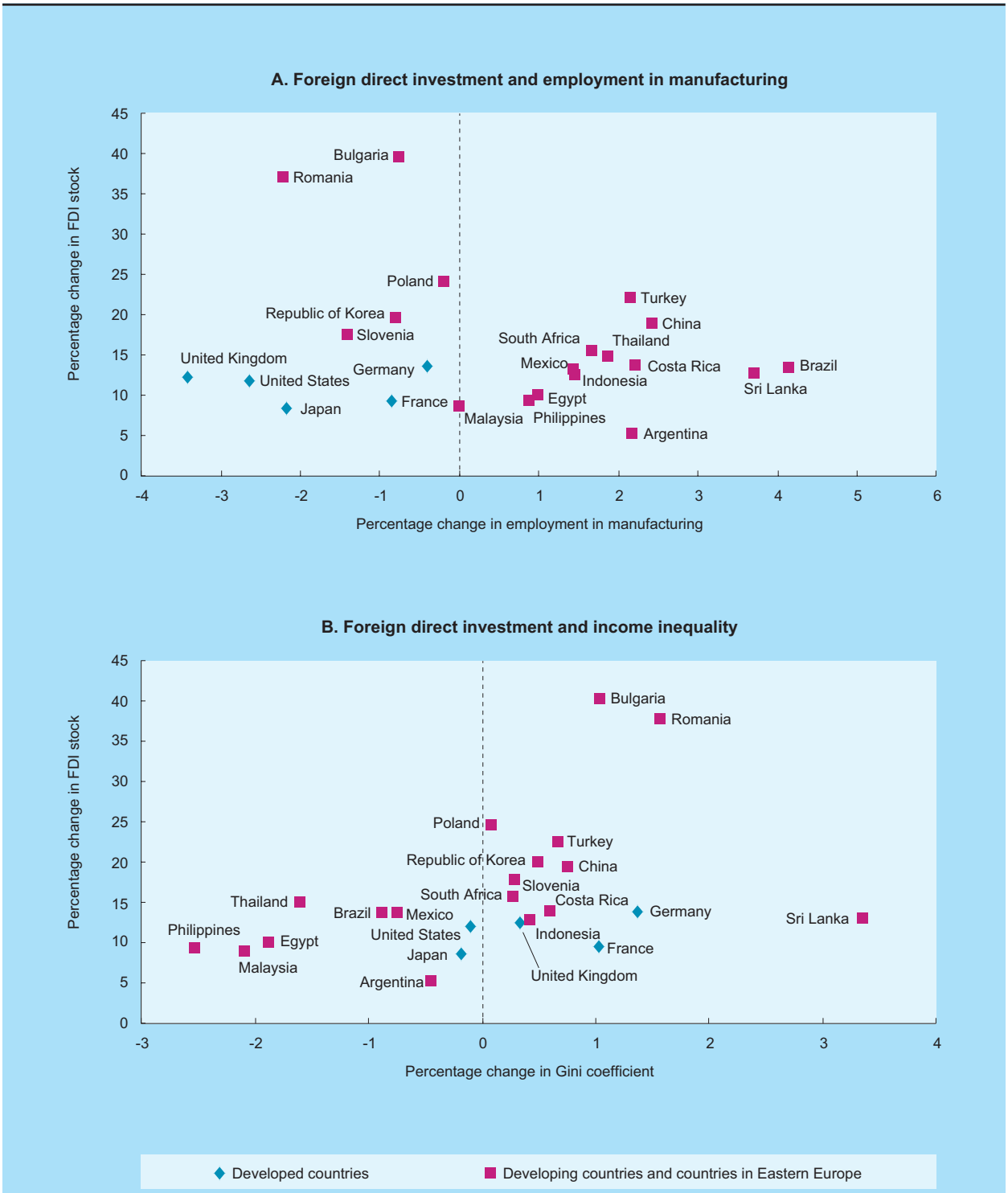
The impact of FDI on employment and income distribution depends not only on the motivations and strategies of TNCs, but also on the initial conditions and policies of the host country. Some of the most rapidly growing developing countries have, in recent years, successfully linked their development efforts to these international production networks. China, for example, began to attract large-scale FDI in the context of regional networks in the early 1990s. Hosting foreign enterprises was part of the country's strategy to accelerate industrialization, create employment and support technological upgrading. A specific regulatory structure and proactive policies succeeded in attracting FDI in the manufacturing sector, which added to existing productive capacity, increased productivity and supported the technological upgrading of local productive capacities, even though the country's exports continued to have a relatively high import content, particularly of technology-intensive parts and components (*TDR 2006*: 186–189).

Many other countries have not had the domestic conditions, particularly a good trade infrastructure, a large, relatively well-skilled labour force and the appropriate administrative capacity, to exercise sufficient leverage over TNCs to secure technology transfer and allow wage earners to participate in productivity growth. This is why the growth of manufactured exports that has accompanied their participation in these networks has not always been matched by comparable increases in value added and employment.

Available evidence for the period 1995–2010 suggests that outward FDI has generally led to a decline of employment in manufacturing in the largest developed countries (chart 4.5A).[14] Whereas FDI inflows have been accompanied by a decline of employment in manufacturing in a number of countries in Eastern Europe, evidence for developing countries indicates that such inflows have most often been associated with expanding employment

Chart 4.5

FOREIGN DIRECT INVESTMENT, EMPLOYMENT IN MANUFACTURING AND INCOME INEQUALITY, SELECTED COUNTRIES, 1995–2010



Source: UNCTAD secretariat calculations, based on *Lane and Milesi-Ferretti External Wealth of Nations* database; *Standardized World Income Inequality Database* (*SWIID*); ILO, *Laborsta* and *KILM* databases; OECD, Eurostat, UNIDO and ECLAC databases.

Note: FDI data refer to outflows for developed countries and to inflows for developing countries and countries in Eastern Europe. Data for China refer to 2000–2010.

in manufacturing.[15] However, this evidence also shows that the same volume of FDI inflows can have very different effects on the magnitude of changes in employment in manufacturing. Several reasons can explain this diversity. First, not all the inward FDI is in fixed capital formation that expands productive capacity and employment, and neither does all of it go to the manufacturing sector. Second, the size of the manufacturing sector in the host country in relation to the existing stock of FDI plays a role: if that stock is small and the industrial sector is large, even a high growth rate of FDI may have little impact on employment. Finally, many factors unrelated to FDI may explain job creation in manufacturing.

Going beyond manufacturing, evidence on the correlation between FDI flows and income distribution is mixed (chart 4.5B). For the period 1995–2010, higher FDI outflows from developed countries generally coincided with an increase in income inequality in these countries. But many host countries, especially those that had large FDI inflows, also experienced an increase in income inequality.[16] It is difficult to understand why FDI outflows and inflows should influence income distribution in the same direction. One reason for this may be that a large proportion of FDI inflows into developing countries is directed to capital-intensive activities, such as the extractive industries, and creates little employment. Moreover, the employment effects may even be negative when FDI involves the acquisition of already existing production sites that may eventually be downsized or closed. Another important reason may be a similar policy response with regard to labour market regulation and wage setting: home countries may attempt to slow the trend towards relocation of production abroad by deregulating the labour market, while host countries may believe that more flexible labour markets will attract additional FDI.

Both FDI outflows from developed countries and inflows to developing countries are associated with a widening income gap …

… probably due to production sharing and related labour market deregulation and wage restraints in both groups of countries.

Openness to FDI is just one element of economic policies, and changes in employment and income distribution can result from other, concomitant factors. For instance (as discussed in chapter III), rising inequality in transition economies was driven by comprehensive market-oriented economic reforms, including deregulation of the labour market.

All of the issues discussed so far concern narrow, trade-related aspects of globalization. However, as mentioned briefly above, the documented changes in trade flows may also reflect shifts in the strategies that developed-country enterprises employ to counter perceived threats of competition from the globalization of trade. There are two main mechanisms these enterprises use to adjust to such competition. One is to increase spending on plants and equipment with a view to upgrading the output mix and production technology. The other is to try to reduce labour costs. Whereas the first mechanism relies on investment in innovation to increase productivity, the second builds on asymmetric negotiating power to impose wage restraint, applying pay reductions or holding pay increases at levels lower than productivity growth, in addition to outsourcing. These are sometimes combined with attempts to boost profits through financial investments.[17]

The first of these two mechanisms was often neglected in the trade-inequality debate of the early 1990s. It concerns trade-induced technological progress, i.e. the argument by Wood (1994) that trade and technology effects cannot be easily separated.[18] Thoenig and Verdier (2003) formalize this argument, predicting that skill-biased technological change should be more pronounced in industries that have been liberalized more. They provide evidence for this from case studies that focused on the automobile and clothing industries in Europe, Japan and the United States.[19]

However, these empirical findings may be sensitive to the specific time period under consideration. Evidence for the United States suggests that the source of productivity growth in this country changed from the 1990s to the 2000s. During the 1990s, output

expansion was achieved through innovations, which were largely related to the microelectronics revolution, and spurred productivity and the upgrading of product quality. In the 2000s, the focus turned to efficiency gains by reducing input costs for given levels of output.

Sector-specific evidence for the United States for the period 1990–2000 indicates that all of the four sectors with the largest growth in productivity (computers and electronic products, wholesale trade, retail trade and manufacturing, excluding computers and electronic products) experienced positive average employment growth, adding a total of nearly 2 million new jobs (chart 4.6A). By contrast, the sectors with the largest productivity gains during the 2000s experienced a substantial decline in employment (chart 4.6B). Computers and electronic products, information, and manufacturing (excluding computers and electronic products), accounted for a sizeable share of overall productivity growth, but employment fell, with a loss of more than 6.6 million jobs, about 60 per cent of which occurred before the onset of the Great Recession of 2008.[20] Moreover, most of the sectors with the largest employment growth were among those with the lowest productivity growth, notably services (chart 4.6B).

The source of productivity growth in the United States changed between the 1990s and the 2000s, from investment in innovation to reducing input costs, including through offshoring.

These developments in productivity and employment may well be associated with the ascendancy of "shareholder value maximization" as a mode of corporate governance.[21] This concept implies evaluating the performance of a company in terms of its financial value per share, rather than by the goods and services it produces, the number of people it employs or its long-term earnings potential as reflected by the company's investment in innovation. This has a direct impact on income distribution, as the compensation of top executives often takes the form of stock options whose market price can rise if the company's share value goes up. More importantly, striving for short-term increases in the market price of a company's stock is inimical to investment in innovation because innovation typically is an uncertain activity that in the short term involves sunk costs, and its long-term return depends on many factors, including some that are beyond the control of a company's executives. By contrast, shareholder value can be influenced directly by a company repurchasing its own shares and granting higher dividends on its shares. This implies that a larger proportion of company profits that could have been reinvested for innovation tends to be distributed through dividend payments or injected in the stock market to buy back shares. The resulting drain on labour demand and, more generally, the threat to move production abroad may well have been used by companies to erode the bargaining power of unions and workers.[22]

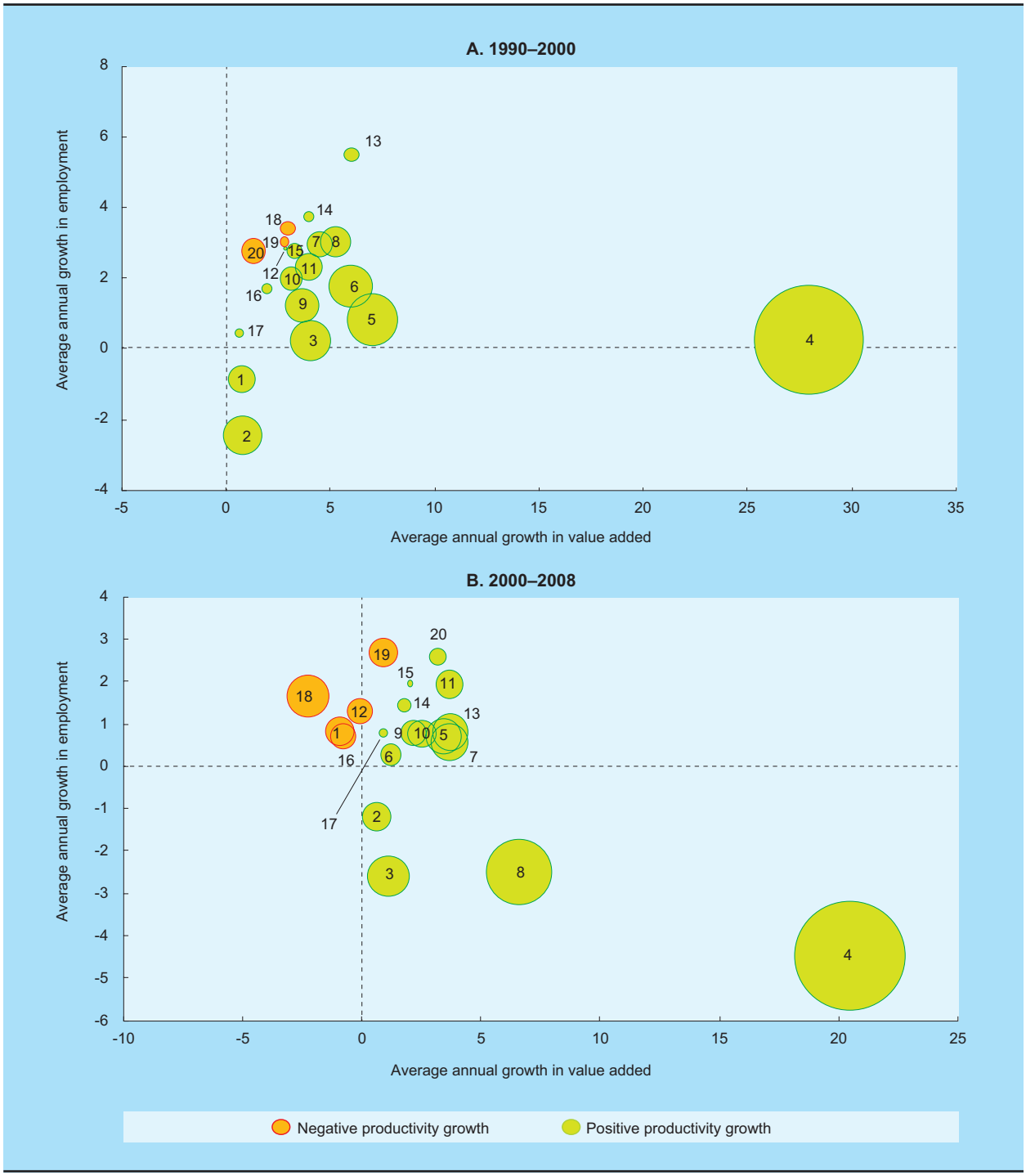
Empirical evidence shows that stock repurchases by the 419 companies in the Standard and Poor's S&P 500 index that were publicly listed between 1997 and 2010 oscillated around a fairly stable level of $300–$350 million throughout the period 1997–2003. Over the subsequent four years, the value of such purchases almost quadrupled. Some of this increase was due to an increase in the value of the underlying stocks. However, the S&P 500 index itself rose by only about 80 per cent over this four-year period, so that the bulk of the fourfold increase in stock repurchases reflects a genuine increase in such repurchases. Perhaps most importantly, the ratio of these companies' stock repurchases to their net income was fairly stable, at a level of about 0.45 between 1997 and 2000, before increasing sharply to 0.6 following the bursting of the dot-com stock market bubble in 2001, and then collapsing to about 0.3 in 2003. Over the period 2003–2008, this ratio continuously increased to reach about 0.8 in 2007, and spiked to more than 1.0 in 2008 before declining to about 0.35 in 2009–2010. Dividend payments evolved in a similar way: they almost doubled, from about $320 million in 2003 to almost $600 million in 2008, before slightly declining in 2009–2010 (Lazonick, 2012).[23]

Offshoring of manufacturing activities has been a major development in global economic relations over the past two decades. However, the tide seems to be turning, at least for the United States. With growing domestic demand in rapidly industrializing developing countries, less of the production capacity in these countries, including in affiliates owned

Chart 4.6

GROWTH IN EMPLOYMENT, VALUE ADDED AND PRODUCTIVITY, BY SECTOR IN THE UNITED STATES

(Per cent)



Source: UNCTAD secretariat calculations, based on data from United States Bureau of Economic Analysis.

Note: The size of each bubble reflects productivity growth in the respective sector. 1: Agriculture and mining; 2: Utilities; 3: Manufacturing (excl. computer and electronic products); 4: Computer and electronic products; 5: Wholesale trade; 6: Retail trade; 7: Transportation and warehousing; 8: Information; 9: Finance and insurance; 10: Real estate, and rental and leasing; 11: Professional, scientific and technical services; 12: Management of companies and enterprises; 13: Administrative and waste management services; 14: Arts, entertainment, and recreation; 15: Accommodation and food services; 16: Other services, except government; 17: Government; 18: Construction; 19: Educational services; 20: Health care and social assistance.

by TNCs, will be utilized for exports. Moreover, in China, the recent rapid wage growth, discussed above, and sizeable currency appreciation have considerably reduced its low-cost labour advantage. And it is unlikely that offshoring to China will be replaced by offshoring to other developing countries in Asia. This is because, since these countries have mainly produced intermediate products for final processing and sale in China, they may find that continuing with this option is easier than retooling their production processes to manufacture finished goods for export to the United States. Finally, the strong increase in oil prices has sharply driven up logistic and transportation costs, and a reassessment of supply chain risks and management costs may lead corporations to reconsider manufacturing goods in the United States. On the other hand, returning production ("reshoring") to the United States, or to other developed countries for that matter, could prove difficult because local suppliers no longer exist and the local labour force may no longer possess the requisite skills.

Nevertheless, any reshoring of production will undoubtedly have positive employment effects in developed countries.[24] The implication for income distribution is less clear. According to media reports, reshored production appears to be located predominantly in jurisdictions with a low degree of unionization, where it is easily possible to rapidly adapt working hours and move to a two-tier wage regime, with new employees being paid barely half the wage of workers that had been employed before reshoring started.[25]

The recent evolution of productivity and employment in developed countries may be associated with the ascendancy of "shareholder value maximization" as a mode of corporate governance.

(c) *Distributional effects in developing and transition economies*

The increase in developing countries' exposure to globalized trade has changed the character of the trade-inequality relationship in two ways. First, rising concerns that some developing countries, mainly in Africa and Latin America, which possessed some industrial production capacity relatively early may also have been adversely affected by imports of manufactured goods, including from low-wage economies (as shown in chart 4.4). Second, countries, especially China, that started rapid industrialization more recently and have become the main source of South-South trade in manufactures, have also experienced more unequal income distribution. An additional change in the nature of the trade-inequality relationship relates to the greater tendency to complement trade with financial integration. Financial integration may have a substantial effect on the exchange rate, which in turn can have an impact on a country's trade performance. This aspect has been ignored by both the old and the new trade-inequality debates (see also section C).

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

In addition to the impact of trade on changes in the total number of jobs, trade-related effects on inequality also depend on whether labour moves towards more productive or less productive activities, or even away from formal employment towards informality or unemployment. Assessments of the consequences of trade liberalization have shown that in developing countries in Asia taken as a group, and most notably in China, labour has moved from low-productivity jobs, often rural, towards higher productivity jobs, especially in manufacturing, while in Latin America and sub-Saharan Africa labour has moved in the opposite direction (i.e. from high-productivity jobs in manufacturing towards lower productivity jobs), such as in informal services and the production of primary commodities (Sainz and Calcagno, 1992; McMillan and Rodrik, 2011). Distinct from the earlier trade-inequality debate, these considerations refer to the economy as a whole, and not just to the manufacturing sector. Taking this broader perspective enables the capturing of structural transformations that give rise to both intersectoral factor movements and sector-specific productivity shifts. Other factors that need to be taken into account are external shocks and macroeconomic and exchange-rate policies.

Looking at the trade-inequality relationship from this broader perspective suggests that the pressures on income distribution arising from trade globalization can vary considerably across countries, depending on macroeconomic shocks and on different effects from trade integration on the process of structural change. One explanation given for the varying distributional effects of trade globalization is that each country has different endowments and has attained a different degree of industrialization when it becomes exposed to the forces of globalization. According to this reasoning, in countries with poor natural resource endowments, many of which are in South and East Asia, integration into the global economy will initially result in greater inequality, because it tends to increase the incentives for expanding manufacturing and other modern sector activities. When such economies are at an early stage of industrialization, such as China two decades ago, their income inequality tends to widen. On the other hand, when such economies already have a well-skilled labour force and reach a relatively advanced stage of industrialization, such as the Republic of Korea in the 1990s, their income distribution tends to narrow, as incentives from trade globalization, often helped by supportive policies, allow labour to move towards more productive and more technology-intensive activities.

Concerns about trade-related inequality in developing and transition economies often focus on distributional effects stemming from changing production structures.

The same reasoning, emphasizing structural factors, leads to the perception that countries that have rich natural resource endowments and have achieved a certain degree of initial industrialization will find it very difficult to sustain a dynamic process of structural change after opening up to global competition. The reason is that these countries – unlike developed countries – have not yet acquired the capabilities for technological innovation that would allow them to benefit from globalization-related incentives to progress to capital- and technology-intensive activities. Moreover, unlike low-income countries at the initial stage of industrialization, they do not, or no longer, possess abundant cheap labour to benefit from offshoring of labour-intensive activities by developed-country firms. Rather, their opening up to global trade will tend to cause a decline in their manufacturing employment and output (i.e. a process of deindustrialization). Indeed, in many countries in sub-Saharan Africa, Latin America and Central and West Asia, as well as some countries in South-East Asia, greater integration into globalized trade may well have reduced incentives to expand manufacturing activities and reinforced traditional specialization patterns in primary commodities and natural-resource-intensive manufactures.

However, independently of factor and technological endowments and the level of industrialization already reached, macroeconomic shocks stemming from the international monetary system and, in particular, from currency overvaluation can seriously compromise or even halt the process of structural change derived from a country's integration into the global economy. The way in which a country manages its integration into the global economy, not only through its trade and FDI policies, but also through its financial and exchange-rate policies, eventually determines globalization-related effects.[26] The inability of a number of countries to sustain a dynamic process of structural change has sometimes been called a "middle-income trap". This is when certain countries find it difficult to increase the share of domestic value added in their manufactured exports and sustain the movement of labour towards more productive and technologically more demanding manufacturing activities (UNCTAD, 2011: 40). Reversing the process of structural change is likely to have adverse distributional effects, because the labour displaced from the manufacturing sector will tend to move into low-productivity activities, and often to informal services or unemployment.

Looking first at countries that faced the forces of trade globalization at an initial stage of industrialization, China clearly shows how structural change affected the pattern of income distribution in the country. Rising income inequality in China over the past two decades has been characterized by a strong increase in spatial inequality (with high incomes concentrated in some locations and low incomes in others). Rapid income growth has been concentrated in coastal areas which benefited from deep trade integration as a result of policies promoting openness pursued since the mid-1980s. These have included

the provision of good infrastructure and rapid logistical access to world markets. However, it has led to growing inequality relative to the internal provinces, although even the latter have seen rapid income growth compared with their earlier levels.[27] Furthermore, sustained investment in the biggest cities, where administrative, financial and export-oriented manufacturing activities are concentrated, has also contributed to increasing urban-rural inequalities (Asian Development Bank, 2012; Galbraith, 2012).[28] According to one estimate, the rural-urban gap, combined with inequality between urban areas, accounts for over two thirds of national income inequality in China (Zhu and Wan, 2012: 98).[29]

The way in which a country manages its integration into the global economy, through its trade and FDI policies as well as its financial and exchange-rate policies, eventually determines globalization-related effects.

Sectoral employment shifts combined with inter-industry wage differentials are an important channel through which structural transformation affects income distribution. These effects are magnified when structural change occurs in economies that undergo significant ownership changes, such as land ownership reform and the dismantling of State-owned enterprises (SOEs). In China, for example, the acceleration of land ownership and labour-market reforms in the late 1990s was followed by a decline of employment in manufacturing in most provinces. However, this decline was overcompensated by sharply rising employment in manufacturing in those coastal provinces that spearheaded China's involvement in global trade and attracted significant FDI, particularly after the country's accession to the WTO in 2001. A favourable exchange rate was a key factor in this process. The wages paid in the labour-intensive activities, which constitute the bulk of manufacturing activities in these coastal provinces, are, by necessity, higher than in the internal provinces in order to attract migrant workers, and especially the better-skilled amongst them. The reason why such export-oriented sectors can afford to pay higher wages may well be that most of those activities are undertaken by TNC affiliates that are more profitable because they combine state-of-the-art technologies with very low absolute wages. These specific distributional impacts of trade and FDI may also explain why intersectoral wage patterns in China have become increasingly similar to those of developed countries (Kwon, Chang and Fleisher, 2011).[30]

The common view that China's emergence is a threat to economic progress and equity in the rest of the developing world is exaggerated.

The growing wage differentials within the private sector are likely to be a major factor contributing to the increase in overall wage inequality in China, in addition to the declining importance of SOEs. However, the geographical concentration of the largely State-controlled banking and finance sector in China and the high remuneration in that sector have also contributed significantly to the increase in income inequality (Chen, Lu and Wan, 2010; Galbraith, 2012).[31]

China's opening up to global trade was supported by a monetary regime of fixing the exchange rate at a competitive level. This allowed a sustained dynamic process of structural change to unfold and employment in high-productivity activities to expand. In much of Latin America and sub-Saharan Africa, however, trade liberalization seems to have resulted in labour moving towards lower-productivity activities, including informality and unemployment (McMillan and Rodrik, 2011). This gives rise to the question whether competition from manufactured imports from low-wage economies is responsible for this pattern, in particular in Latin America which has a much higher level of industrialization than sub-Saharan Africa.

One recent study on how China's opening up to global trade may have affected changes in other developing countries' composition of output and exports points to three broad conclusions (Wood and Mayer, 2011). First, China's impact has been greatest on other East Asian economies that are open to trade and produce goods similar to those made in China. Second, the "China effect" on other developing countries has depended on other, region-specific factors. For example, the rise in manufactured imports in Latin America during the 1980s

was the result of the region's own trade liberalization at a time when China exported very little to that region. Subsequent adverse effects of China's export expansion are likely to have been compensated in part by regional integration schemes and industrial policies designed to improve the competitiveness of Latin America's manufactured exports. Third, overall, it seems that the "common view of China's emergence as a threat to economic progress and equity in the rest of the developing world is exaggerated" (Wood and Mayer, 2011: 346).[32]

It should also be emphasized that much of the effect of trade liberalization on structural transformation in Latin America is due to premature, or badly managed, integration into the international financial system. In many cases, this is associated with currency appreciations as a result of surging capital inflows that did not translate into higher domestic fixed investment. The weakening or phasing out of supportive industrial policies and a general retreat of the State from the economy has also played an important role (*TDR 2003*, Part Two, chap. VI). China's favourable monetary regime, on the one hand, and frequent currency overvaluation in Latin America, on the other, has had a major influence on the composition of output and exports in other developing countries.

Another question that arises from structural change in Latin America and sub-Saharan Africa is related to the distributional impact of terms-of-trade developments. This is very likely to depend on country- and time-specific circumstances. A change in a country's terms of trade (i.e. prices of its exports compared with those of its imports), is a crucial country-specific factor that affects the distributional impact of the globalization of trade. In this regard, it is important to look at both the rapid expansion of manufactured exports from low-wage economies, especially from China-centred production networks in East Asia, and the strong growth in the latters' demand for primary commodities. The reason is that the enormous magnitude, breadth and duration of the upswing in commodity prices since the early 2000s has boosted the export earnings and improved the terms of trade of resource-rich countries, many of which are in Latin America and sub-Saharan Africa.

An improvement in the terms of trade and related incentives for labour to shift from manufacturing to primary activities are not necessarily detrimental to income distribution …

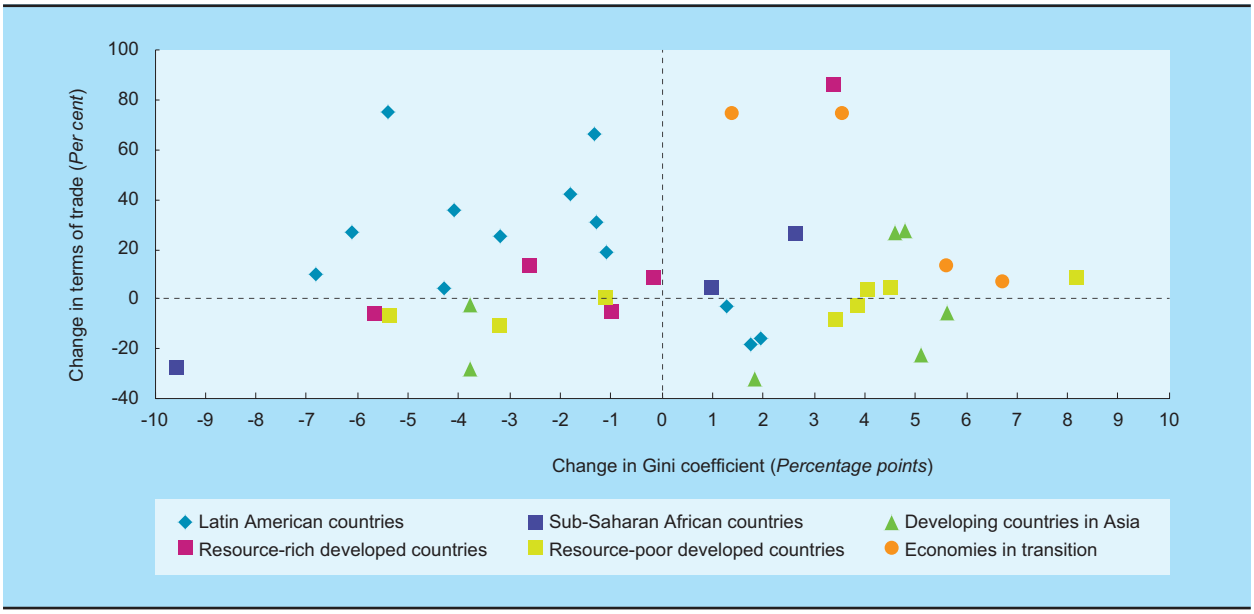
It may be argued that terms-of-trade effects favouring natural resource sectors cause adverse distributional outcomes. One reason is that ownership of natural resources is typically less equally distributed than other assets. Another reason is that, unlike manufacturing industries and services, natural-resource-related activities do not generate much employment (*TDR 2010*, chap. IV). This may contribute to widening the disparities in income distribution when the terms-of-trade effect makes manufacturing less competitive, so that workers may be pushed from manufacturing into lower wage jobs or even into informality and unemployment. An increase in inequality can be avoided if good-quality jobs are created elsewhere in the economy. This depends on the linkages that can be established between the export-oriented activities in the primary sector, on the one hand, and modern services (public and private) and manufacturing on the other. Such linkages rarely emerge from market forces alone; they normally require supportive macroeconomic and wage policies as well as targeted fiscal and industrial policies aimed at ensuring that most of the income generated by natural-resource-related activities is used within the country. In particular, to the extent that an improvement in the terms of trade leads to increases in a government's fiscal revenues, this would enable greater public spending to create jobs directly in the public and services sectors, and indirectly in jobs related to infrastructure development, as well as in manufacturing if macroeconomic conditions are favourable.[33]

… much depends on the pace of capital accumulation and the building of domestic productive capacities, supported by government policies, including the prevention of external macroeconomic and financial shocks.

Most Latin American countries have succeeded in combining an improvement in their terms of trade since 2000 with an improvement in income

Chart 4.7

TERMS OF TRADE AND INCOME INEQUALITY, SELECTED COUNTRIES, 2000–2010



Source: UNCTAD secretariat calculations, based on *SWIID*, *UNCTADstat*; and IMF, *World Economic Outlook* database.
Note: For some countries the end of the period is the last year for which data were available. Period for Azerbaijan starts in 2001. *Latin America:* Argentina, the Bolivarian Republic of Venezuela, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Honduras, Mexico, Paraguay, Peru, Uruguay. *Sub-Saharan Africa:* Ghana, Mauritius, South Africa. *Asia:* China, India, Indonesia, the Philippines, the Republic of Korea, Thailand, Turkey. *Resource-rich developed countries:* Australia, Canada, New Zealand, Norway, the United States. *Resource-poor developed countries:* Austria, Belgium, Denmark, France, Germany, Italy, Japan, the United Kingdom. *Economies in transition:* Azerbaijan, Kazakhstan, Kyrgyzstan, the Russian Federation, Uzbekistan.

distribution. However, this has generally not been the case in most other resource-rich economies (chart 4.7). Drawing conclusions from such a comparison is difficult because of incomplete data coverage, especially for sub-Saharan Africa and West Asia. Nonetheless, available evidence indicates that all the Latin American countries shown in the chart which experienced an improvement in their terms of trade also saw a reduction in income inequality, and in countries where the terms of trade deteriorated (Costa Rica, Honduras and Uruguay), there was an increase in income inequality. By contrast, the income gap widened in the only two sub-Saharan African countries in the chart in which the terms of trade improved (Ghana and South Africa), while it narrowed in Mauritius where the terms of trade deteriorated slightly. Income inequality also increased in all the economies in transition in the chart, even though their terms of trade improved, while there is mixed evidence for developing countries in Asia and for developed countries.

An improvement in the terms of trade resulting from increases in the prices of commodity exports usually has positive fiscal effects, because direct and indirect revenues from commodity export earnings often constitute an important source of fiscal revenues. The groups of countries that benefited most from improved terms of trade over the last decade (Africa, Latin America, West Asia and the transition economies) were also those that had faced slow growth and low investment rates over the 1980s and 1990s. The rise in commodity prices helped these countries to increase their fiscal revenues significantly (see chapter V, section C) and enabled them to increase their current and capital public expenditures, even while reducing their fiscal deficits; in some cases, they even generated a fiscal surplus.

The increase in public investment, which is often necessary for private investment to follow or to rise in parallel, contributed to a rise in the total fixed investment rate in Latin America by an average

of 6 percentage points of GDP between 2003 and 2011 (i.e. from 16.8 per cent of GDP to 22.9 per cent) (ECLAC, 2011). Africa, West Asia (excluding Turkey) and the transition economies also saw increases in gross fixed capital formation (GFCF) of 4–6 percentage points of GDP between 1999-2000 and 2009-2010. While these investment rates remained well below those in East Asia (42 per cent of GDP), South Asia (28 per cent of GDP) and South-East Asia (27 per cent of GDP) in 2010, they were nonetheless the highest levels reached since the early or mid-1980s. Moreover, these rising investment rates were complemented by macroeconomic, trade and industrial policies which improved employment prospects, including by encouraging regional trade that tends to have a higher share of manufactures, as well as by new minimum-wage legislation, as discussed in chapter VI.[34]

Improved fiscal revenue also enabled better provision of public goods, and widened the scope for public redistributive policies, including the introduction of cash transfer programmes, which in some countries, such as Brazil, cover millions of households, as discussed in greater detail in chapter V.

Taken together, the recent experiences in Latin America suggest that an improvement in the terms of trade and related incentives for labour to shift from manufacturing to primary activities are not necessarily detrimental to income distribution. Much depends on the pace of capital accumulation and the building of domestic productive capacities. Public expenditure and general government policies can help support the creation of employment and wage opportunities by developing linkages between export-oriented primary sectors and the rest of the economy. However, unless external shocks can be prevented, such as a real revaluation of the Brazilian *real* during the past decade, it is impossible to implement reasonable redistribution policies and policies that promote the productive potential of the economy, especially in manufacturing.

C. Financial integration of developing and transition economies

The previous section has argued that Kuznets' basic insight that the structural composition of an economy is a major determinant of income distribution most likely remains valid. However, the increasing complexity of economies, owing partly to globalization processes, has made it difficult to find inverted U-curves in inequality data for countries for the period since 1980. This difficulty may be partly due to methodological issues,[35] but certainly also to the greater importance of non-labour incomes (whereas Kuznets referred only to pay inequality) and of post-industrial economic sectors, such as services and, especially, finance. This is because rapid and sizeable changes in asset prices and the associated substantial capital gains, or losses, may sometimes have greater effects on income distribution than the slower moving processes of economic structural change (i.e. changes in the relative shares in employment and GDP of individual sectors emphasized by Kuznets).

However, the greater financial integration of developing and transition economies over the past three decades has probably had an even more significant impact on the macroeconomic variables that shape structural change and the attendant distributional effects. Against this background, this section briefly outlines the benefits these economies sought through financial integration. It then concentrates on the macroeconomic effects of volatile international capital flows, outlining the attendant adverse distributional outcomes in terms of the creation of employment and wage opportunities in high-productivity activities, especially in the traded goods sector.

International financial integration has been a particularly important feature of emerging market economies in recent years. Financial integration[36] can bring significant income and distributional benefits, such as through FDI inflows which can create employment and wage opportunities and help broaden technology transfer, as discussed in the previous section. Financial integration confers additional benefits when it helps to finance imports of capital goods for the creation of new productive capacities. Theoretically, it may also reduce the pressure for macroeconomic adjustment to temporary shocks by bolstering a country's capacity to pursue countercyclical policies through the provision of access to external financing, thereby smoothing or avoiding recessions and job losses. This will be the case, in particular, when shocks have domestic origins and a country's economic cycles have little correlation with global economic developments.

Financial integration affects the macroeconomic variables that shape structural change and the attendant distributional outcomes.

However, the adverse macroeconomic and distributional effects that have often been seen to accompany financial integration, especially in developing and transition economies, tend to outweigh these potential benefits. There are four main adverse effects of increased cross-border private capital flows resulting from international financial integration: (i) due to their volatility and pro-cyclicality they create or exacerbate macroeconomic instability; (ii) they often respond perversely to changes in macroeconomic fundamentals; (iii) they tend to destabilize domestic financial systems; and (iv) they tend to generate asset price bubbles.[37] As a result of these effects, the gains from such cross-border capital movements are primarily, if not entirely, appropriated by the owners of financial assets, whereas the losses are mostly borne by those who earn wages or profits from productive activities in the real sector of the economy.

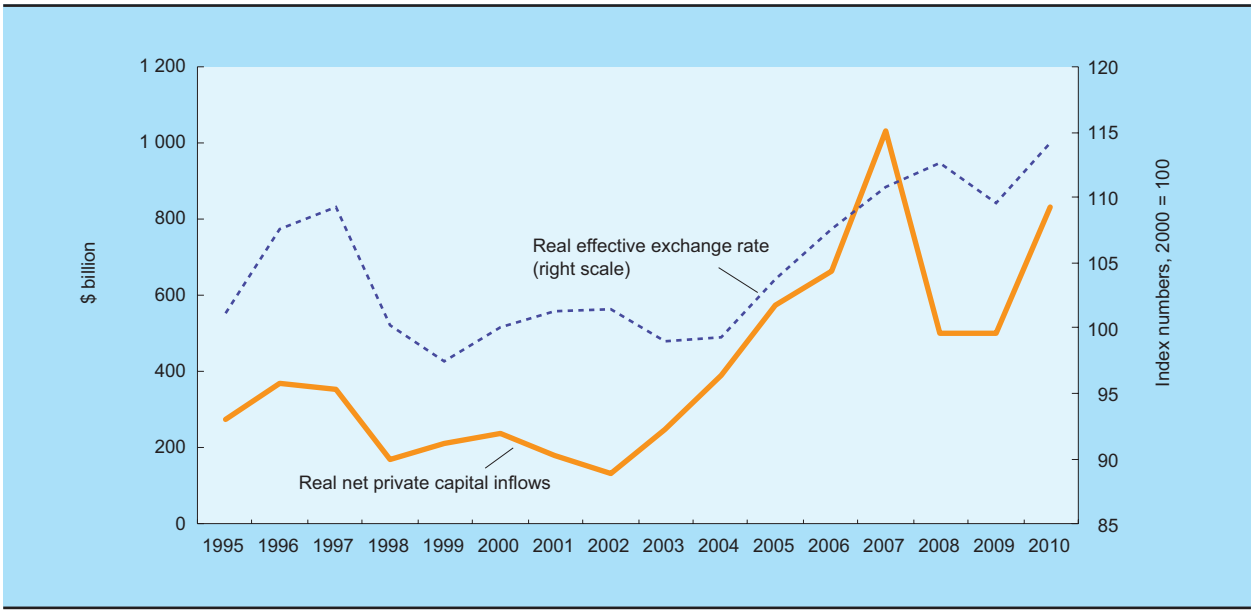
Regarding the first of these channels, it is notable that financial flows to developing and transition economies generally occur in waves (i.e. simultaneously across these countries), and are driven by push factors emanating from macroeconomic conditions in the major developed countries. Such push factors include growing interest rate differentials between the latter economies and emerging economies, as well as greater global "risk appetite" (Ghosh et al., 2012).[38] Empirical evidence indicates that private capital flows to emerging market economies are significantly more volatile than those to developed countries (Broner and Rigobon, 2006), and that a surge of inflows is a good predictor of their sudden stop and reversal (Agosin and Huaita, 2012). Moreover, since they tend to behave in a procyclical manner, they do not smooth the impact of external shocks on the current account; on the contrary, they tend to reinforce those shocks or may act as an external shock themselves. As a result, financial integration is often characterized by boom-bust cycles of financial inflows. The benefits reaped during boom times are mostly limited, since surges of capital inflows generally do not lead to higher fixed investments, or to increased imports of capital goods and technology transfer that would strengthen the process of growth, structural change and sustained employment creation. On the contrary, they exert upward pressure on the exchange rate, which reduces the international competitiveness of domestic producers. And, rapid capital exit during the bust phases cause financial turmoil and economic contraction with attendant adverse effects on employment. Thus the net distributional effects of financial integration may well be negative.

Second, capital inflows often occur in the form of surges, which indicates that they tend to be subject to herd behaviour. This causes them to go beyond or even against what would be determined by macroeconomic fundamentals, such as the current-account balance or inflation differentials.[39] This implies that capital inflows, which are often very large compared with the size of receiving countries' financial sectors, may overwhelm those countries' regulatory and policy frameworks, such as prudential regulations or foreign-exchange market interventions. Financial inflows can therefore cause macroeconomic instability and sharp appreciations of the real exchange rate. As a result, the private sector becomes less willing to invest and investments in tradables sectors become less profitable. Again, this has adverse effects on the creation of employment and wage opportunities.

The evolution of private capital inflows is closely associated with real exchange rate movements

Chart 4.8

REAL NET PRIVATE CAPITAL INFLOWS AND REAL EFFECTIVE EXCHANGE RATE IN EMERGING ECONOMIES, 1995–2010



Source: UNCTAD secretariat calculations, based on Institute of International Finance (IIF), *Capital Flows to Emerging Market Economies*, September 2011.

Note: Nominal net private capital flows are deflated by the United States GDP deflator index (2008 = 100). IIF defines the following countries as "emerging economies": Argentina, the Bolivarian Republic of Venezuela, Brazil, Bulgaria, Chile, China, Colombia, the Czech Republic, Ecuador, Egypt, Hungary, India, Indonesia, Lebanon, Malaysia, Mexico, Morocco, Nigeria, Peru, the Philippines, Poland, the Republic of Korea, Romania, the Russian Federation, Saudi Arabia, South Africa, Thailand, Turkey, Ukraine and United Arab Emirates.

in receiving countries (chart 4.8). However, there are differences in the degree of this association across countries, as revealed by more disaggregated evidence for the period since the early 1990s. It also shows that many emerging market economies, especially in Latin America and Eastern Europe, received sizeable capital inflows but saw little increase in private investment. This has been the case even in countries with current-account deficits, such as Brazil, India, South Africa and Turkey, whose currencies should have depreciated in order to compensate for relatively high inflation and move towards a balanced current account (*TDRs 2008* and *2011*). By contrast, emerging economies in Asia, as well as Chile, which successfully used systematic intervention and capital controls to prevent real exchange rate appreciation for a sustained period of time, saw private investment grow rapidly and employment and wage opportunities in their manufacturing sectors expand (*TDR 2003*; see also Akyüz, 2011). This suggests that differences in government policies relating to financial integration and its management could partly explain the differences in labour movements between high- and low-productivity sectors, and therefore how globalization affects structural change and income distribution, as discussed in the previous section.

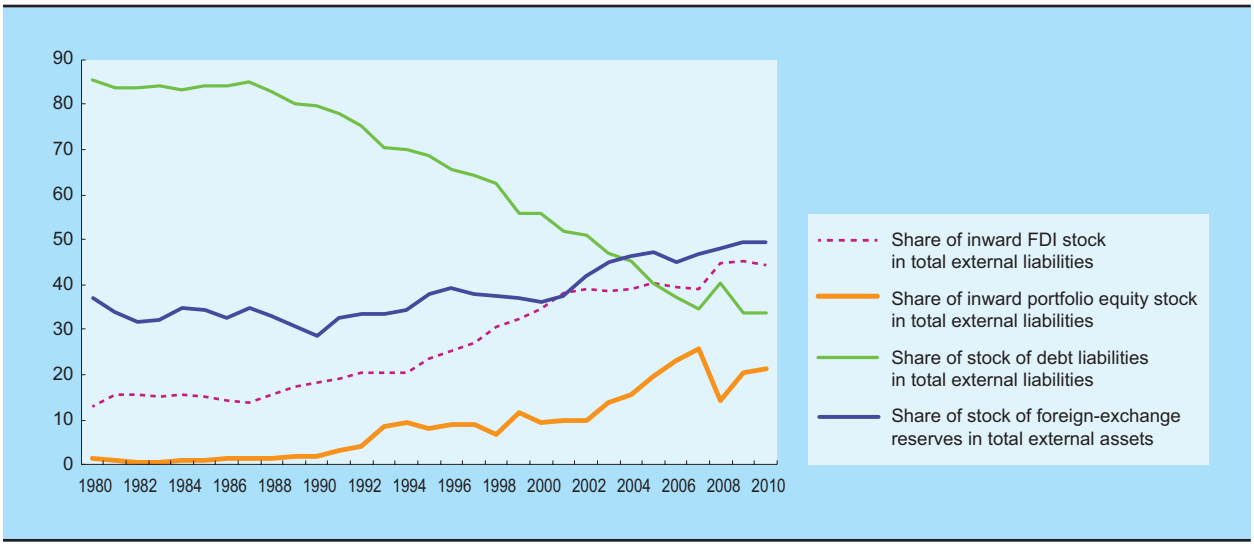
Third, financial integration has often caused an excessive rise in bank credit to the private non-bank sector and a progressive currency and maturity mismatch in the balance sheets of firms, households and banks that borrow in foreign currency at lower interest rates than those charged for domestic credit. Once the financial inflows dry up or reverse, the host country's currency sharply depreciates and the currency mismatches in balance sheets tend to result in increased debt servicing difficulties and default (*TDR 2008*, chap. VI).

However, in the aftermath of the Asian crisis in 1997–1998, emerging economies began to accumulate sizeable foreign-exchange reserves as a form of self-insurance against sudden stops and reversals

Chart 4.9

COMPOSITION OF EXTERNAL ASSETS AND LIABILITIES IN EMERGING ECONOMIES, 1980–2010

(Per cent)



Source: UNCTAD secretariat calculations, based on *Lane and Milesi-Ferretti External Wealth of Nations* database.

Note: The numbers shown reflect GDP-weighted averages. The following emerging market economies are covered in the chart: Argentina, the Bolivarian Republic of Venezuela, Brazil, Bulgaria, Chile, China, Colombia, the Czech Republic, Ecuador, Egypt, Hong Kong Special Administrative Region of China, Hungary, India, Indonesia, Lebanon, Malaysia, Mexico, Morocco, Nigeria, Peru, the Philippines, Poland, the Republic of Korea, the Russian Federation, Taiwan Province of China, Saudi Arabia, South Africa, Thailand, Turkey, Ukraine and United Arab Emirates.

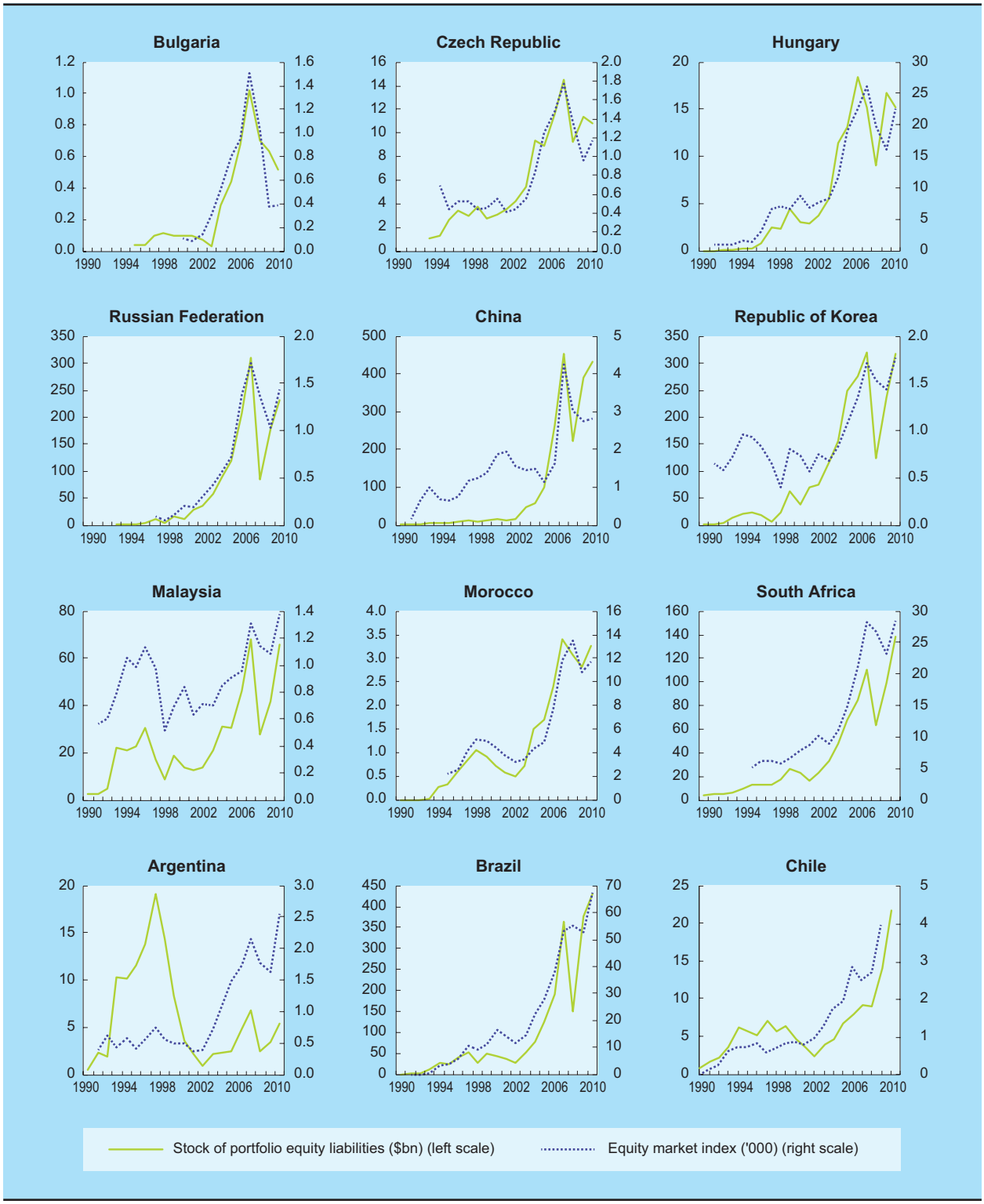
of capital inflows. The average share of foreign-exchange reserves in total foreign assets increased from about 36 per cent in 2000 to almost 50 per cent in 2010 (chart 4.9). Moreover, emerging market economies' external liabilities are no longer dominated by foreign-currency-denominated debt, having shifted towards FDI and portfolio equity instead. Indeed, the share of foreign-currency-denominated debt in total external liabilities declined from almost 90 per cent in 1980 to slightly over 30 per cent in 2010. This was made possible by a favourable external economic environment prior to the onset of the economic crisis, which allowed these economies to improve their debt position more generally. Hence they are increasingly able to issue debt denominated in local currency. One observer notes that this shift towards the issuance of local currency debt "has been facilitated by increasing demand from foreign investors for higher-yielding local currency assets" (Leijonhufvud, 2007: 1839).

This growing preference on the part of foreign financial investors for assets in local currency is reflected in the increase in portfolio equity flows to emerging market economies: the share of portfolio equity holdings in total foreign liabilities almost tripled between 2000 and 2007, when it reached about 26 per cent, although it declined sharply with the onset of the current crisis. This increase is also likely to have been supported by attempts in emerging market economies to strengthen their stock markets by opening them to foreign investors.

This increase in the relative importance of portfolio equity inflows could be indicative of the rising importance of financial activities relative to activities in the real economy (namely investment and consumption). Indeed, a fourth source of possible adverse macroeconomic and distributional effects accompanying financial integration is the potential of capital surges to produce asset price or real estate bubbles. Empirical evidence indicates that movements in the stock market indices of emerging markets, especially those in Eastern Europe but also in parts of Africa, Asia and Latin America, have now become closely correlated with portfolio equity inflows (chart 4.10). This close correlation presents a potential risk of capital flow reversals easily creating

Chart 4.10

STOCK OF PORTFOLIO EQUITY LIABILITIES AND EQUITY MARKET INDICES, SELECTED EMERGING ECONOMIES, 1990–2010



Source: UNCTAD secretariat calculations, based on *Lane and Milesi-Ferretti External Wealth of Nations* database; and Bloomberg.

Note: The following equity market indices were used: Bulgaria: SOFIX; Czech Republic: PX; Hungary: BUX; Russian Federation: INDEXCF; China: SHCOMP; Republic of Korea: KOSPI; Malaysia: FBMKLCI; Morocco: MOSENEW; South Africa: JALSH; Argentina: MERVAL; Brazil: IBOV; and Chile: IPSA.

an asset price bust, or even a credit crunch, with severe macroeconomic consequences and attendant adverse distributional effects.

In 2008, following the onset of the global financial and economic crisis, a reversal of capital flows to emerging market economies, caused a downward pressure on their currencies and their equity markets dropped sharply (charts 4.8–4.10). Most countries were able to smoothen much of the related adverse macroeconomic and distributional effects through countercyclical policies made possible by significantly improved fiscal positions and price stability achieved during the previous boom years. But capital inflows have recovered remarkably quickly since 2009.

In the hope of spurring their development process, and encouraged by recommendations of the international financial institutions, many developing and emerging countries have attempted to integrate rapidly into the international financial system, a number of them prematurely. Like earlier episodes analysed in various *TDRs* over the past three decades[40] (see, in particular, *TDR 1998*, chap. III; *TDR 1999*, chap. III and *TDR 2003*, chap. II), the boom-bust cycle over the past five years shows that countries that have undertaken deep financial integration are highly vulnerable to adverse impacts from a potential worsening of the global economic environment, such as a worsening of the euro-zone crisis, and instability of international financial markets. Particularly exposed are countries that have a current-account deficit (or a declining surplus) and finance their deficit through capital inflows that do not translate into the creation of new productive capacity, but instead stimulate the demand for existing assets, such as stocks and real estate.[41] This implies that the counterparts of current-account deficits are liquid portfolio flows or one-time foreign investment flows into real estate, both of which are exposed to investors losing their appetite for risk, and neither of which contributes to the resilience of the productive sector. The damage to growth and income distribution resulting from a drying up of such financial inflows could be more severe at the present juncture than in 2008. This is because the reversal of capital inflows may last much longer and there is considerably less room for countercyclical fiscal measures to avert renewed macroeconomic instability and recession, as discussed in chapter I.

D. Conclusions

The analysis in this chapter suggests that the extent to which globalization and technological change affect income distribution depends on how trade and financial integration are managed. Policies that influence the nature and speed of economic integration affect the process of structural change and the related creation of employment and wage opportunities in high-productivity activities. From this perspective, it is possible to distinguish five broad categories of economies, described below.

- The first group comprises developed countries, notably the United States, which experienced polarization of their employment and wage structures, resulting in a decline in wages and employment of moderately skilled workers relative to the highest-skilled and the lowest-skilled workers. These countries also saw a strong increase in their manufactured imports from developing countries, especially from low-wage economies. Under the macroeconomic and labour market policies that were pursued, the rapid rise of such imports since the mid-1990s probably stems from offshoring, which is closely associated with FDI and international production sharing. However,

these new features in the trade and inequality relationship also appear to be closely related to a change in strategy chosen by developed-country enterprises to adjust to competition resulting from increasing globalization. During the 1990s, these enterprises achieved productivity growth and output expansion through investment in innovation. By contrast, during the 2000s, they placed greater emphasis on becoming more competitive internationally through wage restraints and reduced employment opportunities, combined with attempts to boost profits through financial investments. This latter strategy was facilitated by the deregulation of financial markets and greater flexibility of the labour market, which strengthened the power of profit earners vis-à-vis wage earners.

- The second group consists of countries that are industrializing rapidly. These include several countries in Asia, especially China. The defining characteristic of this group is the creation of numerous employment and wage opportunities in high-productivity activities, mainly in manufacturing. These are the result of macroeconomic policies supportive of productive investment and exchange-rate management which has preserved the international competitiveness of domestic firms. As a result of these processes there has been rapid growth in average per capita incomes. But the structural transition of their economies from low-productivity to high-productivity activities has also led to rising income gaps and spatial inequalities. It is likely that these countries can maintain high average incomes while gradually closing their income gaps over time through the fuller absorption into high-productivity activities of the workers who now remain employed in disadvantaged areas and activities. A less benign distributional outcome will probably result if a shift from export-oriented production, emphasizing manufacturing, to production oriented more towards domestic markets leads increasingly to employment and wage opportunities in service activities, which tend to be less well remunerated than jobs in manufacturing. Such an outcome could slow down the increase in wages observed over the past few years and result in greater equality, though at lower levels of average income. However, this could be avoided by an incomes policy that links wage adjustments in all sectors of the economy to average productivity growth, as discussed in chapter VI of this *Report*.

- The third group comprises countries that have reached a certain level of industrialization, but have been unable to sustain a dynamic process of industrial deepening. Instead, their economic integration has been accompanied by a process of deindustrialization. These include natural-resource-rich countries in Latin America, sub-Saharan Africa and parts of Asia. Their macroeconomic, trade and exchange-rate policies during their integration into the world economy have undoubtedly contributed – in particular during the 1980s and 1990s – to increasing income gaps in conjunction with generally declining average per capita incomes. However, the substantial increase in commodity prices and the associated strong improvements in these countries' terms of trade have facilitated their attempts to improve their macroeconomic policy stances and fiscal accounts. By creating good-quality jobs elsewhere in their economies, some of these countries, especially in Latin America, have successfully averted adverse distributional effects of deindustrialization. Especially important in this context have been supportive macroeconomic and wage policies, as well as targeted fiscal and industrial policies aimed at ensuring that most of the income generated in the commodities sector is used within the country.

  However, some of these countries are likely to face substantial challenges in sustaining their moves towards more equal income distribution. The reason is that the benign distributional outcomes have, at least in part, depended on higher fiscal revenues resulting from soaring commodity prices. Not all countries can assume that such favourable developments in their export revenues will last much longer. While net food exporting countries are likely to continue to benefit from a favourable external environment, a prolonged global economic slowdown could well have less favourable outcomes for exporters of energy commodities and base metals, many of which are in Africa and Central and West Asia, and where recent distributional changes have already been less favourable than those in many Latin American countries.

- A fourth category consists of countries in South-East Asia and parts of Africa that have attained a certain level of industrialization through integration into international production networks. However, most of their activities have focused on simple labour-intensive activities, and they have been unable to ignite or sustain a dynamic process of industrial deepening. Over the past two decades, these countries have experienced rapid growth, while distributional outcomes have changed little (such as in Malaysia, the Philippines and Thailand) or worsened (Indonesia) for reasons similar to those for countries in the second category described above. Over the next few years, there is a risk that these countries' employment and wage opportunities will be adversely affected by a probable prolonged decline in global aggregate demand, and that the workers displaced from the manufacturing sector will move to low-productivity activities, or even to informal services or unemployment. Such distributional effects could be compounded by adverse impacts stemming from financial openness if a decline in earnings from manufactured exports leads to a deterioration of these countries' current accounts, and if the resulting deficits are then financed through increased international portfolio inflows. For these countries, it will be particularly important to strengthen domestic demand-growth-employment dynamics by adopting macroeconomic policies that promote domestic mass incomes. This could be achieved through well-designed incomes policies, while a higher level of fixed investment could be encouraged through measures that improve domestic financing conditions.

- A final category consists of countries (mostly in Central and Eastern Europe, as well as Central Asia) that have fully embraced liberal policy agendas and whose processes of structural change and related distributional effects have been strongly affected by financial integration, as well as by changes in the ownership structure of enterprises. The further evolution of distributional outcomes in these countries will depend largely on how they manage their financial integration, and whether their macroeconomic and labour market policies will be reoriented towards reversing the trend of increasing inequality.

The examination of the distributional impacts of technological change and globalization in this chapter has focused on the process of structural change and the related shifts in employment and wage opportunities. However, this emphasis on structural factors does not imply a deterministic view of income distribution. On the contrary, policies are the key determinant of distributional outcomes. Nevertheless, in order to design policies so that the desired distributional outcomes are achieved as far as possible, it is important to understand how the forces of globalization and technological developments affect income distribution and what kinds of policies can maximize the distributional benefits of globalization and technological change. ■

Notes

1 Aghion, Caroli and Garcia-Penalosa (1999) observed that wage inequality rose sharply in the United Kingdom and the United States, but only moderately in countries like Australia, Austria, Belgium, Canada, Japan, New Zealand and Sweden, remained stable in Finland and France, and declined in Germany and Italy.

2 As an additional reason, some economists (e.g. Krugman, 1995) argued that the increase in magnitude of developed countries' imports of manufactures from developing countries was too small to make a qualitative difference. However, as suggested by Feenstra and Hanson (2003), given the structural change in developed countries during the twentieth century, the correct comparator is not the share of manufactured imports in GDP, but rather the share of value added in manufacturing. On that measure, between 1913 and 1990 "merchandise trade has indeed grown substantially relative to the production of these commodities in many advanced countries" (Feenstra and Hanson, 2003: 149).

3 This prediction is based on the so-called "factor price equalization theorem", which is one of the major theoretical results of Heckscher-Ohlin trade models. In its simplest form, it postulates that free and frictionless trade will cause factor prices in different countries to converge, provided they have identical linearly homogeneous technologies and their factor endowments are sufficiently similar to be in the same diversification cone.

4 See, for example, Berman, Bound and Griliches, 1994; Berman, Bound and Machin, 1998; and Aghion, Caroli and Garcia-Penalosa, 1999. Focusing on the United States, others have argued that the increase in the wage premium was caused by a decline in the rate of growth of supply of skilled labour after the 1970s (Card and Lemieux, 2001; Goldin and Katz, 2008; Rajan, 2010). Still others argue that the sharply rising supply of skilled workers from the baby-boom generation in the late 1960s made it more profitable to develop skill-biased technologies such as those produced by the information technology revolution of the 1980s and 1990s (Acemoglu, 1998).

5 Feenstra and Hanson (1999) also show that the relative contributions of the two measures are sensitive to how the greater use of high-tech equipment is measured. Trade and technology explain income inequality equally well if high-tech equipment is measured as a share of the total capital equipment used in each industry, while trade is of only marginal importance if high-tech equipment is measured as a fraction of new investments in computers and other high-tech devices.

6 Van Reenen (2011) shows similar evidence for the United Kingdom.

7 Goos, Manning and Salomons (2011) rank occupations by their average wages in 1979 with a view to examining how the proportion of total employment in each type of occupation has changed over time. Similar evidence for developing countries is not available.

8 Data from UNCTADstat.

9 The labour contract law, enacted on 1 January 2008, requires employers to issue written contracts, which limit probationary periods to two years, give permanent status to workers who have been with the same firm for at least 10 years, restrict workers' dismissal and increase severance pay. The new legislation also includes a rise in minimum wages, allows trade unions to become genuine representatives of workers, and improves the dispute resolution system. Surveys of migrant workers in the Pearl River Delta before and after the law took effect suggest that the law has been effective in improving working conditions (Li, 2011).

10 According to Banister and Cook (2011), there are no official nationwide statistics on employment and labour compensation in Chinese manufacturing. Rather, data for formal urban enterprises from the Ministry of Human Resources and Social Security are combined with data for other manufacturing units (i.e. town and village enterprise (TVE)) from the Ministry of Agriculture. This evidence shows that although workers in manufacturing are earning more than ever before, the average hourly compensation was only $1.36 in 2008. Although it is difficult to make cross-country comparisons, this is far below those of many of China's East Asian neighbours in 2010, such as Japan ($32), the Republic of Korea ($16.6) and Taiwan Province of China ($8.36). The hourly compensation costs in China are roughly on par with those of other countries in the region,

such as the Philippines ($1.90), but lag significantly behind those of developing countries with higher per capita incomes such as Argentina ($12.7), Brazil ($10.1) and Mexico ($6.2) (United States Bureau of Labor Statistics, 2011). For qualitatively similar estimates, see Ceglowski and Golub, 2011.

11 Despite large inflows of FDI, the share of FDI in China's gross capital formation has actually declined.

12 While, *a priori*, electronics may be considered skill-intensive manufactures, it is well known that data reporting electronics as part of developing countries' skill-intensive exports are mostly a statistical mirage. The reason is that these exports contain little of the exporting country's own technology and production factors, apart from low-skilled labour. Evidence suggests that some developing countries, especially China, have succeeded in increasing domestic value added in their electronics exports over the past decade or so, while "most exporters in Mexico and Central America remain in the assembly stage" (Hanson, 2012: 47). Other evidence suggests that China's exports, nonetheless, occupy low-price – though not necessarily low-quality – niches within certain product categories on the United States market (Schott, 2008).

13 The perception that FDI does not carry debt obligations to the host country and is devoid of speculative mentalities has reinforced its appeal as an instrument for promoting development. However, as profit remittances accumulate over time, the actual impact on the balance of payments may eventually become negative.

14 Some studies concentrating on earlier periods have led to different findings. One study on manufacturing firms in the United States, examining the period 1982–2004, found a strong positive correlation between the domestic and foreign activity levels of TNCs (Desai, Foley and Hines, 2009). However, this result may be sensitive to both the level of aggregation and the period under review. Indeed, a more disaggregated analysis focusing on specific sectors in the United States and China – two countries tightly linked through TNC activities – indicates significant labour substitution between them (Ebenstein et al., 2012). Moreover, other evidence suggests that United States firms have recently shifted to a business mode where expanding employment abroad is associated with downsizing employment at home, as discussed in the main text.

15 Evidence for the United States and China indicates that this kind of labour substitution may exist even at the sectoral level. One recent study finds that employment growth in China has been largest in those industrial sectors which, in the United States, have experienced a decline in employment (Ebenstein et al., 2012). However, the sample period on which this evidence is based ends in 2005, and therefore does not cover the past few years when wages in China have strongly increased and renminbi appreciation has further increased unit labour costs measured in dollars. It is therefore not clear whether the observation of this study still holds, and even less so, whether it can be expected to be sustained.

16 For example, the OECD (2011: 113) finds a "strong and statistically [highly] significant" effect indicating that "relaxing FDI regulation (to attract more external investment) is associated with higher wage inequality." IMF (2007a) also finds inward FDI in developing countries and outward FDI in developed countries to exacerbate income inequality and attributes this finding to an increase in the relative demand for skilled workers in both advanced and developing countries.

17 According to Milberg and Winkler (2010: 276), "the expansion of global production networks has served a dual purpose in the evolving corporate strategy. Cost reductions from the globalisation of production have supported the financialisation of the non-financial corporate sector, both by raising profits and by reducing the need for domestic reinvestment of those profits, freeing earnings for the purchase of financial assets and raising shareholder returns." These authors have also reviewed studies indicating that an inverse relationship between shareholder maximization and innovation applies in several developed countries.

18 The link between trade and technology may be particularly close in global production sharing, as "offshoring would be unthinkable without low-cost information technology, and information technology would not be as low cost if not for the effective extension of global supply chains into low-wage countries" (Milberg and Winkler, 2009: 3).

19 Concentrating on firms in European countries and imports from China, Bloom, Draca and van Reenen (2011) find a strong and positive correlation between European industries that were more exposed to competition from Chinese imports (e.g. furniture, textiles, clothing and toys) and technological change. The evidence indicates that increased trade with China accounted for about 15 per cent of the technological upgrading in Europe during the period 2000–2007. Half of this effect was due to genuinely faster technological change, reflected in a larger number of patents and resulting from greater spending on research and development (R&D), while industry downsizing accounted for the other half of the 15 per cent.

20 If the data for the period 2000–2010 were to be included, it would have no material impact on the results, except for indicating negative employment growth for construction (for similar evidence, see McKinsey Global Institute, 2011).

21 The rationale for this concept comes from agency theory that argues that there may be tension between

the interests of principals (i.e. shareholders) and their agents (i.e. corporate managers) if the latter are not subject to market discipline. Corporate takeovers would be a way to discipline managers, and the rate of return on corporate stock could be used as a measure of corporate performance (Jensen and Meckling, 1976).

22 Milberg and Winkler (2009) review studies that point to a role of offshoring in the decline of the labour share in GDP.

23 For an eloquent account of the deleterious effects on productivity-increasing innovation of corporate behaviour that concentrates on shareholder value maximization, see Mintzberg, 2007, especially pages 9–10.

24 Reshoring manufacturing from China to the United States would also contribute to a smooth unwinding of global imbalances.

25 Ed Crooks, "GE takes $1bn risk in bringing jobs home", *Financial Times* 3 April 2012; Sylvain Cypel, "La Caroline du Sud devient un pôle automobile", *Le Monde*, 8 May 2012.

26 In particular, policies fostering capital accumulation and technology upgrading can stem adverse pressures from globalization.

27 Distributional developments in China differ considerably from the "growth with equity" model pursued by the NIEs earlier. As shown in *TDR 2003* (chap. V), rapid industrialization and growth of manufactured exports in the Republic of Korea and Taiwan Province of China were based on significant increases in labour productivity. Thus, manufacturers in these economies could maintain international competitiveness, while at the same time allowing rapid increases in wages. Wage growth in the Republic of Korea during its rapid economic catch-up in the period 1975–2000 was broad-based, as reflected by a continuous decline in wage inequality (i.e. wage earnings of skilled workers relative to those of unskilled workers) over this period (Kwack, 2012).

28 The household registration, or *hukou*, system has been a major factor in the evolution of rural-urban inequalities. While this legal barrier to mobility between rural and urban areas has helped prevent the problem of large slums, it has also meant that migrants from rural areas receive lower wages and social benefits than urban workers. Selden and Wu (2011) observe that until the early 1980s the *hukou* system bound villagers to their local communities. However, more recently it has channelled labour towards manufacturing activities and urban areas, but preserved highly differentiated wages and pay structures that permit firms and public entities to realize large savings and investments.

29 The Chinese Government has launched a series of initiatives to address spatial inequality, including the "campaign of 'western development'". This campaign, launched in 1999 is targeting the east-central-west divide. The movement of "constructing a socialist new countryside", formally initiated in 2005, aims at bridging the urban-rural gap. With the declaration, of "building a harmonious society" of October 2006, the Government launched a comprehensive attack on inequality. It envisaged measures to encourage rural-urban migration, increased funding for education and health services for the poor, and shifting demand away from investment and exports toward domestic consumption and public services (Zhu and Wan, 2012: 85).

30 A positive relationship between the share of FDI in aggregate output and inter-industry wage differentials has also been found in Mexico (Lopez Noria, 2011).

31 Integration into the world economy, combined with privatization and the ensuing substantial shifts in sectoral employment and wage structure, also affected income distribution in the Russian Federation. In this case, however, wages in SOEs increased less than in private companies (Gimpelson and Lukyanova, 2009). Moreover, growing spatial inequality stems from rising incomes in finance, especially in Moscow and St. Petersburg, and from major income gains in geographically highly concentrated construction and industrial production (Galbraith, Krytynskaia and Wang, 2004).

32 These findings are supported by McMillan and Rodrik (2011: 75) who argue that "whatever contribution globalization has made, it must depend heavily on local circumstances, choices made by domestic policymakers and domestic growth strategies." Indeed, much of the effects of trade liberalization on structural transformation in Latin America are due to countries' premature, or unregulated, financial integration and the often associated currency appreciations, as well as the weakening, or phasing out, of supportive industrial policies and a general retreat of the State from the economy, as discussed in detail in *TDR 2003*.

33 The experience of Chile between 1987 and 1992 is a case in point. During this period, the Chilean economy saw a cumulative GDP growth of 40 per cent and employment growth of 27 per cent (equivalent to one million jobs). This expansion was largely export-driven. Exports contributed to more than 30 per cent of aggregate demand growth, and, taking into account investment in export-oriented sectors plus the effect of higher consumption resulting from the new income generated, it was calculated that the "exports conglomerate" accounted for 70 per cent of GDP growth and 66 per cent of employment creation (ECLAC, 1994). However, only a few jobs were created in the main export sectors themselves: mining and fisheries contributed less than 2 per cent

to overall employment growth. The bulk of new jobs were created in non-tradable sectors (retail trade, construction) and in manufacturing, which was almost exclusively oriented to the domestic market. A highly favourable real exchange rate was important at that time for generating a strong multiplier effect of export-related income. In particular, the State-owned copper company was a supplementary vehicle for channelling revenues from exports to higher domestic demand.

34 See Peres (2011) for a review of the sectoral policy programmes launched over the past decade in several countries in Latin America (including Argentina, Brazil, Chile, Costa Rica, Mexico, Peru and Uruguay).

35 Regarding the methodological dispute about the empirical validity of the Kuznets hypothesis, see, for example, Anand and Kanbur, 1993.

36 Financial globalization refers to the increase in cross-border financial holdings and in the sum of countries' gross external assets (such as private financial assets denominated in foreign exchange and outward FDI stocks) and liabilities (such as private debt owed to foreign creditors, portfolio investment by non-residents, and inward FDI stocks); see also IMF, 2007b.

37 For a similar argument, though along somewhat different lines, see Akyüz (2011). Others have argued that countries can benefit from financial globalization only when excessive borrowing and debt accumulation can be avoided and when the domestic financial market is well developed (IMF, 2007b). However, a less developed financial market is precisely one of the main distinctions between developed and other countries, so that this argument is of little operational use to developing and emerging market economies.

38 While the occurrence of these waves depends on global push factors, country-specific pull factors determine the magnitude of the financial flows to that economy. These pull factors include economic performance and capital account openness, as well as institutional factors such as the exchange rate, given that expected changes in the exchange rate affect expected returns on financial investment.

39 Leijonhufvud (2007) discusses how risk-management practices in developed-country financial institutions give rise to excessive risk taking and "short-termism" in their investment strategies for emerging markets.

40 For a survey, see UNCTAD (2012), in particular section 5.2.

41 Price-to-income ratios in the real estate markets seem relatively high in a number of Asian countries (Balakrishnan et al., 2012). But prices in such markets are likely to have been inflated by financial inflows also in offshore financial centres, such as Mauritius, where comprehensive data are not available.

Country coverage of chart 4.4:

The country groups covered are as follows:

Latin America (10): Argentina, the Bolivarian Republic of Venezuela, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Paraguay and Peru.

Developing countries in Asia (7): Malaysia, Nepal, Pakistan, the Republic of Korea, Singapore, Thailand and Turkey.

Africa (5): Ghana, Mauritius, Morocco, South Africa, Tunisia.

The following are the 82 low-wage economies covered:

Developed countries (1): Bulgaria.

Transition economies (13): Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

Latin America (6): Bolivia, Guatemala, Guyana, Haiti, Honduras and Nicaragua.

Developing countries in Asia (23): Afghanistan, Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Iraq, Kiribati, the People's Democratic Republic of Korea, Lao People's Democratic Republic, Mongolia, Myanmar, Papua New Guinea, the Philippines, Samoa, Solomon Islands, Sri Lanka, the Syrian Arab Republic, Tuvalu, Vanuatu, Viet Nam and Yemen.

Africa (39): Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Côte d'Ivoire, the Democratic Republic of the Congo, Djibouti, Egypt, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, Sudan, Togo, Uganda, the United Republic of Tanzania, Zambia and Zimbabwe.

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