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# TRADE AND DEVELOPMENT REPORT, 2010

## *Chapter III*

### MACROECONOMIC ASPECTS OF JOB CREATION AND UNEMPLOYMENT



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## MACROECONOMIC ASPECTS OF JOB CREATION AND UNEMPLOYMENT

### A. Introduction: globalization and employment

Most observers acknowledge that the period from the early 1990s until around 2007 delivered some economic successes, such as satisfactory or even rapid output growth in a number of developing countries (although average growth rates were still lower than in the 1960s and 1970s) and relatively low inflation. However, all of them agree that labour market outcomes were generally unsatisfactory in this period of accelerated globalization: employment typically grew at much lower rates than output – or in some cases did not grow at all – and the share of wages in national income generally declined in both developed and developing countries.

In this chapter, it is argued that employment creation and a declining wage share are interdependent, in the sense that if wage growth does not keep pace with productivity growth, the expansion of domestic demand and employment creation will be constrained, and that this constraint can only be lifted temporarily, if at all, by reliance on external demand.

Some analysts have attributed the relative slowdown in wage growth to the integration of global

markets for products, capital and labour. According to one view, globalization implies that 1.5 billion workers in developing and emerging-market economies which have a small endowment of capital have been added to the existing workforce for producing goods on world markets, thereby disturbing previous labour market equilibriums and exerting downward pressure on wage levels, particularly for low-skilled labour (Freeman, 2008). A more nuanced position holds that the impact comes essentially from workers involved in producing traded goods and services (see, for example, Blinder, 2006), and that the greater participation of the more populous developing countries in global trade in goods and services has served to increase the supply of labour-intensive manufactures,

thus reducing world market prices. This is assumed to have lowered the compensation of labour involved in such activities.

However, apart from an increase in merchandise trade, the impact of low-wage labour in developing and emerging-market economies on the labour markets of the industrialized countries is much weaker

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Wage formation may have been influenced by the “threat” of companies being able to relocate parts of their production abroad.

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than is often alleged in these latter countries. Although recent evidence suggests that short-term migration for work has been increasing (UNDP, 2009), in general the international mobility of labour is still low, with migrant workers accounting for only about 1 per cent of the global labour force (ILO, 2009). Compared to total fixed capital formation, the international mobility of fixed capital in the form of greenfield investment, not to be confused with short-term financial flows, is also rather limited. Wage equalization remains a distant mirage for the populations of many developing countries, where economic catch-up and improvements in living standards have continued to advance at a frustratingly slow pace, if at all.

Nevertheless, wage formation and bargaining in the more advanced economies may indeed have been influenced by the “threat effect” of companies being able to relocate or outsource parts of their production in one form or another to lower wage economies (Blinder, 2006; Pollin, 2007). Indeed, the adoption of export-led growth strategies based on the advantage of labour costs appears to have changed the nature of competition between countries. This has led to calls for protectionist measures against goods produced under low-wage conditions, and to attempts in industrialized countries to prevent an increase in wages or even reduce them in order to withstand such competition. These responses are misguided. They are based on textbook neoclassical theory, which posits that relative factor price equalization through trade is possible under perfect competition. More importantly, models used in this context fail to recognize the critical role of effective demand in shaping both current economic activity and future growth possibilities, because they do not grasp the complex dynamics of investment, productivity growth, wage formation and employment.

In this chapter it is argued that export-led growth strategies tend to lead to relative wage compression, which may seem indispensable for strengthening or maintaining the international competitiveness of producers in any economy. But if many or all countries adopted this strategy it would lead to a “race to the bottom” with regard to wages. This would translate into insufficient growth of workers’ purchasing power, which itself is an important determinant for

aggregate demand growth and job creation. A more sustainable growth strategy would be one that relies on domestic demand from wage increases linked to aggregate labour productivity increases. Such a strategy would build on a virtuous circle whereby a favourable environment for fixed capital formation enables productivity growth, the gains from which are distributed equally between labour and capital, so that the share of wages does not decline over time and domestic demand rises at least at the same pace as productivity. This way additional employment, new wage income and incentives for further investment in real productive capacity can be created.

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Export-led growth strategies tend to lead to relative wage compression.

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By arguing for introducing a strong element of wage-led growth into macroeconomic and development strategies, this chapter questions the logic underlying the orthodox reasoning about employment and labour markets. It argues that a general macroeconomic analysis of employment and unemployment should take into account the conditions in which labour markets actually function in the real world. To that end, it relies upon the following stylized facts:

- Labour markets are organized and regulated at the national level, and are linked in various ways to other markets.
- Labour market outcomes depend on the level of investment in real productive capacity, which in turn depends mainly on demand expectations, the availability and costs of finance, and the complementarity of public and private investment. And all these interact in various ways, depending on the historical and structural features of each country.
- Wages, through their impact on the level of consumption, have a strong influence on the level and structure of aggregate demand and product markets. Therefore, they have an impact on corporate profits from both the cost and the demand side, with attendant effects on investment in real productive capacity. This in turn feeds back into the demand for labour.
- The exchange rate has a strong influence on the level of exports and the share of imports

in domestic absorption, and hence on labour market outcomes. In a global monetary system that allows large fluctuations and persistent misalignments of exchange rates, trade performance is often distorted and does not always correctly reflect the “competitiveness” of producers from different countries.

- The level and growth rate of wages depend on country-specific institutional frameworks for wage determination and national labour-market regulations. In most developing countries, where institutional control over wages is weak, the level and growth of wages and incomes from self-employment are affected by patterns of aggregate demand.
- Productivity in an economy and its growth over time are determined by the stock of productive capital, the technology embodied in that capital stock as a result of domestic research and development (R&D), access to the foreign technology embodied in imported capital goods (and its expansion over time), as well as the quality of labour resulting from education, vocational training and learning by doing (and its improvement over time).
- Markets for long-term capital are interlinked internationally, but national long-term interest rates are strongly influenced by national monetary policies which determine the short-term interest rate.
- Foreign direct investment (FDI) can play a role in the catching up process, but in most developing countries this role is only complementary

to that of domestic investment. Both domestic and foreign investment tend to apply the most up-to-date technology available, irrespective of the labour endowment and wage level in each country.

- Short-term capital flows have an increasingly strong influence on prices in many important markets, like those for commodities and currencies, and cause major price distortions in the international markets for goods and services.

Based on these stylized facts, this chapter sets out to look at the basic relationships between

growth, investment, productivity and wages. It argues that unsatisfactory labour market outcomes are more likely to be due to insufficient investment in real productive capacity and inadequate wage growth than to insufficient “flexibility” in labour markets and the replacement of labour by capital. The laissez-faire capitalism of the

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Growth of workers’  
purchasing power is an  
important determinant of  
aggregate demand growth  
and job creation.

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last 30 years, with its emphasis on liberalization of labour markets to achieve “greater flexibility” in contractual wages and employment conditions, has not delivered the promised results in terms of labour market performance. Obviously, the institutional conditions for employment and labour market policies differ between developed countries, emerging-market economies and low-income developing countries (and within each of these groups), as discussed further in chapter V of this *Report*. However, it is suggested that macroeconomic conditions favourable to fixed capital formation and the full participation of labour in the productivity gains emerging from innovative investment are necessary for achieving and maintaining a high level of decent employment, irrespective of the stage of development of an economy.

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## B. The neglected role of aggregate demand growth for employment creation

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### 1. *The problem with microeconomic reasoning about the labour market*

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Rising and persistent unemployment in many countries has prompted a variety of explanations based on new and old ideas concerning the rigidities and malfunctioning of labour markets and the role of the welfare state in generating such “inflexibilities”. According to neoclassical employment theory, the only explanation for high or rising unemployment is that real wages are too high or are rising too fast because strong labour unions or excessively high legal minimum wages prevent wages from falling sufficiently to absorb an excess supply of labour. This reasoning is based on a microeconomic concept that is transposed to the macroeconomic level. However, for prices to balance supply and demand, the supply and demand functions have to be independent of each other. This holds for the microeconomic level, but is not valid at the macroeconomic level.

For example, if the decision of a sufficiently large number of households to buy less bread does not affect the income situation of any of these individual households, the fall in the demand for bread should lower its price and result in new and stable relative prices between bread and other products. From a microeconomic perspective this is valid reasoning if prices are determined by market demand. By contrast, if the income situation of all households

depends, directly or indirectly, on the value added that is generated by all producers in an economy, and the latter have to adjust their production downwards in reaction to a fall in household demand, this adjustment itself will feed back into aggregate household income through lower total wage income.

This is not a new insight: Marshall (1890: 437) observed this 120 years ago, as did Schumpeter when he stated: “an analysis that uses the simple demand-supply apparatus is essentially partial analysis, that is to say, it takes as independently given the factors that determine the demand and supply schedules.

This is inadmissible in the case of so important an element of the economic system as is labour as a whole” (Schumpeter, 1976: 942).

The argument frequently made, that a strong welfare state and powerful labour unions are

the main reasons for rising unemployment (e.g. Siebert, 1997; IMF, 2003; St. Paul, 2004), is based on a comparison of unemployment in the United States and a number of European economies (chart 3.1). Following peaks in 1975 and 1982-1983, the unemployment rate in the United States returned to its former, or even lower, levels, whereas in Europe it continued to remain high, and rose even further for more than a quarter century. A frequent explanation for this experience is that in European welfare states, with a relatively high degree of wage rigidity, the pressure of increasing globalization caused greater unemployment, as labour was increasingly

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Neoclassical theory blames  
rising unemployment on real  
wages being too high.

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Chart 3.1

## UNEMPLOYMENT RATES IN THE EU-6, THE UNITED STATES AND THE EURO AREA, 1960–2009

(Per cent of labour force)



**Source:** UNCTAD secretariat calculations, based on OECD *Stat Extracts*, *Annual Labour Force Statistics* and *Main Economic Indicators* databases; and ILO, *LABORSTAT* database.

**Note:** EU-6 comprises: Belgium, France, Germany, Italy, Luxembourg and the Netherlands.

substituted by capital. By contrast, in the United States, globalization pressures led to lower wages, but, allegedly because of a more flexible labour market, unemployment remained lower than in Europe (even though this was associated with the emergence of a class of “working poor”). Although the view that legal employment protection, trade union power and generous unemployment benefit schemes are responsible for higher unemployment has become very widely accepted, it has been shown to be empirically unfounded (Howell et al., 2007).

It is certainly true that the rate of unionization of the workforce and the level of social protection traditionally have been much higher in Europe than in the United States. Consequently, in a slack labour market situation, to the extent that European workers could defend their wage position with the assistance of trade unions, they were much less obliged to accept

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The view that employment protection and social-security institutions are responsible for higher unemployment is empirically unfounded.

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lower wages in the same or new jobs. However, this explanation for the higher unemployment in Europe is dubious because it builds on a partial analysis of the labour market, which treats the latter as if it was disconnected from the rest of the economy. In reality, there is a strong interdependence between the labour market, on the one hand, and product and financial markets on the other. Only if these other markets had performed identically in the two regions in terms of output growth, could the hypothesis of labour market “flexibility” provide a plausible explanation. Although nominal wages may be more flexible in the United States, wages do not stabilize employment there either. In a recession, employment falls in the United States as well. The

key difference is that the United States authorities respond by providing macro stimulus to boost demand and employment, whereas European authorities tend to ascribe high unemployment to structural

Chart 3.2

## REAL GDP GROWTH IN THE EU-6 AND THE UNITED STATES, 1970–2009

(Per cent)



**Source:** UNCTAD secretariat calculations, based on United Nations Department of Economic and Social Affairs (UN/DESA), *National Accounts Main Aggregates* database; and the United States Department of Commerce, Bureau of Economic Analysis database.

problems. The authorities in the United States may feel more obliged to take countercyclical action to combat unemployment because the welfare system in that country provides much less support than in Europe. But that does not make European welfare systems the cause of high unemployment.

## 2. Macroeconomic trends are key to employment

Starting in the early 1980s, the average growth performance of the EU-6 fell significantly behind that of the United States (chart 3.2). Whereas the average annual growth rates of these two economies were about the same in the 1970s, at around 3.4 per cent, they began to diverge over time, reaching a differential of 1.6 percentage points during the 1990s. Since the turn of the century this has narrowed to 0.9 points. These growth differentials imply that, while labour markets may indeed function differently in diverse institutional settings, the macroeconomic environment

also evolves quite differently. Consequently, employment performance in these two economies cannot be explained using a neoclassical labour market model in which labour and capital are substituted at a given level of output according to their relative prices. Such a model is based on microeconomic reasoning and ignores the macroeconomic factors that determine the demand for goods and services, and labour.

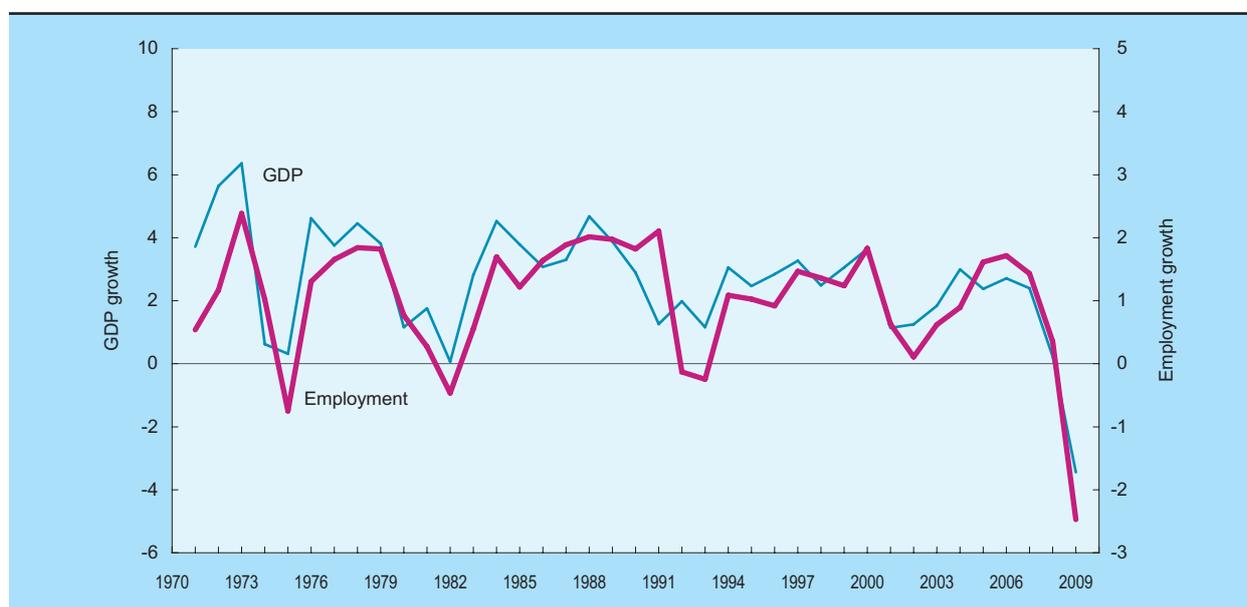
The proposition that employment has to be analysed in connection with output growth, instead of treating the labour market in isolation, draws additional justification from the remarkable cyclicity of unemployment and growth in both economies. The greater frequency and longer duration of the cyclical upswings as well as the shorter downswings in the European unemployment curve are as apparent as the longer duration of the periods of unemployment decline in the United States (charts 3.1 and 3.2).

Generally, in developed countries employment cycles are very closely associated with output growth cycles: employment growth is typically associated with growth of aggregate demand and output

Chart 3.3

## GROWTH OF EMPLOYMENT AND REAL GDP IN DEVELOPED COUNTRIES, 1970–2009

(Per cent)



**Source:** UNCTAD secretariat calculations, based on table 1.1; UN/DESA, *National Accounts Main Aggregates* database; ILO, *LABORSTAT* and *Key Indicators of the Labour Market (KILM)* databases; OECD, *Stat Extracts, Annual Labour Force Statistics* and *Main Economic Indicators* databases; and ECLAC, *CEPALSTAT* database.

**Note:** Developed countries comprise: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States.

(chart 3.3). Such a strong correlation of growth and employment would be highly improbable if the better employment record in the United States compared to Europe were due to the greater flexibility of wages in the United States. A more plausible explanation is that both the United States and Europe have needed a number of strong and long recoveries to bring the unemployment rate down, but Europe has been unable to generate such output recoveries. This means that wage flexibility and the absence of the kind of “distortions” associated with the welfare state can no longer be used to explain that country’s superior employment record.

There is also a strong positive correlation between investment in fixed capital and employment creation in developed countries (chart 3.4).

The evident explanation is that companies invest and disinvest in labour and capital at the same time, depending on the overall state of the economy, since capital and labour are not substitutes, the use of which is left to the employers’ discretion, but complementary factors of production that are combined quite independently of their relative prices.

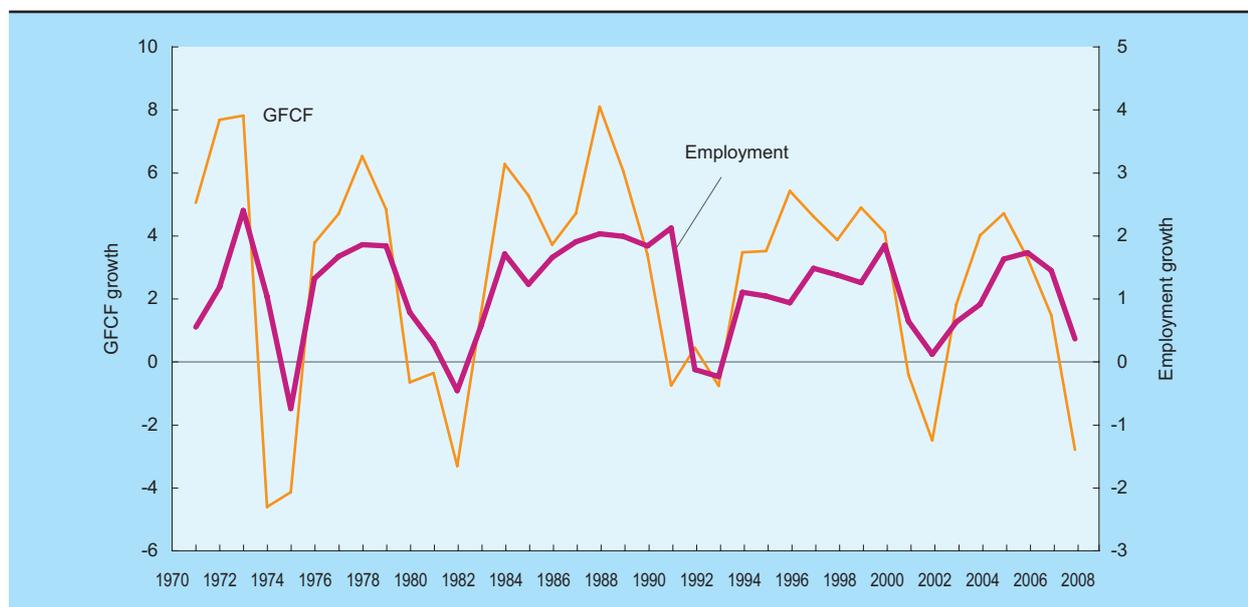
Employment needs to be analysed in connection with output growth.

Clearly, the elasticity of employment in relation to growth differs from country to country, and from period to period, but the close link between growth, employment and investment must challenge the belief that a significant number of new jobs can be created without a critical level of output growth. Once it is recognized that it is not primarily the relative cost of labour but the pace of output growth that is the key determinant of the level of employment, it follows that investment in real productive capacity and the

Chart 3.4

### GROWTH OF EMPLOYMENT AND GROSS FIXED CAPITAL FORMATION (GFCF) IN DEVELOPED COUNTRIES, 1970–2008

(Per cent)



**Source:** See chart 3.3.

**Note:** See chart 3.3.

demand expansion that motivates such investment are the drivers of both income growth and employment creation.<sup>1</sup>

This is not to deny that the dynamics of new technology creation are likely to be influenced by the wage level in those economies where the technology is developed. At the firm level, new investments embodying advanced technologies – aimed at reducing the “disutility” of labour<sup>2</sup> – may be driven partly by an interest in saving on labour when unit labour costs rise. But in general, productivity growth results from the introduction of process or product innovations, which are the main driving force of a capitalist economy. Macroeconomic reasoning also has to take into account additional factors. First, new technologies do not fall from the sky: prior to the “productivity shock” from the introduction of new technologies in a dynamic economy, employment is created in the

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**Companies invest and  
disinvest in labour and  
capital at the same time.**

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firms and institutions where research and development (R&D) is carried out. Second, in the process of introducing new products or production processes, employment is created for the production of the new capital goods. The net employment effect will still be negative if the destruction of jobs resulting from the introduction of new processing technologies is greater than the creation of jobs in the technology producing and capital goods sectors.<sup>3</sup> This is likely to be the case, particularly in developing countries, many of which import most, if not all, their capital goods requirements. However, a further, and the most important, employment creating effect will result when overall productivity increases translate into higher factor incomes which create additional demand for goods and services. In that case, the net effect in a growing economy can be positive, because the production of the additional goods and services requires the employment of additional factors of production, including labour.

Whether or not aggregate demand rises sufficiently to create net employment depends crucially on the distribution of the gains from productivity growth, which in turn is greatly influenced by policy choices. The policies generally adopted over the past 25 years have sought to keep wages low, and have served to translate productivity gains either into higher capital income or into lower prices. They are based on the assumption that the demand for labour will behave in the same way as the demand for most goods (i.e. the lower the price, the greater the demand). But keeping wages low in order to generate higher profits is self-defeating, because without a stronger purchasing power of wage earners, domestic demand will not rise sufficiently to enable owners of capital to fully employ their capacity and thereby translate the productivity gains into profits. A potentially more successful strategy would be one oriented towards ensuring that the gains from productivity growth also accrue to labour: wages rising in line with productivity growth will cause domestic effective demand to increase and nourish a virtuous cycle of growth, investment, productivity increases and employment over time (Stockhammer et al., 2009).

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Keeping wages low in order to generate higher profits is self-defeating.

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### 3. Do macroeconomic trends matter equally in developing countries?

An important question is whether the same mechanisms at work in developed and highly industrialized economies also operate in developing and emerging-market economies where capital endowment is much weaker and there is a large amount of surplus labour.

Structural unemployment or underemployment is undoubtedly a prominent feature in most developing countries, and labour-market and social-security institutions are much less developed than in industrialized countries.

These conditions lead to different behaviours of actors on both sides of the labour market. But in today's developed countries, the creation of such

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The creation of labour-market and social-security institutions was part of the process of structural change that accompanied industrialization.

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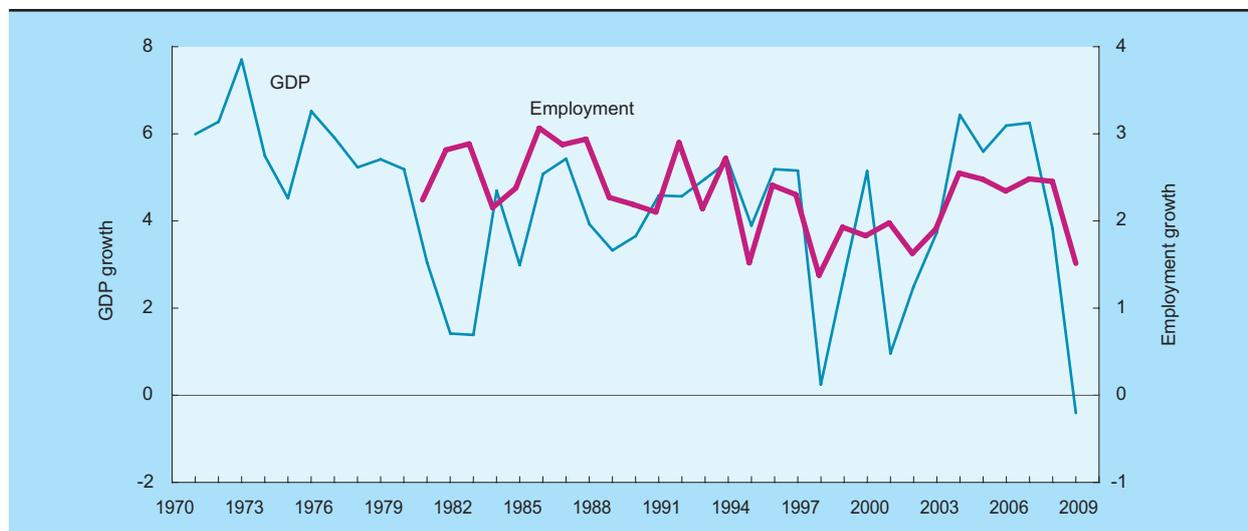
institutions was itself part of the process of structural transformation that accompanied industrialization, and the participation of labour in productivity growth was a necessary condition for the advancement of this process and for achieving higher standards of living. Between today's developing countries and the countries that industrialized and created labour-market and social-security institutions before the globalization of production and investment, the main differences are not in the macroeconomic processes but in the context of corporate decision-making on production and investment. Earlier, such decisions were taken primarily with reference to demand and competition in domestic markets, even when the rest of the world provided markets for some of the increasing production as well as outlets for some labour through migration. By contrast, in most developing countries today such decisions are taken primarily with reference to external demand and global competition. Moreover, these countries can import advanced technologies from the North. The problem of combining technological progress, investment and productivity growth with employment creation is more pronounced when labour-saving technology is introduced in an economy that produces neither the capital goods nor the embodied technology. Since this is a typical situation for developing countries, it is even more important for employment creation that productivity gains translate into higher demand for domestically produced goods and services.

In developing economies that are still highly dependent on the production and export of primary commodities, the link between growth and employment creation can be quite loose. This is because short-term growth is often influenced more strongly by movements in internationally determined prices for primary commodities than by an expansion in the volume of domestic output. Strong increases in commodity prices, as witnessed during the period 2002–2008, can lead to income growth without an increase in real output, and thus do not result in higher employment in the commodities sector. To the extent that higher

Chart 3.5

## GROWTH OF EMPLOYMENT AND REAL GDP IN DEVELOPING ECONOMIES, 1970–2009

(Per cent)



**Source:** See chart 3.3.

**Note:** Developing economies comprise: Argentina, the Bolivarian Republic of Venezuela, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Egypt, El Salvador, Guatemala, Honduras, Hong Kong (China), India, Indonesia, Jamaica, Malaysia, Mauritius, Mexico, Nicaragua, Pakistan, Panama, Paraguay, Peru, the Philippines, the Republic of Korea, Singapore, Taiwan Province of China, Thailand, Trinidad and Tobago, Tunisia, Turkey, Uganda and Uruguay.

commodity prices increase profits in that sector, they tend to have a very small impact, if any, on domestic demand, and thus on employment. However, to the extent that rising commodity prices translate into higher wages (or larger fiscal revenue and expenditure), they could have the same effect as productivity growth resulting from technological innovation:

they could boost demand and employment in other parts of the economy. The latter situation is rare because of the frequent monopoly position of capital owners in the primary sector, especially in mining, and the particularly weak position of labour. Transforming productivity gains resulting from commodity price increases into a sustained process of growth and employment throughout the economy would require changing this situation to ensure that higher prices or productivity growth in the primary sector translate into greater domestic demand and/or more investment (see also chapter V for a discussion on distribution of rents).

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In commodity-dependent developing economies the link between growth and employment creation can be quite loose.

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The situation is different in those developing and emerging-market economies that have achieved a more diversified production structure and sometimes also generated significant productivity increases. In some of these economies technological catching up has led to rapid growth in their tradable goods industries through an expansion of net exports.

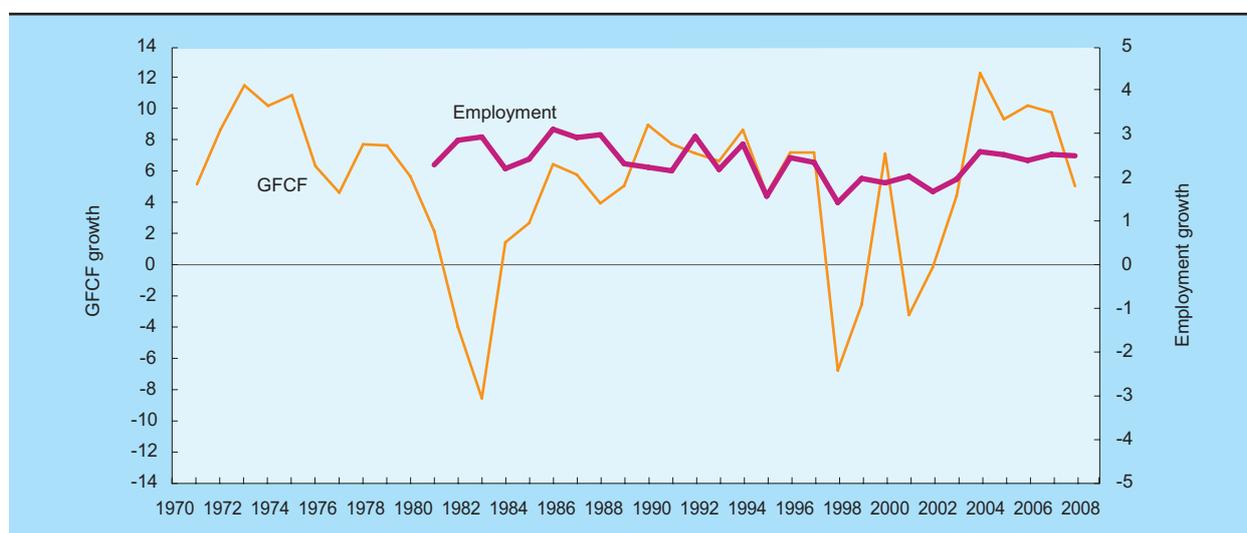
Productivity changes are often passed on in the form of lower prices, while keeping wages depressed in the context of falling world market prices or in the hope of increasing world market shares. However, if an economy depends entirely on external markets for growth, the scope for employment creation is circumscribed by the ability

to benefit from demand expansion in other countries or to increase market shares, both of which are limited. Since wages do not increase, domestic demand does not grow, and so domestic employment creation is also more limited. As a result, this type of growth does not necessarily generate more desirable

Chart 3.6

### GROWTH OF EMPLOYMENT AND GROSS FIXED CAPITAL FORMATION IN DEVELOPING ECONOMIES, 1970–2008

(Per cent)



**Source:** See chart 3.3.

**Note:** See chart 3.5.

employment, which means that informal and less remunerative activities may persist, and even expand, during what may be a dynamic output growth process (Ghosh, 2010).

Therefore, in developing countries, as in developed countries, the ability to achieve sustained growth of income and employment on the basis of productivity growth depends critically on how the resulting gains are distributed within the economy, how much additional wage income is spent for the consumption of domestically produced goods and services, and whether higher profits are used for investment in activities that simultaneously create more employment, including in some service sectors, such as the delivery of health and education (see chapter IV of this *Report* for some examples).

Conclusive statistical evidence for developing countries is difficult to find due to the scarcity of

statistical data on employment and labour market conditions. Where such data are available, the statistical evidence suggests that the link between growth and formal employment is weaker in developing countries than in developed countries. This can probably be explained partly by the fact that changes in informal employment and self-employment dampen the cyclical effects.<sup>4</sup> In developing countries more than in developed countries, workers who are laid off in the formal sector of the economy in bad times often tend to move into the informal economy because of the lack of social safety nets.

Nevertheless, for those developing countries for which reliable data are available, employment growth is also positively correlated with growth of both GDP and investment in fixed capital (charts 3.5 and 3.6; see also chapter IV), although the cyclicity of employment generation is less pronounced in developing than in developed countries.<sup>5</sup>

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Changes in informal employment and self-employment dampen the effects of growth cycles on formal employment.

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Since in most developing countries the distinction between the formal and informal sectors is often blurred, with the former shading into (and often dependent on) the latter, wage stagnation or reduction does not always involve actual declines in wage rates in the formal sector. Rather, it can reflect increases in precarious and low-paying forms of informal employment and self-employment and declines in the remuneration involved in such work. This can also lead to higher formal sector profits as employers outsource certain operations to the informal sector.

Competition in external markets then results in these two sides of the process – informal employment with low wages, and export success – reinforcing each other. However, since there are several limits to such a process, as mentioned above, this can only be sustained for a short period of time; the lack of adequate domestic demand generation will eventually affect economic growth. Moreover, in such a situation it becomes more difficult to shift from a dependence on external markets to a dependence on the domestic market at times of external shocks.

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## C. Beyond capital-labour substitution: wages from a macroeconomic perspective

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### 1. The “price of labour” and employment

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Labour compensation has a dual character. On the one hand, it constitutes the largest proportion of production costs. The wage rate is a key variable in the macroeconomic process, because in vertically integrated economies final, intermediate and capital goods are all produced by the domestic labour force, except for those goods that are imported. Thus, at the macroeconomic level the only cost factor affecting overall production costs, apart from wages, is the price of the imported products (Flassbeck and Spiecker, 2007: 53). On the other hand, labour compensation determines, to a very large extent, the level of demand of private households (Bhaduri and Marglin, 1990).

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Distributing productivity gains between labour and capital at constant factor income shares will create new jobs ...

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Downwardly flexible wages induce a fall in demand from wage earners. According to neoclassical theory, a fall in nominal wages would reduce real wages and increase the incentive for entrepreneurs to change their production processes towards a greater

use of labour because of the fall in the price of labour in relation to capital. In this way, the lower wage per worker would be immediately balanced by a rising number of workers that are employed to replace capital and to produce the same amount of goods and services; hence no demand gap would occur.

There are two problems with this approach. Firstly, owing to strong competition on goods markets, prices may fall by the full amount of the nominal wage reduction, so that real wages may not fall. Secondly, if the latter do fall because prices on the goods markets are more rigid than nominal wages,<sup>6</sup> the drop in real wages will induce a reduction in overall final demand long before any substitution of capital with labour can take effect. As such substitution implies a change in the technology used for the production of similar goods as before, with a more labour-intensive combination of the factors of production, the effect, even if intended by the owners of capital, would take a significant time to materialize. By contrast, a reduction in total real wages will

have the immediate effect of inducing workers to cut down on their consumption because they will have no expectation of a quick return to their former standard of living (Weeks, 1989: 123–124).

It could be argued that a fall in wages would redirect existing resources towards the remuneration of capital (i.e. profits), and thus cause investment to rise. But the same logic as above applies in this case as well: a reduction in real wages will trigger a fall in demand, so that profits will not rise. In a context of unchanged profits and falling demand it cannot be assumed that companies will invest more than before and in this way compensate for the fall in workers' consumption. Hence, overall income will decline.<sup>7</sup>

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... and compensate for possible job losses in the firms where productivity has increased the most.

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In a relatively closed economy this outcome can be prevented temporarily if the fall in wages is accompanied by an increase in non-wage sources of income, for example through asset price inflation, or when wage-earning households save less or incur additional debt in their efforts to maintain or even increase their consumption. A prominent example is that of households in the United States over the past decade, but it has also been observed in several other countries. It is evident that such a situation cannot be sustained for long, as household debts will eventually reach unsustainable levels or asset price bubbles will burst.

For a more open economy, this reasoning needs to be slightly modified. If nominal wages fall in one country but remain constant in others, the former gains a competitive (absolute) advantage if the implied fall in unit labour costs is not balanced by an appreciation of its currency. With permanently lower prices, the country will gain international market shares and raise its income and employment as the external contribution to its overall income increases, normally moving the current-account balance into surplus (see box 3.1, comparing France and Germany). This may be an attractive option for countries that follow an outward-oriented growth strategy that seeks to attract foreign demand, as opposed to mobilizing domestic demand. However, increasing income and employment this way will be possible only if the same strategy is not simultaneously pursued by many other countries. When the strategy succeeds in one country,

in the sense that higher external demand compensates for lower domestic demand so that domestic employment is stabilized or increased, this success will be at the expense of the other economies, where incomes and employment will fall as a result of their loss of international market shares. Thus, from the global perspective there is a fallacy of composition.

Moreover, such a strategy is only feasible if the international monetary system allows a significant misalignment of real exchange rates, which occurs when differences in the rate of inflation or in the rate of increase of unit labour costs are not fully compensated by adjustments in the nominal exchange rate. In fact, as recent events in Europe show, even in a unified currency regime like the euro zone, real exchange rates between members of the currency area may get misaligned when relative wages and prices between them change.

## 2. Productivity growth and employment

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As argued above, a key economic variable for the determination of aggregate demand growth and employment is the distribution of the gains from productivity growth among profits and wages. This distributional question has critical significance for a sustainable trajectory of growth with employment creation.

Like wage growth, productivity growth has a dual character. On the one hand, it is the most important source of income growth for all economies which lack a rich endowment of natural resources. On the other hand, it has a labour-saving effect and is a potential source of unemployment. However, the destructive part of it can be overcome if the higher proceeds from the deployment of new technologies that are more productive than older ones can be deployed to enhance mass incomes in the economy, which will induce an increase in demand for goods and services.

The distribution of productivity gains between earners of capital and labour incomes can take two

**Box 3.1**

**THE LINK BETWEEN WAGES AND EMPLOYMENT:  
THE EXPERIENCES OF FRANCE AND GERMANY COMPARED**

Germany's experiment with a restrictive wage policy has been the subject of economic debate in Europe for over a decade. However, so far policymakers do not appear to have drawn lessons from this experience.

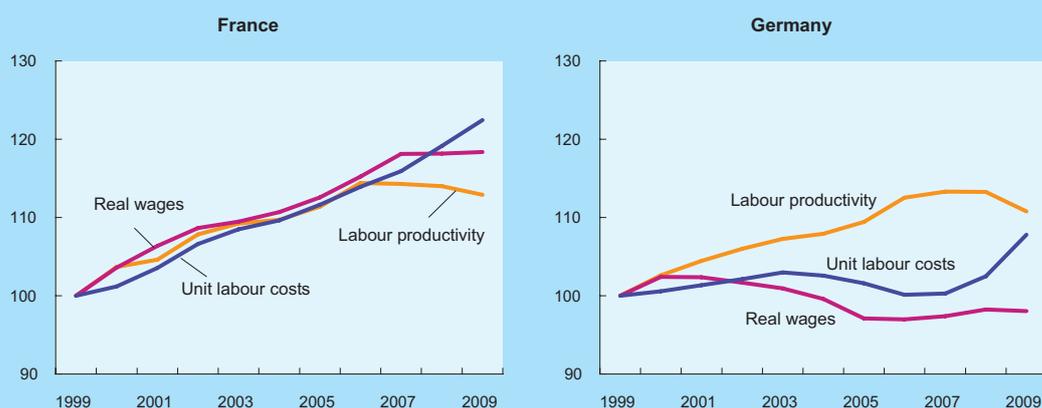
A comparison of the wage policies of Germany and France offers important insights into the interdependence of productivity, wage and employment growth. The two countries are comparable in size and both have been members of the European Economic and Monetary Union (EMU) since 1999. Their common target for price stability is an annual inflation rate of about 2 per cent, as set by the European Central Bank. In the years before the EMU was established, both France and Germany had rather high unemployment rates. After 1999, Germany suffered significant employment losses, with the unemployment rate reaching an all-time high of more than 11 per cent in 2005. In France, the unemployment rate fell below that of Germany as France achieved higher GDP growth rates than Germany.

The better employment performance of France was accompanied by a constant share of wages in total income, whereas the German wage share dropped. In Germany, particularly between 2002 and 2007, wage policy was very restrictive. From 1999 onwards unit labour costs in Germany fell consistently compared to those of France, so that by 2007 the difference amounted to 20 percentage points (chart 3.B1.1). In France, although real wages rose much more than in Germany, new jobs were created and the unemployment rate fell.

**Chart 3.B1.1**

**LABOUR PRODUCTIVITY, REAL WAGES AND UNIT LABOUR COSTS  
IN FRANCE AND GERMANY, 1999–2009**

(Index numbers, 1999 = 100)



**Source:** UNCTAD secretariat calculations, based on AMECO database.

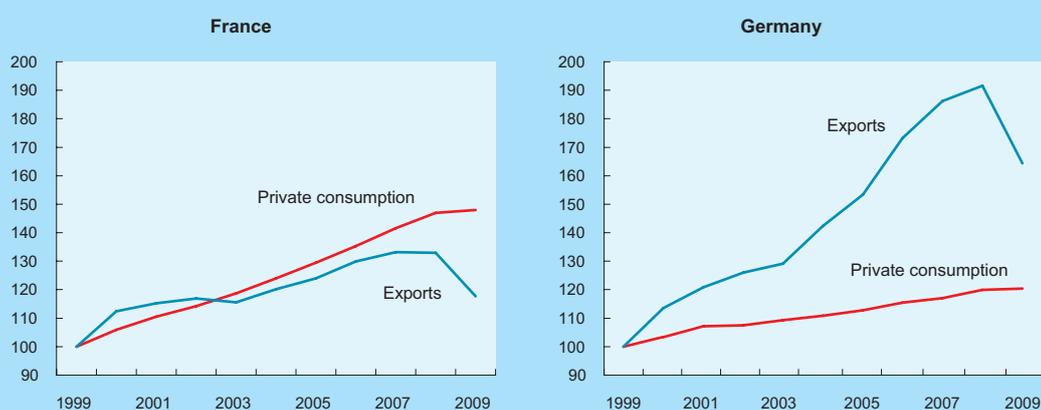
As Germany is part of the EMU, its competitiveness increased without a currency devaluation, resulting in a much larger growth of its exports than those of France, but sluggish domestic consumption growth (chart 3.B1.2). France, on the other hand, achieved a better performance in terms of a higher rate of investment and faster GDP growth than its neighbour.

## Box 3.1 (concluded)

Chart 3.B1.2

## PRIVATE CONSUMPTION AND EXPORTS IN FRANCE AND GERMANY, 1999–2009

(Index numbers, 1999 = 100)



Source: See chart 3.B1.1.

Lower nominal wage increases in Germany did not produce a positive effect on investment or employment. Indeed, there is evidence that wage restraint – inspired by the neoclassical model that emphasizes substitution of capital and labour – turned out to be detrimental not only from a social but also a macroeconomic perspective.

Wage restraint was beneficial for the German economy only in terms of boosting its international competitiveness and exports, an effect that was supported by Germany's membership of the European currency union. However, inside the euro area the effects of German wage restraint on the country's real exchange rate and external trade are being felt in many countries in the form of current-account deficits. This is causing a deflationary threat for the currency area as a whole, because sooner or later wage restraint will become unavoidable in the deficit countries, especially Greece, Portugal and Spain.

extreme forms, or turn out to lie somewhere between these two. At one extreme, the owners of capital may try to appropriate the entire productivity gains by resisting both wage increases and price reductions. This attempt will fail because demand for their products will decline if they cut the redundant jobs. As a result, the expanded productive capacity will not be fully used, investment will tend to fall, and a deflationary effect will result. If workers' bargaining position is weak but there is strong competitive pressure in the goods market, the technological pioneers may choose, or be forced, to pass on the productivity gains to consumers through lower prices while

keeping nominal wages unchanged. Consequently, real wages will increase, but the price reduction could induce consumers to delay their purchases, and this could also feed a deflationary spiral with negative implications for employment.

At the other extreme, if workers have strong bargaining power, they may obtain an increase in nominal wages that absorbs the entire productivity gain, so that unit labour costs will rise. As capital owners normally are not willing to accept a reduction in the share of profits, firms will increase prices in order to maintain that share. If they do not succeed,

demand will rise more than the productivity-induced increase in supply potential. This means that there will be inflationary pressure from both the cost and the demand side with no real wage growth. This may stimulate further investment, but will also trigger an inflationary acceleration, even in the presence of unemployment.

An optimal solution between these two extremes would be for the productivity gains in an economy to be distributed between labour and capital in such a way that the share of labour in total income does not fall.<sup>8</sup> This will generate a sufficiently large increase in demand for consumer goods and services to create an additional demand for labour, which will compensate for the laid-off labour in those firms where productivity has increased. And there will be no risk of inflation from either the cost or the demand side.<sup>9</sup>

As supply and demand on the labour market cannot be separated from what is happening in the other markets of an economy, the problems of cyclical and structural unemployment in developing countries appear in a different light. It could even be argued that one reason why structural unemployment and underemployment have remained very high over many decades is that the link between domestic demand growth and employment creation

did not receive the attention it deserved. If low wages dictated by powerful employers are regarded as a “natural” labour market outcome in an economy that has an excess supply of labour, this tends to lock in high unemployment.

This is more likely to happen when employment generation is not a central focus of growth and development strategies. Moreover, if it is argued that export orientation and expansion of external trade are the only sustainable ways to achieve real income growth

and increase employment, the argument is perpetuated, because low labour costs become a major, and in many countries the only, instrument for international competition. Yet it is precisely this view that has shaped development strategies in a majority of developing countries as well as some developed countries over the past three decades. It is true that many developing countries, especially those with lower

levels of per capita income, do not have sufficient domestic purchasing power to benefit from the scale economies necessary for a vibrant manufacturing sector, and therefore must rely on external demand even to diversify their production base. However, their excessive reliance on external markets may prevent them from generating more sustainable output growth and employment on the basis of rising domestic wages.

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Excessive reliance on external markets reduces the possibility of generating sustainable demand growth based on domestic wage growth.

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## D. Productivity-oriented wage growth supports investment and innovation

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In addition to playing a key role in employment creation, wage incomes are also closely related to the dynamics of real productive investment and innovation. This is because profits drive investment, and the level of profits is fundamentally driven by demand rather than by a reduction in production costs.

A large part of investment is motivated by the possibility of gaining competitive advantages by introducing technological advances in the production process. As Schumpeter (1911) noted nearly a century ago, technological progress arises from entrepreneurs' interest in earning higher profits, which they seek to achieve by gaining competitive advantages resulting from a process of innovation and imitation, in the course of which new cost-saving production techniques are introduced or new products are launched that are more attractive to consumers than those already on the market.

At the firm level, successful innovative investment will be reflected in growing market shares if the investor chooses to pass on the rents from innovation in the form of lower prices; or it will lead to (temporary) monopoly profits if the investor chooses to leave sales prices unchanged and enjoy the rents from innovation until competitors succeed in imitating the innovator. The choice of the strategy will largely depend on the intensity of competition.

If wages paid to workers with the same qualifications are uniform throughout the economy, changes in competitiveness will result from changes in relative labour productivity across different firms. For this

process to unfold, it is essential for pioneer investors to be able to increase their productivity without being forced to increase wages at the level of the individual firm. This implies that technological progress and the ensuing growth in labour productivity are associated with what might be called "workable" rather than "perfect" competition in the markets for goods and services (Clark, 1962), allowing temporary monopoly rents to accrue to pioneer firms. In the labour market, this process requires more or less uniform wages for workers with similar qualifications across the entire economy (i.e. the "law of one price"), rather than each production plant (or sector) determining wages in accordance with its marginal productivity. However, this is conditional on having a highly mobile labour force or, alternatively, a highly centralized process of wage formation, for example through nationwide collective bargaining or through the government setting or recommending wage targets.

The dynamic development of an economy is then driven by profit differentials, rather than wage differentials. Indeed, as noted by Keynes (1930: 141), "the departure of profits from zero is the mainspring of change in the ... modern world ... It is by altering the rate of profits in particular directions that entrepreneurs can be induced to produce this rather than that, and it is by altering the rate of profits in general that they can be induced to modify the average of their offers of remuneration to the factors of production." Hence, the closer the actual conditions on the labour markets get to the law of one price, the stronger will be the effects of profit differentials on the evolution

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Profits are driven by demand rather than by a reduction in production costs.

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of economic systems.<sup>10</sup> Or, the more rigid the wages, the more flexible will be the profits and the stronger will be the dynamic forces in the economy.

This potential for generating extra profits through product or process innovation is the major incentive for starting and sustaining a process of “creative destruction” along Schumpeterian lines. To the extent that wages in each firm grow in line with firm-specific productivity gains, innovative investors will receive lower extra profits, and will thus have less incentive for innovative investment.

In developed countries, innovative investment extends the technological frontier, whereas in developing countries it mostly entails the adoption, imitation and adaptation of technology invented elsewhere. However, this does not undermine the importance of productivity-enhancing investment to boost competitiveness at the firm level, or significantly alter the determinants of investment decisions. Technological catch-up can take place in different ways and through diverse mechanisms, such as the

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The more rigid the wages, the more flexible will be the profits and the stronger will be the dynamic forces in the economy.

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transfer of a physical plant as part of a process of industrial relocation through FDI, local investment in R&D that allows the adoption and adaptation of off-the-shelf technologies, or other forms of innovation. This can play a critical quasi-Schumpeterian role in the growth process also in developing countries, if these productivity gains enlarge the domestic market and trigger a process of wage-led growth. It is important to bear in mind that productivity improvements can take place at all levels of production and in different kinds of enterprises, and often increases in productivity among small-scale producers in agriculture and informal sector activities may be the most crucial for overall economic advancement. Thus, while

technological upgrading in developing countries is usually associated with a painstaking and cumulative process of learning, there is scope for it to occur in various ways and at different levels. However, since the development of skills per se cannot create additional jobs (except in the education sector), investment in real productive capacity remains crucial to enable the absorption of surplus labour.

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## E. Conclusions

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This chapter has argued that employment growth critically depends on an expansion of aggregate demand, and much less – if at all – on the price of labour relative to that of capital. The conventional wisdom about “export-led growth” advocates a reliance on export markets rather than on domestic markets for aggregate demand growth. Consequently, export-led growth strategies have tended to suppress wage growth with the aim of lowering unit labour costs to improve a country’s competitive position in global markets. This strategy may work for some economies for some time, but the more

economies that follow such a strategy, the less it can be successfully sustained by all of them. The relative longevity of this strategy over the past decade and more has been possible mainly because of the fast growth of import demand from the United States, which, however, generated large external deficits in that economy. As attempts are made to trim these deficits, other countries in the world will also have to rebalance (as discussed in chapter II of this *TDR*). It is therefore important that the macroeconomic and growth strategies adopted in most countries in recent decades be reconsidered.

In any case, a more sustainable growth strategy would be one that relies, more than it did in the past, on domestic demand based on wage increases in line with aggregate labour productivity increases. At the same time, an increase in domestic demand for wage goods needs to be accompanied by a dynamic process of investment and new capacity creation for absorbing surplus labour.

Despite apparent differences in structure, institutions and types of constraints on growth, there are important similarities between developed and developing countries in terms of the relationship between investment, output and employment. In all countries, sustainable growth trajectories are those that are based on the synergies between employment and output growth.

For a virtuous circle of investment, productivity growth, income growth and employment creation to occur, policies need to be oriented towards ensuring that the income gains from productivity growth are distributed equally between labour and capital, so that the share of wages in national income does not decline over time. This basic insight is just as

relevant for developing countries as it is for developed countries, though for the former countries wage shares need to be broadly interpreted to include incomes from self-employment in agriculture and non-agricultural informal activities, and it may also include the public provision of wage goods.

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**Faster employment growth cannot be achieved by greater wage flexibility, but by changes in the general wage level along the path of average productivity growth in the economy.**

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From this perspective it is not greater wage flexibility that leads to faster employment growth, but rather the opposite: an orientation of changes in the general wage level along the path of average productivity growth in the economy. This will not only create additional jobs that produce additional value added, but also allow for the emergence of profit differentials strengthening the dynamic forces in the economy, and thus investment in productive capacity.

The policy implications of an alternative and more employment-friendly growth and development strategy that relies more on domestic demand growth are discussed in chapter V of this *Report*. It is more important than ever that such policies be considered seriously; otherwise both developed and developing countries face the real risk of a downward spiral into recession and economic instability. ■

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## Notes

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- 1 See also Weeks (1989: 160), who shows that what may be true at the level of the firm (higher real wages lead to less employment) is not true in the aggregate, even if capital is assumed to be perfectly malleable.
- 2 This notion goes back to Marshall (1890), Edgeworth (1894), Pigou (1933) and Keynes (1936).
- 3 Job losses are likely to occur at the level of the individual firm when new technologies are introduced for the production of traditional goods. But when new technologies are associated with the introduction of new products that cater to new customers, there are likely to be few, if any, job losses even at the microeconomic level.
- 4 While underemployment and low-wage informal employment have been seen as typical features of developing countries, in recent years, the meaning of unemployment has also changed somewhat in statistics for developed countries as new forms of underemployment have proliferated. The recent

- economic and financial crisis has led to employment adjustments at the firm level: short-time working and work time reduction has been combined with wage reduction, thereby avoiding open unemployment; however, “unemployment on the job” has increased.
- 5 The correlation weakens considerably or even disappears, depending on the periodization, when China is included in the sample. Some of the main reasons for this could be that: (i) growth cycles in that country have been less pronounced than in most other countries, (ii) the large share of FDI – often including leading-edge technology – in total investment in China creates extremely large productivity gains, and (iii) rural-urban migration (and reverse migration), and the way in which it is recorded in statistics, dampen the impact of changes in investment on employment.
  - 6 Indeed, if nominal wages (i.e. the price on the labour market) were as flexible as the prices on all the other markets, the neoclassical edifice would collapse. If an exogenous shock, say a fall in export demand, were to occur, the prices on all of these markets would react in the same way, and the real wage would not fall. Unemployment would rise but the labour market would have no means to cope. This only supports the contention (explained earlier in this chapter) that the labour market should not be treated as a separate market.
  - 7 Another perspective on the relationship between wages and investment, which leads to the same conclusion, is provided by Leijonhufvud (1968: 335): “Observing unemployment, the ‘classical’ economist draws the conclusion that wages are too high and ‘ought’ to be reduced. In Keynes’ theory, the maintenance of full employment depends upon the maintenance of a ‘right’ relation between...asset prices and the wage ... Keynes’ point is that when the appropriate price relation does not obtain, it is in general not wages but asset demand prices that are out of line...”.
  - 8 The application of this rule would ensure that the functional income distribution will not change at the expense of labour incomes as a result of productivity increases. Of course, there may be specific situations in particular countries where the current distribution of income between capital and labour as a result of past policies is considered unfair. In this case, shifts in that distribution towards labour would need to be subject to negotiation and consensus-building at the national level. Moreover, the creation of a more equitable society is mainly the outcome of public policy choices, including with regard to taxation and the provision of public services.
  - 9 To the extent that this implies an increase in imports, the greater demand will boost output and employment not only in the country where the productivity increases, but also abroad. If the distribution of productivity gains is similar in all countries, unit labour cost relations will remain unchanged, ensuring that trade remains in balance. If, however, inflation differentials lead to a divergence in unit labour costs, an adjustment of the nominal exchange rate will be necessary to prevent the emergence of trade imbalances.
  - 10 Looking at developed countries, Scarpetta and Tressel (2004) point out that in addition to wage bargaining regimes, two main aspects of labour-market policy and institutional settings are closely related to the incentives for firms to undertake investment with a view to expanding and innovating production facilities: (i) the stringency of employment protection legislation, which influences the costs of hiring and firing; and (ii) the possible interactions between this legislation and industry-specific technology characteristics.

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