2 Making profits work for investment and jobs[1]

Main findings

- Pre-crisis gains in growth were distributed unevenly: between 2000 and 2009, among 56 countries with available information (which account for roughly 90 per cent of world GDP), more than 83 per cent enjoyed an increase in the share of profits in GDP. However, the chapter shows that, while the profit share increased, productive investment as a percentage of GDP stagnated globally. This disconnect between growing profits and productive investment reflects three main factors.

- First, much of the increase in profits accrued to the financial sector. Between 2000 and 2007, in advanced economies, financial-sector profits grew by 13 per cent annually, compared with 6 per cent in the case of the non-financial sector, i.e. the real economy. In emerging and developing economies, the figures are around 85 per cent and 20 per cent, respectively. Financial-sector profits declined somewhat in 2008–09, but have since strongly recovered – both in absolute terms and vis-à-vis profits in the real economy.

- Second, in advanced economies, profits of non-financial corporations have increasingly been used to pay dividends and to invest in financial assets rather than to make productive investments. In 2009, more than 36 per cent of profits were distributed in terms of dividends, compared with less than 35 per cent in 2007 and less than 29 per cent in 2000. Moreover, total financial assets of non-financial firms in advanced economies increased from 81.2 per cent of GDP in 1995 to 132.2 per cent of GDP in 2007. Due to the financial crisis, there was a decline in 2008 and 2009, but 2010 data show that there is an upward trend in financial investment by non-financial corporations in advanced economies.

1. Excellent research assistance was provided by Elodie Dessors.

- The situation among non-financial corporations in emerging and developing countries is a stark departure from the practices in the advanced world. Dividend payouts – at roughly 19 per cent of profits – remained relatively stable in the pre-crisis period and even declined to 16.5 per cent at the onset of the crisis in 2008. However, as in advanced economies, investment in financial assets also increased from 54 per cent of GDP in 2000 to 87.4 in 2007.

- Third, more recently, productive investment in advanced economies has been hampered by uncertain demand prospects combined with tight credit conditions – affecting small and medium-sized enterprises (SMEs) disproportionately. In the European Union, the net percentage of banks reporting a tightening of lending standards has remained positive throughout 2011. In the United States, the net percentage of banks reporting tightening of lending standards increased in the third quarter of 2011 for SMEs.

- Ensuring a closer link between profits and productive investment is crucial for job creation. If private sector investment had grown at the same pace as GDP during the period 2000 to 2009, private sector employment in the advanced economies would have been higher by 5.8 million in 2009. Likewise, there exist significant productive investment opportunities in developing and emerging economies, with a major potential in terms of job prospects – notably in rural areas and agriculture, see Chapter 4.

- The last section of the chapter identifies reforms to improve the links between profits and productive investment. Moving ahead with this agenda, combined with action on the demand side (see Chapter 3), would boost investment and job prospects considerably thereby facilitating a sustainable exit from the global crisis.

Introduction

Productive investment is crucial for ensuring a sustainable exit from the global crisis. As noted in Chapter 1, investment is needed in advanced economies to facilitate the structural transition away from sectors where financial bubbles and debt-led growth have happened. In emerging and developing countries, the challenge is to rely less on exports to advanced economies and more on domestic and South-South sources of growth – a transition for which investment is also necessary. In addition, investment in agriculture would help alleviate food shortages – this issue is addressed in Chapter 4.

In general, profits are a key factor behind productive investment and section A examines broad trends in profits and investment around the world. It shows that there has been a growing disconnect between the two. Section B analyses the factors behind this disconnect with a view to improving employment outcomes. Section C discusses policy options of how to make profits work for investment and jobs.

Box 2.1 Definitions and other measurement considerations

National accounts provide a comprehensive and detailed record of the production, income and expenditure activities of an economy's economic agents, namely government, non-financial corporations, financial corporations, non-profit institutions and households.

Corporate accounts: The detailed activities of firms are grouped into two main sub-categories: financial corporations (units specializing in financial intermediation, such as banks and insurance companies) and non-financial corporations (including those corporations that are wholly or partially owned by the State, known as "public enterprises"). Corporate accounts exclude unincorporated enterprises, also referred to as individual entrepreneurs or "self-employed", which are often too small to have complete sets of accounts and are thus grouped with the accounts of households (see also Chapter 3 for more details). Corporate accounts show principally: (i) how the income derived from production – the "gross value added" – is divided between the two factors of production (labour and capital); (ii) the amount by which this income is increased or reduced by "property income" or by various kinds of transfers; and, (iii) the extent of capital or investment acquired. All this information is valued at current prices. The principal components and definitions related to corporate accounts employed throughout this chapter include:

- *Gross operating surplus (GOS):* the portion of the income derived from production that is earned by the capital factor. It is the principal measure of firms' performance in terms of operating profits, although this measure differs from profits as calculated in companies' accounts. For the purposes of this chapter, and given that most countries do not provide information for the depreciation of capital, operating surplus or capital share is measured in gross terms rather than net.
- *Capital share:* the gross operating surplus as a percentage of gross value added, gross national income or GDP. For the purposes of this chapter, the capital share is measured as a percentage of gross domestic product so as to increase the sample of countries analysed – a number of countries do not report information on gross value added.
- *Property income:* includes interests, dividends, reinvested earnings on foreign direct investment, property income attributed to insurance policyholders and rent on land and sub-soil assets. Most of these are liable to appear both in corporations' uses (in which case the property income is "paid") and in their resources (in which case the property income is said to be "received", for example when corporations receive dividends on their holdings in other corporations).
- *Retained earnings:* the gross savings or undistributed income of corporations. It is the balancing item of the distribution of income account, also known as "gross disposable income". This balancing item equates, in the case of corporations, to their gross saving because by definition corporations do not have final consumption expenditure.
- *Gross fixed capital formation (GFCF):* often called "investment". It appears in the capital account and refers to the purchases of assets intended for use in the production of goods and services, such as machinery, vehicles, offices, industrial buildings and software (changes in inventories or constitution of stocks are not included in GFCF). Therefore, GFCF measures the total expenditures on products intended to be used for future production (the fixed capital).

Source: Lequiller and Blades, 2006.

A. Trends in income distribution and productive investment

Total income in an economy is shared between capital (profits accruing to firms) and labour (the share that returns to households in the form of wages – see Chapter 3 for more information regarding wage share trends and determinants).[2] As described in detail in box 2.1, the capital share – often referred to as profit share – is measured in this chapter as the gross operating surplus (GOS) of corporations as a percentage of GDP.[3]

Capital shares have increased faster than investment in the vast majority of countries...

Between 1995 and 2000, capital shares in both advanced and emerging economies remained relatively stable. However, since 2000, capital shares for both sets of economies increased: in advanced economies it grew by 1.5 full percentage points, from roughly 17 per cent in 2000 to 18.5 per cent in 2007 (figure 2.1).[4] The growth in emerging and developing economies was even more pronounced – over the same period the capital share grew more than 4 percentage points to reach 27 per cent in 2007.[5] In contrast, investment growth did not keep pace with profits: between 2000 and 2007 the global capital share increased by 2.5 percentage points, while investment grew only 0.4 percentage points. There were, however, important diverging trends by country grouping: among emerging and developing countries, investment as a share of GDP increased from 12.4 per cent in 2000 to 19.3 per cent in 2007, whereas investment growth in advanced economies stagnated. Since the onset of the crisis the capital share in emerging and developing countries has continued to rise, whereas in advanced economies it has fallen considerably – although there have been important compositional changes (see section B).

In terms of developments by country, the vast majority with available information – more than 83 per cent – experienced a shift in income towards capital between 2000 and 2009 (figure 2.2). The trend is particularly evident among emerging and developing countries (of which there are 26), with only Latvia and Serbia experiencing modest declines in the capital share. Consistent with the trends by country grouping, emerging and developing economies have the highest capital shares and experienced significant increases. For instance, Azerbaijan, Chile, Egypt, Iran and Venezuela have capital shares above 45 per cent and experienced

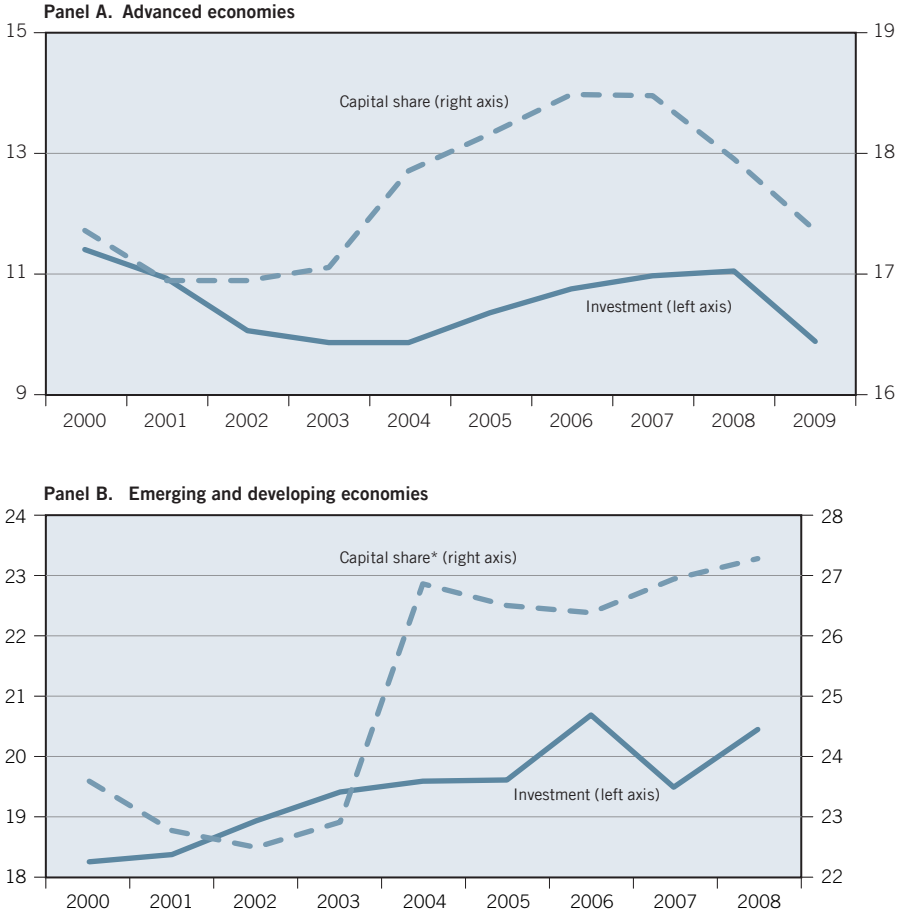
2. The production account includes a third item: net taxes on production and imports payable. In general, this item is a relatively small component of the production account. For instance, in 2007, it represented 2.7 per cent of GDP, on average, in the group of advanced economies analysed and 7 per cent in the emerging and developing country group.

3. As measured, the capital share excludes "unincorporated enterprises", also referred to as "individual entrepreneurs" or "self-employed". And while unincorporated sectors account for a sizeable portion of economic activity, especially in developing countries, on average, however, the corporate GOS accounts for close to 75 per cent of the total economy's GOS in emerging and developing countries and for 62 per cent in the advanced group.

4. See also Ellis and Smith, 2007 and Vaona, 2011 for further information and evidence regarding capital share trends.

5. "Advanced economies" refers to high-income countries, i.e. countries with a gross national income (GNI) per capita of US$ 12,276 or more. "Emerging" refers to upper-middle income countries (GNI between US$ 3,976 and 12,275) and "developing" to low- and lower-middle income countries (GNI of 3,975 or less). These terms are used interchangeably (see appendix A of Chapter 1 for more details regarding country groupings).

Figure 2.1 Capital share and investment developments among non-financial firms (percentages of GDP)



*Given that averages correspond to weighted averages, the increase observed in the capital share of emerging and developing countries between 2003 and 2004 is explained by an important increase in the capital share of China – which increased by more than 7 percentage points between these two years.

Note: The sample analysed comprises 56 countries, of which 26 are emerging and developing countries and 30 are advanced economies. See appendix A of Chapter 1 for the list of countries analysed and their income groups.

Source: IILS calculations based on the OECD and UN National Accounts databases, national sources and IMF (2011).

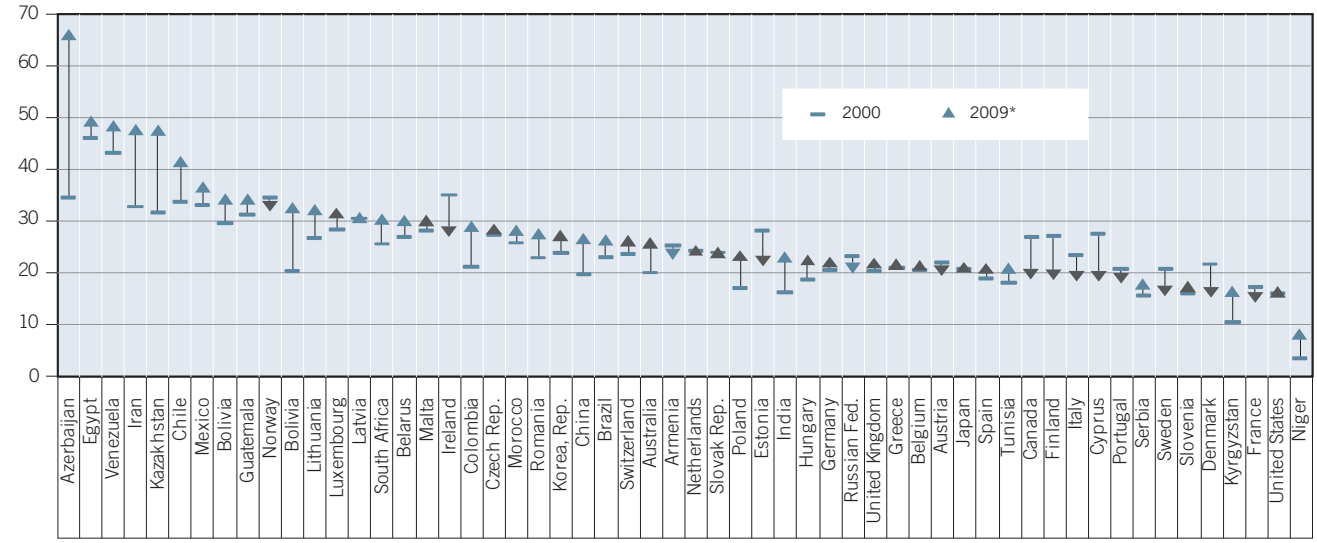
an average increase of 12 percentage points over the period 2000–2007 (15 percentage points if Egypt is excluded).

For advanced economies, Luxembourg and Norway have the highest capital shares (at more than a third of GDP), with each of Germany, Luxembourg and Poland gaining more than 5 percentage points on average. Only 7 of the 30 advanced economies (Canada, Cyprus, Denmark, Italy, Finland, Ireland and Spain) experienced declines in the capital share, most notably Cyprus (nearly 8 percentage points decline) and Ireland (3.3 percentage points).

... led by growing profits in the financial sector.

In terms of composition of the total capital share by type of corporations, the highest shares – due to their relative size in the economy – are concentrated in non-financial corporations. This is the case in both advanced and emerging and developing economies. For instance in 2007, the capital shares in non-financial

Figure 2.2 Capital share developments by country, 2000 to 2009 (percentage of GDP)



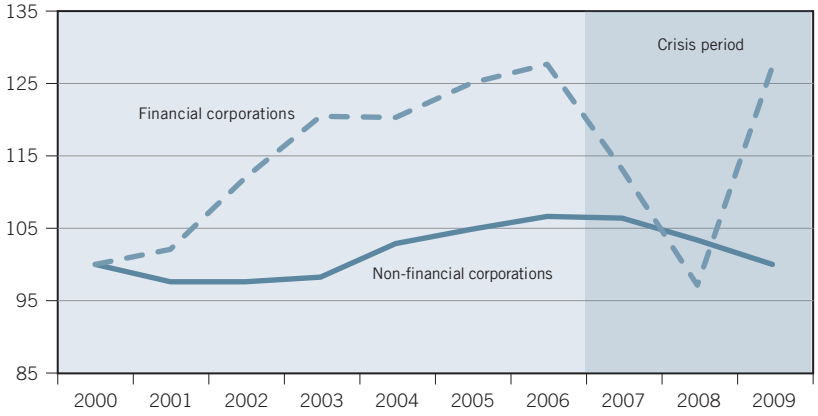
* Data for Cyprus, Japan, Malta, Switzerland, and for emerging and developing countries correspond to 2008 (with the exception of Colombia, Guatemala, Morocco and Romania, in which it corresponds to 2007; and of Brazil and Venezuela, in which it corresponds to 2006).

Note: Blue arrows refer to emerging and developing economies (grey to advanced economies).

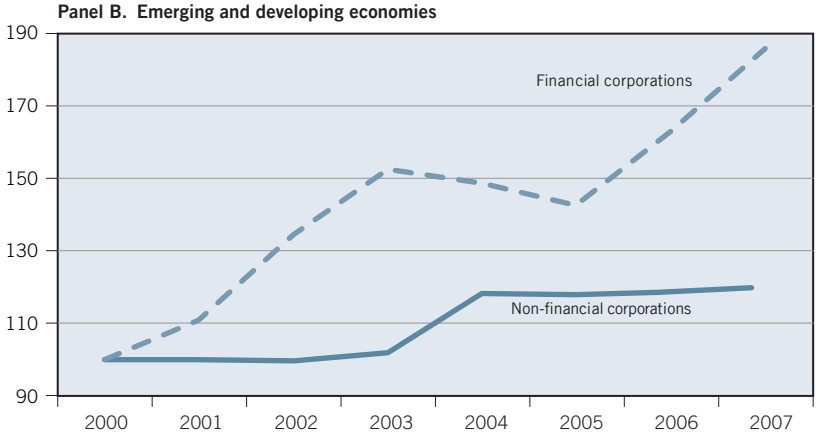
Source: IILS calculations based on the OECD and UN National Accounts databases, national sources and IMF (2011).

Figure 2.3 Evolution of capital shares by type of corporations, 2000 to 2007/09 (2000=100)

Panel A. Advanced economies



Panel B. Emerging and developing economies



Source: IILS calculations based on the OECD and UN National Accounts databases, national sources and IMF (2011).

corporations were 26 and 18 per cent in emerging/developing and advanced economies, respectively, compared with less than 5 per cent for financial firms. However, in both sets of economies, the rate of growth within the financial sector between 2000 and 2007 has outpaced growth in the non-financial sector (figure 2.3, panels A and B). This is especially the case in emerging and developing economies, where the capital share among financial firms grew by more than 85 per cent over this period, compared with 20 per cent among the non-financial sector. The same trend is true for the advanced group, although the difference in the growth rates is less marked.

The onset of the crisis has brought a dramatic shift in the trend and composition of capital shares in advanced economies. In 2007, with the collapse of Lehman Brothers, capital shares began to fall across sectors – with the decline being particularly acute among financial corporations. In fact, in 2008 the capital share among financial corporations fell by more than 25 per cent, erasing all of the gains of the past seven years. Yet, this fall of financial corporations was short-lived and in 2009 capital shares had already returned to levels similar to 2007. On the other hand, the decline in the non-financial sector has been much more gradual, but capital shares for this group – which account for 87 per cent of employment in advanced economies – continue to decline. This reflects the paradox that the impact of the global economic crisis of 2007–08 on the financial sector was short-lived initially – despite it being at the very origin of the downturn. Moreover, as demonstrated in Chapter 1, there are renewed concerns regarding the financial system, notably in Europe, where in some instances private sector investment is hampered by credit constraints (see section B).

Similar trends are present among a select few emerging and developing economies, i.e. Chile, Mexico and South Africa. For instance, in the period 2007 to 2009, the non-financial corporate sector was more deeply affected in these countries (a decline of 1.4 per cent in capital share) than the financial corporate sector (relatively unchanged capital share).

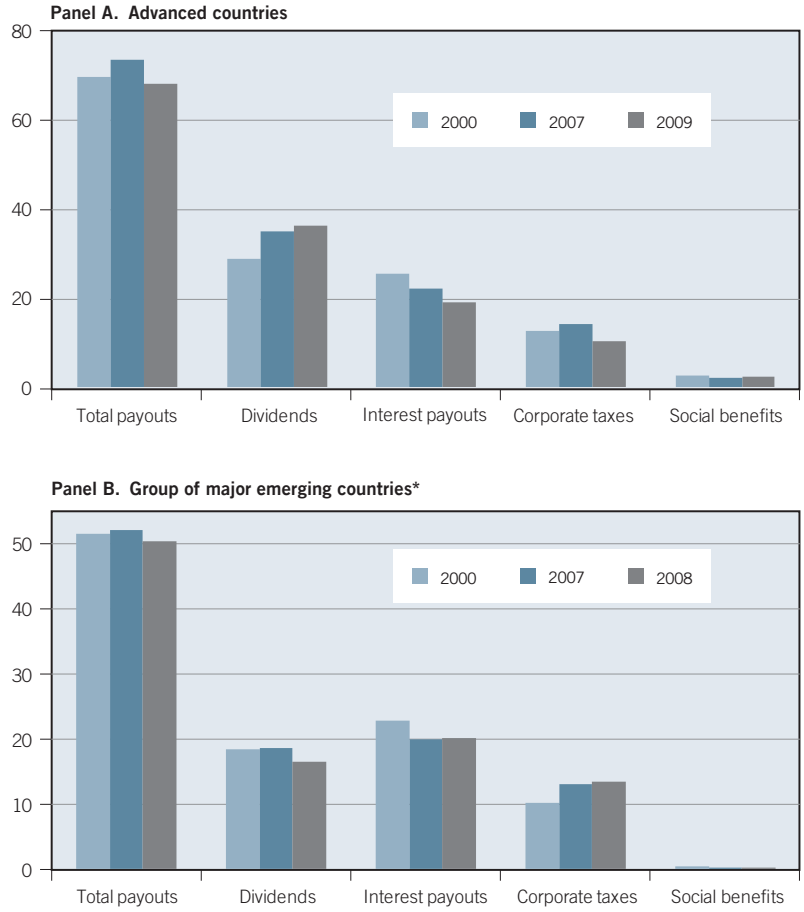
The remainder of this chapter focuses on the manner in which the higher profit shares were disbursed. In particular, section B assesses whether there has been increased recourse to corporate payouts in the form of dividends and other payouts, including an analysis of changes in income from sources other than operations and retained earnings. This includes examining the extent to which any change in resource allocation has translated into more investment, paying particular attention to various investment types. The final section discusses a number of policy considerations in light of the evidence presented.

B. Profits and productive investment of non-financial firms: Causes of a growing disconnect

First, the portion of profits distributed as dividends has grown significantly in advanced economies ...

During the period that preceded the crisis, part of the increase in capital shares in the advanced country group reflected a redistribution towards increased dividend payments (figure 2.4, panel A). In these countries, on average, the share of dividends in GOS (dividend payout ratio) rose by 6 percentage points, reaching close to 35 per cent of GOS in 2007. During that period, dividends in advanced

Figure 2.4 Payouts of non-financial corporations by type, 2000 to 2008/09 (percentages of GOS)



* The group of major emerging countries includes Brazil, Chile, China, Mexico and South Africa.

Source: IILS calculations based on the OECD and UN National Accounts databases and national sources.

economies more than doubled.[6] Even with the onset of the crisis, non-financial firms in advanced economies continued to pay out substantial dividends. For instance, only in 2009 did actual dividends decline; however, as they fell less than GOS, the dividend payout ratio actually increased to 36.2 per cent in 2009.[7]

... but remained constant in emerging economies for which data exist, such as Brazil, China and South Africa.

In contrast, the dividend payout ratio among major emerging economies has remained relatively stable since the early 2000s, at close to 19 per cent of GOS (figure 2.4, panel B) – which is well below the dividend payout ratio in advanced

6. Dividends in advanced economies grew by 10 per cent per annum on average, compared with an 18 per cent average annual rate in a select group of major emerging economies.

7. Interestingly, however, firms decided to keep dividend payments in line with stock prices – raising the question of the financial market's influence over the distribution of profits. Indeed, between 2007 and 2009, dividend yields (ratio of dividend to stock price) in both advanced and emerging countries remained stable (excluding an increase in 2008, which was likely due to the rapid decline in stock prices). This indicates that firms are probably more concerned about keeping dividends constant in relation to stock prices rather than adjusting dividend payouts due to fluctuations in earnings.

economies. Available information suggests that the dividend payout ratio has also remained broadly unchanged since the start of the global crisis.

With respect to the composition of other payouts, interest payments as a share of GOS fell in both groups of economies – as a result the ratio of interest to dividend payments fell after 2000. Moreover, in advanced economies, the ratio continued its downward path even during the crisis – from 71.5 per cent in 2007 to 63.7 per cent in 2009.[8] The overall decrease in the growth of interest payments partially reflects falling nominal interest rates during the pre-crisis period 2000 to 2007. Indeed, close to 86 per cent of the countries analysed saw their nominal lending interest rates decrease during the pre-crisis period – by close to 1 percentage point in the advanced group and by 3.8 percentage points in the select group of emerging countries. This is even more evident in the advanced group, in which interest payments even declined between 2000 and 2004, reflecting falling interest rates (close to 3 percentage points over the period) and a process of deleveraging being undertaken among many non-financial firms. Leverage ratios for non-financial businesses – measured as debt to book equity[9] – were stable or declining in most countries in the years that preceded the crisis,[10] mostly thanks to growing profits and booming equity markets.

The results have been that, first, the portion of profits available for investment, so-called retained earnings, fell in advanced economies and increased in emerging and developing countries ...

Among non-financial corporations, other income represents a significant portion of GOS – and in some cases this has risen significantly since 2000. In particular, in 2007, property income and other transfers accounted for roughly 32 per cent of GOS in advanced economies, compared with 28 per cent in 2000 (figure 2.5, panel A). However, the increase in other income was not enough to offset the large increase in dividend payments as discussed above. As a result, retained earnings as a share of GOS fell between 2000 and 2007 (figure 2.5, panel B).

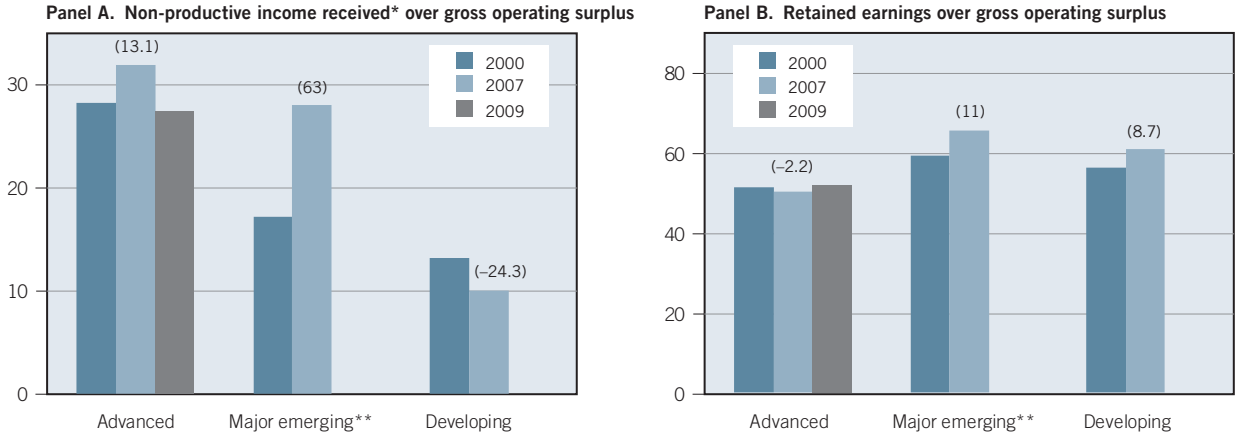
In contrast, in the group of emerging and developing countries – despite increases in overall payouts among non-financial corporations – retained earnings managed to grow faster than GOS, partly due to the fact that dividends in these countries remained relatively stable as a share of profits. The result was an improvement in retained earnings during the period analysed.

... and second, retained earnings of non-financial firms are less and less used to invest in the real economy in all country groups ...

Between 2000 and 2007, productive investment as a share of total resources received decreased in nearly all regions, with the exception of developing countries (figure 2.6).[11] There were even declines among major emerging economies, such as

8. Only advanced countries have available national account information for 2009.
9. This ratio is available only for a number of advanced economies, namely: Canada, France, Germany, Italy, Japan, Republic of Korea, Spain, Switzerland, United Kingdom and the United States (Roxburgh et al., 2010).
10. Two exceptions stand out of this deleveraging trend among non-financial businesses, the commercial real estate sector and companies bought through leveraged buyouts (Roxburgh et al., 2010).
11. In 31 out of 50 countries with available information, productive investment as a share of total resources received decreased.

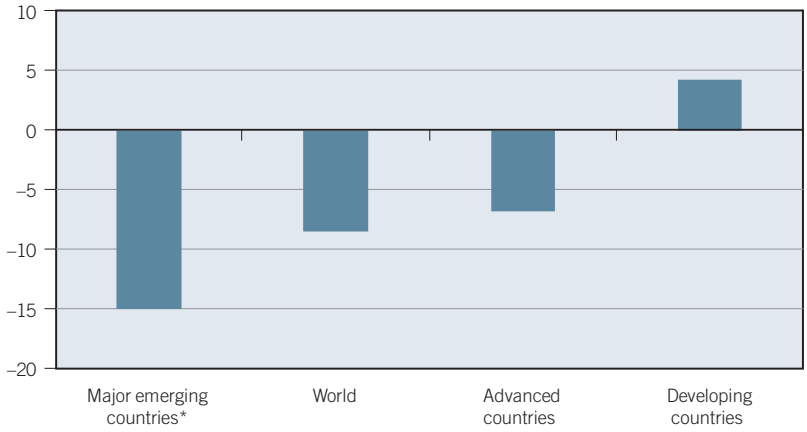
Figure 2.5 Growth of the share of non-productive income received* and retained earnings over gross operating surplus in non-financial corporations, 2000 to 2007/09 (percentages)



Note: Values in parentheses show the change in per cent over the period 2000 to 2007.
*Non-productive income received corresponds to all resources received other than gross operating surplus. These include: property income received, other current transfers received and social contributions and benefits received.
**The group of major emerging countries comprises Brazil, Chile, China, Mexico and South Africa.

Source: IILS calculations based on the OECD and UN National Accounts databases and national sources.

Figure 2.6 Investment over total resources received for non-financial corporations, 2000 to 2007 (percentage point change)



Note: Total resources received are gross operating surplus, property income received, social contributions and benefits received and other current transfers received.
*The group of major emerging countries comprises Brazil, Chile, China, Mexico, Russian Federation and South Africa.

Source: IILS calculations based on the OECD and UN National Accounts databases and national sources.

China. In addition, in terms of the amount of total resources allocated towards investment, similar patterns emerge across country groupings, i.e. roughly 52 per cent of total resources in 2007 among major emerging economies, compared with 46.2 per cent for advanced countries and 44.2 per cent for developing countries.

Furthermore, the recent decline in investment in research and development (R&D) among advanced economies is a worrying sign. Conversely, developing and emerging economies showed positive signs in this regard – in fact, they quadrupled their R&D spending in a little over a decade preceding the 2008–09 crisis (see box 2.2).

Box 2.2 Research and development by the private sector

R&D is a forward-looking indicator of investment as it tends to raise the potential output in the medium to long term. Recent trends show that spending on R&D has stagnated among advanced economies, while it has increased fourfold among developing and emerging economies, mostly led by China.

Among advanced economies, R&D conducted by the private sector increased from 1.5 per cent of GDP in 1995 to 1.7 per cent of GDP in 2001. It then declined over the next few years, but later trended up, reaching 1.8 per cent of GDP in 2008. In contrast, developing and emerging economies saw a fourfold increase in private sector R&D in the same period. For example, it increased from 0.27 of GDP in 1995 to 0.9 per cent of GDP in 2008, led by the private sector in China.

The 2008–09 economic crisis deeply affected business expenditure on R&D worldwide, but the impact has been varied across sectors, countries and firms. For example, in the OECD area, the crisis seems to have particularly hit R&D expenditure in the information and communication technologies sector.

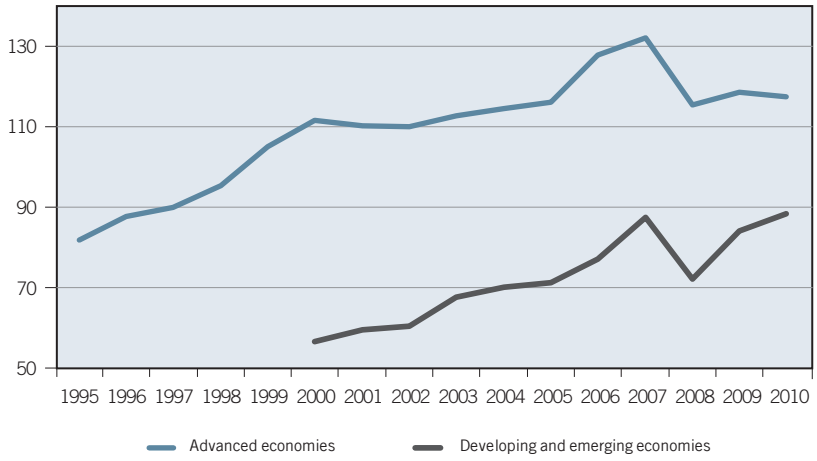
Source: Eurostat (2009) and OECD (2009).

... and more and more to invest in financial markets.

Non-financial firms have increasingly invested in financial assets at the expense of physical assets. This change in the investment behaviour of private businesses has been associated with a broader phenomenon known as "financialization", where financial markets play an increasingly important role in the operation of the non-financial sector. This is particularly the case with firms in advanced economies, but in recent years, developing and emerging economies have started to exhibit similar trends. For example, the total financial assets of non-financial firms in advanced economies increased from 81.2 per cent of GDP in 1995 to 132.2 per cent of GDP in 2007, although it declined to 117.5 per cent of GDP in 2010 because of the financial and economic crisis (figure 2.7). Meanwhile, in the case of developing and emerging economies, the total financial assets of non-financial firms increased from 56.4 per cent of GDP in 2000 to 87.4 in 2007. It saw a slight decline in 2008 to 72 per cent of GDP, but in 2010 trended up to 88.3 per cent of GDP.

Empirical evidence shows that rising profitability in the financial sector has played an important role in drawing in investment from the non-financial sector towards the financial sector. For example, among advanced economies, the financial sector's profitability doubled from 14.2 per cent in 1990 to 30.5 per cent in 1999. It then declined slightly, but resumed the upward trend in 2003, peaking at 36 per cent in 2006. Meanwhile, among developing and emerging economies, profitability of the financial sector declined sharply in the second half of the 1990s, which was mainly driven by the 1997 Asian financial crisis and other smaller crises in Latin American countries. But the profitability of the financial sector in developing and emerging countries started to increase in 2002, peaking at 32.1 per cent in 2007.

Figure 2.7 Total financial assets of non-financial firms as a share of GDP (percentages)



Note: Includes 28 advanced economies and 26 developing and emerging economies (weighted averages).

Source: IILS calculations based on the Economist Intelligence Unit.

Econometric evidence confirms the important role of financial policies and demand on promoting productive investment and employment in advanced economies.

An econometric analysis has been undertaken in order to carry out a closer investigation of the drivers of investment in non-financial corporations of advanced economies. The analysis, based on an extended version of the pecking order theory,[12] underlines the role of dividend policies and demand factors as follows:[13]

- A 1 per cent increase in the growth rate of dividends paid is associated with a 0.12 per cent decrease in the investment level. This result is in line with economic theory – the pecking order theory – suggesting that firms facing relatively costly external financing will first seek internal funds for investment needs. Under these circumstances, if dividends grow faster than profits, a firm's ability to fund its own future investment is affected.

- The capacity utilization rate – calculated as the ratio of actual output over potential output – has a strong and significant positive effect on investment: a 1 per cent increase in the capacity utilization growth rate will translate into a 1.24 per cent increase in GFCF. This is consistent with the importance of demand to evaluate the profitability of new investment.

12. This theory asserts that a firm's investment decisions are linked directly to its available internal funds and therefore the investment equation is specified by those variables that have a direct impact on the firm's cash flow. See Fazzari et al. (1988) and Vogt (1994).

13. See appendix A for the exact specifications of the investment equation and Escudero and López (forthcoming) for a more detailed analysis of the theoretical framework from where the equations were derived and the interpretations of the results.

- Accelerated depreciation tax allowances have a positive relationship to investment and therefore have the potential for incentivizing investment.[14]

Based on these relationships, two scenarios were simulated to illustrate: (i) the potential impact that fostering investment growth would have on employment creation; and (ii) the potential impact that shifting resources, specifically, from dividends to investment would have on employment creation.

The first finding that arises from the model is that investment growth has a strong and positive effect on employment creation. In fact, a 1 percentage point increase in the investment growth rate would produce a 0.12 percentage point increase in employment growth. As such, the promotion of investment growth – through improved credit conditions for SMEs, for example – would yield significant gains in terms of jobs. More specifically, the simulation shows that if private sector investment had grown at the same pace as GDP during the period 2000 to 2009, private sector employment in the advanced economies would have been higher by 5.8 million in 2009 – of which roughly two-thirds is accounted for by SMEs.

The second finding reveals that the growth of dividend payouts has a significant negative relationship with employment, since it reduces a firm's capacity to invest. The model shows that a 1 percentage point increase in the growth rate of dividends would reduce employment growth by 0.013 percentage points. This means that if non-financial corporations had kept the dividend payout ratio constant – dividends growing at the same rate as GOS – private sector employment in advanced economies in 2009 would have been higher by 1.6 million.

C. Policy considerations

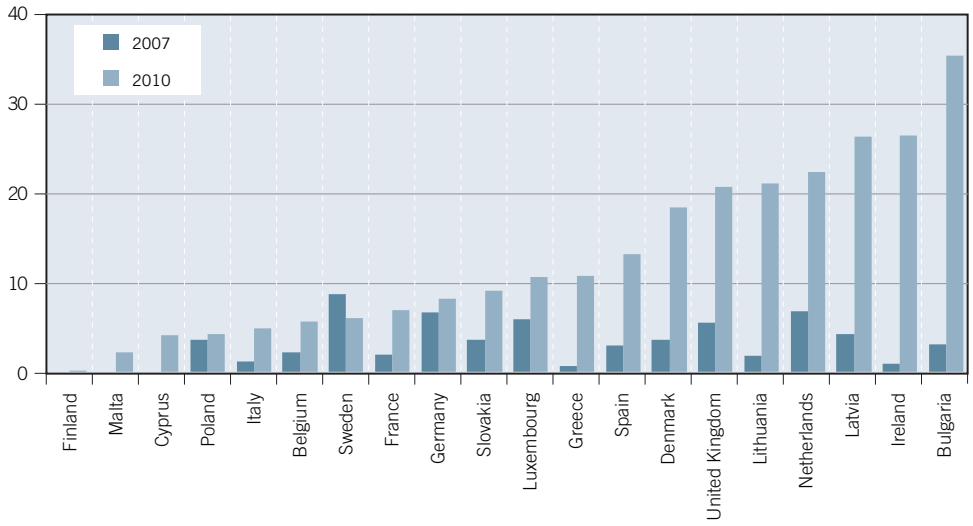
Against the backdrop of slowing employment growth and relatively unchanged investment practices, considerable – and urgent – action is needed to support job creation by prioritizing investments over payouts. Over the medium term, efforts will be needed to address a number of underlying structural issues, notably issues related to corporate governance as well as the distribution of gains and investment practices. In the near term, however, stable and sustained job creation will rely on ensuring that resources are made available to SMEs who continue to face liquidity constraints as financial markets, especially in Europe, enter a new crisis phase.

Employment creation will rely on incentivizing investment and supporting SMEs …

Given the importance of investment in encouraging employment creation, it will be important to consider immediate measures to spur investment in the short term while also addressing structural issues related to the trend of declining investment, notably in advanced economies. First, credit conditions have deteriorated for SMEs since early 2011. For example, in the United States, the net percentage of banks reporting a tightening of lending standards for SMEs increased in the most recent quarter (Q3 2011). In addition, when firms in the European Union were asked about the most pressing problem they faced between September 2010 and

14. However, in the estimated model, the level of significance of this variable was not sufficiently high, most likely due to the technical and organizational delays in translating the allowance for depreciation into investment.

Figure 2.8 Rate of unsuccessful loan applications by small- and medium-sized enterprises (percentage of total loan applications)



Note: Only banks are included; no other credit institutions are taken into account.

Source: IILS calculations based on Eurostat.

February 2011, one-fifth of SMEs reported a lack of adequate access to finance. In fact, the rate of unsuccessful loan applications increased between 2007 and 2010 in 19 of the 20 European economies for which data are available (figure 2.8).[15]

Given the current climate of economic uncertainty, causing depressed demand and a difficult credit environment, countries need to address the following pressing issues:

- *Support access to credit among SMEs, thus investment and jobs:* Measures to support SMEs could include: (i) the development of credit mediators to assess credit requests denied to SMEs by banks (as exist in northern Italy); (ii) the introduction of credit guarantees, such that part of the loan is backed/guaranteed by government support (as in Brazil and Germany); (iii) the provision of liquidity earmarked for SMEs directly to banks. For instance, in the European Union, the budget for special financial instruments for SMEs is only just over EUR 1 billion, which is intended to increase access to funding for 300,000 to 400,000 SMEs by 2013. This figure is insignificant when considering that there are nearly 20 million SMEs in the EU. As such, much more effort is needed in this area, with a focus on severely-hit countries such as Greece.

- *Faster repair of the financial system:* In advanced economies, over 30 per cent of banks – representing nearly 20 per cent of bank assets – do not meet newly introduced capital requirements. This raises systemic risks and aggravates the credit crunch, affecting SMEs disproportionately. The weak tail of banks needs to be consolidated through strong government involvement.

15. Data are based on a survey covering 25,000 SMEs across the European Union and were released in connection with the "European SME week 2011", which took place on 3–9 October in 37 European countries. For more details see: http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/4-03102011-AP/EN/4-03102011-AP-EN.PDF.

Second, as this chapter has shown, private sector investment has become a casualty of financial sector excesses, particularly in advanced economies. Going forward, it is important to focus on incentivizing productive investments that create sustainable jobs for the future, particularly through the following policies:

- *Accelerated depreciation*: One of the policy tools immediately available is accelerated depreciation, which is commonly used to incentivize the purchase of fixed assets such as plant and equipment. Accelerated depreciation allows firms to write off the costs of assets from their taxable income more quickly and at a higher rate. Moreover, it lowers the price for the acquisition of new capital, hence encouraging more investment in equipment and machinery.[16]

- *Incentivizing new growth sectors with tax credits and exemptions*: Policy options include tax credits for R&D, ICT-related incentives and other country-specific exemptions and tax credits. Indeed, several countries have taken action in these areas to enhance investment and promote job creation, such as Brazil and Chile.

… and effective corporate governance …

As illustrated by this chapter, non-financial firms are increasingly exposed to and reliant on capital market developments, and corporate interests are often more aligned with those of financiers than with the real economy. As a direct consequence, the share of profits dedicated to financing internal growth is reduced and firms are constrained by banks (Aglietta and Breton, 2001). Furthermore, non-financial firms have become more like financial companies, with a spectrum of financial services and financial investments, as shareholders increasingly demand higher dividends, leading to a decline in real investment (Milberg, 2007). Corporate governance reforms can play a decisive role in realigning the incentives of the financial sector with those of the real economy. There are numerous ways to achieve this, in particular the following:

- *Regulating executive pay*: Studies have shown that highly skewed executive pay has a detrimental impact on corporate earnings and productivity (Bebchuk and Grinstein, 2005). Furthermore, it has a depressing effect on firms' morale.[17] In the light of these collateral effects of disproportional executive pay and bonuses, policies need to ensure that: (i) executives are rewarded less through equity incentives to ensure an optimal investment strategy (see the case of the United Kingdom in table 2.1)(Kim et al., 2011); (ii) bonuses are based on performance over three to five years (if compensation is based on shorter-term performance then there should be stringent clawback provisions;[18] and, (iii) peer-benchmarking of executive pay – where companies benchmark their pay against that of a peer group based on corporate revenue, market capitalization and assets – could be promoted further and made more widely accepted.[19]

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16. The potential effectiveness of accelerated depreciation depends nevertheless on the extent to which corporate income tax represents an obstacle to investment (Goode, 1955; Domar, 1953).
17. Peter Drucker has demonstrated, for instance, that the ratio of executives' pay to workers' pay can be no higher than 20:1 without company morale being damaged.
18. Based on the report by The Commission of Experts of the President of the UN General Assembly on Reform of the International Monetary and Financial System, headed by Joseph Stiglitz.
19. Regulation should ensure that peer groups are not composed solely of firms that pay their executives at above the average rate. See for example Cheng, 2011.

Table 2.1 Corporate governance reforms: Some country examples

Germany	German firms are required by law to have both a "supervisory board" and a "managerial board". In companies made up of 2,000 employees, the so-called co-determination structure is imposed, whereby the supervisory board has to be constituted of equal numbers of shareholder-elected and employee-chosen members.
Republic of Korea	Following the 1997 financial crisis, corporate governance reforms and government-initiated corporate restructuring were implemented in the Republic of Korea. The overall aims of the reforms were to enhance the monitoring function of boards, improve the accountability of management and CEOs, protect (minority) shareholder rights and improve managerial transparency and information disclosure.
United Kingdom	In January 2010, the revised Remuneration Code came into force, which included the following: (i) at least 40 per cent (60 per cent in the case of particularly high amounts) of remuneration must be deferred, with a vesting period of not less than 3 to 5 years; (ii) all deferred remuneration is subject to reduction through a form of "performance adjustment" (in case of evidence of employee misbehaviour or material error); (iii) at least 50 per cent of any variable remuneration must be paid in the form of shares, and those shares cannot be sold or transferred for a certain period after vesting (designed to align incentives with the long-term interests of the firm); (iv) firms must not offer guaranteed bonuses unless they are "exceptional"; and (v) payments relating to the early termination of an employment contract must reflect performance achieved over time and must not reward failure.
United States	The Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") that was passed in 2010 requires shareholder "say-on-pay," "say-when-on-pay" and "say on golden parachutes" votes. All three votes are non-binding, so the impact of a negative vote will be difficult to measure. The Dodd-Frank Act also eliminates broker discretionary voting on executive pay and bonuses matters, which will give even greater power to institutional shareholders and corporate governance activists.

Source: IILS based on national sources.

- *Improving oversight by boards of directors for corporations*: Boards of directors for private corporations need to do a better job of overseeing the investment and compensation practices of firms. Moreover, they need to ensure that the practices are in line with the medium- to long-term welfare of the organizations. For example by: (i) separating the roles of chief executive officer (CEO) and chairman within a corporate board of directors, to improve monitoring and increase the board's independence from management; (ii) ensuring that independent directors make up at least one-third of the board, and that those directors have the relevant financial experience to staff key committees (such as the audit committee) and can have private meetings without the presence of executive management and controlling shareholders; and (iii) encouraging corporations to include social partners and employee representatives within their boards of directors, to provide a further push towards aligning the incentives of financial and non-financial corporations (see the example of Germany in table 2.1).

Box 2.3 Advantages of profit sharing

"Profit sharing refers to definite arrangements under which workers regularly receive, in addition to their wages and salaries, a share on some predetermined basis, in the profits of the undertaking, the sum allocated to workers varying with the level of profits". This is the official definition adopted at an International Congress on Profit Sharing held in Paris in 1889 (Cynog-Jones, 1956).[20]

Profit-sharing schemes aim to improve employees' motivation with regards to their jobs so as to attain a greater involvement of workers in the company's outcomes. A significant number of empirical studies have shown that profit-sharing schemes have a positive impact, increasing labour productivity and reducing monitoring costs, with mixed evidence pertaining to wage flexibility:

- Profit sharing is associated with increases in firms' productivity (FitzRo and Kraft, 1987; Kruse, 1993). The reason for this is that such schemes are said to increase workers' incentives, because an additional effort yields positive externalities.
- Moreover, profit sharing could reduce firms' monitoring costs through the generation of peer pressure. Studies have shown that where there is a profit-sharing scheme, employees have an incentive to observe the actions of their peers because the behaviour of each employee has an impact on the output of the company and, therefore, on the earnings of the rest of the employees (Daneshfar et al., 2010; Kandel and Lazear, 1992).
- Profit sharing is also said to enhance wage flexibility and so makes it easier for firms to adjust their costs in response to changes in market conditions (Daneshfar et al., 2010).

… and a more equal distribution of the gains.

Other measures to ensure a fairer and more equitable distribution of gains can also lead to improved labour market conditions over the medium term. For instance, profit sharing – if well-designed – not only ensures a fairer distribution of income, but has been shown also to improve productivity and growth (box 2.3).

A number of countries have adopted profit sharing on a mandatory or voluntary basis:

- *United States*: Profit-sharing schemes, on a voluntary basis, take on several forms in the United States: (i) the cash plan, under which contributions are paid directly to employees in the form of cash or stock; (ii) the deferred plan, which works as a supplementary insurance plan, so the share that the company credits to the plan can be made effective at the retirement, disability, death, etc. of the employee; (iii) and the combination plan, under which the employee can defer all or part of the profit-sharing allocation as in the deferred plan or can use it in cash (Daneshfar et al., 2010).

- *France*: In 2009, 35 per cent of private sector companies with ten or more employees offered some kind of profit-sharing scheme to their employees – in comparison with an average of 14 per cent across Europe. Part of the

20. Note that the definition refers only to the profits of the undertaking not to equity (schemes which involve the sharing of equity are known as "employee share ownership schemes") and as such profit sharing is not aimed at balancing the ownership of firms through the participation of employees.

explanation for this high rate lies in the fact that profit sharing is compulsory for firms with more than 50 employees and that schemes are given preferential tax treatment. Companies have to establish a deferred profit-sharing fund, from which employees can have access to an amount corresponding, at least, to the minimum established by law.[21] In addition, companies that are not mandated to offer a profit-sharing scheme but which implement one on a voluntary basis receive the same tax-free investment benefits. There is evidence of profit-sharing schemes in France having significantly improved labour productivity (Cahuc and Dormont, 1997).

- *Latin America*: In Peru, for example, profit sharing is compulsory; the amount to be distributed ranges between 5 per cent and 20 per cent of profits, depending on the economic sector. Likewise, in Ecuador, profit sharing is supported by legislation. Ecuador's Work Charter establishes that employers have to distribute 15 per cent of their profits among their employees – 10 per cent of the profits should be distributed among all workers equally and the other 5 per cent has to be allocated depending on the number of dependants that each employee has (Banco Central de Ecuador, 2003). At the other end of the spectrum, in Paraguay, Colombia, Bolivia, El Salvador, Guatemala and Costa Rica, the distribution of profits among employees is voluntary.

To be effective, profit-sharing measures must be part of an overall wage-determination process. Otherwise, pro-cyclical measures of this nature run the risk of reducing employees' incomes in times of crisis, potentially intensifying income inequalities (Teulings and Hartog, 1998). Indeed, a comprehensive income-generation strategy for stimulating demand and consumer spending will be central to the recovery process – an issue taken up in greater detail in the following chapter.

21. This legal minimum is calculated using the formula: ((*net fiscal benefits – 5% of capital*)/2) X (*wages / value added*).

Appendix A

The dividends–investment–employment dynamic: An empirical analysis

This appendix explains how the investment and employment models were constructed and provides the quantitative basis for simulating the policy scenarios presented in section B. The analysis draws on a cross-sectional time-series econometric model based on a panel of 25 advanced economies[22] during the period 1995 to 2009. The results of the exercise (levels of significance of variables) are presented in table 2A.2 and table 2A.3. For a more detailed explanation of the economic interpretations of these results, please refer to the body of section B.[23]

The investment model

The theoretical starting point of the investment analysis presented in this chapter is an extended version of the pecking order model. This model asserts that investment decisions are linked directly to available internal funds (Fazzari et al., 1988; Vogt, 1994) and, as such, investment is influenced by cash flow component variables, such as gross operating surplus and dividends paid. In this chapter, this approach has been extended by adding a number of external variables specified in the standard approaches to investment theory – i.e. lending interest rate, stock market index, capacity utilization and consumption of fixed capital, etc. (see table 2A.1 for a description of the variables and sources used). The resulting investment equation is as follows:

$$ln(gfcf_{it}) = \alpha_0 + \alpha_1 Dln(div_{it}) + \alpha_2 ln(lend_{it}) + \alpha_3 Dln(stock_{it}) + \alpha_4 Dln(cu_{it}) + \alpha_5 Dln(kcons_{it}) + \alpha_6 Dln(interest_{it}) + \alpha_7 Dln(taxes_{it}) + \varepsilon_{it} \quad (1)$$

Where

gfcf represents investment (measured by gross fixed capital formation of non-financial corporations); *div* the dividends paid by non-financial corporations; *interest*, the interests paid by non-financial corporations; and *taxes* the corporate taxes paid. In terms of the external variables, *lend* corresponds to the lending interest rate as a measure of the cost of investment decisions – i.e. the price that companies need to pay for borrowed funds; *stock*, the stock market index, which measures the relative value of a group of stocks quoted in the main stock market of each country – this variable is used in this chapter as a proxy for the attractiveness of financial investment; *cu*, the capacity utilization – calculated as the ratio of actual value added of non-financial corporations over the potential value added; and *kcons*, the consumption of fixed capital as a measure of the depreciation of fixed capital. Moreover, the model uses the first difference *D* of the natural

22. The 25 advanced economies included in this analysis are: Australia, Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Japan, Republic of Korea, Netherlands, Norway, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom and United States.

23. See Escudero and López (forthcoming) for a more detailed analysis of the theoretical considerations from which the equations were derived and for the interpretations of the results.

logarithms (*ln*) of variables to ensure that variables are stationary and facilitate the interpretation of the coefficients.

Table 2A.2 shows that all coefficients are highly significant with the exception of consumption of fixed capital.

The employment model

To illustrate the effects that incentivizing investment policies could have on employment creation, a standard labour demand model – based on the assumption that firms make decisions following income maximization objectives[24] – has been estimated. The model assumes that:

$$G(employment_{it}) = \beta_0 + \beta_1 G(lcost_{it}) + \beta_2 G(gva_{it}) + \beta_3 G(cu_{it}) + \beta_4 G(gfcf_{it}) + e_{it} \quad (2)$$

Where

employment corresponds to the dependent employment of the private sector; *lcost*, the unit labour cost; *gva,* the non-financial corporate gross value added; *cu*, the capacity utilization; and *gfcf*, investment as measured by gross fixed capital formation. Moreover, *G* denotes that variables are expressed in annual growth rates.

With the aim of investigating the impacts that changes in specific investment components have on employment growth, equations (1) and (2) were combined and estimated through a semi-simultaneous equation model, controlled for first-order autocorrelation:[25]

$$G(employment_{it}) = \delta_0 + \delta_1 G(lcost_{it}) + \delta_2 G(output_{it}) + \delta_3 G(cu_{it}) + \delta_4 G(div_{it}) + \delta_5 G(stock_{it}) + v_{it} \quad (3)$$

Table 2A.3 shows that all coefficients are highly significant.

24. For example, Layard and Nickell (1986).

25. This extended employment equation does not include some of the variables included in the investment model described in equation (1). Indeed, the lending interest rate, consumption of fixed capital, interest paid and corporate taxes were excluded from equation (3) because the level of significance of these variables was not sufficiently high to be meaningful for the model. Furthermore, gross value added was substituted for the output of non-financial corporation in this equation, because the latter variable yielded better goodness-of-fit of the estimated model.

Table 2A.1 Definitions and sources of variables used in the regression analysis

Variable	Definition	Source
Investment	Gross fixed capital formation of non-financial corporations	OECD.Stat
Dividends	Distributed income of non-financial corporations	OECD.Stat
Interest rate	Lending interest rate	Economic Intelligence Unit
Stock market	Stock market index	Economic Intelligence Unit
Capacity utilization	Ratio of actual gross value added of non-financial corporations to potential gross value added*	IILS estimations based on OECD.Stat
Consumption of capital	Consumption of fixed capital of non-financial corporations	OECD.Stat
Interests paid	Interests paid by non-financial corporations	OECD.Stat
Corporate taxes	Current taxes on income and wealth paid by non-financial corporations	OECD.Stat
Employment	Dependent employment of the private sector	OECD.Stat
Unit labour costs	Ratio of the compensation of employees to private sector dependent employment	OECD.Stat
GVA	Gross value added of non-financial corporations	OECD.Stat
Output	Output of non-financial corporations	OECD.Stat

* The potential gross value added was calculated by applying the Hodrick and Prescott (1997) filter to the actual gross value added.

Table 2A.2 The investment model: Regression results

	Gross fixed capital formation (*lngfcf*)	
	Random effects	Fixed effects
Dividends paid (*Dlndiv*)	–0.11 (–1.91)*	–0.12 (–1.92)*
Lending interest rate (*lnlend*)	–0.49 (–8.73)**	–0.49 (–8.67)**
Stock market index (*Dlnstock*)	–0.21 (–8.18)**	–0.21 (–8.19)**
Capacity utilization (*Dlncu*)	1.24 (2.54)*	1.24 (2.55)*
Consumption of fixed capital (*Dlnkcons*)	0.12 (0.26)	0.12 (0.27)
Interest paid (*Dlninterest*)	0.31 (5.39)**	0.31 (5.39)**
Corporate taxes (*Dlntaxes*)	–0.18 (–2.41)*	–0.18 (–2.41)*
Constant	12.60 (25.55)**	12.54 (119.31)**

Notes: Absolute value of *z*-statistics in parentheses. Significance levels: *significant at 5 per cent; **significant at 1 per cent.

Variables were logged and included in the model in first differences (with the exception of *lnlend*). All variables were tested for non-stationarity through the augmented Dickey–Fuller test and the Phillips–Perron test. In all cases the tests rejected the null hypotheses of non-stationarity at 1 and 5 per cent levels.

The model was estimated using random effects and fixed effects, but the former model was chosen following the results in favour of this type of estimator by the Hausman test. With both models, results remain highly significant (with the exception of consumption of fixed capital) with little or no variation in the estimated coefficients and *z*-statistics, which demonstrates the robustness of the model.

The model was controlled for multicollinearity following the VIF regress command and the collin test. Results from both tests show VIF values considerably lower than the rule of thumb of 10, implying that no further investigation is needed regarding this problem. Both cases also controlled for heteroskedasticity and autocorrelation.

Table 2A.3 The employment model: Regression results

	Growth rate of the private sector dependent employment (*Gemployment*)	
	Equation (2)	**Equation (3)**
Unit labour costs growth rate (*Glcost*)	–0.17 (–4.80)**	–0.27 (–6.94)**
Gross value added growth rate (*Ggva*)	–0.01 (–0.18)	
Gross fixed capital formation growth rate (*Ggfcf*)	0.11 (10.13)**	
Capacity of utilization growth rate (*Gcu*)	0.22 (7.18)**	0.10 (2.94)**
Output growth rate (*Goutput*)		0.27 (8.88)**
Dividends paid growth rate (*Gdiv*)		–0.01 (–2.80)**
Stock market index growth rate (*Gstock*)		–0.01 (–2.41)*
Constant	1.38 (8.92)**	1.02 (6.01)**

Notes: Absolute value of *z*-statistics in parentheses. Significance levels: *significant at 5 per cent; **significant at 1 per cent.

Variables included correspond to annual growth rates. All variables were tested for non-stationarity through the augmented Dickey–Fuller test and the Phillips–Perron test. In all cases the tests rejected the null hypotheses of non-stationarity at 1 and 5 per cent levels.

The estimation of equations (2) and (3) was done using GLS estimators to correct for groupwise heteroskedasticity (tested through the modified Wald statistic). The table shows that all coefficients are highly significant (with the exception of *gva* in equation 2).

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