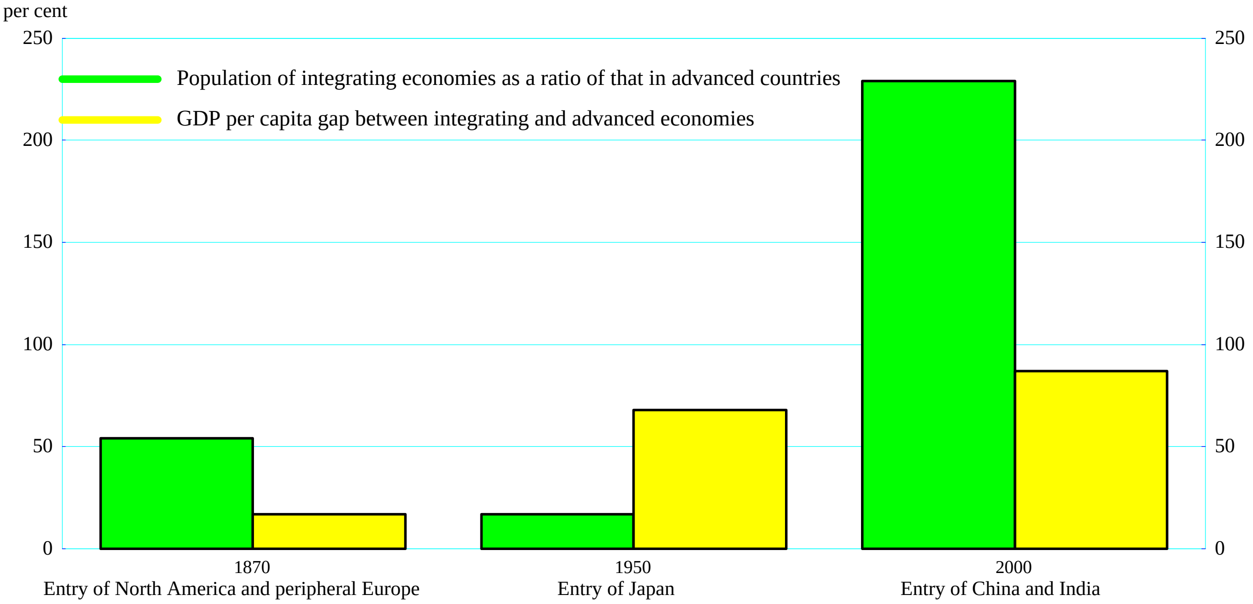
III. MAKING THE MOST OF GLOBALISATION

Globalisation creates benefits and challenges for public policy

This chapter provides a synthesis of the work undertaken by the Economics Department on the economic effects of globalisation, while also draws on other OECD and non-OECD research.[1] It begins with an overview of the main trends that have characterised the globalisation process. The second section then describes its potential effects on employment and wages. Globalisation also has had an impact on inflation and has been accompanied by distinctive trends in international capital flows, which are discussed in the third section. The chapter concludes by examining the benefits and challenges that globalisation creates for economic policy.

Figure III.1. The current episode of globalisation is historically large
Episodes of countries entering the internationalised economy compared



Source: Maddison (2007).

1. This chapter has been prepared in the context of the mandate given by OECD Ministers in May 2005 on Globalisation and Structural Adjustment.

Drivers of globalisation

International integration has historical roots but has entered a new stage...

Globalisation may be defined as the process whereby domestic product, capital and labour markets become more integrated across borders. It is a process that has deep historical roots. Indeed, an early manifestation was the integration of markets for goods, labour and capital in Europe, the Middle East and Northern Africa during Roman times (Temin, 2006). However, a distinguishing feature of the current period is the size of the ongoing "globalisation shock". In comparison with earlier phases of globalisation, the countries now coming in have relatively larger populations and lower incomes (Figure III.1).

… spurred by advances in transport and communication

In addition to lower tariff barriers, key forces behind globalisation have been technological progress and the induced fall in transport and communication costs (Figure III.2). Over the past 50 years, passenger air travel costs, measured by the ratio of airline revenues to miles flown, have been reduced fourfold in real terms. The decline in international communication costs has been even more dramatic. For instance, expressed in 2005 US dollars, the charge for a three-minute New York-London call has dwindled from $80 in 1950 to $0.23 in 2007. Moreover, advances in computing power and the emergence of the internet have drastically cut the costs of processing and transmitting information, thereby further facilitating international transactions and trade.

Production has been internationalised...

Falling costs of trade and communication have encouraged not just strong trade in final products but also the greater internationalisation of production (Figure III.3). To a large extent, trade now occurs within industries and firms, as producers "trade in tasks" and develop global supply chains. Countries specialise in activities that cut across industries rather than focusing on producing certain categories of final goods.

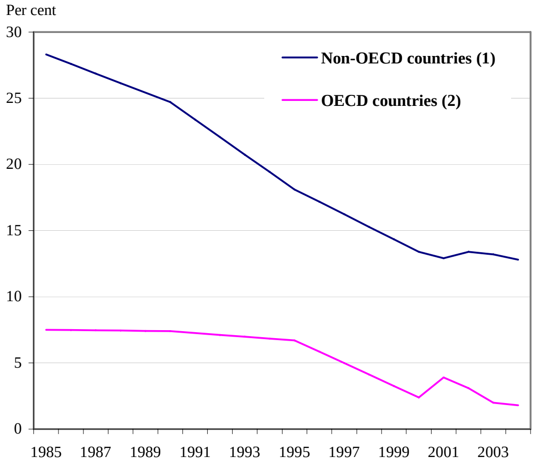
... and localised services can now be provided across borders

Another recent trend, facilitated in particular by the internet, is that services that had long been considered of a local nature can now be provided across borders. Recent research indicates that in the OECD area nearly one in five workers carry out service tasks that are now potentially internationally footloose (van Welsum and Vickery, 2005).[2] So far these possibilities have materialised only to a limited extent. Despite a rapid rise, in the United States the international outsourcing of services still accounts for less than 1% of intermediate service inputs (Amiti and Wei, 2005a). Moreover, the United States and many other OECD countries are net *exporters* of intermediate service inputs (Amiti and Wei, 2005b).

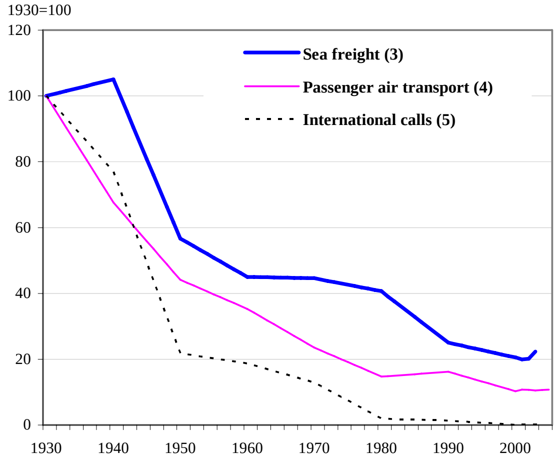
2. The reported figure is an estimate of the share of service workers whose products are potentially exposed to international sourcing in total employment. In addition, most workers in industry and, especially, manufacturing, which accounts for 16% of total employment in the OECD area, produce goods that could be imported from abroad.

Figure III.2. Trade and transaction costs have diminished

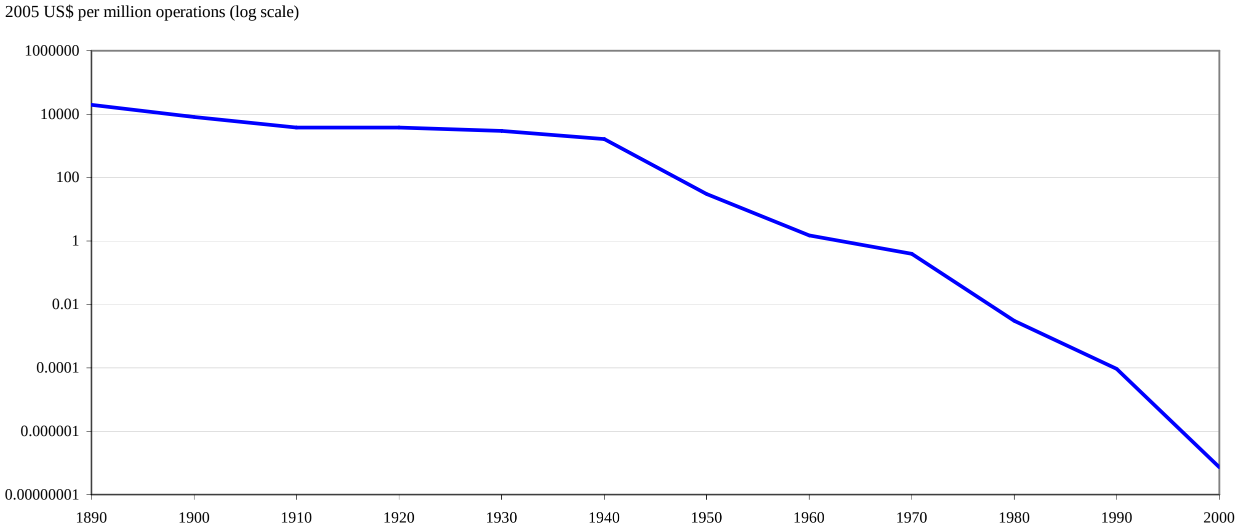
Tariffs have been lowered



Real transport and communication costs have fallen



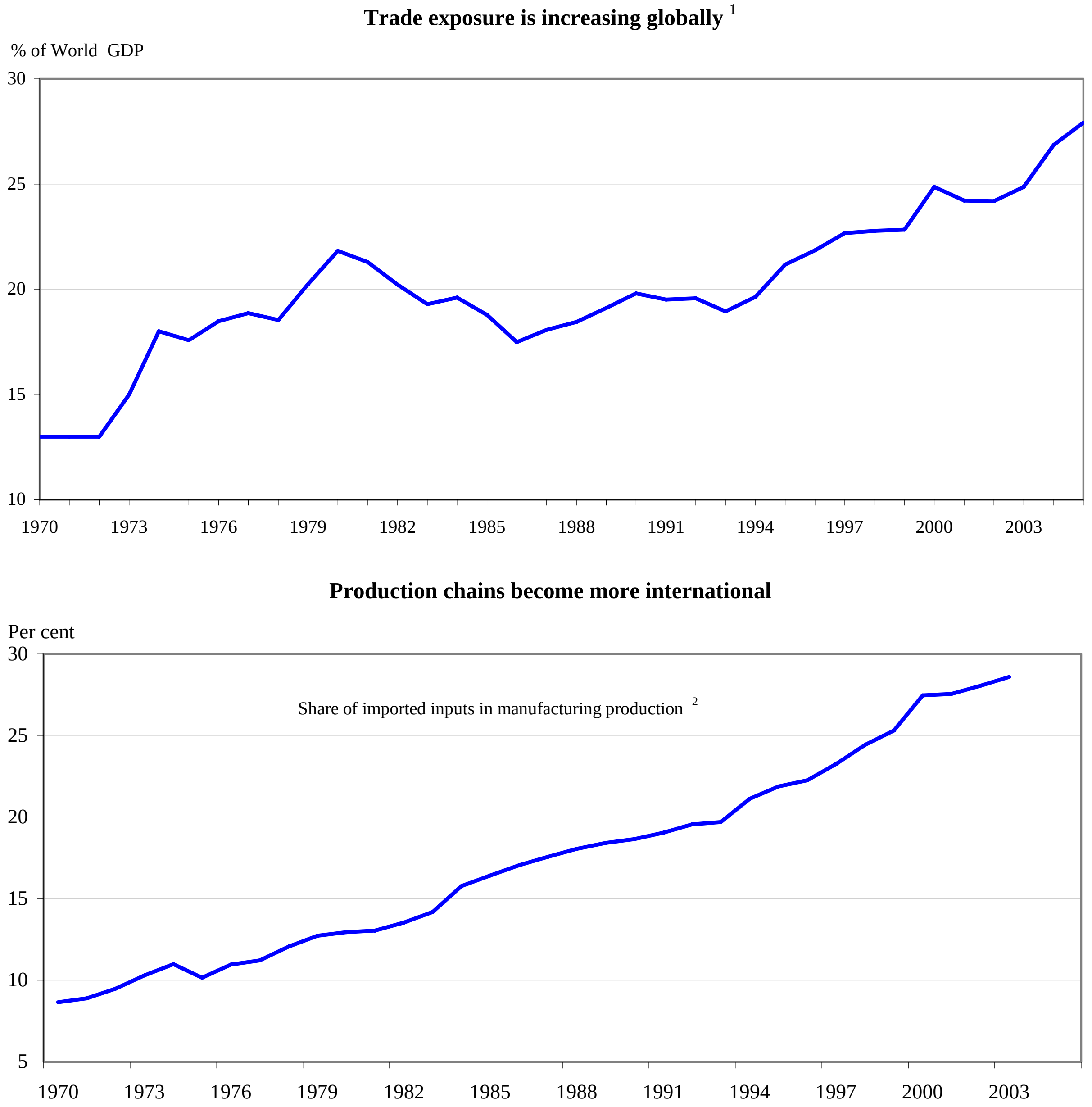
The costs of processing information have plummeted [6]



1. Median across non-OECD countries of national mean bound tariffs.
2. Median across OECD countries of national mean bound tariffs.
3. Average international freight charges per tonne.
4. Average airline revenue per passenger mile until 2000 spliced to US import air passenger fares afterwards.
5. Cost of a three-minute call from New York to London.
6. The chart shows the cost of computing an average operation (sum and multiplication). It is based on calculations made by hand in 1890, with electro-mechanical calculators from 1900 to 1940, and with computers thereafter.

Sources : World Bank, World Development Indicators; Fraser Institute; Busse, M. (2003); Hummels, D. (2006); US Bureau of Labour Statistics; Nordhaus (2001); OECD calculations.

Figure III.3. Trade links are strengthening

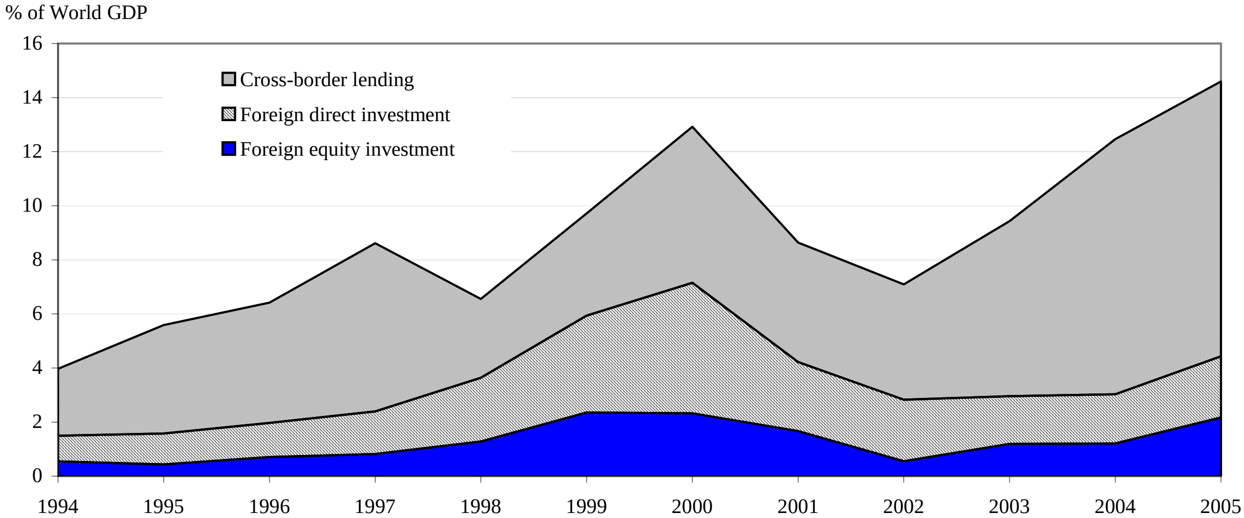


1. Imports of good and services.
2. Based on a weighted average of major OECD economies.
Source: World Bank, World Development Indicators database; OECD Structural Analysis database.

Financial markets have become global

Increased trade in products implies that factor markets have become more integrated, a strengthening of direct international links being especially evident for capital (OECD, 2005a). Over the past decade cross-border capital flows have been growing strongly, tripling as a ratio to world GDP (Figure III.4). The composition of cross-border investment flows has been changing markedly. Foreign direct investment and international equity flows, which were very strong in the late 1990s, have been comparatively muted in the aftermath of the stock market decline in 2000-01. In contrast, international transactions in more liquid assets have surged in recent years, accounting for most of the increase in global capital movements.

Figure III.4. Global capital flows are rising much faster than GDP [1]



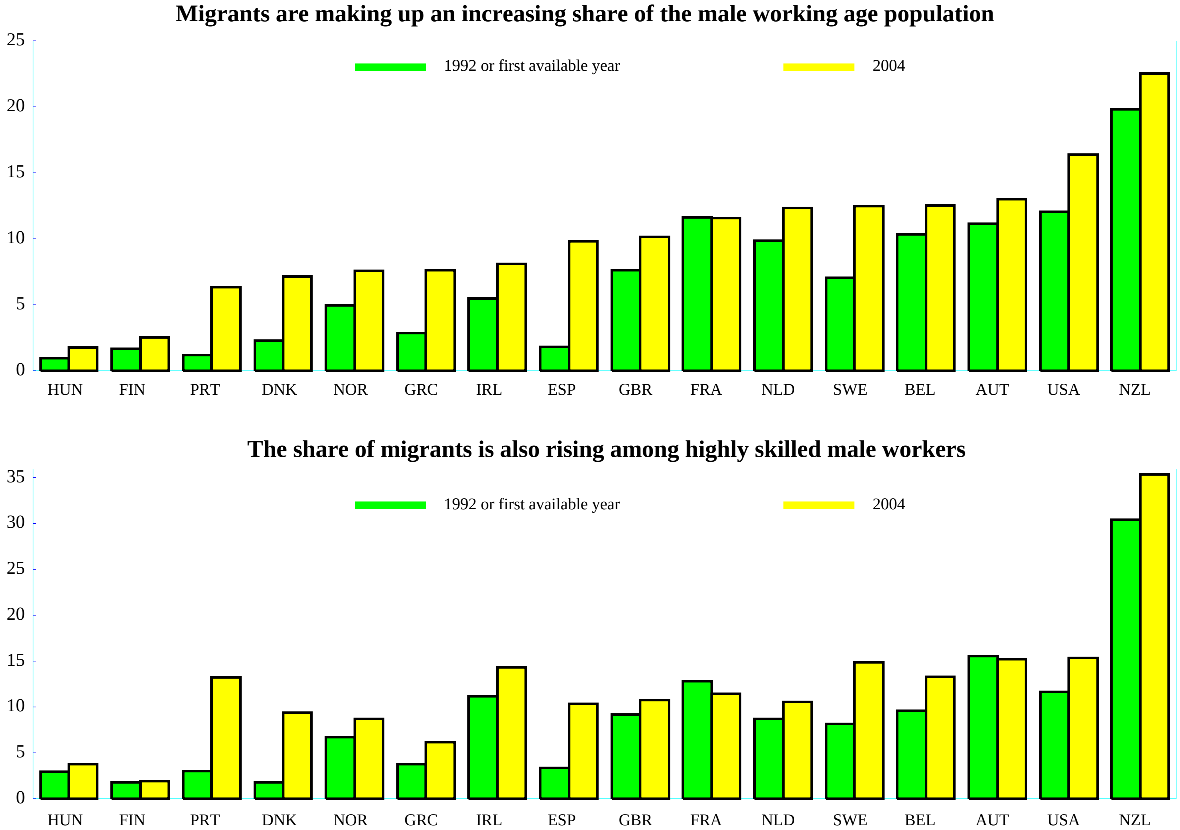
1. Inward foreign direct investment, portfolio investment (equity and debt securities), financial derivatives and other investments (including cross-border bank lending).

Source: IMF, Balance of Payments Statistics.

Labour has become more internationally mobile

A strengthening of international labour market links has also been evident, resulting from increased immigration (OECD, 2006a). Foreign workers have become a more important component of the workforce in most OECD countries since the mid-1990s (Figure III.5, upper panel). Migration of highly skilled workers has been part of this trend (Figure III.5, lower panel).

Figure III.5. Migration has intensified



Note : The figures relate to men only for reasons of data availability. Workers are counted as migrants when they are foreign-born. Working age population is defined as people aged 16-64. The first year is 1992 except for Australia 1995, Finland 1996, France 1993, Hungary 1997, Netherlands 1996, Norway 1996, Sweden 1995, New Zealand 1997, United States 1994.
Source: OECD (2006b).

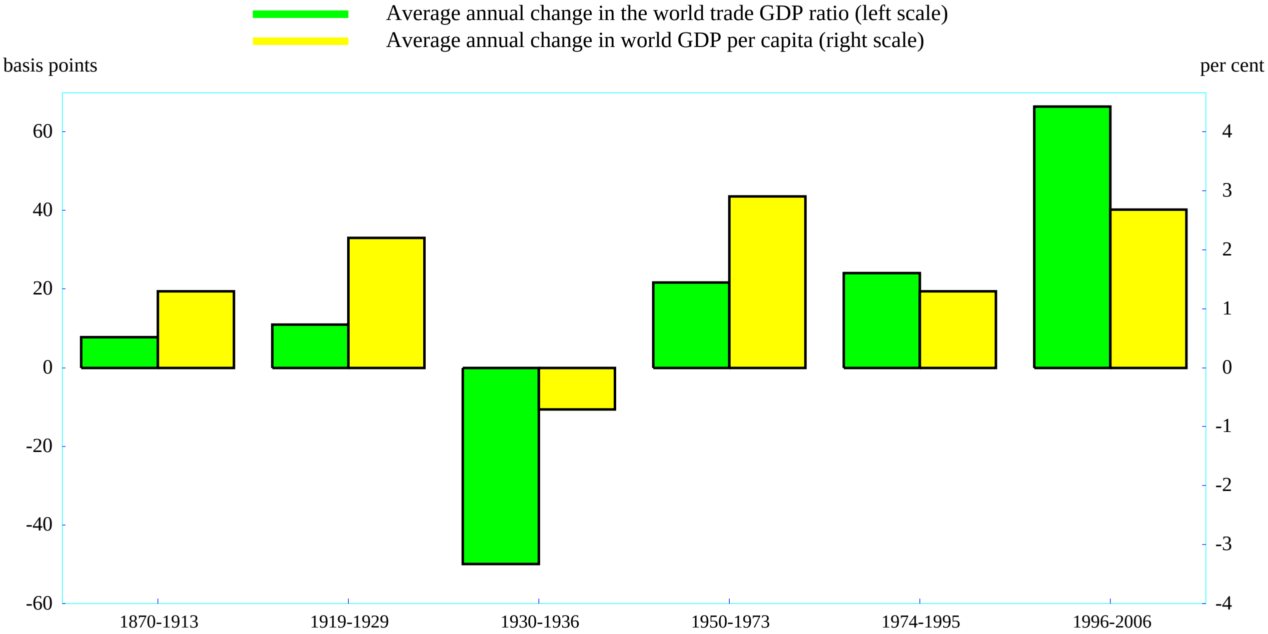
Effects on material living standards

Trade contributes to a more efficient use of resources

Material living standards have increased with trade openness (Figure III.6). Openness to cross-border product and factor flows boosts growth and income because it contributes to an efficient allocation of resources through various channels.[3] First, trade enhances the division of labour as countries specialise in their areas of comparative advantage. Second, integrated markets enable producers and consumers to reap the full benefits of economies of scale. Third, stronger competitive pressure

3. The causality also runs in the other direction as growth spurs trade (Rodrik *et al.*, 2004).

Figure III.6. Material living standards have increased with trade openness



Sources : Maddison (2006,2007); IMF, Balance of Payment Statistics.

prompts producers to reduce their mark-ups, tackle sources of inefficiency and invest in productivity-enhancing capital and innovation, leading to lower prices and higher output and employment. There is ample empirical evidence that the overall impact of trade on growth is positive and strong.[4] The OECD Growth Project found that a 10 percentage-point increase in trade exposure was associated with a 4% rise in income *per capita* (OECD, 2003).

Capital flows can spur productivity growth

Openness to capital inflows and outflows can further boost productivity growth in at least three ways.

- First, countries with financial sectors which are fully open to international capital inflows and to foreign ownership can benefit from global best practice in financial intermediation and corporate governance (Mishkin, 2006; Kose *et al.*, 2006). Improved financial systems enable a more efficient allocation of capital to its most productive uses, making for stronger productivity growth (Levine, 2005; de Serres *et al.*, 2006).

- Second, inward FDI is often associated with the transfer of technology to improve efficiency in foreign affiliates, with significant effects on economy-wide productivity growth

4. Winters (2004) reviews a wide body of literature and concludes that trade openness raises incomes.

(de Mello, 1999). More generally, increased trade, capital, labour and information flows quicken the pace of innovation diffusion, stimulating productivity growth, especially in countries that are behind the technological frontier (World Bank, 2007).

- Third, capital outflows enable firms to increase their productivity at home by relocating some tasks to other countries where they can be accomplished more efficiently (Grossman and Helpman, 1991; Amiti and Wei, 2005a; Molnar *et al.*, 2007).

Effects on labour markets

Trade openness does not undermine aggregate employment…

Contrary to the fear expressed in some quarters that rising imports might threaten the overall number of jobs in advanced economies, trade openness has not undermined aggregate employment (OECD, 2005c; European Commission, 2005). From the demand side, emerging-market countries offer an expanding export market for OECD producers.[5] From the supply side, a number of factors, summarised in the next paragraph, work to increase employment.

… and can even reduce structural unemployment

More competition in product markets, as a result of globalisation, implies greater demand for labour at a given real wage. And increased exposure of jobs to competition reduces wage pressures at a given employment level (Boulhol *et al.*, 2006). Both effects reduce unemployment. Experience shows that the effect can be large. Despite very little progress in easing rigid labour market policy settings, the structural unemployment rate has fallen by one percentage point in the European Union over the past ten years. This improvement appears to have been primarily driven by the intensification of competitive pressures in European product markets (OECD, 2007b), even though it was not exclusively due to globalisation. However, the full gains from greater competition will only emerge if labour is successfully reallocated from disappearing to new jobs.

Labour reallocation has not implied greater insecurity...

The reallocation of labour to more productive jobs is required in response to globalisation and other factors. However, the number of job losses due to trade-related adjustment is small compared with the overall rate of job destruction in the economy (Mankiw and Swagel, 2006). Moreover, despite the accelerating pace of globalisation, the rate of change in sectoral employment patterns has been fairly stable in the OECD area (OECD, 2005d). Average job tenure has even increased in most OECD countries since the early 1990s, belying the perception that jobs have generally become more insecure. The longer average tenure has been paralleled by a rising incidence of temporary employment in a majority of OECD countries, driven to a large extent by changes in labour market regulation that have unfortunately favoured the emergence of a two-tier labour market. Despite fears of offshoring, the data show no systematic link

5. In effect, job creation in areas of comparative advantage offsets job losses in domestic production displaced by imports, leaving aggregate employment unchanged once the reallocation has occurred.

between outward investment and lower domestic employment (Molnar *et al.*, 2007). Nor does more employment in foreign affiliates necessarily mean slower employment growth at home.[6]

... and migrant labour can reduce structural unemployment

While also often mentioned as a cause for concern in the globalisation debate, the impact of inward labour flows on the employment of non-migrants has in practice proved very limited. Empirical evidence suggests that, while immigrant workers may displace a few native workers temporarily, the effect is small and short-lived (Jean *et al.*, 2007).[7] Nevertheless, when immigrants tend to find employment, it does weaken the bargaining position of native workers. In addition, migrants may target regions and sectors where labour demand is strong, thereby alleviating the pressure. As a result, immigration may "grease the wheels of the labour market" and reduce the structural rate of unemployment (Borjas, 2001; Blanchflower *et al.*, 2007). However, the opposite may happen where high minimum labour costs and generous social transfers conspire with low productivity of immigrants to generate unemployment traps.

International competition may be affecting the wage distribution…

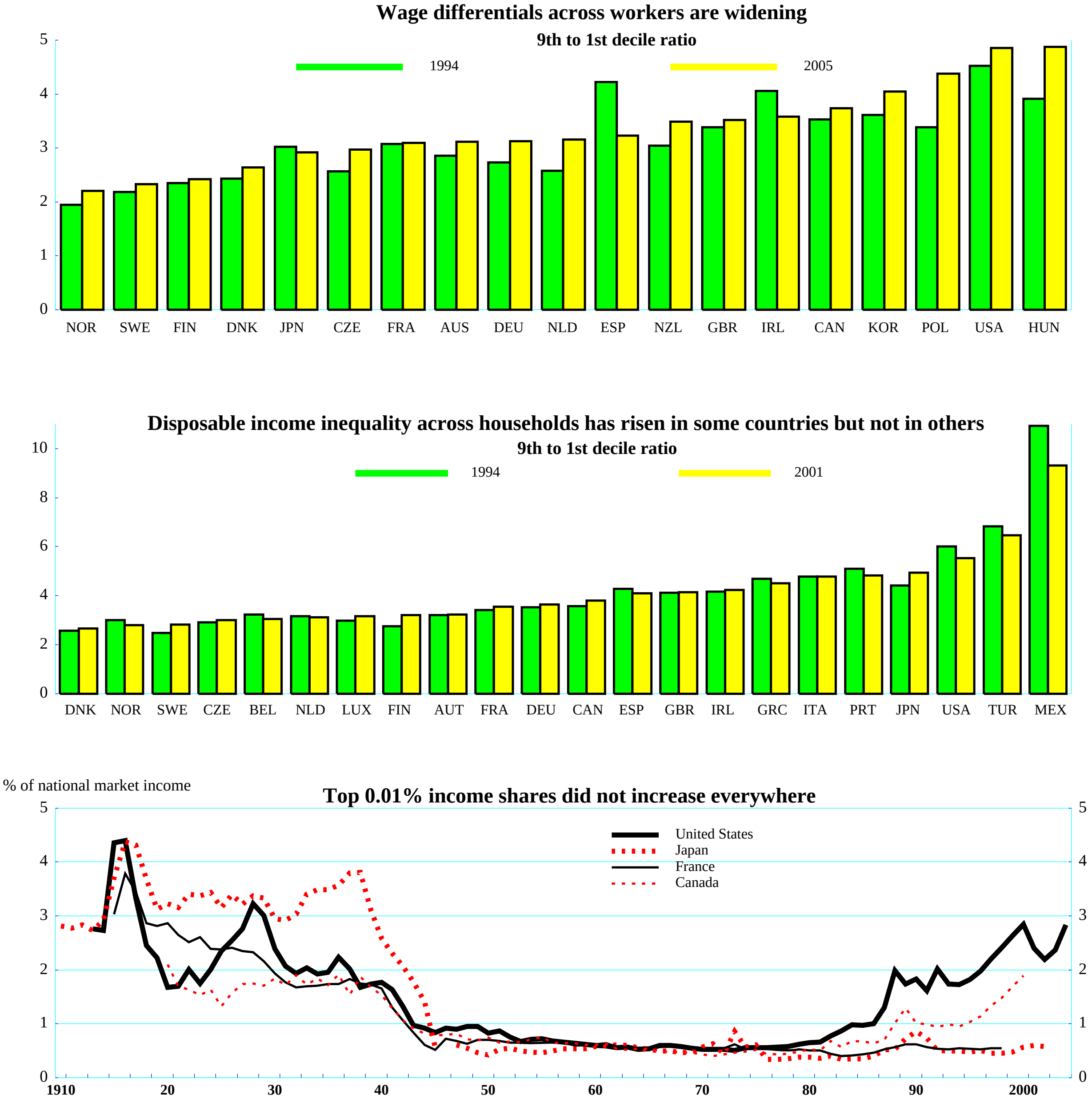
Political concerns with equity focus on the distribution of disposable incomes. One of the determinants of income inequality that may be affected by globalisation is wage distribution. Globalisation can have an effect on wage differentials, which have widened in a large majority of OECD countries (Figure III.7, top panel). On the one hand, conventional trade theory indicates that increased integration should boost the wages of the highly skilled relative to the less skilled in advanced countries and compress wage dispersion in developing countries. In addition, by expanding effective market size, globalisation increases the competition and the reward for scarce talent (Cuñat and Guadalupe, 2006). As such, increased international economic integration can be among the drivers of the strong rise in the income share going to the very top earners in some countries.[8] On the other hand, some aspects of globalisation may tend to uphold the wages of low-skilled workers relative to those with intermediate skills (Baldwin, 2006). Many low-skilled workers are providing services that cannot be imported. At the same time, tasks that can now be sourced internationally involve many jobs with intermediate skill levels (Levy and Murnane, 2006; van Welsum and Reif, 2006). Globalisation may therefore have some role in explaining why the rise in wage dispersion has been

6. Molnar *et al.* (2007) found that the effect of employment in foreign affiliates on domestic employment growth is not significant in Germany, slightly negative in Japan and clearly positive in the United States.

7. By expanding labour supply, immigration puts downward pressure on real wages in the transition period before the capital stock adjusts. If barriers hamper the temporary downward adjustment of real wages, immigration can result in higher unemployment instead.

8. The increase in size of the largest corporations, which probably owes much to globalisation, can explain much of the rise in the relative earnings of managing directors according to Gabaix and Landier (2006).

Figure III.7. Wage dispersion is rising but income inequality shows no general trend



Top panel : For full-year, full-time workers.
1994-1999 for Netherlands, 1994-2000 for Hungary and Ireland, 1994-2002 for France, Germany, Korea and Poland, 1995-2002 for Spain, 1996-2003 for Czech Republic and Denmark, 1997-2002 for Norway, 1997-2003 for Canada.
Middle panel :
1994-2000 for Japan, 1994-2002 for Mexico and Turkey, 1995-2000 for Canada and Norway, 1995-2001 for Belgium, Finland, Italy, Portugal and Sweden, 1996-2002 for Czech Republic.
Bottom panel : For tax units: households in France and the United States; individuals in Canada and Japan.
Sources: OECD Employment Outlook (2006); Burniaux et al. (2006); Saez and Piketty (2007); Moriguchi and Saez (2006); Piketty (2001); Saez (2005).

occurring mainly at the top, while inequality remained broadly stable in the lower half of the wage distribution in most OECD countries over the past decade (OECD, 2006d).[9]

… with technical progress accentuating wage dispersion...

However, globalisation is not the only factor affecting the wage distribution. Technical progress, changes in unionisation and trends in the skill profiles of the labour force are often mentioned as important influences. The balance of empirical evidence indicates that technical change is a significantly more powerful driver of increased wage dispersion than increased trade (Berman *et al.*, 2003; Feenstra, 2007). Moreover, international experience suggests that the sharp increase in the before-tax market income share of top earners in some countries cannot be seen only as a consequence of globalisation. For example, the increase observed in Canada and the United States has not been mirrored in France or Japan (Figure III.7, bottom panel) even though the trade share is higher in both France and Japan and FDI penetration is stronger in France.[10]

… but disposable income inequalities have not necessarily increased

Despite wider wage distribution and, in some countries, rising shares of market income at the top, disposable income distribution has shown no general trend since the mid-1990s (Figure III.7, middle panel).[11] Indeed, OECD countries are nearly equally split between those where disposable income inequality has increased and those where it has diminished (Förster and Mira d'Ercole, 2005). Taxes and transfers, which have an equalising effect in OECD countries (Burniaux *et al*., 1998), are likely to have played a role in helping to keep disposable income inequality in check so far. Moreover, at the world level, accelerating economic growth has reduced global income inequality and lifted hundreds of millions of people out of poverty (Sala-í-Martin, 2006).[12]

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9. Developments in minimum wages and wage floors created by social transfers also influenced the lower part of the wage distribution. The composition of the labour supply may have been another force contributing to supporting the wages of low-skilled workers, whose share in the workforce has declined in many countries over the past ten years relative to those with intermediate skills, whose share increased (Delozier and Montout, 2007).

10. See for instance Saez (2006) for a recent survey of the evidence on top income shares.

11. The available data stop in 2001. The Directorate for Employment, Labour and Social Affairs is collecting more recent data from member countries. Corresponding figures are still preliminary and cover only half the OECD membership, but they suggest that the conclusions drawn in the main text on the basis of the latest official dataset still hold.

12. A large study by the World Bank (2005) found that income dispersion among households across the world has been on a firm downward trend since the early 1980s on all three reported measures of relative inequality (Gini index, Theil index, mean logarithmic deviation). Global growth also helped cut the number of individuals living in absolute poverty by about 400 hundred million between 1981 and 2001, while the world population increased by more than 1½ billion people. Population-weighted measures of income inequality across countries produces a clear downward trend, although this is, misleadingly, not evident from unweighted measures (Sala-í-Martin, 2006).

Effects on inflation and capital flows

Globalisation has influenced OECD-area inflation...

Globalisation affects inflation in OECD countries through a number of channels, both favourable and unfavourable, including the following.

- Increased sourcing from low-cost producers holds back import prices and therefore inflation.
- Competition from low-cost foreign suppliers puts pressure on local firms to reduce the mark-ups of prices on costs, thereby keeping a lid on inflation. Consistent with this effect, imports have been found to exert a greater influence on inflation than their share in domestic demand (Pain *et al.*, 2006).
- Working in the opposite direction, strong GDP growth in non-OECD countries has been an important factor underlying the inflationary impulses from energy and other commodity prices.

... the net effect being favourable

OECD research indicates that the net effect has been slightly favourable. Globalisation has reduced inflationary pressures in net terms by between 0 to ¼ percentage point per annum since 2000 (Pain *et al.*, 2006).[13] The estimates may be conservative because they do not take account of the damping effects globalisation is likely to have on domestic costs. As noted above and discussed further below, globalisation may be helping to restrain real labour and capital costs in OECD countries.

Developing economies have been exporting capital…

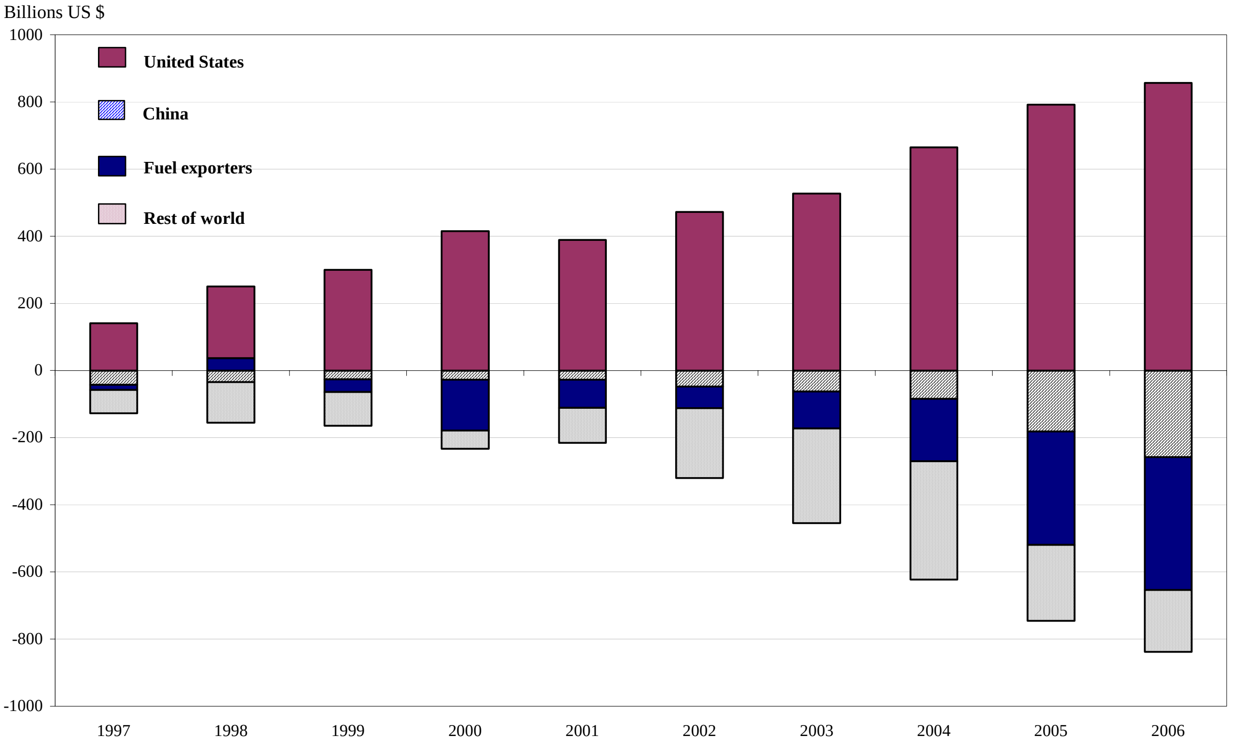
The way in which globalisation has evolved has probably played a role in the build-up of capital account positions. *A priori,* fast-growing less-developed countries would be expected to offer high-return investment opportunities and exhibit a propensity to borrow from richer countries. Such a situation would imply a general pattern of capital account surpluses in emerging market countries and deficits in advanced countries. The opposite pattern prevails: most developing and emerging countries are running (sometimes fairly large) capital account deficits while some advanced countries show large surpluses (Figure III.8). This pattern of capital flows, emanating from saving-investment behaviour, has been intrinsically associated with low long-term real interest rates in OECD countries (Bernanke, 2005; Ahrend *et al*., 2006).

13 . This calculation is an *ex ante* one and assumes monetary stance is unaffected; in practice reduced inflationary pressures allowed the monetary authorities to run the economy at a higher level of output, meaning that the effect on inflation was less *ex post.*

Figure III.8. Fuel exporters and China are saving abroad

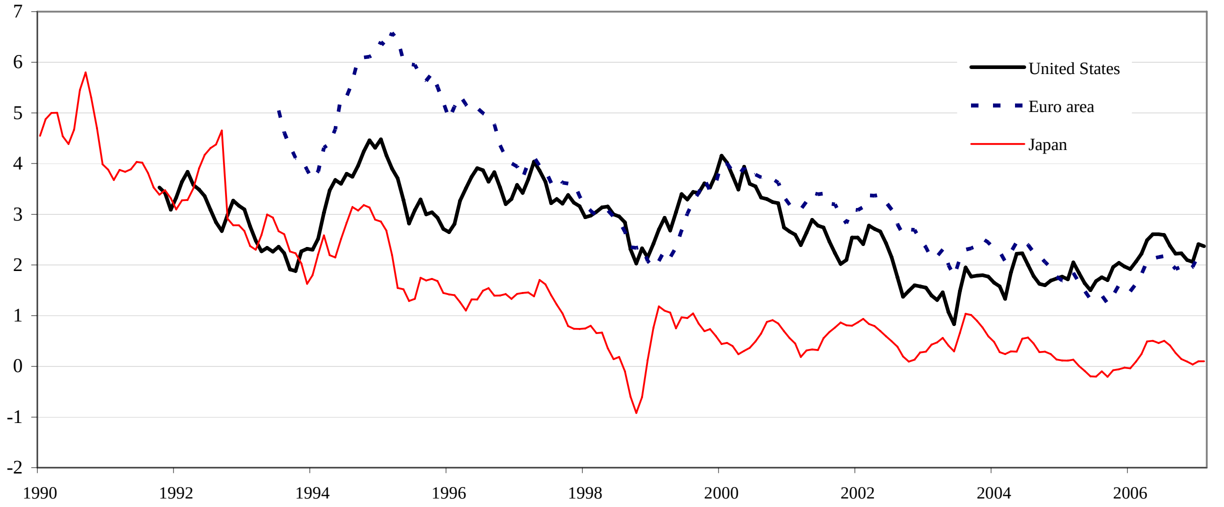
They finance much of the large US capital account surplus

Capital account balances [1]



They contribute to the low levels of real interest rates in the OECD area

Real interest rates [2]



1. Figures are based on current account data. Due to statistical discrepancies, the sum of surpluses and deficits is not equal to zero.
2. Nominal rates less inflation expectations. Expected average rate of CPI inflation over the next 10 years for the United States, based on the Survey of Professional Forecasters (SPF) by the Federal Reserve Bank of Philadelphia. Expected HICP inflation rate 5 years ahead for the euro area based on the SPF by the ECB. Expected average rate of CPI inflation 6-10 years ahead for for Japan based on Consensus Forecasts.

Source: IMF *World Economic Outlook*, April 2007; OECD, *Main Economic Indicators*; US Bureau of Economic Analysis; Federal Reserve Bank of Philadelphia; European Central Bank; Consensus Forecasts.

... reflecting specific features of the globalisation process

The direction of capital flows has been shaped by some of the distinctive characteristics of the current phase of globalisation.

- Following the crises of the late 1990s, a number of emerging market countries have been building up large amounts of foreign reserves, as a precaution against future vulnerability.

- In China and many other developing countries, structural factors have led to a propensity to invest a large part of their savings abroad. Weak property rights and a lack of efficient financial intermediation have limited private investment possibilities (Rajan, 2006; Bini Smaghi, 2007) and may have been responsible for a marked increase in corporate saving. And the near absence of social safety nets, together with underdeveloped banking, insurance and fund management markets (partly due to restrictions on foreign providers), contributes to high desired household saving rates.

- Several developing Asian countries (including China) have had to assimilate large numbers of migrants from rural areas in the urban workforce (Eichengreen, 2004; IMF, 2005). These population shifts in part explain why low inflation has remained consistent with pegged exchange rates and relatively easy monetary conditions, leading to strong export growth.

- The sharp increase in the oil price (which has been partly driven by the emergence of a number of non-OECD economies) has brought in substantial revenues for fuel exporters. It would appear that these windfall revenues are not spent as fast as in the past and that a large share of them is saved abroad. This trend may continue to the extent that fuel exporters rely more on reserve funds (such as in Mexico and Norway) to manage the proceeds from non-renewable resources.

- In the United States, sound framework conditions for investment and faster trend productivity growth have provided an attractive environment for capital inflows. A continued albeit recently declining public deficit has also contributed to the large capital account surplus by exacerbating the need for the US economy to rely on foreign financing.

Capital account adjustment will not necessarily be disorderly

Going forward, the emerging constellation of current and capital balances will continue to be influenced by globalisation. As regards the sustainability of a continued large US current account deficit, the effect of globalisation involves two counteracting forces. On the one hand, rapid growth and financial integration increases the global pool of funds that can be invested, including in US liabilities. On the other hand, the US economy is set to decline as a share of the world economy tending to reduce the share of portfolios that investors would wish to hold in US liabilities. Given that US financial markets currently enjoy an advantage in terms of depth and efficiency, the first of these forces may have a stronger influence in the near to medium term. In any case, OECD model simulations suggest that under a number of assumptions a continued large US current account deficit could be consistent with the United States retaining broadly the same share of world foreign liability holdings in 2025 as in 2005 despite continued large capital inflows (Hervé *et al.*, 2007). However, faced with persistent low returns on their foreign assets[14], and because the US weight in the world economy is gradually diminishing, China and other developing countries running current account surpluses may at some point choose to reduce the share of US liabilities in their portfolios. Such a rebalancing would require a lower US capital account surplus, which may be achieved in an orderly or disorderly manner.

The transmission of shocks is intensified by international links...

Increased integration implies that shocks in one area have greater effects on the rest of the world. OECD model-based simulations provide estimates of the extent to which the transmission of shocks will intensify if current globalisation trends persist (Hervé *et al.*, 2007). Because of greater trade and financial integration, a given increase in domestic demand in the non-OECD region will have twice as large an effect on OECD output in 2015 as in 2005. Simulations of financial shocks also show that developments in one area will have a greater effect on the rest of the world than currently is the case. For example, the effect on OECD economies of higher risk premia in the rest of the world is expected to be 50% larger in 2015 than in 2005.

... but international diversification reduces financial risk

At the same time as it magnifies the transmission of output shocks across countries, globalisation reduces exposure to financial risk by facilitating international diversification. The fact that returns vary more across countries than within them implies that, by diversifying their portfolios internationally, investors can achieve higher returns for the same level of risk. Emerging market countries, especially, offer diversification possibilities which have not been fully exploited in the past.

Implications for macroeconomic policies

Globalisation creates challenges for monetary policy

Globalisation affects the conduct of macroeconomic policies. Borrowing capacity is enhanced to the extent that government bond markets become more global, while fiscal discipline is increased because of heightened financial market scrutiny. Globalisation may thus offer opportunities to borrow at lower cost so long as discipline is maintained. However, perhaps the greatest impact is on the conduct of monetary policy. First, increased international links imply that monetary policy will have to react more to external influences (Hervé *et al.*, 2007). Second, insofar as globalisation puts persistent downward pressure on inflation, monetary

14 . The simulations imply a continuation of current trends in that China and other developing countries running current account surpluses would get very low returns on their foreign assets. Taking the example of China, net foreign assets as a ratio to GDP would as a result fall from a simulated 47% of GDP in 2015 to 39% in 2025.

policy objectives can be achieved with lower policy rates than would otherwise be necessary (Bean, 2006). However, it may in practice be difficult to distinguish temporary from permanent price effects and to separate favourable external effects on inflation from domestic influences stemming from deficiencies in demand. These difficulties pose a challenge for monetary authorities. If below-target inflation were to be erroneously interpreted as resulting from a large amount of economic slack, the central bank might be led to adopt an unduly easy stance with the risk of fuelling asset price inflation. Conversely, if in times of slack low inflation is incorrectly ascribed to a benign global supply shock, monetary policy may end up being too tight, biasing the economy towards deflation.

Inflation is less responsive to domestic activity...

The short-run trade-off between inflation and activity (the Phillips curve) is subject to opposite effects from globalisation,[15] and the sign of the net effect is an empirical question. The data indicate that inflation has become less responsive to domestic demand pressures (Pain *et al.*, 2006 and Figure III.9), but while globalisation may have been one of the drivers, the importance of its role is difficult to ascertain. In most countries the Phillips curve flattened before globalisation accelerated. This timing suggests that improvements in monetary policy frameworks, leading to better anchored inflation expectations, may have been the most critical factor behind the changing trade-off between inflation and activity. Nevertheless, globalisation does seem to have played a role, and to the extent that it lowers the sensitivity of prices to domestic output conditions and makes inflation more stable, it should help central banks to meet their inflation targets at higher levels of resource utilisation. At the same time, the flatter short-run Phillips curve makes it more difficult to determine where the economy is related relative to its potential. At the point when this is revealed by either rising or falling inflation, it could be costly or difficult to bring inflation back to target.

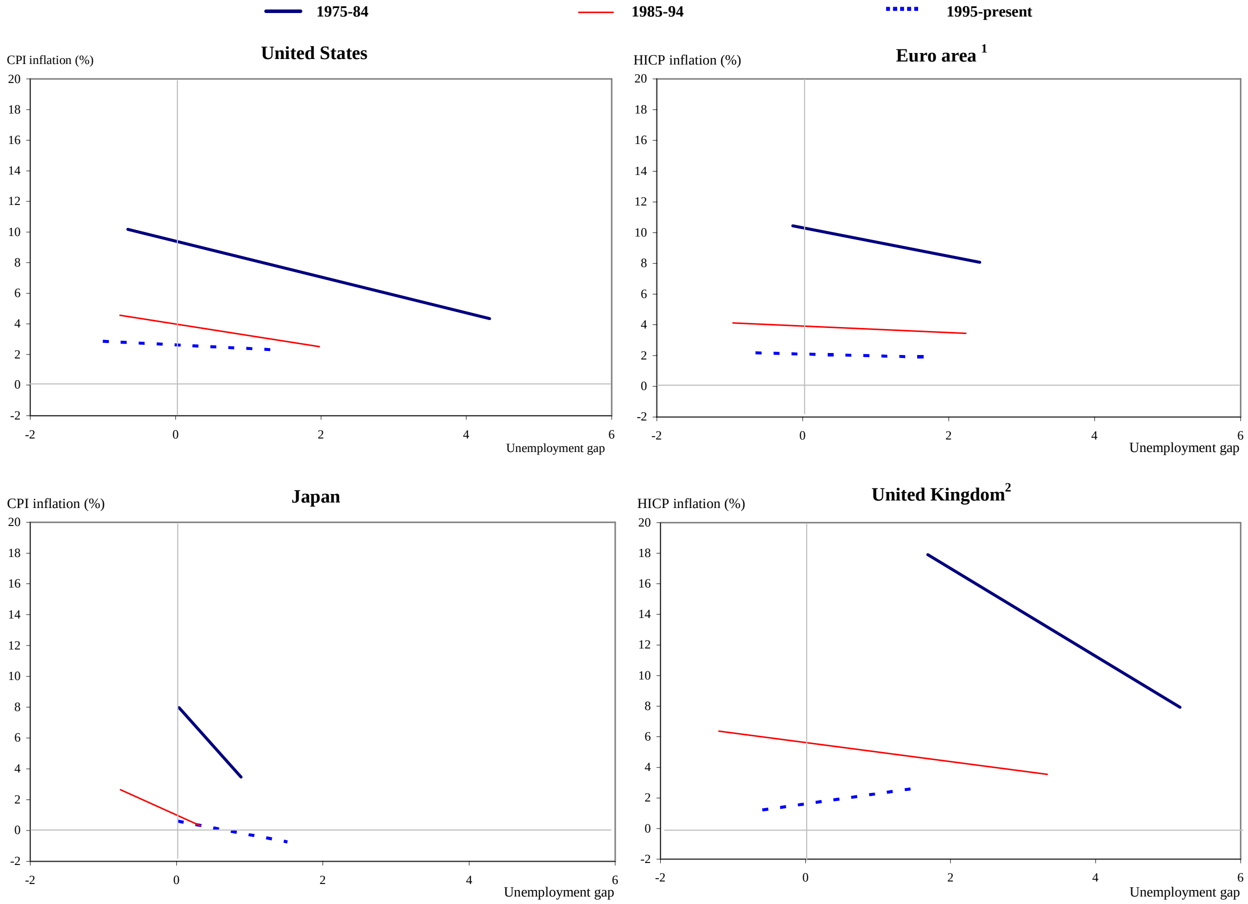
... but identifying inflation trends has become more complicated

Globalisation may also complicate the identification of underlying trends in the price level because it implies large shifts in relative prices. Headline inflation measures remain affected by the noise that their volatile components generate. However, core inflation measures that were built to remedy this problem by excluding a number of volatile items such as food and energy may have become less useful. They suffer from the shortcoming

15. The higher frequency of price changes in competitive sectors suggests that, by subjecting large parts of the economy to more intense competition, globalisation makes prices more responsive to activity (Altissimo *et al.*, 2006). This effect should result in a steeper Phillips curve. On the other hand, increased specialisation weakens the effect of domestic demand pressures on inflation and makes it more responsive to the balance between supply and demand in the rest of the world (Borio and Filardo, 2006). Stronger competition, in part due to globalisation, may make it more difficult for producers to increase their prices when domestic demand strengthens (Batini *et al.*, 2005). To the extent that globalisation reduces workers' bargaining power (Dumont *et al.*, 2005), low unemployment can become compatible with a smaller increase in wage claims. These three effects should result in a flatter Phillips curve (Bean, 2006).

Figure III.9. The short-term trade-off between inflation and unemployment has flattened

CPI inflation versus unemployment gaps



Note: The unemployment gap is the difference between the unemployment rate and the NAIRU (as estimated by the OECD). The chart shows simple regression lines on quarterly data.

1. For the euro area, CPI is shown prior to 1991. Western Germany is used in place of total Germany to calculate the aggregate euro area prior to 1991.

2. The slope of the trend line in the United Kingdom in the 1995 to present period should not be interpreted as indicating that more economic slack is associated with higher inflation. The granting of operational independance to the Bank of England in May 1997 has noticeably modified the relationship between UK inflation and unemployment. This change implies that the regression line on data covering the 1995-to-present period is biased.

that they reflect the systematic downward impact of globalisation on manufactured goods prices but not the possibly systematic, though volatile, upward impact on commodity prices.

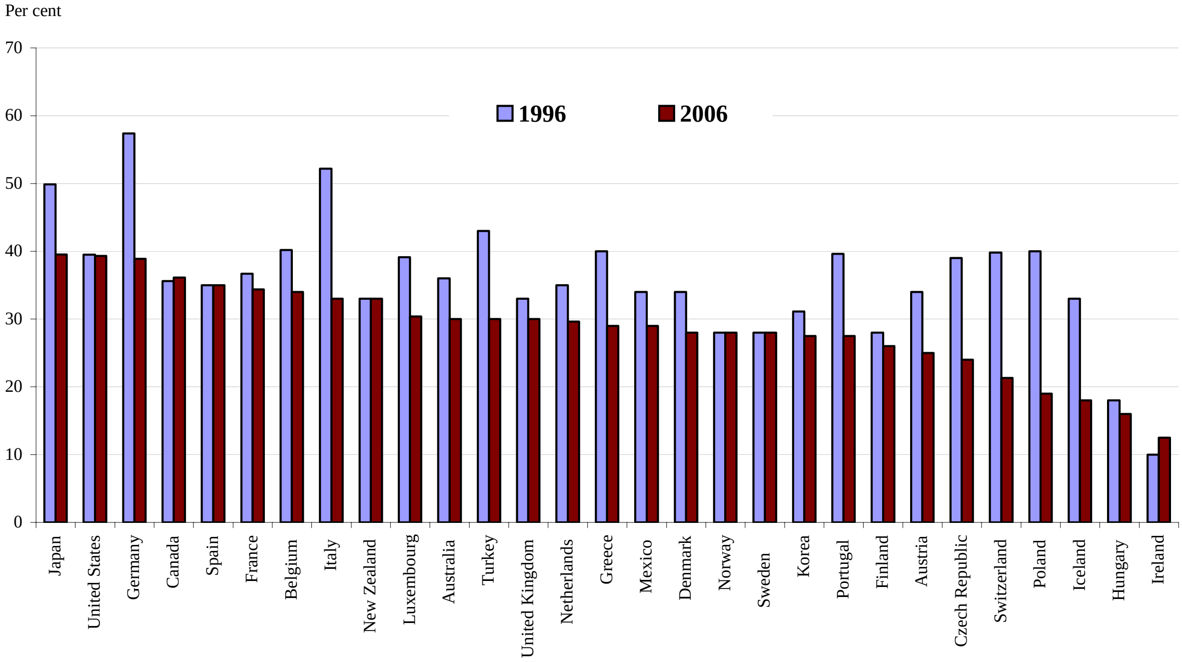
Globalisation and progress in structural reform

Globalisation fosters tax competition...

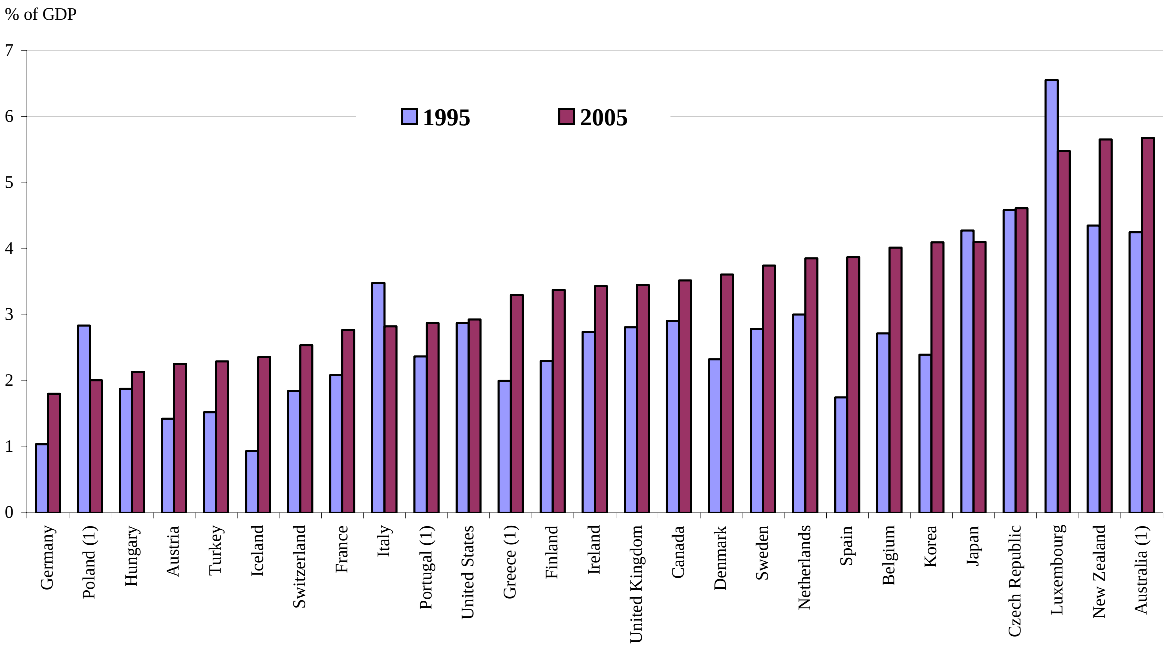
Globalisation, especially the increased mobility of capital and highly-skilled labour, fosters greater tax competition. While corporation tax is only one among many factors that shape firms' location decisions, it has a significant impact (Nicoletti *et al.*, 2007 and OECD, 2007c). Most OECD countries have cut their corporate tax rates over the past decade, some by a considerable amount (Figure III.10). Similarly, empirical evidence indicates that lower income tax rates can be attractive to highly skilled migrants

Figure III.10. Corporation tax has become more broad-based

Statutory rates are going down...



... but tax revenues are increasing



1. Data refer to 2004 instead of 2005.
Source: Yoo (2003); OECD Tax Database; OECD Revenue Statistics.

(Liebig and Sousa-Poza, 2005; Eichler *et al.*, 2006). Many governments have also reduced the top marginal rate of income tax, which is an important determinant of the effective tax rate for highly skilled workers. On average across OECD countries, the top marginal income tax rate fell from 45% in 1995 to 37% in 2005. In both cases, however, considerations other than the wish to attract or retain mobile factors probably also played an important role in shaping tax trends. Indeed, in the case of corporate tax, rate cuts were compensated by base broadening, suggesting that concerns about domestic distortions created by high rates may have been more important drivers of tax changes than globalisation.[16]

... which helps create more efficient tax systems

Globalisation also encourages the pursuit of efficiency gains in tax systems. To the extent that globalisation encourages a move to less elastic tax bases, it should improve the efficiency of tax systems. In practice, this has included shifting the tax burden away from capital and labour and towards property and consumption.[17] On the other hand, tax competition could potentially reduce the ability of the tax system to contribute to the achievement of income redistribution objectives.

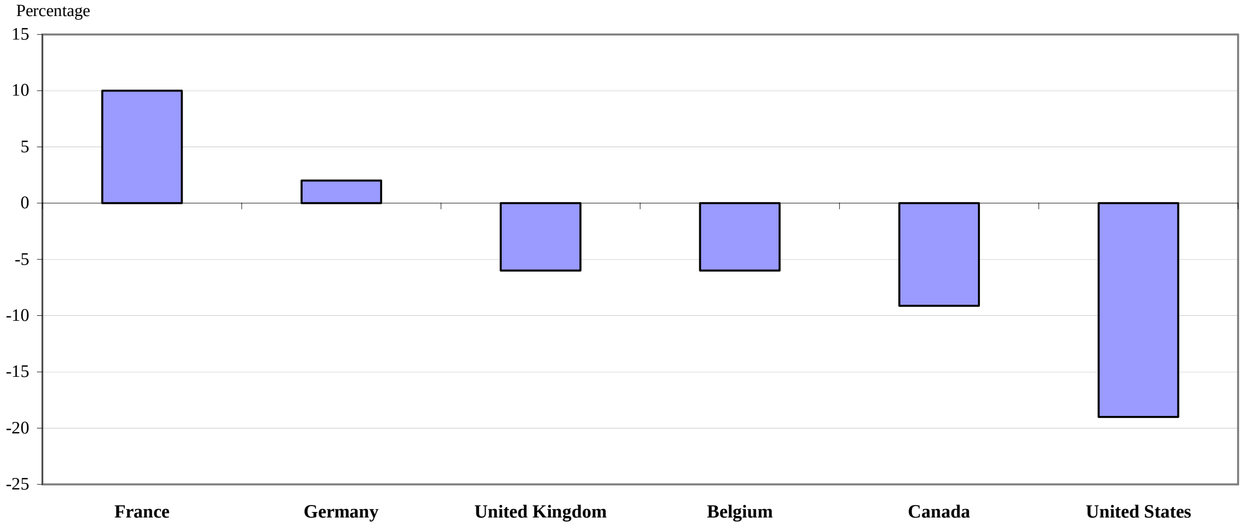
Flexible labour markets are needed to benefit from globalisation...

Globalisation calls for greater emphasis on labour market flexibility, at the same time as the feeling of job insecurity often associated with globalisation fuels the demand for income protection. When they become re-employed, trade-displaced workers typically receive lower pay, sometimes significantly so, as the returns to job-specific skills and previously available economic rents are eroded (Figure III.11). An implication is that in countries with high unemployment benefits, trade-displaced workers can receive very high replacement incomes compared with their earning prospects if re-employed. Long spells of unemployment and slower structural adjustment may result when income transfers are primarily given passively (OECD, 2005d). But a number of countries which are generally regarded as having successfully dealt with the challenges of globalisation were able to maintain relatively high levels of unemployment benefits. They have balanced relatively high replacement incomes with a close monitoring of job-search efforts and strict enforcement of availability-to-work requirements. (*e.g.* Denmark, Netherlands, Norway, Sweden). In contrast, assistance programmes specifically targeted at displaced workers have not proved effective in terms of labour market outcomes (OECD, 2005c). However, they may serve a useful “political economy” role inasmuch as they alleviate opposition to globalisation.

16. The rise in corporate tax revenues in many countries reflected not just base broadening but also increases in the share of profits in value added.

17. There are however limits to the extent to which consumption taxes can be increased since globalisation makes it easier to buy from abroad.

Figure III.11. Trade-displaced workers must often accept large pay cuts to get a new job [1]



1. Average wage changes for workers who previously had more than 10 years of job tenure. Refers to total layoffs for Canada, United Kingdom and United States, and to mass layoffs only for Belgium, France and Germany.

Source: OECD *Employment Outlook* 2005.

... the design of social protection being important

Where health and retirement insurance is provided at the firm level, the hardship caused to workers who lose such benefits when they are forced out of their jobs may fuel protectionist sentiment. Protectionist pressures have been relatively well contained in countries where unemployed workers benefit from stronger social protection. Guaranteeing that laid off workers retain some health coverage and ensuring full occupational pension portability might ease fears of globalisation and improve its political economy. Fully portable pensions would also bring sizeable economic gains by facilitating the allocation of labour to its most productive uses. Strict employment protection legislation reduces the chances of finding another job and may be associated with greater fear of the consequences of globalisation (OECD, 2006b).

Education policies are key

Globalisation magnifies the benefits of education policies that equip workers with general skills which enable them to work in a wide range of high value-added activities (European Commission, 2005; Trefler, 2005). However, education finance can no longer be based on the premise that recipients will stay in the same country (OECD, 2006c). The greater mobility of highly skilled workers has increased the deadweight costs of free higher education. Tuition fees coupled with income-contingent loans reduce these deadweight costs. They also reduce public spending on higher education, which is regressive in its impact because tertiary students disproportionately come from or will form families with above-average income.

Globalisation helps solve local environmental problems

While global output growth has put pressure on some environmental resources, it has helped a number of the problems of *localised* pollution by generating higher incomes and thereby fuelling the demand for higher environmental standards in OECD and emerging economies. As a result, the rapid expansion of the global economy has not translated into a proportional increase in the pressure on *local* environmental resources. Globalisation has also facilitated the transfer of environmentally friendly technology. In the OECD area, emissions of sulphur and nitrous oxides -- two major categories of local air pollutants -- came down by 41% and 17% over the 1990-2002 period (OECD, 2005b). In China, starting from the high levels inherited from the era of central planning, emissions of nitrous oxides and sulphur dioxides remained broadly stable between 1990 and 2004 -- a period during which economic output nearly quadrupled (OECD, 2007a).

Global environmental challenges require coordinated responses

Environmental problems related to high growth have proved more difficult to tackle when they involve *global* public goods such as fish stocks and the climate. However, the example of the 1987 Montreal protocol on ozone-depleting substances shows that implementing a co-ordinated response is possible. In the area of climate change, the emission targets adopted by industrialised countries under the 1997 Kyoto protocol can be regarded only as a first step towards a global response. Nonetheless, OECD countries cannot solve the problem on their own since they are expected to account for less than 40% of global emissions in 2030.[18] Hence, the international community needs to work towards a framework that covers all important emitters.[19] In terms of policy instruments, tradeable caps or a minimum tax rate on greenhouse gas emissions offer cost-efficient options (OECD, 2004).

Reaping the full benefits of globalisation depends on policies

Realising the full net benefits of globalisation involves establishing the right framework conditions and there is a risk that, faced with the negative aspects of globalisation, policy makers could attempt to slow down the changes needed to enjoy the full benefits. Ultimately, such restrictive measures would magnify the adjustment costs, without halting the globalisation process itself. There is some way to go, in terms of policy settings, before the full benefits of globalisation are achieved.

18. The projection is taken from the IEA (2006a) reference scenario and relates to energy-related CO_2 emissions.

19. There is a strong case for integrating international air and sea transport in such a framework as these two sectors currently benefit from tax-exempt fuel and are not subject to emission caps. They account for 3½ per cent of global CO_2 emissions from fossil fuel combustion (IEA, 2006b).

BIBLIOGRAPHY

Ahrend, R., P. Catte and R. Price (2006), "Factors behind Low Long-Term Interest Rates", *OECD Economics Department Working Papers*, No. 490, OECD, Paris.

Altissimo, F., M. Ehrmann and F. Smets (2006), "Inflation Persistence and Price-Setting Behaviour in the Euro Area: a Summary of the Inflation Persistence Network Evidence", *National Bank of Belgium Working Paper*, No. 94.

Amiti, M. and S-J. Wei (2005a), "Service Offshoring, Productivity, and Employment: Evidence from the United States," *IMF Working Paper*, No. 05/238, IMF, Washington DC.

Amiti, M. and S-J. Wei (2005b), "Fear of Service Outsourcing: is it Justified?", *Economic Policy*, April.

Baldwin, R. (2006), "Globalisation: the Great Unbundling(s)", Contribution to the project *Globalisation Challenges for Europe and Finland*, September.

Batini, N., B. Jackson and S. Nickell (2005), "An Open-Economy New Keynesian Phillips Curve for the UK," *Journal of Monetary Economics*, Vol. 52, October.

Bean, C. (2006) "Globalisation and Inflation", *Bank of England Quarterly Bulletin*, Vol. 46, No. 4.

Berman, E., J. Bound and S. Machin (2003), "Implications of Skill-Biased Technological Change: International Evidence", *Quarterly Journal of Economics*, Vol. 113, No. 4.

Bernanke, B. (2005), "The Global Saving Glut and the U.S. Current Account Deficit", *Sandridge Lecture, Virginia Association of Economics*, Richmond, March.

Bini Smaghi, L. (2007), "Global Capital and National Monetary Policies," Speech at the European Economic and Financial Centre, London, 18 January, available on www.ecb.int.

Blanchflower, D., J. Saleheen and C. Shadforth (2007), "The Impact of the Recent Migration from Eastern Europe on the UK Economy", background paper for a speech at the Cambridgeshire Chamber of Commerce, 4 January.

Borio, C. and A. Filardo (2006), “Globalisation and inflation: New cross-country evidence on the global determinants of domestic inflation,” *mimeo*, Bank for International Settlements.

Borjas, G. (2001), “Does Immigration Grease the Wheels of the Labour Market?”, *Brookings Papers on Economic Activity*.

Boulhol, H., S. Dobbelaere and S. Maioli (2006), “Imports as Product and Labour Market Discipline”, *IZA Discussion Paper Series*, No. 2178, Bonn.

Burniaux, J-M., T-T. Dang, D. Fore, M. Förster, M. Mira d’Ercole and H. Oxley. (1998), “Income Distribution and Poverty in Selected OECD Countries”, *OECD Economics Department Working Papers*, No. 189, OECD, Paris.

Burniaux, J-M., F. Padrini and N. Brandt (2006), “Labour Market Performance, Income Inequality and Poverty in OECD Countries”, *OECD Economics Department Working Papers*, No. 500, OECD, Paris.

Busse, M. (2003), “Tariffs, Transport Costs and the WTO Doha Round: The Case of Developing Countries”, *Journal of International Law and Trade Policy*, Vol. 4, No. 1.

Cuñat, V. and M. Guadalupe (2006), “Globalisation and the Provision of Incentives Inside the Firm: The Effect of Foreign Competition”, *IZA Discussion Paper*, No. 2408, Bonn.

Delozier, B. and S. Montout (2007), “Effets des Nouvelles Caractéristiques de la Mondialisation sur les Marchés du Travail Européens”, *Trésor-Éco*, No. 11, Ministry of Economy, Finance and Industry, Paris.

Dumont, M., G. Rayp and P. Willemé (2006), “Does Internationalisation Affect Union Bargaining Power: an Empirical Study for Five EU Countries”, *Oxford Economic Papers*, Vol. 58.

Eichengreen, B. (2004), “Global Imbalances and the Lessons of Bretton Woods”, *NBER Working Paper*, No. 10497, Cambridge MA.

Eichler, M., M. Grass, H. Blöchliger and H. Ott (2006), *Determinants of Productivity Growth*, BAK Basel Economics, Basel.

European Commission (2005), “Rising International Economic Integration: Opportunities and Challenges”, *The EU Economy 2005 Review*, Brussels.

Feenstra, R. (2007), “Globalization and its Impact on Labor”, *Global Economy Lecture 2007, Vienna Institute for International Economic Studies*, Vienna, 8 February.

Förster, M. and M. Mira d’Ercole (2005), “Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s”, *OECD Social, Employment and Migration Working Papers*, No. 22, OECD, Paris.

Gabaix, X. and A. Landier (2006), “Why Has CEO Pay Increased So Much?”, *mimeo*, MIT, Cambridge MA.

Grossman, G. and E. Helpman (1991), *Innovation and Growth in the Global Economy*, Cambridge: MIT Press.

Hervé, K. and I. Koske, N. Pain and F. Sédillot (2007), “Globalisation and the Macro-Economic Policy Environment”, *OECD Economics Department Working Papers*, No. 552, OECD, Paris.

Hummels, D. (2006), “Transportation Costs and International Trade over Time” in ECMT, *Transport and International Trade*, OECD, Paris.

IEA (2006a), *World Energy Outlook*, International Energy Agency, OECD, Paris.

IEA (2006b), *CO_2 Emissions from Fossil Fuel Combustion: 1971/2004: 2006 Edition*, International Energy Agency, OECD, Paris.

IMF (International Monetary Fund) (2005), “Globalisation and External Imbalances”, *World Economic Outlook*, Chapter 3, IMF, Washington DC.

Jean, S., O. Causa, M. Jimenez and I. Wanner (2007), “Migration in OECD Countries

Kose, A., E. Prasad, K. Rogoff and S-J. Wei (2006), “Financial Globalisation: a Reappraisal”, *NBER Working Paper Series*, No. 12484, Cambridge MA.

Levine, R. (2005), “Finance and Growth: Theory and Evidence”, in P. Aghion and S. Durlauf (eds.), *Handbook of Economic Growth*, Vol. 1, North-Holland, Amsterdam.

Levy, F. and R. Murnane (2006), “How Computerised Work and Globalisation Shape Human Skill Demands”, available online at http://web.mit.edu/flevy, revised excerpt from F. Levy and R. Murnane (2004), *The New Division of Labour: How Computers are Creating the Next Job Market*, Princeton University Press.

Liebig, T. and A. Sousa-Poza (2005), “Taxation, Ethnic Ties and the Location Choice of Highly Skilled Immigrants”, *OECD Social, Employment and Migration Working Papers*, No. 24, OECD, Paris.

Maddison, A. (2006), *The World Economy*, OECD, Paris.

Maddison, A. (2007), *The Contours of the World Economy 1-2030 AD*, Oxford University Press (forthcoming).

Mankiw, G. and P. Swagel (2006), “The Politics and Economics of Offshore Outsourcing,” *Journal of Monetary Economics*, Vol. 53.

Mello, L. de, (1999), "Foreign Direct Investment-Led Growth: Evidence from Time Series and Panel Data", *Oxford Economic Papers*, Vol. 51.

Mishkin, F. (2006), *The Next Great Globalization*, Princeton University Press.

Moriguchi, C. and E. Saez (2006), "The Evolution of Income Concentration in Japan, 1886-2002: Evidence from Income Tax Statistics", *NBER Working Paper* No. 12558.

Nicoletti, G., D. Hajkova, L. Vartia and K-Y. Yoo (2007), "Taxation, Business Environment and FDI Location in OECD Countries", *OECD Economic Studies*, OECD, Paris (forthcoming).

Nordhaus, W. (2001), "The Progress of Computing", *Cowles Foundation Discussion Paper*, No. 1324, Yale University.

OECD (2003), *Sources of Economic Growth in OECD Countries*, OECD, Paris.

OECD (2004), *Sustainable Development in OECD Countries: Getting the Policies Right*, OECD, Paris.

OECD (2005a), *Measuring Globalisation: OECD Economic Globalisation Indicators*, OECD, Paris.

OECD (2005b), *Environment at a Glance: OECD Environmental Indicators*, OECD, Paris.

OECD (2005c), *OECD Employment Outlook*, OECD, Paris.

OECD (2005d), *Trade and Structural Adjustment: Embracing Globalisation*, OECD, Paris.

OECD (2006a), *International Migration Outlook*, OECD, Paris.

OECD (2006b), *OECD Employment Outlook*, OECD, Paris.

OECD (2006c), *Education Policy Analysis 2005-2006: Focus on Higher Education*, OECD, Paris.

OECD (2006d), *Society at a Glance 2006*, OECD, Paris.

OECD (2007a), *OECD Environmental Performance Reviews: China*, OECD, Paris, forthcoming

OECD (2007b), *Economic Policy Reforms: Going for Growth 2007*, OECD, Paris.

OECD (2007c), "The Influence of Taxation on FDI Decisions", CTPA/CFA(2007)11, OECD, Paris.

Pain, N., I. Koske and M. Sollie (2006), “Globalisation and Inflation in the OECD Economies”, *OECD Economics Department Working Papers*, No. 524, OECD, Paris.

Piketty, T. (2001), *Les Hauts Revenus en France au XXe siècle: Inégalités et Redistributions*, 1901-1998, Grasset.

Rajan, R. (2006), “Is There a Shortage of Fixed Assets?”, Speech at the G-30 meetings, New York, 1 December.

Rodrik, D., A. Subramanian and F. Trebbi (2004), “Institutions Rule: The Primacy of Institutions Over Geography and Integration in Economic Development,” *Journal of Economic Growth*, Vol. 9, No. 2.

Saez, E. (2005), “Top Incomes in the United States and Canada over the Twentieth Century”, *Journal of the European Economic Association, Papers and Proceedings*, Vol. 3.

Saez, E. (2006), “Income and Wealth Concentration in a Historical and International Perspective”, in A. Auerbach., D. Card and J. Quigley (eds.), *Public Policy and the Income Distribution*, Russel Sage Foundation, New York.

Saez, E. and T. Piketty (2007), “Income Inequality in the United States” in A.B. Atkinson and T. Piketty (2007), *Top Incomes over the Twentieth Century: a Contrast between European and English-Speaking Countries*, Oxford University Press, forthcoming (May).

Sala-í-Martin, X. (2006), “The World Distribution of Income: Falling Poverty and … Convergence, Period,” *Quarterly Journal of Economics*, Vol. 121, No. 2.

Serres, A. de, S. Kobayakawa, T. Sløk and L. Vartia (2006), “Regulation of Financial Systems and Economic Growth”, *OECD Economics Department Working Papers*, No. 506, OECD, Paris.

Temin, P. (2006), “The Economy of the Early Roman Empire”, *Journal of Economic Perspectives*, Vol. 20, No. 1.

Trefler, D. (2005), “Offshoring: Threats and Opportunities,” Paper presented to the Brookings Trade Forum 2005 on the Offshoring of Services, Washington DC, 12-13 May.

Welsum, D. van, and X. Reif (2006), “Potential Impacts of International Sourcing on Different Occupations”, DSTI/ICCP/IE(2006)1/FINAL, OECD, Paris.

Welsum, D. van, and G. Vickery (2005), “Potential offshoring of ICT-intensive using occupations”, *OECD DSTI Information Economy Working Paper*, DSTI/ICCP/IE(2004)19/FINAL, OECD, Paris.

Winters, A. (2004), “Trade Liberalisation and Economic Performance: an Overview”, *The Economic Journal*, Vol. 114, February.

World Bank (2005), *World Development Report 2006: Equity and Development*, World Bank, Washington DC.

World Bank (2007), *Global Economic Prospects*, World Bank, Washington DC.

Yoo, K-Y. (2003), “Corporate Taxation of Foreign Direct Investment Income 1991-2001”, *OECD Economics Department Working Papers*, No. 365, OECD, Paris.