



Economic Policy Reforms

Going for Growth

2009



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Going for Growth was launched in 2005 as a new form of structural surveillance complementing the OECD's long-standing country and sector-specific surveys. In line with the OECD's 1960 founding Convention, the aim is to help promote vigorous sustainable economic growth and improve the well-being of OECD citizens.

This surveillance is based on a systematic and in-depth analysis of structural policies and their outcomes across OECD members, relying on a set of internationally comparable and regularly updated indicators with a well-established link to performance. Using these indicators, alongside the expertise of OECD committees and staff, policy priorities and recommendations are derived for each member. From one issue to the next, Going for Growth follows up on these recommendations and priorities evolve, not least as a result of governments taking action on the identified policy priorities.

Underpinning this type of benchmarking is the observation that drawing lessons from mutual success and failure is a powerful avenue for progress. While allowance should be made for genuine differences in social preferences across OECD members, the uniqueness of national circumstances should not serve to justify inefficient policies.

In gauging performance, the focus is on GDP per capita, productivity and employment. As highlighted in the 2006 issue, this leaves out some important dimensions of well-being. For instance, while a high GDP per capita tends to make for better health and education outcomes, it is not sufficient to ensure social cohesion, even if higher employment helps. However, for economic policy purposes, GDP per capita and employment measure well-being better than any other available indicators.

Going for Growth is the fruit of a joint effort across a large number of OECD Departments.

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Editorial

Going for Growth at a Time of Financial Crisis

This fifth edition of *Going for Growth* comes at a time when OECD countries are faced with the most severe financial and economic crises in a lifetime. The still unfolding global crisis and recession have inevitably raised questions about the extent to which markets can be trusted to deliver good outcomes and whether earlier reforms have contributed to make economies more vulnerable. The current crisis in financial markets has uncovered major problems with the functioning of such markets and demonstrated the failures of past regulatory and supervisory structures to ensure market stability. It shows the destructive force of particular developments and imperfections in financial markets that have intensified moral hazard and information deficiencies. These faults are starting to be recognised and countries are beginning to work individually and jointly to identify the best ways to reform regulation of financial markets to address the particular market and regulatory imperfections that led to the current crisis.

However, it is important to emphasise that the debacle in financial markets does not call into question the beneficial effects of recommended reforms of product and labour markets in this report. A number of reforms throughout OECD countries in recent years have demonstrably shown their power to raise employment and productivity, and acting on the reform agenda set out in this report would noticeably strengthen economic performance in the long term. In addition, more flexible product and labour markets are likely to strengthen country resilience to weather future downturns with less disruption to output and employment.

The crisis, nonetheless, has implications for the choice of which structural policies to pursue in the near term. At a time when aggregate demand is well below productive capacity, it is apt to focus on structural reforms that are most likely to raise aggregate demand in the short run as well as aggregate supply in the long run. Indeed, the structure of fiscal packages that have been recently announced or implemented in several OECD countries has also been shaped by concerns of their long-term impact on growth.

This report identifies three broad fiscal/structural reforms that could yield a “double-dividend” at present: increased spending on infrastructure; increased spending on active labour market policy, including on compulsory training courses; and reduction of personal income taxes, notably on low-income earners. In addition, product market reforms that ease entry restrictions and strengthen competition may boost demand in some cases in the short term and increase productivity in the long term.

The special chapter in this report on the long-term impact of infrastructure on GDP per capita comes at the right time, considering the focus of many recent fiscal packages on infrastructure spending to boost the economy. It shows that investment in infrastructure may have positive spill-overs throughout the economy. Nonetheless, to get the strongest growth effects from infrastructure investment, it is essential to carefully select projects on the basis of cost-benefit analysis and have in place regulatory structures that ensure competition where it is possible and prevent abuse of market power where competition is not feasible.

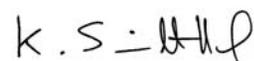
Another special chapter on taxation and growth concludes with a ranking across different taxes with respect to their impact on long-term growth. Corporate income taxes are the most harmful, followed by labour income taxes and then indirect taxes, with property taxes the least harmful. Countries currently relying disproportionately on taxes levied on corporate and labour income could therefore raise GDP per capita by shifting their tax base towards goods and services as well as property. This is a promising strategy for the medium and long term, but it may have to be accompanied by supporting measures to counter any weakening of redistribution via the tax system.

However, it is less obvious that this “tax and growth” ranking can be exploited for short-term demand purposes in the current crisis. Lowering tax rates on corporate income is unlikely to have much impact on investment demand as corporate profits slump, and raising taxes on property would weaken already-depressed housing markets.

A third special chapter illustrates that most OECD countries have continued to make significant progress in reducing regulatory constraints on competition in product markets over the past five years. This welcome development bodes well for innovation and productivity in the longer term, and may prove helpful in dealing with the current crisis. Notwithstanding this progress, regulations still unduly constrain healthy competition in some sectors and some OECD countries, notably lower-income countries, who maintain a restrictive regulatory stance throughout their product markets. Reforming regulations is a priority for several countries to enhance their productivity in the long run, with some beneficial effects on demand in the short run.

A final special chapter shows that a significant proportion of the cross-country difference in aggregate employment rates and average productivity levels, and thus GDP per capita, is accounted for by differences in population structure, in particular along the educational attainment dimension. It demonstrates that differences between national aggregates and averages can be misleading and re-emphasises the importance of education. However, the noted differences in population structure do not affect countries’ areas of relative strength and weaknesses that forms the basis for the selection of policy priorities in Going for Growth.

With its focus on reforms to support long-term growth, this report represents a fundamental component of the OECD’s strategic response to the financial and economic crisis. It concludes that the economic crisis facing OECD countries should not be allowed to slow down structural reforms, and opportunities for reforms should be exploited to strengthen economic dynamism and living standards. Under no circumstances should mistakes from previous crises be repeated. In particular, attempts to cut unemployment by reducing labour supply would prove as damaging as in the past and leave our societies poorer; keeping markets open and avoiding new protectionism is key to strengthen prosperity throughout the world.



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Table of Contents

Executive Summary	11
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Part I

Taking Stock of Structural Policies in OECD Countries

Chapter 1. Structural Reform at a Time of Financial Crisis	17
Do crises facilitate structural reforms?	19
The selection of appropriate structural policies	20
Notes	25
Bibliography	25
Chapter 2. Structural Policy Priorities 2009: An Overview	27
Introduction	28
Growth performance in OECD countries: Key stylised facts	29
Areas of policy priorities	33
The evolution of policy priorities since 2005	39
Notes	40
Bibliography	41
Annex 2.A1. How Policy Priorities Are Chosen in <i>Going For Growth</i>	42
Annex 2.A2. Structural Policy Priorities by Country and Performance Area	44
Annex 2.A3. Choice of the Numéraire in <i>Going For Growth</i>	49
Chapter 3. Country Notes	53
Chapter 4. Structural Policy Indicators	117

Part II

Thematic Studies

Chapter 5. Taxation and Economic Growth	143
Introduction	144
Tax structures and growth	145
Effects of different taxes on GDP per capita	146
Concluding remarks	158
Notes	158
Bibliography	159

Chapter 6. Infrastructure Investment: Links to Growth and the Role of Public Policy	163
Introduction	164
Network infrastructure provision	165
Infrastructure investment and economic growth	167
Role of public policies	168
Concluding comments	174
Notes	175
Bibliography	176
Annex 6.A1. Public-private Partnerships: An Indicator of Framework Conditions	177
Chapter 7. Reform of Product Market Regulation in OECD Countries: 1998-2008	179
Introduction	180
Countries' current regulatory stance	181
Reform of product market regulation since 1998	183
The sources of reform	185
Potential for future reform	186
Notes	188
Bibliography	188
Annex 7.A1. The OECD Indicators of Product Market Regulation	190
Chapter 8. Population Structure, Employment and Productivity	193
Introduction	194
Population structures across OECD countries	195
Working-age population structure and employment performance	195
Working-age population structure and productivity	199
Conclusions and policy implications	203
Notes	205
Bibliography	207

This book has...



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ISO country code	Country name	ISO currency code
AUS	Australia	AUD
AUT	Austria	EUR
BEL	Belgium	EUR
CAN	Canada	CAD
CHE	Switzerland	CHF
CZE	Czech Republic	CZK
DEU	Germany	EUR
DNK	Denmark	DKK
ESP	Spain	EUR
EU	European Union (the EU15 refers to members prior to the 2004 enlargement)	n.a.
FIN	Finland	EUR
FRA	France	EUR
GBR	United Kingdom	GBP
GRC	Greece	EUR
HUN	Hungary	HUF
IRL	Ireland	EUR
ISL	Iceland	ISK
ITA	Italy	EUR
JPN	Japan	JPY
KOR	Republic of Korea	KRW
LUX	Luxembourg	EUR
MEX	Mexico	MXN
NLD	Netherlands	EUR
NOR	Norway	NOK
NZL	New Zealand	NZD
POL	Poland	PLN
PRT	Portugal	EUR
SVK	Slovak Republic	SKK
SWE	Sweden	SEK
TUR	Turkey	TRL
USA	United States	USD

Executive Summary

Until the present downturn, there had been an improvement in the pace of convergence in GDP per capita of OECD countries relative to the best performing countries. Nevertheless, underlying performance weaknesses remain in many countries, and this requires a re-assessment of the main policies having an impact on long-term growth.

The first part of this report uses international benchmarking of performance and policies to identify a set of five policy priorities for each OECD country and the European Union to increase GDP per capita:

- Policies mainly aimed at increasing labour productivity are recommended as a priority for all OECD countries and the European Union. Reforms to strengthen human capital are identified as a priority for most countries, as are reforms to strengthen competition in product markets. Reforms of agricultural policies are called for in the United States, the European Union and Japan, as well as in a few other countries with particularly high support levels.
- Policies focused on improving labour utilisation are recommended as a priority for all but two OECD countries. In particular, reforms of tax and benefit schemes are identified as a priority for most OECD countries in Europe, while reforms of health care systems are recommended as a priority for the United States and New Zealand. Reforms of labour market policies are also a priority for the European Union, as well as for Japan, Korea and Turkey.
- The policy priorities determined in this edition are broadly similar to those reported in the 2007 edition, with 134 of the previous 155 policy priorities retained in all or in part. Only 13 of the 21 priorities were replaced based on reforms undertaken, with the remaining 8 replaced based on a re-consideration of newly available policy-performance evidence. While the results of this exercise reflect some reform progress, they also imply that much work is still left to be done.

A special chapter (Chapter 1) is focused on the particular concerns that arise for reformers in the context of a financial crisis such as the present one. It discusses what types of policies may be able to boost short-run demand and at the same time improve long-run economic performance. The main policies include some that are being considered at present:

- Introducing infrastructure projects that can be brought on stream quickly or improving the quality of existing infrastructure, particularly for education.
- Increasing expenditure on active labour market policies to provide workers with the skills that will be needed as the economy recovers, including through the use of compulsory training programmes.

- Reducing the tax burden on labour income, particularly for low-income workers. This will have a strong impact on spending by this group in the short run, and will enhance job prospects for such workers in the long term.
- Reforming anti-competitive product market regulations, especially entry barriers.

While country circumstances vary, and thus not all of these policies are appropriate in all OECD countries, those described above are the ones most likely to strengthen both short-term demand in the current economic situation, and long-term growth as well. However, nearly all OECD countries have priorities in at least one of these areas, suggesting that there is scope for carrying out “good” reforms during the crisis.

This issue of *Going for Growth* also contains four special topical chapters, dealing with taxes and economic growth, infrastructure investment and public policy, the stance of product market regulation, and the effect of population structure on employment and productivity.

The chapter on taxes and economic growth (Chapter 5) looks at how the structure of taxation could be changed to be less of a drag on economic growth. While taxes are essential to raise revenue for public expenditures that can support growth, the structure of tax systems differs widely across OECD countries and these variations explain part of the differences in economic performance and, in turn, differences in living standards. The main findings of this analysis are as follows:

- Corporate taxes are found to be the most harmful type of tax for growth, followed by personal income taxes and then consumption taxes, with recurrent taxes on immovable property being the least harmful.
- Taxes on immovable property have relatively small effects on decisions of households and firms concerning labour supply, investment in education and how much to produce, invest and innovate.
- Consumption taxes can weaken work incentives but do not affect incentives to save; they will have the least impact on growth when the main consumption tax is set at a single rate for all goods and services.
- Personal income taxes reduce employment and human capital investment, and can weaken productivity performance. However, disincentives to work at low earnings can be reduced with well-designed “in-work benefits”.

The chapter on infrastructure (Chapter 6) looks at how the networks of energy, water, transport and telecommunications can have effects on output over and above that of other types of investment, as well as the role of public policy in determining provision. In the context of fiscal responses to the current crisis, increased spending on infrastructure may be an attractive option compared with other fiscal measures, though it requires careful scrutiny of individual projects and a strong policy framework in order to ensure that the investment is not misallocated or wasted. The main results of the chapter are:

- Infrastructure investment represents between one-tenth and one-quarter of economy-wide investment in OECD countries. Over the past two decades investment in energy, water and transport has been falling as a share of GDP in most OECD countries, though it has been growing more rapidly in the telecommunications sector.
- Infrastructure investment can have positive effects that go beyond the impact to be expected from a larger capital stock. However, such effects are not shared by all OECD economies, with some evidence suggesting cases of both under – and over – provision of

infrastructure. Cost-benefit analysis of individual projects is key to ensuring efficient infrastructure investments.

- Exclusive public sector ownership and provision can sometimes lead to inefficient investment decisions. If designed carefully, new contracting techniques can be used in network industries in order to allow more private sector involvement and better selection of investment projects.
- Removing barriers to entry in network-related but inherently competitive market segments can foster higher rates of investment in the network industries. At the same time, regulation of infrastructure access prices through price cap regulation, when combined with regulatory independence, can result in more efficient investment.

The chapter on product market regulation (Chapter 7) describes the most recent regulatory stance in OECD countries, and examines how the development of regulation has evolved across countries over the past ten years. Previous OECD work has shown how more intensive competition in product markets tends to boost economic growth by increasing productivity, and can increase employment, *e.g.* by facilitating new entry. The following main conclusions emerge from the analysis:

- OECD countries have extensively liberalised their product markets over the past ten years. Yet reforms appear to have slowed in the most recent period (2003-2008) as compared with the earlier period (1998-2003).
- Over the whole period, easing of product market regulation appears to have been driven to a considerable extent by reforms in sector-specific regulation, notably as regards the gas, electricity and telecommunications markets.
- Despite ten years of liberalisation of regulation, considerable scope for further reform remains, especially in terms of reducing the control of government over business, the scale of public ownership and the extent of other forms of control over firm decisions.
- Though there has been much progress in reform in certain sectors, there is considerable scope for reform in others, such as professional services and retail trade.

The final chapter examines how the composition of the population can influence both employment and productivity (Chapter 8). It assesses the quantitative importance of the working-age population structure, as defined by age, gender and education, in explaining differences in employment and productivity levels across countries. The key results are:

- Differences in the structure of the working-age population, especially as regards educational attainment, account for around a third of the employment rate gap, or about two percentage points, between Europe (EU15) and the United States.
- Aligning each country's working-age population structure to that of the United States, with respect to educational attainment, would reduce the gap in output per hour worked relative to the United States by around 5 percentage points on average, and even more for Turkey, Mexico, Portugal, Italy, the Czech Republic, the Slovak Republic and Greece.
- Combining the employment and productivity effects, differences in the composition of the working-age population account for a third of the gap in GDP per capita for Europe (EU15) *vis-à-vis* the United States, mainly due to differences in educational attainment.

- Over and above the effect of population structure, most low-employment countries tend to have a relatively small share of low-productivity workers in the workforce. Hence, the current employment-rate structure in these countries artificially boosts measured labour productivity for Europe (EU15) by almost 2% compared with the United States.
- The diagnosis underlying the selection of policy priorities in *Going for Growth* is not seriously affected by the above adjustments. This is because the adjustments do not have major effects in shifting countries' areas of good and bad performance in terms of contributing to GDP per capita.

PART I

Taking Stock of Structural Policies in OECD Countries

As a general rule, the cut-off date for information used in Part I is end-2008.

PART I
Chapter 1

Structural Reform at a Time of Financial Crisis

This chapter reviews how the current recession affects the prospect for structural reform and then explores which of the policy priorities identified in the current volume to boost long-term growth are most likely to stimulate demand in the near term. The main conclusion of the chapter is that there are, indeed, growth-enhancing structural policies in nearly all OECD countries that could potentially enhance short-term, as well as long-term, growth.

The OECD economy is in its deepest recession for at least three decades. The downturn was originally related to the weakening of the sub-prime mortgage market in the United States, but spread to the inter-bank market and other financial markets, and to other OECD and non-OECD countries, with extreme stress in global financial markets on a scale not seen since the 1930s. Difficulties in financial markets have increasingly affected the real economy: GDP contracted towards the end of 2008 in most OECD countries and industrial production collapsed (Figure 1.1).

Figure 1.1. **Industrial production**¹



1. Production index in total industry, excluding construction. Monthly data are working day and seasonally adjusted.

Source: EUROSTAT and OECD Economic Outlook No. 84, Vol. 2008/2.

StatLink  <http://dx.doi.org/10.1787/533826616320>

The initial policy response to the crisis has been aimed at stabilising financial markets through guaranteeing deposits and bank lending, and providing equity injections. These emergency measures will eventually have to be scaled back once markets and institutions have begun to function normally. Of particular importance for long-run growth, reforms will be required of regulatory and supervisory structures to reduce the likelihood of such events in the future. To the extent that such reforms succeed in improving the functioning of financial markets, they will contribute to raising economic growth and living standards in the long term.

As the scale of the impact of the financial crisis on economic growth and jobs has become evident, authorities around the world have taken unprecedented measures to stimulate aggregate demand. Central banks throughout the OECD area have cut their interest rates sharply; in the United States and Japan, policy rates are now close to zero. At the same time, governments have decided to provide significant budgetary support to

aggregate demand through a mixture of public spending increases and tax cuts. Indeed, most OECD countries have recently announced fiscal measures, amounting to up to 5% of GDP over a two year period, to stimulate growth. While these fiscal packages are primarily intended to boost aggregate demand in the short run, their design can influence growth in the long term through changes in incentives and structural conditions.

This chapter reviews how the current recession affects the prospect for structural reform and then explores which of the policy priorities identified in the current volume to boost long-term growth are most likely to stimulate demand in the near term. The main conclusion of the chapter is that there are, indeed, growth-enhancing structural policies in nearly all OECD countries that could potentially enhance short term, as well as long-term growth. These include:

- Introducing infrastructure projects or improving the quality of existing infrastructure, particularly in education. Provided that such projects can be brought on stream quickly, they are a potent way to stimulate aggregate demand in the short run; greater provision of high-quality infrastructure services will facilitate economic growth in the long run.
- Increasing expenditure on active labour market policies to provide workers with the skills that will be needed as the economy recovers, including through the use of compulsory training programmes. In the short term, this increases the ability to find a job and spending power of those that are likely to have a high propensity to spend; in the long term, to the extent it succeeds in enhancing the skills of participants, it will increase productivity and employment.
- Reducing the tax burden on labour income, particularly for low-income workers. In the short term, this will increase aggregate demand as spending by this group is closely linked to their disposable income; in the long term, the tax cut will raise employment rates for this group with positive effects on GDP per capita.
- Reforming anti-competitive product market regulation, especially entry barriers. In the near term, this may stimulate the creation of new products and businesses with beneficial effects on demand; in the long term, stronger competition will raise productivity and hence living standards.

While country circumstances vary, and thus not all of these policies are appropriate in all OECD countries, those described above are the ones most likely to strengthen both short-term demand in the current economic situation, and long-term growth as well.

Do crises facilitate structural reforms?

While the focus of policy making during a sharp downturn shifts to supporting demand, past experience shows that structural reforms are often initiated in times of economic crises. This is the case even if it is easier to cope with adjustment costs of reform when the economy is strong. Among the reasons for this pattern is that crises unmask weaknesses in existing policies that were hidden by cyclical buoyancy, and the associated mood of public anxiety reduces part of the resistance to change. For example, high unemployment and weak growth in previous crises in the United Kingdom, New Zealand, the Netherlands and Finland triggered strong reform efforts. The current recession, which is likely to be the deepest one in many OECD countries for decades, may also stimulate reforms as countries attempt to regain dynamism.

While presenting opportunities for reform, crises also carry the risk that structural measures are introduced which ultimately undermine growth and living standards.

Politicians come under intense pressure to do “something” during economic crises, and hasty responses may involve measures that are simple and popular but fundamentally flawed. A classic example of this is the erection of import barriers in the 1930s which contributed to transform a downturn into the Great Depression. Another is the introduction of early retirement schemes in many European countries in the wake of the crisis in the 1970s which were intended to reduce unemployment by making room for employing young people. This policy proved to be a failure, but it took many countries years to withdraw it.

Politicians will come under pressure in the current crisis to adopt measures that are unsuitable to raise living standards in the long term, or even growth in the short term. Giving in to such demands, notably protectionist pressures, would seriously damage living standards over time. Policies targeting particular sectors in the current situation risk delaying necessary adjustment to new circumstances and creating a costly dependence on public support. If nonetheless taken, such measures should be phased out quickly. Generally, any government sectoral support should be confined to sectors that are of systemic importance to the functioning of the wider economy.

The crisis should not be allowed to delay decisions on climate change. The international community has started to discuss objectives and policies that could replace the Kyoto Protocol. Decisions are required in the near term about measures that will be mainly implemented only after 2012 to moderate global warming in the long term. Such reforms will increase welfare, though not necessarily GDP per capita.

The selection of appropriate structural policies

What does the current crisis imply for near-term structural policy priorities and what demand-management policies can be applied that would also strengthen productive capacity in the long term? As outlined in Box 1.1, countries with growth-friendly structural policy settings have tended to recover relatively quickly from a downturn. Whether the current slump may prove different is too early to tell but, at any rate, it is probably too late for other countries to strengthen their resilience to the current shock. However, structural reforms that increase aggregate supply may also affect short-term demand, and those that boost rather than depress demand should clearly be given greater emphasis in the context of the current crisis.

Demand effects of structural policies

Structural reforms may create slack in the economy as capacity expands, without a commensurate increase, or even sometimes a temporary contraction, in demand. In normal circumstances, such induced slack can be offset by the wealth effect resulting from the incorporation of higher growth prospects in asset prices (see below) and by expansionary macroeconomic policies. For instance, monetary policy aimed at price stability would react to reforms that threatened to open up a negative output gap and push inflation below target. However, at present when the capacity of macroeconomic policy is stretched, such reactions may not be feasible. This suggests that now may not be the right time for structural reforms that could have adverse short-run effects on aggregate demand, and that those reforms with possible beneficial effects on aggregate demand should be prioritised at present.

Box 1.1. **Structural policy and resilience to shocks**

The structural policy settings that have tended to be most supportive of high GDP per capita are generally the same as those that are usually most helpful for economies to rebound swiftly after negative shocks.^{*} However, these settings have also been found to amplify the initial impact of shocks. Such policies allow for a more rapid adjustment in prices and wages that enable a more rapid recovery in aggregate demand, reducing the cumulative losses in output and employment that might otherwise arise. This is because where policies encourage strong competition in product markets, slack in demand will induce producers to cut profit margins, and lower prices will help to support demand, including by allowing monetary policy to respond more strongly to the downturn (provided that it has scope for reducing interest rates). Similarly, where structural policies foster flexibility in wages, an increase in unemployment will swiftly show up in lower wages, which in turn will raise employment prospects. Also, well-functioning financial markets that permit households and firms to borrow to smooth the consequences of an economic downturn would under normal circumstances help to limit the decline.

In the past, favourable structural policy settings in a number of OECD countries have given them the flexibility to recover relatively quickly from downturns. The United States, in particular, has demonstrated its capacity to bounce back after being hit by sharp cuts in demand, though it remains to be seen how resilient it will be in the current downturn with impaired financial markets. By contrast, Continental European countries have historically had milder downturns but slower rebounds, and their reaction to the downturn earlier this decade showed that recovery can take a long time.

^{*} For OECD evidence, see Duval et al. (2008).

In this context, the fiscal easing that is underway in many OECD countries could, in principle, also facilitate structural reforms. Temporary easing may offer the leeway to initiate reforms that require permanent restructuring of public budgets, such as frontloading cuts in revenue or spending increases, while delaying measures to raise revenue or cut spending until the economy recovers. Also, part of the increase in public spending or lowering of taxes may help compensate losers of structural reforms, and hence reduce their resistance to reform.

Potential positive short-term demand effects

Structural policies that successfully increase long-term GDP should have positive wealth effects on aggregate demand in the short run. Thus, reforms that raise company profits over an extended period due to lower costs and/or higher productivity will in normal circumstances show up in higher share prices, which in turn will spur households to spend more and businesses to invest more. However, the mechanisms that allow future benefits to be translated into current spending rely on well-functioning financial markets, which value assets appropriately and permit borrowing on the basis of using these assets as collateral.²

With financial markets in crisis, it is doubtful if they can currently carry out these functions in an efficient way. Thus, expected future profits seem to be strongly discounted in current share prices, and financial institutions with impaired balance sheets are likely to be reluctant to lend to households and businesses on the basis of collateralised assets in

the near term. These conditions put a premium on structural reform measures that are not reliant on financial markets to have positive short-term demand effects.

Such reforms include the opening up of markets where latent demand cannot be satisfied because of entry barriers and other regulations. Past reforms of the financial market itself offer an example of how easing of regulations can stimulate aggregate demand. For example, reforms and new products allowed households to withdraw equity from housing and this boosted their spending, although some of the associated borrowing and lending subsequently turned out to be excessive.³ Another example of demand-raising regulatory reforms was the deregulation of telecommunications in the 1980s and 1990s in many OECD countries, which spurred entry of new companies with new products that appealed to consumers and raised demand. Some countries may still have scope to catch up in this area. Similar developments could take place in other sectors if currently high entry barriers were reduced, notably in retail trade (see Chapter 7).

Potential short-term negative demand effects

While structural reforms have long-term growth enhancing effects, they may have negative short-run demand effects if they involve costly factor reallocation or increase the risk of job loss and thereby dent households' confidence. For instance, by their very nature, many structural reforms imply turbulence in the labour market:

- The easing of entry regulations and other measures aimed at increasing competition in product markets can result in greater turnover of firms, with corresponding lay-offs in the companies that exit. At the same time, they create jobs in new companies, and the net employment effect may well be positive. In fact, some past reforms of product markets have been associated with greater product variety, higher output, and considerable net employment gains even in the short term.
- Increasing public sector efficiency, and the implied civil service retrenchment, will reduce job opportunities in the government sector. However, a more efficient public sector which allows for lower taxes will encourage employment creation in the private sector, and the net effect on employment may relatively quickly turn positive.
- The relaxation of employment protection legislation (especially on regular contracts) may reduce job security as firing costs are cut. On the other hand, such easing tends to encourage job creation. For example, the easing of restraints on the use of temporary contracts in Italy is widely credited for the maintenance of solid employment gains during the downturn earlier this decade.

While such structural reforms could have a negative impact on confidence and demand in the near term, this is not a given outcome as the reforms destroy some jobs but create new jobs in new firms and often other sectors. Improving public awareness of the benefits of reforms could imply that their overall effect on confidence in the short run would be positive.

Another way in which structural reforms may have adverse effects on demand in the short term is if they threaten income security and prompt precautionary saving. This is probably most relevant for pension reforms but also applies to reforms of other social transfer systems, such as unemployment and invalidity benefit systems. However, reforms in these areas do not necessarily imply a negative response from households. In fact, if confidence in the existing pension system has already been shaken, households may already have adjusted their spending accordingly. Reforms that clarify future pension

arrangements would reduce uncertainty and could even stimulate spending in the short run.

Structural reforms to reduce certain types of distortions in housing markets would not be suitable at present. For example, removing tax privileges for owner occupation has been frequently discussed (see Chapter 5). As tax advantages have increased demand for housing, they have boosted property prices and higher wealth in turn has encouraged the owners to spend. The removal of these advantages at present would put downward pressure on the price of residential property at a time when it is already falling in most OECD countries. To avoid amplifying the decline in household wealth and related spending, such reforms are best delayed until after a recovery has taken hold.

Structural effects of demand policies

Even if the objective of fiscal policy at present is to support demand, the design of the stimulus can influence the medium and long-term productive potential of the economy. Adjustments to tax structures and spending components will affect the incentives of individuals to work and businesses to invest in a positive or a negative way depending on the specific measures. Temporary measures may not have any permanent effects, but their transitory impact could still be long-lasting.

Public investment in infrastructure and education-related expenditure

Fiscal spending is likely to have positive supply-side effects if it involves investment in capital rather than government consumption or induced household spending. The government has the option to increase or accelerate infrastructure, maintenance and other types of potentially welfare-enhancing expenditures, such as environmental investments, that have been identified after a careful cost-benefit analysis.

Investment in electricity, transportation and telecommunication networks is the traditional mode of injecting demand into a weak economy. Provided that this can be done in a timely way and bottlenecks can be avoided, it is an effective tool for this purpose. Moreover, it may also be effective in raising employment in the short run, given that infrastructure activity is relatively labour intensive. As is discussed in Chapter 6, past infrastructure investment has raised GDP per capita in the long term, though the extent of such effects varies across different types of spending and different countries. However, there is some evidence that the impact declines as infrastructure investment deepens, and, with the high level of infrastructure provision in most OECD countries at present, the gains will be smaller than in the past. In general, new infrastructure spending projects will have stronger supply-side effects if they are carefully chosen on a project-by-project basis with the help of a cost-benefit analysis where benefits include positive externalities for the economy as a whole.⁴ But even in cases where external effects have been exhausted, infrastructure spending may well have more positive long-term supply effects than many other instruments to stimulate demand. Nonetheless, there may be a dearth of new infrastructure projects with reasonable returns that can be implemented at short notice. Accelerating necessary maintenance expenditures is probably the surest immediate way to improve infrastructure where profitable new projects cannot be launched readily.

Increased public spending on education and training could raise potential output, though the effects are generally realised only over a long horizon. However, a focus on infrastructure for education could provide some short-term stimulus and also enhance longer-term growth by helping to improve the support facilities for better education.

Perhaps a more promising area for public expenditure is to focus on short compulsory training courses in the context of active labour market policies (ALMP). Participation in such training can increase skills and re-tool workers with new skills,⁵ which may facilitate reallocation of workers between sectors and firms in the short run and raise GDP. Also, it may support activation policies and serve as a test on the work-availability and willingness-to-work requirements in unemployment and other benefit systems, thereby countering work disincentives embedded in such programmes. However, for such ALMP programmes to have favourable supply-side effects, they have to be carefully designed.

Tax reform

Fiscal expansion can also be used as a first stage in a tax reform to reduce the efficiency cost of taxation. As discussed in Chapter 5, there is evidence of a “tax and growth” ranking, whereby corporate income taxes are most harmful for long-term growth, followed by labour income taxes and then consumption taxes, with taxes on immovable property the least harmful to long-term growth.⁶ Unfortunately, this hierarchy is unlikely to provide guidance to short-term prioritisation of tax measures because the most harmful taxes from a long-term perspective do not typically have particularly large demand-side effects. Thus, cutting the most distortive taxes, on corporate income, may not be effective in stimulating demand in current circumstances, as companies may already pay little or no tax due to a sharp reduction in income and savings on future tax bills might not be reflected in share prices due to the turmoil in stock markets. However, one potential shift of taxation that could be of help in the short run is to reduce the income and social security taxes on lower-income workers, who are more likely to spend the additional income they receive than those with higher incomes. Also, time-limited fiscal support to encourage energy efficiency is likely to stimulate demand in the short-run and have beneficial environmental effects in the longer term.

Benefits

Focusing fiscal reflation on increasing the generosity of benefits to households runs the risk of undermining the supply potential of the economy in countries where such policies are already prominent. For example, lengthening the maximum duration of unemployment benefits and raising benefit levels (especially for low-income individuals) may raise aggregate demand, but the evidence shows that unless they are temporary such measures will delay the return to work of unemployed individuals and have adverse effects on labour market performance in the long term. Easing entitlement conditions to disability or early retirement benefits, as has often been the case when labour participation fell in the past, would similarly increase demand in the short run but at the high cost of permanently reducing the supply potential of the economy.

Subsidies

Introducing or increasing government subsidies to producers may also undermine the long-term production capacity of the economy if these go beyond limiting adjustment costs and postpone necessary restructuring, even if they increase aggregate demand in the short term. If subsidies to individual sectors or companies are made conditional on progress in industrial restructuring, the economic cost of such programmes will be reduced. However, such subsidies can act like protectionist measures, and may provoke retaliation in other countries and a global reduction in growth potential. To avoid the

potentially damaging effects, it is therefore necessary for any sectoral support to be accompanied with a clear exit strategy, outlining the maximum duration of support and how it will be scaled back.

Notes

1. See Chapter 7 of the 2007 issue of *Going for Growth*. The political economy of structural reforms is discussed in greater detail in Duval and Elmeskov (2005), Høj *et al.* (2006), IMF (2008) and Duval (2008). It is also the subject of ongoing work at the OECD.
2. In principle, reforms that increase human capital might also make families more willing to increase their current spending, but in practice using future human capital as collateral is difficult.
3. Indeed, future reforms may put some restrictions on asset-backed lending to households.
4. For example, an assessment of the benefits of investment in information and communication technologies should incorporate secondary benefits (*e.g.* via on-line education and teleworking) and tertiary benefits (*e.g.* more efficient organisation).
5. See *OECD Employment Outlook 2006*.
6. In the long run, the tax mix will also have an impact on the degree of automatic stabilisation provided by public finances.

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PART I

Chapter 2

Structural Policy Priorities 2009: An Overview

Until the present downturn, there had been an improvement in the pace of convergence in GDP per capita of OECD countries relative to the best performing countries. Nevertheless, underlying performance weaknesses remain in many countries. This chapter provides an overview of broad long-term trends in economic performance and an updated set of policy priorities that have been identified in each country to address specific performance weaknesses. Many of the policy priorities that were deemed important two years ago still remain important in 2009. In particular, an emphasis on productivity-enhancing reforms remains, especially for the lower income OECD countries, with an increased emphasis on measures that enhance human capital. Although labour utilisation improved until recently in many countries, reforms of tax and benefit systems are identified as priorities in a large number of them.

Introduction

The objective of structural reform is to increase welfare. Welfare includes material standards of living as well as value of leisure, inequality of income, use of non-renewable resources and environmental services. Many of these aspects of welfare are difficult to measure and are not available on a timely basis. This report focuses on GDP per capita as its principal measure of material living standards. As previous editions of *Going for Growth* have demonstrated, there is a close relationship in most cases between GDP per capita and broader, though less timely, measures of economic well-being.

Differences in GDP per capita across OECD countries reflect in part different structural policy settings. Relatively low income per capita and a failure to converge towards the highest-income countries can be signs of policies not being as growth-friendly as they could be. Successive empirical studies by the OECD and beyond have sought to identify the policy levers that influence GDP per capita and its growth. As part of these exercises, indicators have been developed that summarise performance in key components of GDP per capita and the stance of related policies in a consistent way across countries and over time.

As in the 2005 and 2007 *Going for Growth* assessments, this chapter employs OECD indicators and studies to identify policy priorities to raise GDP per capita based on international benchmarking of performance and policies. Although other international organisations identify country-specific policy recommendations to improve economic performance, the process used to derive the *Going for Growth* policy priorities is unique (Box 2.1). Five policy priorities are derived for each OECD member country and the European Union, following a standardised approach described in Annex 2.A1. This chapter provides an overview of the policy priorities that have been identified to address specific performance weaknesses as well as broad trends in long-term growth performance over the recent past. The policy priorities are discussed in greater detail in the country notes in Chapter 3; the policy indicators used for benchmarking are presented in Chapter 4.

Box 2.1. How does *Going for Growth* differ from country priority setting by other institutions?

The *Going for Growth* exercise applies a systematic international benchmarking framework for all OECD member countries that relies mostly on objective policy and performance indicators that have been linked econometrically (see Annex 2.A1). This horizontal structural surveillance exercise supplements the country-specific surveillance that is reported in *OECD Economic Surveys*. While the *Going for Growth* approach is specific in many respects, several international organisations periodically carry out some types of related policy priority-setting for their member countries. These go beyond countries' own priority assessments, and include:

- The European Commission's *Lisbon Assessment Framework (LAF)*. This framework (first published in September 2008) was developed to assess progress by European Union member countries toward

Box 2.1. How does Going for Growth differ from country priority setting by other institutions? (cont.)

the Lisbon targets. Its methodology takes inspiration from the *Going for Growth* exercise (including the use of international benchmarking), and it is also grounded in economic analysis linking policy with GDP-per-capita performance. The methodology considers growth rates in addition to income levels in identifying priorities, includes a broader set of policy areas (such as the underlying strength of public finances) and covers some policy domains where policy indicators are not available. It does this by relying more heavily on performance indicators. Moreover, the procedure imposes no limit on the number of policy priorities that can be determined for each country. The results derived from the assessment are intended to help underpin the policy priorities identified by the Commission and are published in the annual progress reports on the Lisbon Strategy.

- *IMF Article IV reports and Financial Sector Assessment Program (FSAP) assessments.* These reports and assessments are produced as part of the IMF's monitoring of the international monetary system and the economic and financial policies of its members. The Article IV reports provide an examination of country-specific policy developments, with a focus on risks to stability and short-term growth. The FSAP assessments are carried out as part of the Financial System Stability Assessments (with the World Bank) and focus on strengths, risks, and vulnerabilities of financial systems in member countries and financial sector development needs. These exercises tend to be focused on relatively short and medium-term policy issues.
- *World Bank Country Assistance Strategies.* These Strategies are negotiated plans that rely upon discussions with active borrowing governments, and use as their starting point a country's own development plans. They are then developed in consultation with country authorities, civil society organisations, and other stakeholders. Country strategies are focused on areas where the Bank feels it has a comparative advantage in the context of donor activities.
- *World Bank Doing Business Indicators.* The Doing Business exercise produces indicators that can be used to rank countries in terms of the costs a typical firm faces due to government regulations. The indicators are based on expert judgement, and can be used to prioritise areas for reform.*

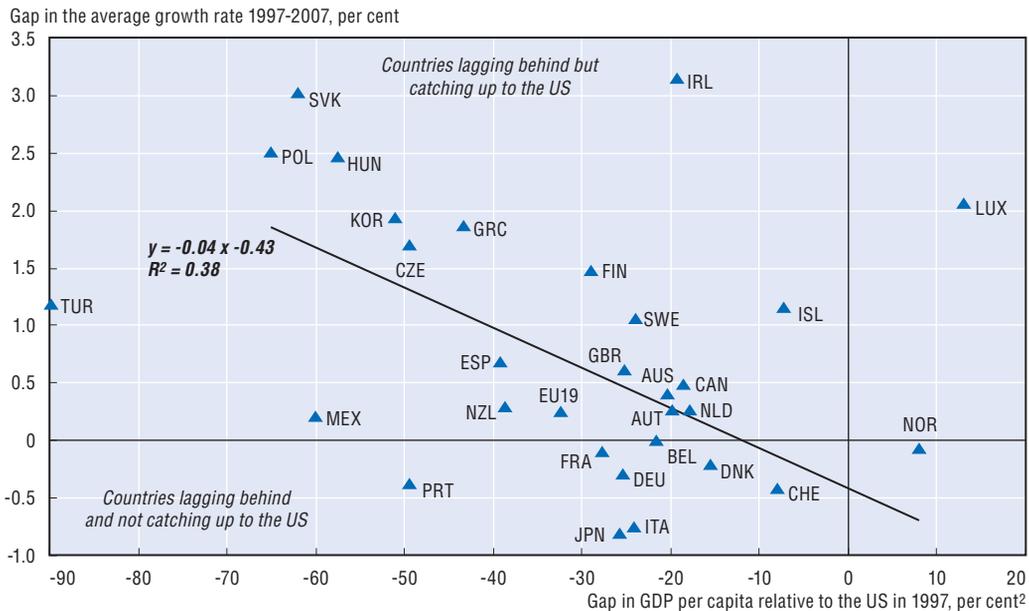
The consistent approach of the *Going for Growth* exercise across a wide range of structural policy areas is what distinguishes it from most other policy priority-setting exercises. While many organisations carry out reviews of policies in specific areas (including the OECD, which carries out focused policy reviews in areas such as agriculture, education, environment, innovation, investment and regulatory policy), the relative breadth of the present exercise is also distinctive. It relies upon more in-depth work done by the OECD in specific areas, and is complemented by work on macroeconomic stability that is reported in the semi-annual *OECD Economic Outlook*.

* Other organisations such as the UNDP (Human Development Index) and the World Economic Forum (Global Competitiveness Index) produce indicators that can be used to rank countries in specific policy/performance areas.

Growth performance in OECD countries: Key stylised facts

Twenty-one OECD countries and the European Union (EU19) made progress in converging toward the comparison country, the United States, over the ten years to 2007 (Figure 2.1).¹ This compares with the ten-year record two years ago, when there were only 18 countries in the convergence category, and the European Union was diverging slowly. The convergence was driven by an increase in labour utilisation in Europe, and a downward shift in productivity growth in the United States at a time when it recovered in Europe. However, while the fall in productivity growth in the United States appears to be partly structural, it is too early to tell whether the recent stabilisation in underlying trend

Figure 2.1. **GDP per capita levels and growth rates**
Gap vis-à-vis the United States¹



1. The average growth rate of GDP per capita is calculated on the basis of volume data from national accounts sources. The level of GDP per capita is calculated on the basis of current PPPs. Ireland, Luxembourg and Turkey are detected as statistical outliers using the method of Hadi (1994). The regression line is estimated on individual countries excluding these outliers.
2. In the case of Luxembourg, the population is augmented by the number of cross-border workers in order to take into account their contribution to GDP.

Source: OECD, National Accounts Database; OECD, Labour Force Statistics Database and OECD Economic Outlook, No. 84, Vol. 2008/2.

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productivity growth in Europe is durable (Box 2.2). Only a few countries are catching up rapidly: besides Ireland,² where a sharp downturn may have put at least a temporary halt on convergence, only the countries with levels of GDP per capita that are less than one-half of the United States' (i.e. Hungary, Poland and the Slovak Republic) converged at a rate that exceeds 2% per year.³ The ongoing financial crisis and its impact on activity may make it harder to discern convergence patterns in the years to come.

The 2007 gaps in GDP per capita vis-à-vis the comparison country can be broken down into contributions from labour productivity and labour utilisation (Figure 2.2). This decomposition (which is not dependent on the choice of the numéraire) shows that the countries can be divided into three groups, depending on the relative contributions:

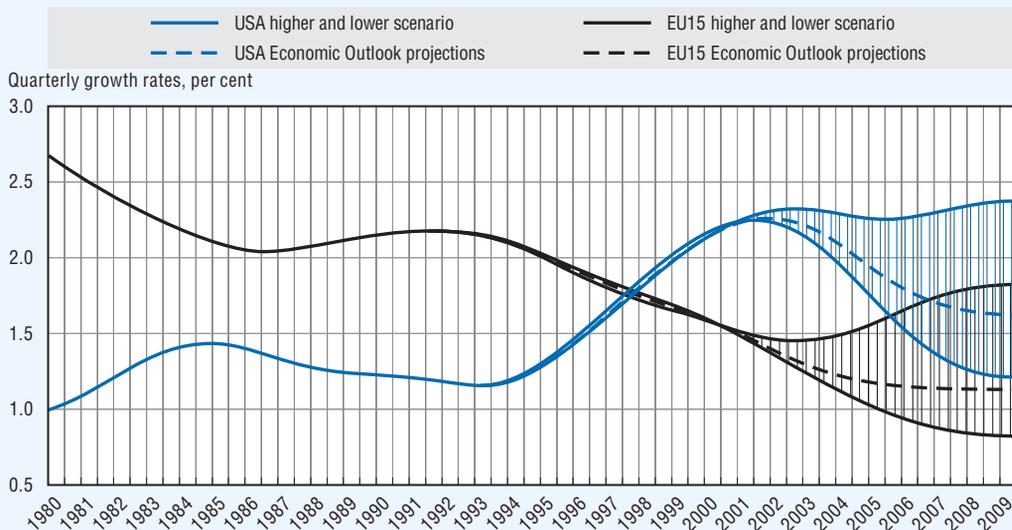
- **Mostly a productivity gap:** The gap for the ten lowest-income OECD countries is accounted for primarily by the effect of low labour productivity, given their lower levels of physical and human capital per worker, although the five lowest-income countries also have a substantial gap in measured labour utilisation. Among countries with higher incomes, for Australia, Canada, Iceland, Japan and Switzerland, the income gap vis-à-vis the comparison country reflects primarily productivity shortfalls.

Box 2.2. The shift in EU-US productivity growth performance: a significant break-point?

The sharp slowdown in US labour productivity growth over the past few years and the more recent stabilisation of labour productivity growth in Europe (before the crisis) raise important questions about future convergence paths. More precisely, annual US productivity growth had fallen to slightly above 1% in 2007 compared with around 3% in 2004 while that of the EU19 averaged about 1¼ per cent over the same period.

The growth of labour productivity is highly cyclical, which makes it important to analyse trend rates of growth in order to determine its sustainability. If productivity growth until 2009 evolves in line with projections in the OECD *Economic Outlook 83*, the slowdown in actual US labour productivity will be characterised as being in part cyclical, with the underlying growth trend (derived using a statistical filter) ½ percentage point off the peak reached in the early 2000s. At the same time, recent actual growth of European labour productivity may indicate that the decline in underlying productivity is coming to an end rather than representing an inversion of the trend. However, the range of uncertainty is wide for both estimates (see figure below).

Estimates of underlying growth rates in US and EU labour productivity

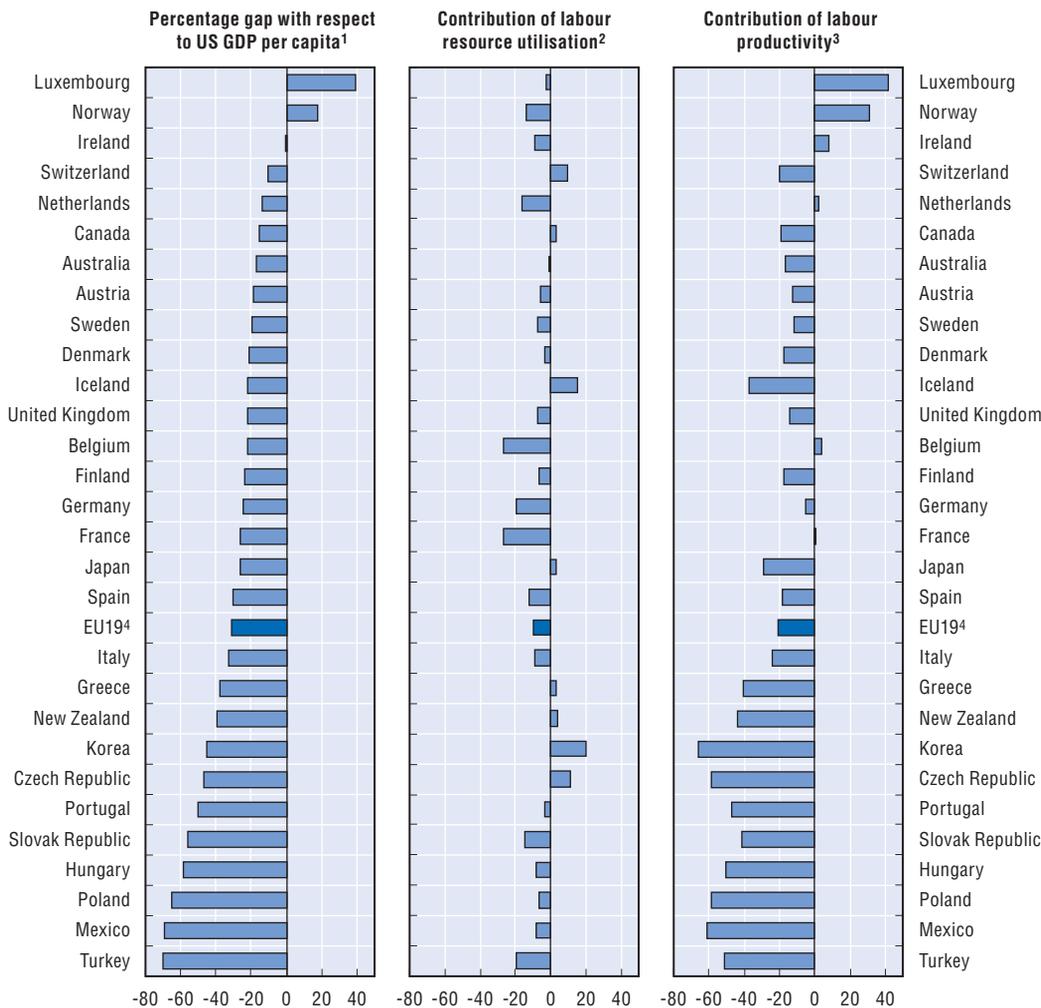


Note: Labour productivity is defined as GDP per hour worked. A Hodrick-Prescott filter is used to identify the trend and cyclical components for labour productivity growth, based on quarterly historical data through mid-2008 and a time-series forecast through end-2009. The upper and lower bound scenarios are based on 95% confidence intervals around a central scenario (not shown).

Source: Turner and Boulhol (2008).

A statistical breakpoint test suggests that while the trend increase in US labour productivity growth in the mid-1990s cannot be characterised as a decisive statistical break, the *difference* between United States and European growth rates indeed shows a significant break in 1995. While this breakpoint may be partly a result of the slowing down of the catch-up process of Europe with the United States, it also appears to be tied to shifts in the pattern of growth *within* Europe.

Labour productivity growth has diverged dramatically across European countries over the past two decades, with the cross-country variance in growth rates more than doubling over this period. Part of this divergence appears to be attributable to differential investments in information and communications technologies (ICT), with European countries that are more ICT-intensive enjoying higher productivity growth. Such a development also suggests that government policies made an important difference to this outcome, as earlier OECD studies (see *Going for Growth 2007*) have shown ICT investments to be driven heavily by regulation in product and labour markets.

Figure 2.2. **The sources of real income differences, 2007**

1. Based on 2007 purchasing power parities. In the case of Luxembourg, the population is augmented by the number of cross-border workers in order to take into account their contribution to GDP.

2. Labour resource utilisation is measured as total number of hours worked per capita.

3. Labour productivity is measured as GDP per hour worked.

4. EU19 is an aggregate covering countries that are members of both the European Union and the OECD. These are the EU15 countries plus the Czech Republic, Hungary, Poland and the Slovak Republic.

Source: OECD, National Accounts Database; OECD, Economic Outlook 84 Database, and OECD (2008), *Employment Outlook*.

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- *Mostly a labour utilisation gap*: The income gaps of Belgium, France, Germany and the Netherlands can be mostly accounted for by low labour utilisation. This divergence reflects a range of factors, including relatively lower working hours, lower participation rates for older workers and higher unemployment.⁴
- *Both significant productivity and labour utilisation gaps*: For the European Union, as well as the Nordic EU countries, Spain and Italy, the income shortfall reflects gaps with the United States in both productivity and labour utilisation.

Areas of policy priorities

In order to address countries' performance weaknesses in terms of labour productivity or utilisation, structural policy priorities have been selected on the basis of standardised criteria and expert judgement, as in past exercises (see Annex 2.A1 for methodology). The summary of the policy priorities that follows covers both measures that are aimed at correcting weaknesses in productivity performance and those intended to improve labour utilisation (the priorities are listed in Annex 2.A2). However, it should be kept in mind that a policy reform selected with a view to improve performance in one area may also have beneficial effects in the other area, though the opposite can also be the case such as when reform to raise employment of low-skilled workers leads to lower average productivity because of compositional effects (see Chapter 8).

The policy priorities determined in this edition of *Going for Growth* are broadly similar to those reported in the 2007 edition, with 86% of the previous 155 policy priorities retained in all or in part; 27% of these priorities (corresponding to 23% of the total) were broadened, refocused, narrowed or merged.⁵ Of the 21 priorities (14%) that were replaced, sufficient policy action was taken on 13 of these to drop them based on reforms undertaken (Box 2.3), with the remaining 8 replaced based on a re-consideration of newly available policy-performance evidence. While the results of this exercise reflect some reform progress, they also imply that much work is still left to be done.

Box 2.3. Reforms resulting in 2007 policy priorities being dropped in *Going for Growth* 2009

	2007 priorities	Action taken
Hungary	Reduce shadow-economy activities	The campaign against shadow activities intensified, including stricter screening. Healthcare coverage has been tied to social security contributions to bring workers into registered activities.
Italy	Improve the framework for risk taking	New codes were enacted to improve minority shareholders' rights and financial market transparency.
Japan	Encourage innovation	The government announced the "Innovation 25" plan to encourage innovation up to 2025 by enhancing the mobility of researchers, expanding the use of competitive research grants and extending the length of visas for foreign researchers.
Mexico	Reform the tax system	A tax reform aiming at broadening the tax base and at the same time improving spending efficiency was approved.
Netherlands	Strengthen competition in network industries	Full ownership separation of the energy distribution networks and supply companies was implemented from July 2008. Competitive tenders were opened up public transport activities to private operators.
New Zealand	Facilitate access to childcare for working parents	Since July 2007, subsidies provide up to 20 hours per week early childhood education for three and four-year-olds on an opt-in basis.
Norway	Complete the pension reform	In 2007, a new White Paper on pension reform was presented to promote actuarially neutral old-age pensions in the PAYG system, with a flexible retirement age from 62 onwards. The proposals in the White Paper were implemented with minor changes in 2008.
Poland	Promote competition in professional services and telecommunications	The telecommunications regulator made progress in boosting competition.
Portugal	Continue public administration reform	The reorganisation of the public administration is underway. An employee mobility scheme is in operation. The implementation of a new system for careers, contracts and pay is starting, introducing elements of performance-related salaries.

Box 2.3. Reforms resulting in 2007 policy priorities being dropped in Going for Growth 2009 (cont.)

	2007 priorities	Action taken
Slovak Republic	Strengthen law enforcement	The government passed a new law making the requirement to publish public procurement notices more widely applicable.
Spain	Reform the pension system	The reform that became effective in early 2007 introduced additional restrictions to partial retirement, an increase in the effective contribution period to acquire pension rights and stronger incentives to continue work at old ages. It also extended survivors' pension rights to unmarried couples.
Switzerland	Remove non-tariff trade barriers	In 2008, the government adopted a simplified procedure that took a further step towards to the application of the "Cassis de Dijon" principle.
United Kingdom	Improve work incentives for low-paid parents and second earners	The 2007 Budget announced an increase in the threshold for the Working Families' Tax Credit. The government also initiated public consultations on a proposal to introduce more stringent work testing for lone parents receiving out-of-work benefits.

Policies to improve labour productivity performance

Labour productivity is a critical component of economic growth, and can be stimulated with a variety of policies that facilitate investments in physical, human and intangible capital, and reduce inefficiency in their use and allocation. Relevant policies in this domain include removal of unduly anti-competitive product market regulations, reduction of agricultural subsidies and a variety of other policies that would strengthen competition and enhance trade and financial openness, as well as reform of education systems to improve the skills of the workforce in the longer term. The largest number of identified policy priorities in this area relate to product market regulation (including sectoral regulation), although their number has decreased considerably over time, as discussed below. At the same time, the number of policy priorities in the area of education has tended to rise. This shift partly reflects the progress that has been made in reducing anti-competitive market regulation, especially in members of the European Union, but also stems from a better understanding of the essential role of education policies in promoting long-term growth.

Product market regulation

Regulatory barriers to competition may reduce the pace of catch-up to the most efficient economies, by *inter alia* interfering with business entry and exit decisions, reducing the extent of innovation activity and creating distortions in market structure and incentives. While the overall stance of product market regulation has converged considerably over the past decade across OECD countries (see Chapter 7), there are areas of regulation that are restrictive in nearly all economies. As a consequence, policy priorities in the area of product market regulation were still identified for all but three OECD economies (Finland, Sweden and the United Kingdom).

The OECD economies with the lowest productivity levels also have the highest administrative burdens on business: the Czech Republic, Hungary, Korea, Mexico, Poland, Portugal and Turkey. The dismantlement of these economy-wide barriers was identified as a priority, as they substantially limit growth. A few countries still retain distortionary FDI

restrictions or other arrangements that limit the benefits of spillovers and knowledge flows, including Canada, Iceland, Japan, Korea and Mexico.

The most broad-ranging recommendations for product market regulation relate to the European Union as a whole, where barriers to trade remain in many service sectors, despite the considerable progress that has been achieved in moving towards a single market in goods.⁶ The 2006 Services Directive, which is due to be fully transposed into law in 2009, should ease barriers to cross-border establishment, although some service sectors are exempt and it leaves some anti-competitive national laws in place. It is a priority for the European Union to ensure that member states implement the directive and consider common standards where mutual recognition is difficult.

Another priority area for the European Union is to make further progress to improve the operation of network sectors, where there are considerable efficiency gains still to be realised, especially in energy, ports and postal services. A number of EU countries need, as a matter of priority, to further reform these and other network sectors, including Austria, the Czech Republic, Germany, Greece, Hungary, Ireland, Italy, Portugal and the Slovak Republic. In railways, stronger competition is identified as a priority for Austria and Portugal, while in telecommunications, further regulatory reforms are a priority in Greece, Hungary, Ireland and Portugal. In some network sectors more competition through greater entry is needed, while in others, privatisation is considered to be the most promising means to improve efficiency, once financial markets return to their normal functioning.

Outside of the European Union, a range of countries have network sectors where reforms are seen to be a priority. These include Australia, Canada, Iceland, Japan, Korea, Mexico, Norway, New Zealand, the Slovak Republic, Switzerland and Turkey, with reforms of their energy sectors the most common priority, although reforms of transport and water distribution are also important. Restructuring of public enterprises in network sectors is also called for in several countries, notably Iceland, Mexico and Norway.

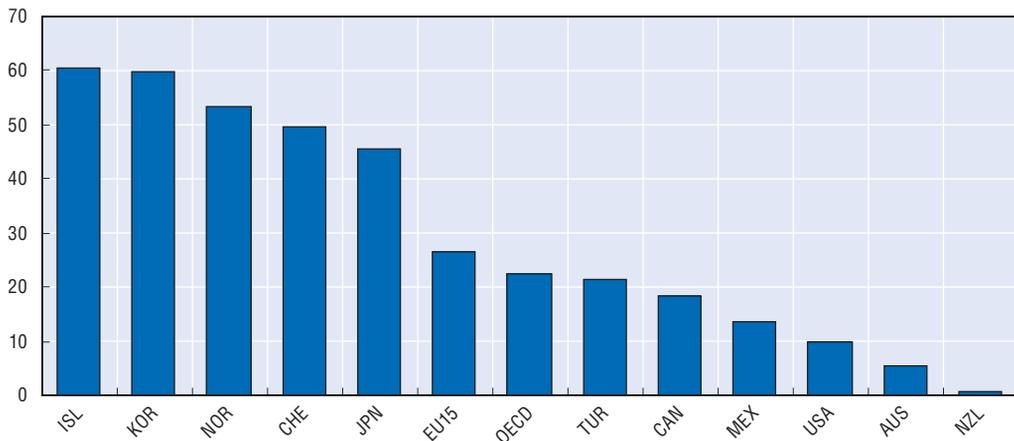
Further reforms of inherently competitive activities, such as retail distribution and professional services, are identified as priorities in many countries. For retail distribution, the priorities typically refer to easing entry for larger stores and/or liberalising opening hours (Austria, Belgium, Denmark, France, Hungary, the Netherlands and Spain). In some cases they cover just the national level but often they also cover the regional or local level, where planning rules can interfere with opening of more efficient outlets. Easing of restrictions in professional services (accounting, architecture, legal and business services) was considered to be a priority in a number of EU countries (Austria, France, Germany, Hungary, Italy and Luxembourg), as well as across provinces in Canada.

An area of particular importance for reform, as revealed by the recent financial crisis, is the regulatory and supervisory framework of the financial system, with a substantial overhaul being a priority for the United States and Iceland. For the European Union, one of the five policy priorities is to better integrate its financial markets and improve financial stability arrangements. The financial sector is an area where much reform will be required in the coming years.

Agriculture

Another sector in need of further reform in many OECD countries is agriculture (see Figure 2.3). The Doha round of trade talks has, so far, failed to conclude an agreement that would reduce trade-distorting support for agricultural products. However, farm

Figure 2.3. **Producer support estimates for agriculture, 2007¹**
Percentage of gross farm receipts



1. The monetary value of transfers from consumers and budgetary payments to producers. Provisional data.
Source: OECD (2008), *Agricultural Policies in OECD countries: At a Glance*.

StatLink  <http://dx.doi.org/10.1787/533837814665>

incomes have increased as a result of high world food prices which reduce the market support element of producer support measured relative to farm receipts. The hike in world food prices was in part driven by mandates requiring higher shares of biofuels in transport fuels and other support, thereby providing indirect support to agriculture and intensifying distortions in agricultural markets.⁷ At the same time, there are growing doubts about the efficiency or even the effectiveness of such policies – at least given current biofuel technologies – in achieving their objectives of cutting greenhouse gas emissions and reducing reliance on fossil fuels.

Though they have fallen, still relatively high world food prices offer a good opportunity for countries to revamp their farm policy, and reform of agricultural support is identified as a priority for the United States, the European Union and Japan, as well as for Iceland, Korea, Norway and Switzerland. The level of support should be reduced and further de-linked from production, especially in Korea, Japan and the United States. Also, subsidies and mandates for biofuel use in the United States and the European Union should be withdrawn, and trade barriers against more efficient biofuel suppliers should be eliminated.

Human capital

Education policies support human capital accumulation, which is an important determinant of long-term growth performance. Early education helps to broaden opportunity and stimulate subsequent learning, while secondary and tertiary education improves workforce skills and enhances absorptive capacity. The latter policy also supports innovation, a particularly important source of productivity growth. While much action was registered in this area in the 2008 edition of *Going for Growth*, the number of policy priorities in this area has tended to increase. Recommendations cover a range of areas, including:

- **Pre-primary education.** Partly with the aim of increasing the future attainment and performance of disadvantaged students, it is a priority in Australia, Denmark, Germany, Ireland, Poland, Switzerland and the United Kingdom to strengthen the quality and content of their early education programmes, as well as to increase enrolment rates.

- *Primary and secondary education.* A range of different remedies are recommended, based to a large extent on PISA scores and policies associated with strong performance:⁸ greater autonomy and accountability in Iceland, Luxembourg and the United States; more testing in Spain and Sweden; improvements in teacher training and quality in Greece, Norway, New Zealand and Portugal; greater funding and accountability in Mexico, Portugal and Turkey; and reform of vocational training in Hungary, Portugal and the Slovak Republic.
- *Tertiary education.* Policies to improve higher education performance and output are a priority for Austria, the Czech Republic, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Poland, the Slovak Republic, Sweden, Switzerland and Turkey. In most cases, these include introduction of, or increases in, tuition charges to increase resources for higher education and raise incentives for timely study completion. Higher tuition fees are to be combined with increased availability of student loans with income-contingent payback to ensure that financial constraints do not discourage tertiary studies.

Other policy areas

A wide range of additional policies that could improve labour productivity, and thereby raise GDP per capita, are also identified as policy priorities:

- *R&D spending and innovation.* Interactions between business and higher education institutions are an important input into innovation, and policies to enhance cooperation with universities are recommended for Italy, Korea and New Zealand. In addition, because of the potential spillovers from R&D, greater support for it through tax incentives and focused government funding is recommended for Ireland, Italy, Korea and New Zealand.
- *Improve public infrastructure.* Public infrastructure can in some cases have large effect on productivity, as discussed in Chapter 6, and is found to be in need of greater levels of investment in Ireland, New Zealand, Poland and the United Kingdom.
- *Planning policies.* Policies related to the allocation of land are problematic in several countries and corrective action is recommended with respect to fees and planning or zoning regulations in the Netherlands, Poland and the United Kingdom. Restrictive policies in this area can also inhibit labour mobility.
- *Government and governance reforms.* Recommendations to improve public management practices and incentives were made for the Czech Republic, Hungary, Iceland and the United Kingdom. The rule of law in particular could be strengthened in Mexico.
- *General taxation.* As discussed in Chapter 5, poorly structured tax systems can create unnecessary distortions that reduce productivity. It is recommended as a priority for Canada, Portugal, Japan and the United States to broaden tax bases, shift taxation towards consumption taxes and/or reduce corporate taxes.
- *Restrain health care costs.* Excessive spending on health care wastes resources that could be put to more effective use, and funding for such spending may involve efficiency costs. For example, it may also have adverse effects on labour market performance by increasing non-wage labour costs. Raising health care efficiency is seen as a priority for the Czech Republic, New Zealand, Switzerland, the United Kingdom and the United States.

Policies to improve labour market performance

Policies to support labour utilisation have important direct effects in enhancing the productive capacity of the economy, and they are found to be a priority in virtually all OECD countries.⁹ Moreover, the number of priorities have increased in this area over time, especially in the area of labour market regulation, as a result of the relatively sluggish pace of reform. In Continental European countries especially, and notwithstanding improvements in performance in recent years, labour force participation rates, particularly among older workers, and in some cases women, are comparatively low; unemployment rates are also high and annual hours worked are short. In other OECD countries, hours worked can be low, even if participation rates are high.

Average and marginal taxation of labour income

Labour taxes can act as a strong deterrent to labour force participation¹⁰ and often have a particularly negative effect on weekly hours worked of second earners (see Chapter 5). Moreover, and especially when combined with rigidities in take-home pay, they may also reduce labour demand. To reduce the efficiency costs of taxation, it is a priority to reduce overall labour tax burdens, by themselves, or in combination with social security contributions, in Belgium, the Czech Republic, Finland, Germany, Greece, Hungary, Poland and Turkey; furthermore, cutting marginal or marginal effective tax rates is a priority in Australia, Austria, Denmark, Finland, Italy, the Netherlands, Norway and Sweden. To ensure that such tax cuts do not destabilise public finances, and despite possible dynamic effects on revenues, priorities in this area are generally accompanied with recommendations to finance the resulting loss in revenues, including through broadening of tax bases and shifts towards taxation of consumption.

Social benefits

An important area of concern for labour utilisation is the disincentive for individuals to remain in the labour force at older ages. The structure of pension systems, in particular how longer working periods and shorter retirement periods influence the level of pension benefits, in addition to the availability of early-retirement schemes, have an important effect on decisions to continue work.¹¹ Reforms that pursue actuarial neutrality are needed in order to eliminate disincentives to work. Even though reforms have taken place in some of the countries, reducing disincentives in the retirement systems is a priority in Austria, Belgium, Finland, France, Greece, Luxembourg, the Slovak Republic and Turkey.

The tightening of other early exit routes from the labour market has coincided with an increase in disability (and sickness) benefit recipients in a number of countries and the stock of benefit receivers remains high, despite measures intended to control the inflows. Corrective measures in this area are a priority in Australia, Denmark, Hungary, the Netherlands, Norway, Sweden and the United Kingdom. More broadly, the unemployed need to be given stronger incentives to work in Australia, Canada, Belgium, Finland, Luxembourg, the Netherlands and the Slovak Republic. The identified priorities include providing better services for job search and training, as well as restructuring benefit schemes to impose duration limits or reductions of support over the duration of an unemployment spell.

Tax policies and support for childcare can have a strong effect on women's participation in the workforce, as well as their working hours. Reducing impediments to

female participation, especially through better availability of childcare, is identified as a priority in Germany, Ireland, Korea, the Slovak Republic and Switzerland.

Labour market regulation and wage policies

Excessive job protection reduces the dynamism of the labour market, damaging productivity and having adverse effects on the employment of certain groups. The modest changes in job protection in recent years have come through easing of regulations on temporary contracts and exclusions of certain groups. Virtually no change has occurred for permanent contracts. As a result, a segmentation of the workforce has emerged in a number of countries, with persons on permanent contracts enjoying a high degree of security and persons on revolving fixed-term contracts suffering from both insecurity and reduced human capital investment (as well as, in some countries, reduced access to credit). It is a policy priority for many OECD countries to harmonise and relax protection of permanent contracts *vis-à-vis* temporary contracts, including in the Czech Republic, France, Germany, Japan, Korea, Luxembourg, the Netherlands, Sweden and Spain. The uncertainty concerning severance and compensatory payments constitutes a separate barrier to hiring and should also be reduced, especially in France and Spain. Overall job protection needs to be liberalised across-the-board in Portugal and Turkey.

A variety of institutions can limit the geographical mobility of the labour force, which also impedes matching of jobs to skills. In the European Union as a whole, greater pension scheme portability is needed, while in Denmark, Poland, the Slovak Republic, Sweden and Spain in particular, moves are required to reform benefit and housing policies in order to improve labour mobility across regions.

Minimum wages that are excessively high, either on their own or in conjunction with non-wage labour costs, can further limit the number of jobs that are suitable for the young and low-skilled. In order to address this concern, France, Greece, Luxembourg and Turkey should limit the increase in their minimum wages to help these workers in finding suitable employment.

The cost of labour can also be driven up by collective wage agreements, that at times are administratively extended to workers and employers who are not party to the original settlements, and which can lead to too high labour costs for some enterprises, sectors and regions. To make wages more responsive to local conditions, thus increasing employment at the local level, it is a priority to make wage setting more decentralised in Australia, Belgium, Finland, Italy and Spain.

The evolution of policy priorities since 2005

Over the course of the *Going for Growth* process since 2005, the composition of policy priorities has gradually shifted from productivity-augmenting priorities towards those that are more focused on labour utilisation, although the largest number of priorities remains associated with improving labour productivity (Table 2.1). The decrease in productivity-enhancing policy priorities has been driven primarily by progress in reducing anti-competitive product market regulations, with part of this decrease balanced by shifting priorities towards policies that enhance human capital. A larger shift has occurred towards priorities aimed boosting labour utilisation, notwithstanding improvements in labour market performance in recent years. Much of this shift has focused on priorities to reform labour market regulations while the number of priorities dealing with labour taxes and

Table 2.1. **Distribution of policy priorities by Going for Growth edition**

	2005	2007	2009
Productivity			
Product market regulation	47	39	38
Agriculture	7	7	7
Human capital	16	22	24
Other policy areas	28	23	21
<i>Total</i>	<i>98</i>	<i>91</i>	<i>90</i>
Labour utilisation			
Average and marginal taxation on labour income	12	11	13
Social benefits	27	31	27
Labour market regulation and collective wage agreements	16	18	20
Other policy areas	2	4	5
<i>Total</i>	<i>57</i>	<i>64</i>	<i>65</i>
Overall	155	155	155

social benefits has remained more stable, reflecting much slower progress in this area: a concern highlighted in previous work on the political economy of structural reform (see *Going for Growth 2007*).

More worrying, the number of previous policy priorities where action was sufficient for them to be dropped fell by more than half between 2007 and 2009, leaving three-quarters of countries in the most recent exercise with priorities in nearly the same areas as before, suggesting that the pace of progress slowed, over a period when economic performance was good. That said, the current crisis may well stimulate structural reforms, as discussed in the previous Chapter.

Notes

1. While the United States is used as the numéraire in the decomposition in Figure 2.1, the choice of policy priorities is based on an assessment of performance and policy settings relative to the OECD average, see Annex 2.A3.
2. In Ireland, the catch-up is more evident for output than for income per capita. The distinction is largely due to the large repatriation of profits from foreign-owned companies and terms-of-trade losses due to falling prices of domestically produced computers and related equipment.
3. The academic literature has found some support for long-run convergence of growth rates across countries, conditional on institutional settings, although the empirical evidence is weaker within the OECD, likely a result of the smaller set of countries (Mankiw *et al.*, 1992; Bernanke and Gürkaynak, 2001; OECD, 2003; Durlauf *et al.*, 2005).
4. This gap in labour utilisation would be even larger if more consistent data on hours worked were taken into account. According to estimates presented in *Going for Growth 2008*, consistently measured hours worked for the United States could be about 10% higher than elsewhere in the OECD. However, since official data on hours worked are typically derived in conjunction with national accounts estimates of output, they are used here, even if, in principle, the consistent data are more comparable across countries.
5. Of the 155 overall priorities (five priorities for each of the 30 OECD members and the European Union), 134 of the 2007 priorities (86%) were retained in all or in part, with 36 of these priorities broadened (19), refocused (11), narrowed (2) or merged (4). Twenty-one policy priorities were replaced. After the merger of four priorities (into two), this means that the current exercise contains 23 new priorities, of which 8 are based on indicators and 15 are based on country-specific expertise.
6. Progress reflects in part the concentration of EU competencies in product markets.

7. In the United States, minimum content requirements for biofuel use in gasoline are substantial and rising. The European Union as a whole has also set substantial mandates on the content of transport fuel, and several EU member states have set even higher targets.
8. These policies were discussed in detail in *Going for Growth 2008*.
9. Average labour productivity and participation are interlinked as a result of differences in the quality of the active and inactive workforce (see Chapter 8).
10. In some lower-income OECD countries, particularly Greece, Hungary and Turkey, high labour taxes reduce employment in the formal sector and contribute to maintaining resources in inefficient informal activities.
11. These policies were discussed in detail in *Going for Growth 2005*.

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ANNEX 2.A1

How Policy Priorities Are Chosen in Going For Growth

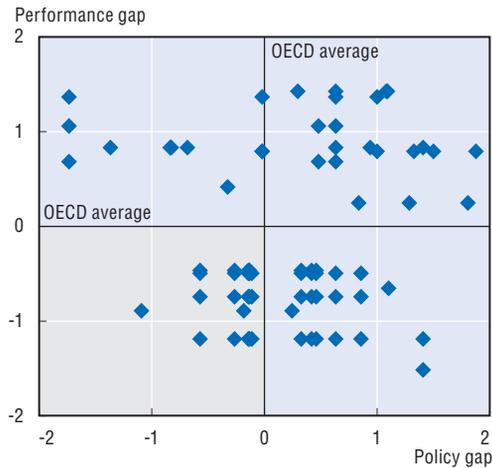
The *Going for Growth* structural surveillance exercise seeks to identify five policy priorities for each OECD member country and the European Union. Three of these policy priorities are based on a systematic benchmarking approach, using internationally comparable OECD indicators of policy settings and performance. The additional two priorities are often supported by indicator-based evidence, but may also draw on country-specific expertise. These two priorities are meant to capture any potential policy imperatives in fields not covered by indicators.

For the selection of the three indicator-based policy priorities, the starting point is a detailed examination of labour utilisation and productivity performance relative to the OECD average, so as to uncover specific areas of relative strength and weakness compared with other OECD countries. Each performance indicator is juxtaposed with the corresponding policy indicators, where OECD empirical research has shown a robust link to performance, to determine where performance and policy weaknesses appear to be linked. This evaluation process is carried out for each of the approximately 50 areas where OECD policy indicators provide coverage.

As an example, Figure 2.A1.1 shows, for a sample country, a scatter plot of pairings of policy indicators (on the horizontal axis) with corresponding performance indicators (on the vertical axis). Since many of the approximately 50 policy indicators are associated with more than one performance area, there are more than 100 potential pairings to be examined. The indicators of policy and performance are standardised by re-scaling them so that each has a mean of zero and a cross-country standard deviation of one, with positive numbers representing positions more growth-friendly than the OECD average. The scatter plot is thus divided into four quadrants, depending on whether a country's policy-performance pairing is below or above the average policy or performance score.

Candidates for recommendations thus fall into the lower left quadrant, where policy indicators and corresponding performance are *both* below average. In most countries there are more than three unique policy areas that qualify as potential priorities (for instance, Germany had 16 candidates in the 2009 exercise). When there are more than three candidate policy priorities, the list has been narrowed using a combination of country expertise with the following criteria: i) the estimated quantitative impact of reforms in the policy area on GDP per capita as determined in previous OECD analysis, ii) the normalised distance of the policy stance from the benchmark (the OECD average), and iii) recent trends in policy and performance. The limit on the number of priorities means that for some

Figure 2.A1.1. **Example of the selection of candidates for Going for Growth priorities**



Note: Points represent policy-performance indicator pairings.

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countries, obvious policy imperatives may not be identified as priorities because other priorities are deemed as more important.

The empirical research linking policy with performance includes a long series of panel studies on a large number of OECD countries carried out by the Secretariat. These studies include the *OECD Growth Study* (2003), the *OECD Jobs Strategy* (1994) and its reappraisal (OECD, 2006), and a wide range of other reports, which took inspiration and drew extensively on the academic literature.

ANNEX 2.A2

Structural Policy Priorities by Country and Performance Area

	Labour utilisation	Productivity
Australia	<p>Continue reform of disability benefit schemes to encourage work by existing claimants with substantial work capacity.</p> <p><i>Improve incentives for workforce participation by reducing marginal effective tax rates, especially for second wage earners.</i></p> <p><i>Preserve decentralised wage bargaining to maintain a close link between productivity and wage growth.</i></p>	<p>Promote competition in network industries by encouraging greater regulatory consistency and market integration across states.</p> <p>Improve early education to raise the efficiency of the labour force in the longer term.</p>
Austria	<p>Reduce disincentives to work at older ages by cutting fiscal subsidisation of early retirement and tightening eligibility criteria for disability benefits.</p> <p><i>Strengthen incentives to work and entrepreneurship by reducing marginal taxes on labour income.</i></p>	<p>Promote competition in network industries by reducing ownership restrictions and other barriers to entry.</p> <p>Raise graduation rates from tertiary education by giving more autonomy to universities to select students and set tuition fees.</p> <p><i>Promote competition in services by reducing statutory regulation of trades and professions, and abolishing compulsory chamber membership</i></p>
Belgium	<p>Reduce disincentives to work at older ages by phasing out remaining early retirement options.</p> <p>Reduce tax wedges on low-income workers to increase employment opportunities for this group.</p> <p><i>Reform the wage bargaining system so that wages better reflect local labour market conditions.</i></p> <p><i>Reduce unemployment benefits with duration to strengthen work incentives.</i></p>	<p>Promote competition in retail distribution by further easing regulation on zoning and opening hours.</p>
Canada	<p><i>Reform the employment insurance system by introducing a firm-level employer experience rating.</i></p>	<p>Reduce barriers to competition in network industries.</p> <p>Further reduce barriers to foreign ownership to facilitate transfer of new technology and management practices from abroad.</p> <p>Further reduce barriers to competition in professional services to increase labour mobility and efficiency.</p> <p><i>Reduce non-neutralities in the business tax system and move the tax base toward consumption.</i></p>
Czech Republic	<p>Cut the costs of employment protection legislation (EPL) for regular workers to stimulate hiring.</p> <p>Ease labour shortages by improving work incentives through further reforms of the tax-benefit system.</p>	<p>Raise funding for tertiary education by introducing tuition fees backed by student loans with income-contingent repayments.</p> <p>Improve the business environment by further streamlining administrative procedures for start-ups.</p> <p><i>Improve public sector efficiency by reforming health care and pension systems.</i></p>

	Labour utilisation	Productivity
Denmark	<p>Reduce marginal tax rates on labour income to cut disincentives to work longer hours.</p> <p>Refocus sickness and disability benefit schemes in order to encourage work by those with substantial work capacity.</p> <p><i>Reduce housing subsidies and abolish rent regulation to minimise housing market distortion and facilitate labour mobility.</i></p>	<p>Continue liberalising opening hours in retail trade and promote competition in publicly funded services.</p> <p><i>Improve educational achievement at early ages to raise efficiency of the labour force in the longer term.</i></p>
Finland	<p>Strengthen work incentives by further reducing the tax wedge on labour income.</p> <p>Phase out early retirement pathways to improve work disincentives at older ages.</p> <p>Strictly enforce job search requirements to reduce the incidence of long-term unemployment.</p> <p><i>Promote greater flexibility in centralised wage agreements to expand employment opportunities.</i></p>	<p><i>Reduce the university study times by improving incentives for students.</i></p>
France	<p>Stimulate labour demand for youth and the low-skilled by allowing for a relative decline in the minimum cost of labour.</p> <p>Reduce the duality of the labour market by cutting the costs of EPL for regular workers.</p> <p><i>Further reduce the implicit tax on continued work at older ages to raise employment of those above the age of 55.</i></p>	<p>Reduce regulatory barriers to competition in retail distribution and professional services.</p> <p><i>Extend the autonomy of universities to increase efficiency of tertiary education and increase funding by introducing a fee system backed by income-contingent loans.</i></p>
Germany	<p>Reduce social security contribution rates to strengthen work incentives.</p> <p><i>Reduce disincentives to full-time female labour force participation by moving to individual taxation of couples and improving access to child-care facilities.</i></p> <p><i>Ease employment protection legislation on regular jobs to promote regular employment.</i></p>	<p>Promote competition in professional services and network industries by reducing regulatory barriers to entry.</p> <p>Improve education outcomes by increasing participation in, and enhancing the quality of, early childhood care and education.</p>
Greece	<p>Reduce disincentives to work at older ages by further reforming the old-age pension system and tightening access to disability pensions.</p> <p>Reduce the tax wedge on labour income to strengthen work incentives.</p> <p><i>Stimulate labour demand for youth by introducing a sub-minimum wage for young people.</i></p>	<p>Promote competition in network industries by privatising energy and transport corporations and facilitate access to network services.</p> <p><i>Raise the quality of education through improvements in teaching quality and advanced technology at schools.</i></p>
Hungary	<p>Reduce the tax wedge on labour income to strengthen work incentives.</p> <p>Continue reform of disability benefit schemes to encourage work by those with substantial work capacity.</p>	<p>Ease business regulations by simplifying entry and exit procedures to encourage competition.</p> <p><i>Make the education system more efficient to raise overall human capital.</i></p> <p><i>Promote public sector efficiency.</i></p>
Iceland		<p>Improve education outcomes by strengthening school accountability and improving teacher quality.</p> <p>Reduce producer support to agriculture.</p> <p>Lower barriers to entry in the electricity sector and reduce foreign ownership restrictions in the fisheries and energy sectors to increase competition.</p> <p><i>Accelerate performance measurements and management reforms in the public sector to raise public-sector efficiency.</i></p> <p><i>Reform financial sector regulation and supervision.</i></p>

	Labour utilisation	Productivity
Ireland	Strengthen work incentives for women by greater targeting of child support.	Strengthen competition in network industries by facilitating entry and access to network components. Enhance R&D spending and innovation by ensuring that government support is more concentrated and by improving the links between universities and the private sector. <i>Continue to upgrade infrastructure to reduce bottlenecks.</i> <i>Raise educational standards by extending the availability of pre-primary education.</i>
Italy	Reduce the tax wedge on labour income, especially for low-income workers, to strengthen work incentives. <i>Decentralise wage bargaining in the public sector to promote greater flexibility in wage setting more generally.</i>	Reduce public ownership and regulatory barriers to promote competition. Improve educational outcomes by increasing private investment in tertiary education through higher tuition fees and private sector financing. <i>Increase R&D expenditure through tax incentives and partnerships between industry and universities.</i>
Japan	Reduce the duality of the labour market by cutting the costs of EPL for regular workers.	Ease regulations in network industries to promote competition. Reduce producer support to agriculture. <i>Reform the tax system to rely more on indirect taxes to reduce the efficiency cost of taxation.</i> <i>Enhance inward FDI by ensuring that the M&A market is open to all firms to enhance transfers of new technologies from abroad.</i>
Korea	Adjust employment protection for regular workers to reduce the incentives to hire non-regular workers. <i>Strengthen female labour force participation by improving access to child-care facilities.</i>	Ease regulations in network industries to stimulate competition and efficiency. Reduce producer support to agriculture. <i>Improve the innovation system by upgrading the quality of universities through deregulation and competition.</i>
Luxembourg	Reduce work disincentives by decoupling unemployment benefits from minimum wage increases. Reduce disincentives to work at older ages by phasing out pre-pension and early retirement schemes. <i>Reform employment protection by making the regulation of collective dismissals more flexible.</i>	Improve educational achievement by increasing school autonomy to strengthen human capital. <i>Reduce barriers to entry in professional services by lowering licensing and education requirements.</i>
Mexico		Raise achievement in primary and secondary education to raise efficiency of the labour force. Promote competition in network industries by reducing regulatory barriers to entry. Reduce barriers to foreign ownership to enhance technological transfers from abroad. <i>Reform the state-owned oil company to enhance efficiency.</i> <i>Improve the "rule of law" to strengthen investor confidence.</i>
Netherlands	Ease employment protection legislation for workers on regular contracts by making the current dual system of dismissal more predictable. Lower marginal effective tax rates to strengthen incentives to full-time labour force participation. Tighten access to disability benefit schemes to encourage work by those with substantial work capacity. <i>Reduce the maximum duration of unemployment benefits and strengthen activation measures to reduce the incidence of long-term unemployment.</i>	 <i>Facilitate the entry of large retail stores and phase out restrictions on shop-opening hours to promote competition.</i>

	Labour utilisation	Productivity
New Zealand	<i>Increase health sector efficiency to reduce labour costs, thus encouraging job opportunities.</i>	Reduce barriers to competition and regulatory uncertainty in network industries. Improve educational achievement, in particular among ethnic minorities, to raise efficiency of the labour force. Raise effectiveness of R&D support by fostering collaboration between universities and the private sector. <i>Improve road infrastructure by relaxing regulation and implement congestion-charging schemes.</i>
Norway	Refocus disability and sickness benefit schemes to encourage work by those with substantial work capacity. <i>Reduce marginal income tax rates to strengthen incentives to full-time labour force participation.</i>	Reduce the scope of public ownership by resuming privatisation. Reduce producer support to agriculture. <i>Raise the efficiency of education by improving teacher training and publishing the result of a national school assessment.</i>
Poland	Reduce the tax wedge on low-income workers to stimulate demand for, and supply of, such workers. <i>Increase housing supply by reforming zoning arrangements.</i>	Remove barriers to entrepreneurship by streamlining the system of licenses and permits. Improve the efficiency of education by improving the provision of pre-school education and introducing fees in tertiary education backed by income-contingent repayments. <i>Increase transport infrastructure investments by reforming public procurement legislation.</i>
Portugal	Ease employment protection legislation and simplify dismissal procedures for workers on permanent contracts to reduce labour market segmentation.	Improve secondary attainment to raise efficiency of the labour force. Reduce the administrative burden on business to stimulate entrepreneurship and competition. <i>Promote competition in network industries by easing regulatory barriers to entry and ensuring third-party access.</i> <i>Simplify the tax system and broaden the corporate tax base to reduce the efficiency cost of taxation.</i>
Slovak Republic	Raise work incentives for women by shortening the duration of parental leave entitlements in favour of childcare subsidies. <i>Improve the activation of the long-term unemployed by expanding training measures to reduce high incidence of long-term unemployment.</i> <i>Reform housing policies through the establishment of an effective private rental market to stimulate labour mobility.</i>	Raise education achievement by fostering integration of Roma children and extending tuition fees to full-time students backed by income-contingent repayments. Promote competition by reducing barriers to entry in network industries and liberal professions.
Spain	Limit the administrative extension of collective agreements to promote greater flexibility in wage determination. Reduce labour-market duality by cutting the costs of EPL for regular workers. <i>Remove regulatory impediments to the development of the private rental housing market and withdraw subsidies for owner-occupied housing.</i>	Improve secondary education by introducing standardised school testing and raising school autonomy. <i>Strengthen competition in retail distribution by facilitating the establishment of shopping centres.</i>
Sweden	Reduce marginal tax rates to strengthen incentives to work longer hours. Refocus sickness leave and disability benefit systems to encourage work by those with substantial work capacity. <i>Reform housing policies to encourage labour mobility.</i>	Ease EPL to facilitate human resource management and stimulate innovation. <i>Improve education by introducing regular tests for children and accreditation to enhance teacher competence.</i>

	Labour utilisation	Productivity
Switzerland	<p>Strengthen incentives to full-time labour force participation for women by developing pre-school services and moving to individual taxation of couples.</p> <p><i>Contain health-system costs by assigning hospital funding to insurers in full.</i></p>	<p>Remove barriers to competition in network industries. Reduce producer support to agriculture.</p> <p><i>Improve tertiary education by developing quality assessments of universities and tuition fees backed by student loans with income-contingent repayments.</i></p>
Turkey	<p>Contain minimum wage increases to below average wage increases to stimulate employment of low-skilled workers in the formal sector.</p> <p>Ease employment protection and facilitate temporary work to stimulate hiring of regular workers in the formal sector.</p> <p><i>Reduce incentives to retire early and to take work in the informal sector by making the pension system actuarially neutral.</i></p>	<p>Improve educational achievement to raise the efficiency of the labour force.</p> <p><i>Simplify product market regulations, especially the sectoral licensing rules, to encourage competition.</i></p>
United Kingdom	<p>Further reform the disability benefit scheme by extending the Pathways to Work scheme to all existing claimants to encourage work by those with substantial work capacity.</p>	<p>Improve the education achievement of young people by raising participation in quality early-childhood education.</p> <p>Improve public infrastructure, especially for transport, to reduce bottlenecks.</p> <p><i>Improve the efficiency of health and other publicly-funded services.</i></p> <p><i>Improve planning regulations to encourage firm entry and competition.</i></p>
United States	<p>Limit increases in labour costs and improve efficiency by reforming health insurance markets.</p>	<p>Improve primary and secondary education by completing implementation of "No Child Left Behind" to raise efficiency of the labour force.</p> <p>Reduce producer support to agriculture and reconsider support for biofuels.</p> <p><i>Strengthen financial market supervision.</i></p> <p><i>Reduce the efficiency cost of taxation by broadening the tax base and shifting toward consumption taxes.</i></p>
European Union	<p><i>Raise labour mobility by improving the portability of pension and social welfare benefits to improve intra-EU labour mobility.</i></p>	<p>Ease regulatory barriers to internal trade and ensure the full transposition of the Services Directive.</p> <p>Raise competition in network industries by removing intra-EU barriers to trade.</p> <p>Reduce producer support to agriculture and reconsider support for biofuels.</p> <p><i>Deepen financial integration by intensifying efforts to integrate retail financial markets.</i></p>

Note: The priorities in italics are not necessarily based on indicators.

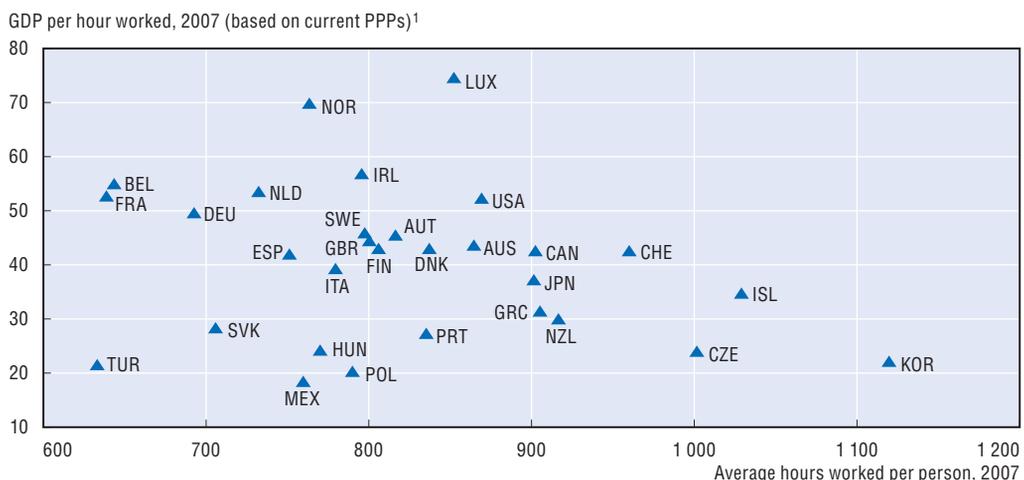
ANNEX 2.A3

Choice of the Numéraire in Going For Growth

While the average OECD performance is used to identify areas of relative weakness in setting priorities in *Going for Growth* (see Annex 2.A1), the United States is used as numéraire to compare levels of GDP per capita. This approach provides a relatively straightforward way of summarising the data and gauging how well countries do compared with US performance. Conceivably, there are alternative ways of accomplishing this task using more sophisticated methods, although a more complex approach could also possibly reduce the transparency of the exercises. This Annex assesses the extent of the trade-off between robustness and transparency, and discusses the adequacy of the current practice of using the United States as numéraire in these types of comparisons.

Relatively high levels of GDP per capita achieved by the United States do not automatically qualify the United States as the “leader”. For instance, based on 2007 figures, Luxembourg and Norway achieved higher levels than the United States (see Table 2.A3.1). However, in both these countries, GDP per capita is boosted by special factors: the exploitation of gas and petroleum resources in Norway and a large financial sector in Luxembourg. Abstracting from these countries, the United States records the highest level of GDP per capita in the OECD area.

Figure 2.A3.1. **Labour productivity and utilisation levels in 2007**



1. In the case of Luxembourg, the population is augmented by the number of cross-border workers in order to take into account their contribution to GDP.

Source: OECD, National Accounts Database; OECD, Labour Force Statistics Database and OECD Economic Outlook 84 Database.

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Table 2.A3.1. **Efficiency scores relative to the United States and the efficiency frontier**

Based on 1997-2007 data

	GDP per capita with respect to:			GDP per capita with respect to:	
	United States	Frontier ¹		United States	Frontier ¹
Australia	0.83	0.83	Japan	0.73	0.80
Austria	0.82	0.84	Korea	0.54	0.95
Belgium	0.77	0.76	Mexico	0.28	0.44
Canada	0.84	0.86	Netherlands	0.85	0.80
Czech Republic	0.52	0.79	New Zealand	0.60	0.74
Denmark	0.80	0.82	Norway	1.21	1.00
EU19 ²	0.68	0.71	Poland	0.34	0.51
Finland	0.77	0.80	Portugal	0.48	0.60
France	0.74	0.69	Slovak Republic	0.43	0.47
Germany	0.74	0.70	Spain	0.67	0.64
Greece	0.64	0.70	Sweden	0.80	0.82
Hungary	0.41	0.52	Switzerland	0.88	0.94
Iceland	0.83	1.00	Turkey	0.28	0.36
Ireland	0.93	0.91	United Kingdom	0.76	0.77
Italy	0.66	0.70	United States	1.00	0.98

1. Excluding Luxembourg since it is found to be a statistical outlier. Its GDP relative to the US is 1.38.

2. The EU19 is a weighted average of these countries' scores, as it is not included in the DEA as a unit.

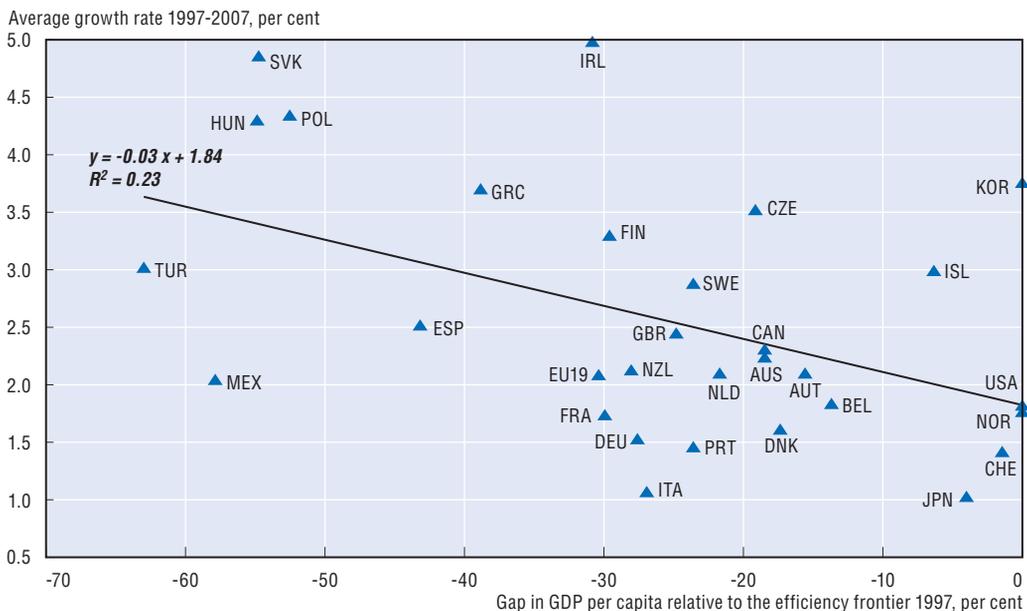
However, the United States does not exhibit the best performance in either of the major subcomponents of GDP per capita: labour utilisation and productivity. Different combinations of the two components can yield a given level of GDP per capita. This variation in observed labour utilisation and productivity pairs across OECD countries can be exploited to calculate efficiency measures relative to a theoretical country at an efficiency frontier, utilising a technique called Data Envelopment Analysis (DEA). This technique allows the estimation of a piecewise-linear production possibility frontier. Observations that lie inside this frontier and the parts of the frontier that are perpendicular to either axis are considered inefficient. The efficiency score for each observation is calculated by measuring the distance to the production possibility frontier. This calculation is made by simply scaling up the outputs – labour utilisation and labour productivity in the current exercise – while keeping the ratio between them constant.

The exercise is run over the pool of labour utilisation and productivity levels for all OECD countries since 1997, to ensure that longer-term trends in the composition of growth are captured (Table 2.A3.1). Luxembourg appears to be an outlier and is identified as such by a multivariate outlier identification method.¹ The technical efficiency score for each of the remaining countries is calculated relative to a hypothetical situation that is located on the intersection of the production possibility frontier and the line passing through the corresponding observation and the origin. The correlation between the GDP per capita series scaled by the GDP per capita of the United States (i.e. current practice) and the efficiency score relative to the hypothetical situation (on the efficiency frontier) is very high. In the pooled data, the correlation is 0.86, while using only the 2007 cross-sectional data, it is 0.76.² The relative position of countries is similar for most countries on both measures, with the main exceptions being lower-income OECD countries, Iceland, Korea and New Zealand. However, the apparently strong performance of these countries with good labour utilisation may be somewhat misleading: the efficiency scores reflect whether

a given combination of labour productivity and labour utilisation is efficient given the current ratio between them; yet there may still be considerable scope for these countries to raise labour productivity, whether through technological progress or capital deepening, thus raising GDP per capita above the frontier.

An additional exercise is run to assess the role of convergence in observed GDP-per-capita growth rates by basing the analysis on GDP-per-capita gaps relative to the efficiency frontier rather than the United States. In essence, Figure 2.1 in the main text is replicated with the efficiency figures obtained from the Data Envelopment Analysis as opposed to gaps in GDP per capita vis-à-vis the United States. As can be seen in Figure 2.A3.2, the goodness of fit and the strength of association between the gap measures in 1997 and the observed growth rates over 1997-2007 remain similar, leaving the results from the two approaches closely in line with each other. The primary difference is that the gap is reduced for those countries whose labour productivity is relatively weaker than their labour utilisation, such as Mexico and Turkey, while it is increased for those countries with greater weakness with labour utilisation, such as France and Germany.

Figure 2.A3.2. **GDP per capita levels vis-à-vis the efficiency frontier and growth rates¹**



1. The average growth rate of GDP per capita is calculated on the basis of volume data from national accounts sources. The level of GDP per capita is calculated on the basis of current PPPs. No statistical outliers are detected using the method of Hadi (1994). The regression line is estimated on individual countries (excluding the EU19 grouping).
2. The efficiency frontier combines the highest possible levels of labour utilisation and productivity. They are calculated based on Data Envelopment Analysis.

Source: OECD, National Accounts Database; OECD, Labour Force Statistics Database and OECD Economic Outlook, No. 84, Vol. 2008/2.

StatLink  <http://dx.doi.org/10.1787/533837814665>

Notes

1. Outliers are determined using the method of A.S. Hadi (1994).
2. If Luxembourg is included in the analysis, the pooled correlation remains relatively high, at 0.67.

PART I
Chapter 3

Country Notes

This chapter provides more detailed information on key policy priorities for individual OECD member countries and for the European Union.

AUSTRALIA

Notwithstanding continued strong economic performance in recent years, a sizeable GDP-per-capita gap persists vis-à-vis the leading countries, mainly reflecting low productivity levels and weak labour force participation among particular groups. Wide-ranging reforms have taken place recently to improve labour market outcomes and human capital, as well as enhancing infrastructure, but particular weaknesses still remain in the following areas.

Priorities supported by indicators

Reform disability benefit schemes

The relatively large number of people, especially older workers, receiving the Disability Support Pension (DSP) contributes to the low labour force participation rate for low-skilled persons aged 55 and over.

Actions taken: No action since 2006, when the eligibility requirements for new entrants were tightened so that those able to work at least 15 hours have to look for a job and receive unemployment instead of disability benefits.

Recommendations: Extend the job-capacity assessment and associated support services to those who started receiving DSP before July 2006. The incentives for DSP recipients to find a job should be strengthened by maintaining their entitlement to a pension if, after finding work temporarily, they lose it again.

Strengthen competition in network industries

While Australia has a competition-friendly regulatory framework, geographical segmentation in the electricity, transport and water management sectors limits productivity advances in network industries and the economy more generally.

Actions taken: To improve the energy transmission framework, a new single operator will co-ordinate and assist investment decisions to develop a national network as from 2009. The Council of Australian Governments agreed to speed up the harmonisation of rail safety regulation. A plan has been adopted to improve the governance of the main hydraulic basin (the Murray Darling Basin) and to develop an integrated water management system.

Recommendations: Reforms to complete a national energy market should continue, public companies should be privatised and the ceilings on retail electricity prices should be removed quickly. In the freight sector, state standards for heavy-goods vehicles and access regimes to railway infrastructure should be harmonised. Extending the national investment Auslink programme to ports would help co-ordinate investment in transport. To enhance the efficiency of water use, barriers to water entitlement transactions between certain areas, including urban and rural zones, should be lifted.

Improve the performance of early education

The organisation of the Early Childhood Education and Care (ECEC) sector is fragmented and the sector is under-funded. Provision of services is insufficient, of unequal quality and relatively expensive. This affects disproportionately the children from disadvantaged backgrounds and contributes to the relatively high share of early school-leavers, with adverse effects on productivity.

Actions taken: The government aims at developing universal access to 15 hours-per-week ECEC for all four-year-olds. Tax rebates for “out-of-pocket” childcare expenses were raised in the 2007/08 and 2008/09 budgets.

Recommendations: The government should move towards an integrated ECEC system with greater consistency of services across the child-care and early-education sectors and proceed with the provision of universal access to ECEC for four-year-olds. Extending access to three-year-olds from disadvantaged groups and increasing the duration of services should be considered.

Other key priorities

- **Work incentives.** To improve incentives for workforce participation, align the tax and welfare system better and reduce marginal effective tax rates further, especially for second wage earners and families with children, notably lone parents.
- **Wage bargaining.** Even if the WorkChoices law has been abrogated, a decentralised wage bargaining system should be preserved, with collective negotiations taking place at the firm level to maintain a close link between productivity and wage growth.

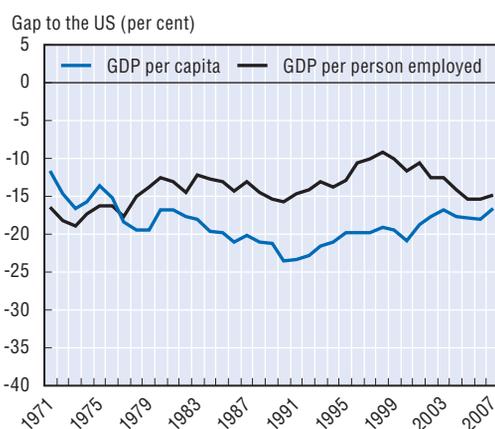
AUSTRALIA

Structural indicators

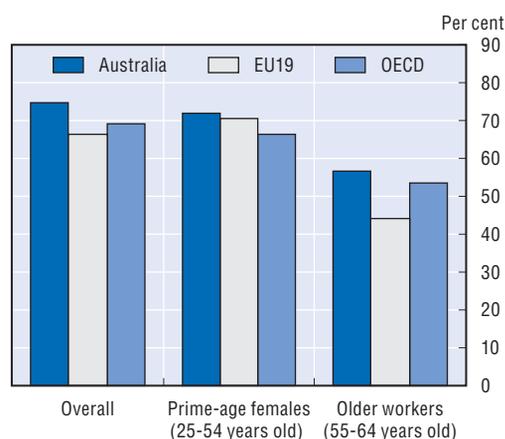
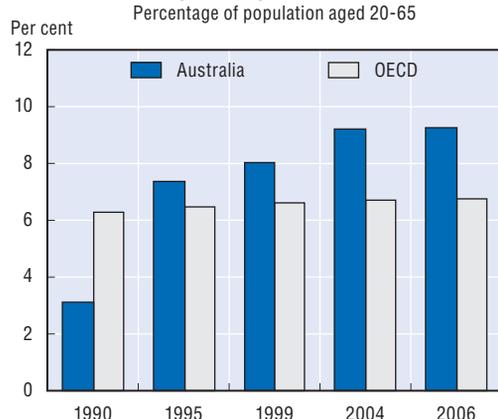
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	2.1	2.5	1.6
Labour utilisation	0.4	0.3	0.5
of which: Employment rate	0.7	0.6	0.7
Average hours	-0.3	-0.3	-0.2
Labour productivity	1.7	2.2	1.1
of which: Capital intensity	0.8	0.9	0.8
Multifactor productivity	0.9	1.4	0.4

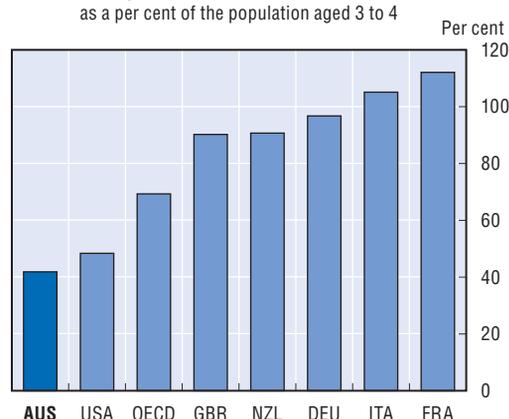
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity remain substantial¹

B. Employment rates are high, 2007

C. The rise in the share of the working-age population receiving disability benefits has ceased²

D. Low enrolment rates in early childhood education, 2006



- Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
- Disability benefits include benefits received from schemes to which beneficiaries have paid contributions (contributory), programmes financed by general taxation (non-contributory) and work injury schemes.

Source: Chart A: OECD, *National Accounts Database*; Chart B: OECD, *Labour Force Statistics Database*; Chart C: OECD (2003), *Transforming Disability into Ability* and OECD estimates; Chart D: OECD (2008), *Education at a Glance*.

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AUSTRIA

Despite relatively strong growth in recent years, a significant GDP-per-capita gap vis-à-vis best performing countries persists because of relatively low productivity in competition-sheltered services and relatively low employment rates of older workers. In recent years, reforms have aimed at improving public sector efficiency and strengthening work incentives, but further measures are needed, especially in the areas below.

Priorities supported by indicators

Reduce barriers to entry in network industries

High network access prices and remaining state ownership in some network industries deters new entry, hindering greater competition, thus depressing productivity and sustaining high prices.

Actions taken: No action taken.

Recommendations: Ensure that access prices are not kept artificially high. Relax ownership restrictions that create high barriers to entry at various stages in the production and distribution of electricity. Achieve full privatisation in the telecommunication and electricity sectors when financial conditions stabilise. Introduce competition in rail transportation. Reduce or eliminate remaining cross-subsidies in all network industries.

Reduce the implicit tax on continued work at older ages

Even after recent pension reforms, high implicit taxes on continued work at older ages still encourage early retirement and reduce labour force participation.

Actions taken: The 2003-04 pension reforms were a major step forward in reducing the fiscal subsidisation of early retirement, but in 2007 some of the reform measures were relaxed. In particular, the government halved the pension discount rate for each year of early retirement from 4.2% to 2.1%, partly undermining the goal of increasing the currently very low employment rate for older workers.

Recommendations: Phase in all provisions of the 2003-04 pension reforms, and restore (actuarially neutral) discount rates applicable before the standard retirement age. Automatically adjust the legal retirement age in line with demographic developments. Tighten eligibility criteria to ensure that disability pensions are only used by people unable to work.

Improve graduation rates from tertiary education

The share of the labour force with tertiary education is low, and the quality of some vocational and tertiary education programmes remains sub-standard. This holds back productivity growth and innovation.

Actions taken: No new measures since 2007, when the first three-year performance agreement between the universities and the government was introduced, with a formula-driven budgeting system to strengthen the financing and autonomy of universities: 20% of the university budget is now allocated according to output-related qualitative and quantitative indicators.

Recommendations: Allow universities to select students and to set their own tuition fees to help improve service quality and enhance student incentives. Introduce a system of loans with income-contingent repayments to avoid the exclusion of cash-constrained students from poor families.

Other key priorities

- **Marginal tax rates:** Enhance work and entrepreneurship incentives by lowering marginal income tax rates financed by further broadening the tax base through reducing numerous tax allowances.
- **Regulation of services:** Restrictive regulations remain widespread in services, limiting competition and acting as a drag on productivity growth. Statutory regulation of trades and professions should be reduced. Compulsory chamber membership for the liberal professions should be abolished. Although legal shop opening hours were extended in January 2008, restrictions should be further eased in retail trade to promote competition.

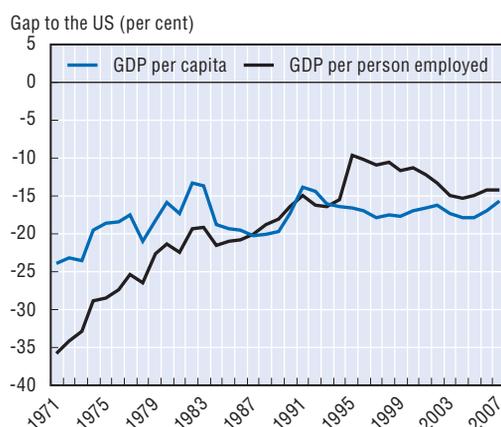
AUSTRIA

Structural indicators

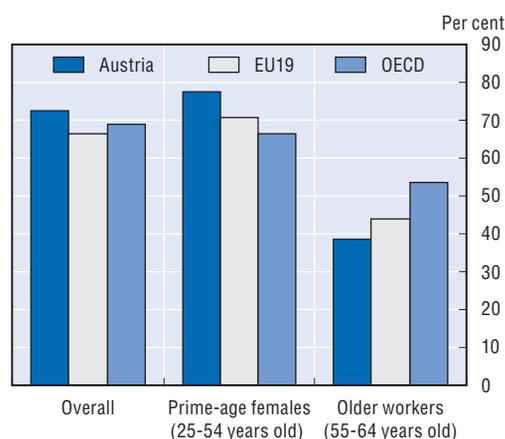
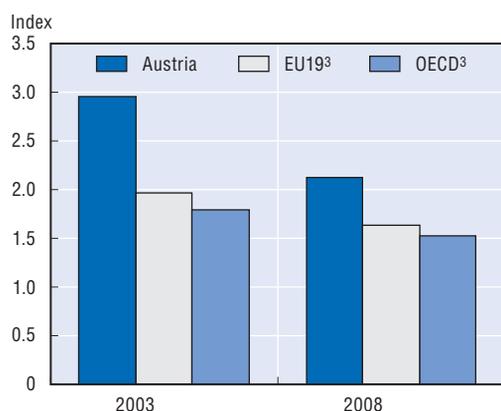
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	2.0	2.2	1.8
Labour utilisation	0.2	0.4	0.0
of which: Employment rate	0.3	0.5	0.2
Average hours	-0.1	-0.1	-0.2
Labour productivity	1.7	1.8	1.7
of which: Capital intensity	0.6	0.6	0.5
Multifactor productivity	1.2	1.2	1.2

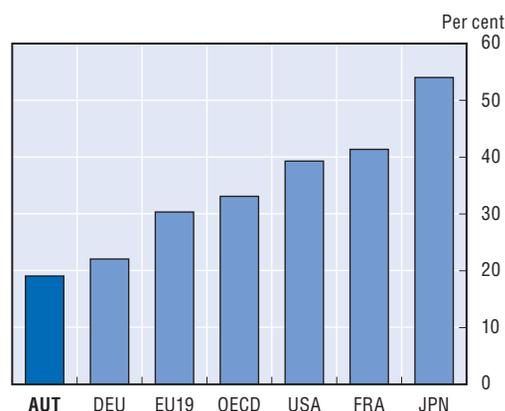
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Convergence in GDP per capita and productivity has stalled¹

B. The employment rate of older workers is low, 2007

C. The administrative burden to set up a business has fallen but remains high²

D. The share of population aged 25-34 with tertiary education is low, 2006



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Product Market Regulation Database; Chart D: OECD (2008), Education at a Glance.

StatLink  <http://dx.doi.org/10.1787/533853331362>

BELGIUM

The GDP-per-capita gap vis-à-vis best performing countries remains substantial. This mainly reflects low employment rates, especially for older workers, and high unemployment, in part due to geographical labour market mismatches. Broad reforms have been implemented over recent years to improve labour market performance, but additional measures are still required, in particular in the following areas.

Priorities supported by indicators

Further reduce the implicit tax on continued work at older ages

Employment rates for older workers are low, as early retirement schemes remain pervasive and implicit taxes on continued work are high.

Actions taken: Ceilings on pensioners' work income above which pensions are partially withdrawn have been increased. Otherwise, no actions have been taken beyond completing the implementation of the Solidarity Pact in 2008. The pact includes a gradual increase in the minimum age of entry into early retirement via the old age pension system from 58 to 60 years as well as a longer working life requirement for a full pension.

Recommendations: Early retirement via the old age pension system should be phased out and other exit routes should be closed. This includes extending the surtax on top-ups on unemployment benefits to all wage agreements and phasing out occupational exemptions.

Further reduce the tax wedge on low-income workers

The tax wedge is among the highest in OECD countries. In particular, low-income households face high marginal effective tax rates that discourage their labour market participation and hours worked, and increases structural wage pressures.

Actions taken: Measures have been taken to make work pay, including an additional reduction in individual social security contributions targeted at low-income workers and a reduction in personal income taxes.

Recommendations: All wage subsidies and reductions of social security contributions should be targeted to low-wage earners to avoid substitution effects between different support schemes. In particular, other reductions of social security contributions for other types of workers, such as for shift workers, should be phased out.

Ease regulation in the retail sector

The regulation of zoning and shop opening hours continues to be stringent. Licensing requirements are very restrictive, hampering the entry of new shops, and employment and productivity advances in the sector.

Actions taken: No action taken since the reforms in 2006.

Recommendations: Reduce licensing requirements and facilitate the entry of large shops by making zoning laws more flexible. Relax restrictions on shop opening hours outside of designated tourist areas.

Other key priorities

- **Wage bargaining:** To reduce the large and persistent geographical mismatches in the labour market, the scope for individual companies to opt out from sectoral agreements should be increased. To make wage determination more flexible, wage indexation should be abolished.
- **Unemployment benefits:** To fully benefit from the increased focus on activation policies, the level of unemployment benefits should be reduced with unemployment duration to raise incentives for job seekers to search for employment.

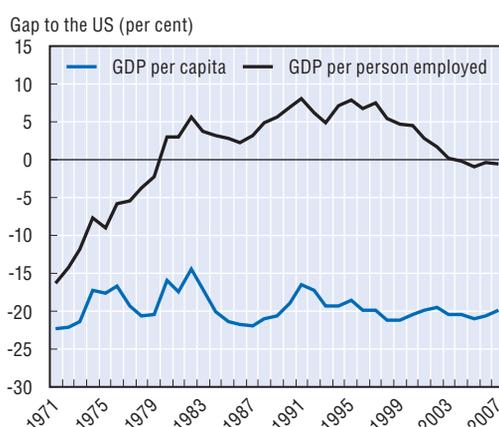
BELGIUM

Structural indicators

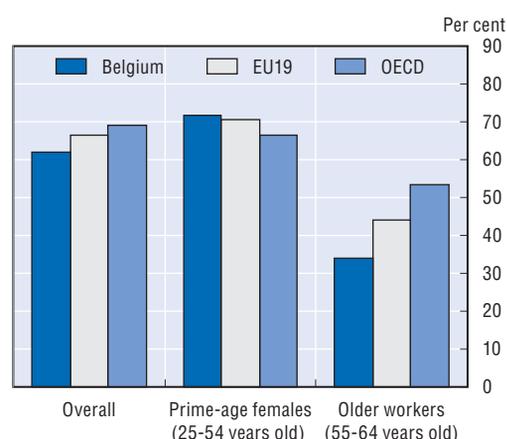
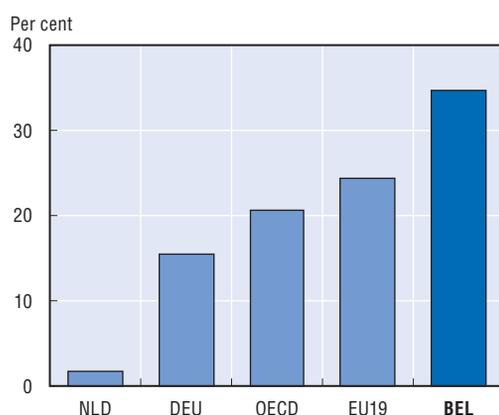
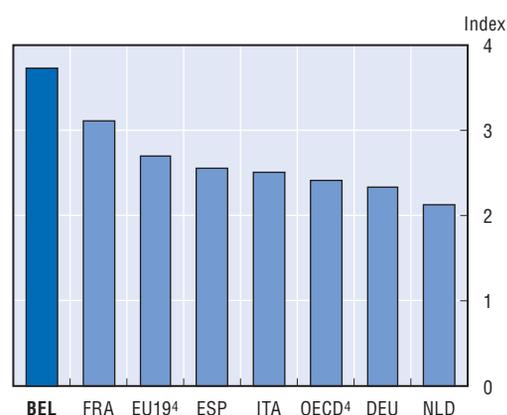
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.7	1.9	1.6
Labour utilisation	0.4	0.4	0.4
of which: Employment rate	0.4	0.4	0.4
Average hours	0.0	0.0	0.0
Labour productivity	1.3	1.4	1.2
of which: Capital intensity	0.5	0.6	0.5
Multifactor productivity	0.8	0.9	0.7

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. The gap in GDP per capita is persistent¹

B. The employment rate of older workers is low, 2007

C. The implicit tax on continued work at older ages is among the highest in the OECD, 2007²D. Regulations in the retail sector are restrictive, 2008³

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
2. Implicit tax on continued work embedded in the regular old-age pension scheme for 60-year-olds.
3. Index scale of 0-6 from least to most restrictive.
4. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, *National Accounts Database*; Chart B: OECD, *Labour Force Statistics Database*; Chart C: Duval, R. (2003), "The Retirement Effects of Old-Age Pension and Early Retirement Schemes in OECD Countries", *OECD Economics Department Working Papers*, No. 370 and OECD calculations; Chart D: OECD, *Product Market Regulation Database*.

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CANADA

The GDP-per-capita gap with the United States has not improved in recent years due to weak productivity developments. Over the past few years, corporate income and capital taxes have been cut, but reforms are still needed, notably in the areas below.

Priorities supported by indicators

Reduce barriers to competition in network industries

Substantial barriers to competition and innovation remain in network industries, such as postal services, telecommunications and electricity. Besides negatively affecting consumer choice and welfare, these raise the cost of doing business in other industries and hamper productivity growth.

Actions taken: There has been no significant progress in integrating electricity markets and opening them up to competition. In telecommunications, the recent auction of wireless spectrum should help to enhance competition. There has been no progress on liberalising postal services.

Recommendations: Move toward more competitive wholesale and retail electricity markets. Encourage competition in regulated telecommunications markets by implementing the recommendations of the Telecommunications Policy Review Panel. Undertake postal-sector reform by reducing or eliminating legislative monopoly protections and by privatising Canada Post, while maintaining universal service obligations through targeted regulatory or financing schemes.

Further reduce barriers to foreign ownership

Restrictions on foreign direct investment remain higher than in the majority of OECD countries, in particular in telecommunications, broadcasting and air transport. These hamper investment and slow the diffusion of new technology and best management practices, with adverse effects on productivity.

Actions taken: The Competition Policy Review Panel released its report in July 2008, with recommendations to liberalise the review process for all foreign investments, notably by lifting the financial threshold and ending discrimination in certain sectors by transferring the onus from the investor to the minister, who must show why a transaction should not take place.

Recommendations: Further reduce barriers by eliminating ownership restrictions in telecommunications and transport, and by allowing a majority of board members to be non-residents in sectors where this is currently not allowed. Implement the Panel's recommendations to end most sectoral restrictions on foreign direct investment.

Further reduce barriers to competition in professional services

Around 50 professions and 100 trades are regulated in one or more provinces. This limits inter-provincial trade in services and impedes the geographical mobility of skilled labour.

Actions taken: Implementation of the Trade, Investment and Labour Mobility Agreement (TILMA) between Alberta and British Columbia is helping to reduce barriers to trade in these two provinces, notably in professional services. This agreement is also encouraging the federal government and some provinces (such as Quebec and Ontario) to renew efforts to fully implement the Agreement on Internal Trade (AIT), which commits to remove all such barriers in all provinces by April 2009.

Recommendations: Continue to work towards full labour mobility as stipulated in the AIT. Beyond that, aim for a new pan-Canadian agreement with TILMA's basic architecture, which features a presumption that all measures fall within its scope unless explicitly excluded.

Other key priorities

- **Employment insurance.** Reform the Employment Insurance system by introducing a firm-level employer experience rating or scaling back access to unemployment insurance for seasonal and temporary workers, and by eliminating regionally differentiated provisions.
- **Tax system.** Reduce remaining non-neutralities in the business tax system, notably by eliminating the tax preferences for small firms, and move the tax base further toward a consumption base.

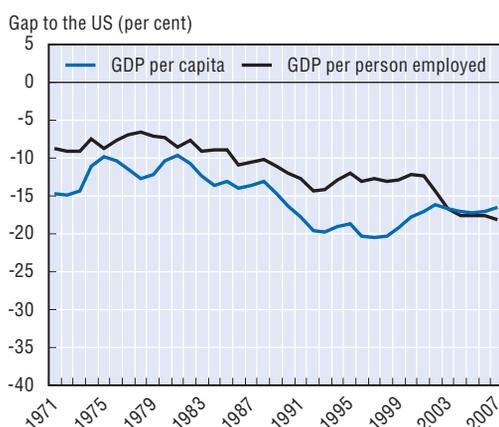
CANADA

Structural indicators

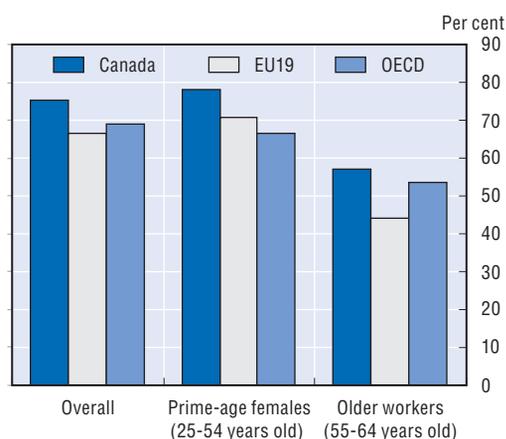
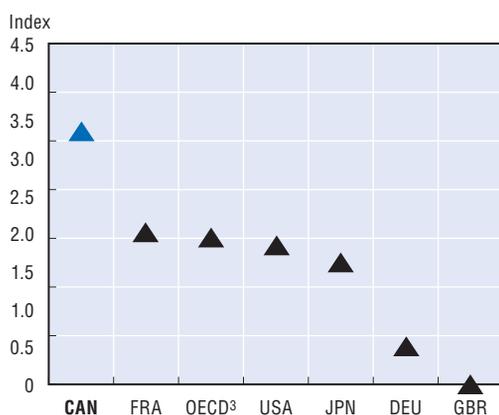
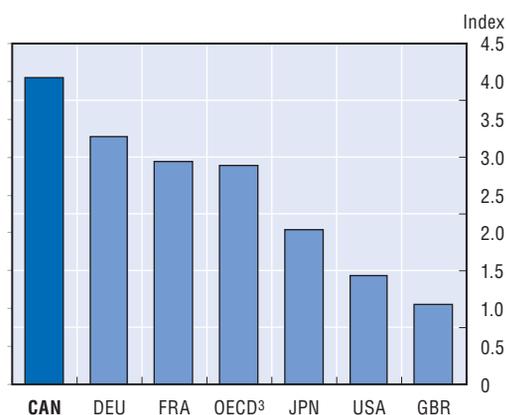
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.9	2.2	1.6
Labour utilisation	0.6	0.6	0.6
of which: Employment rate	0.8	0.8	0.8
Average hours	-0.2	-0.2	-0.1
Labour productivity	1.3	1.6	1.0
of which: Capital intensity	0.8	0.9	0.8
Multifactor productivity	0.4	0.6	0.2

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. The gap in GDP and productivity has persisted in recent years¹

B. Employment rates are relatively high, 2007

C. Regulatory barriers to competition in the electricity sector are high, 2008²D. Entry regulations in professional services are restrictive, 2008²

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Charts C and D: OECD, Product Market Regulation Database.

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CZECH REPUBLIC

Strong labour productivity and employment growth have recently accelerated convergence, but gaps in GDP-per-capita and labour productivity remain large relative to the OECD average. In recent years, reforms have been undertaken to reduce the administrative burden on businesses and to ease labour and skill shortages, but more remains to be done, especially in the following areas.

Priorities supported by indicators

Increase graduation rates from tertiary education

Tertiary education enrolment has been expanding rapidly, but graduation rates remain low, impeding innovation and productivity growth. The expansion of tertiary education requires more resources and better incentives for both students and higher-education institutions.

Actions taken: No significant actions taken. Proposals are being developed to link output and quality indicators to funding.

Recommendations: Introduce tuition fees in public institutions backed by student loans with income-contingent repayments. Facilitate cooperation between employers and universities to better cope with changing skill requirements in the labour market. Expand the range of programmes and improve access for adults, in particular for shorter studies. In secondary education, widen access to general courses leading to tertiary-level studies.

Reduce barriers to business entry

Licence and permits systems, and communication of rules and regulations, remain relatively cumbersome, especially for new firms, discouraging competition and productivity increases. State ownership remains high in certain network industries and concentration in the gas sector is excessive.

Actions taken: A substantial amendment to the trade law became effective in July 2008, significantly simplifying licensing procedures, including through electronic registration, and making starting a business easier and faster (with a five-day time limit stipulated). A new insolvency law came into force in 2008 which should shorten the duration of bankruptcy procedures and strengthen creditors' position.

Recommendations: Streamline further the implementation of the new trade and insolvency laws to encourage entrepreneurship. Improve communication of rules and procedures. Facilitate new entry by reducing state ownership in network industries (airlines, post and rail) and strengthen competition in the gas sector by reducing the dominant incumbent's interest in transmission networks and in other areas, such as regional distribution.

Reduce the costs of EPL for regular workers

Relatively costly dismissal protection has been impeding reallocation of workers across jobs and sectors, with potentially adverse effects on innovation, productivity and long-term unemployment.

Actions taken: No significant measures have been taken since the adoption of a less constraining labour law effective from January 2007.

Recommendations: Reduce the length of the notice period and severance pay requirements at short tenures, thus linking the dismissal conditions to duration of employment. Simplify further other procedures for terminating employment.

Other key priorities

- **Public sector efficiency.** Increase the efficiency of public spending and ensure fiscal sustainability by reforming health care and pension systems. Strengthen incentives for municipalities to increase cost efficiency while improving service delivery.
- **Work incentives.** Ease labour shortages by improving work incentives for low-income households through further reforms of the tax-benefit system.

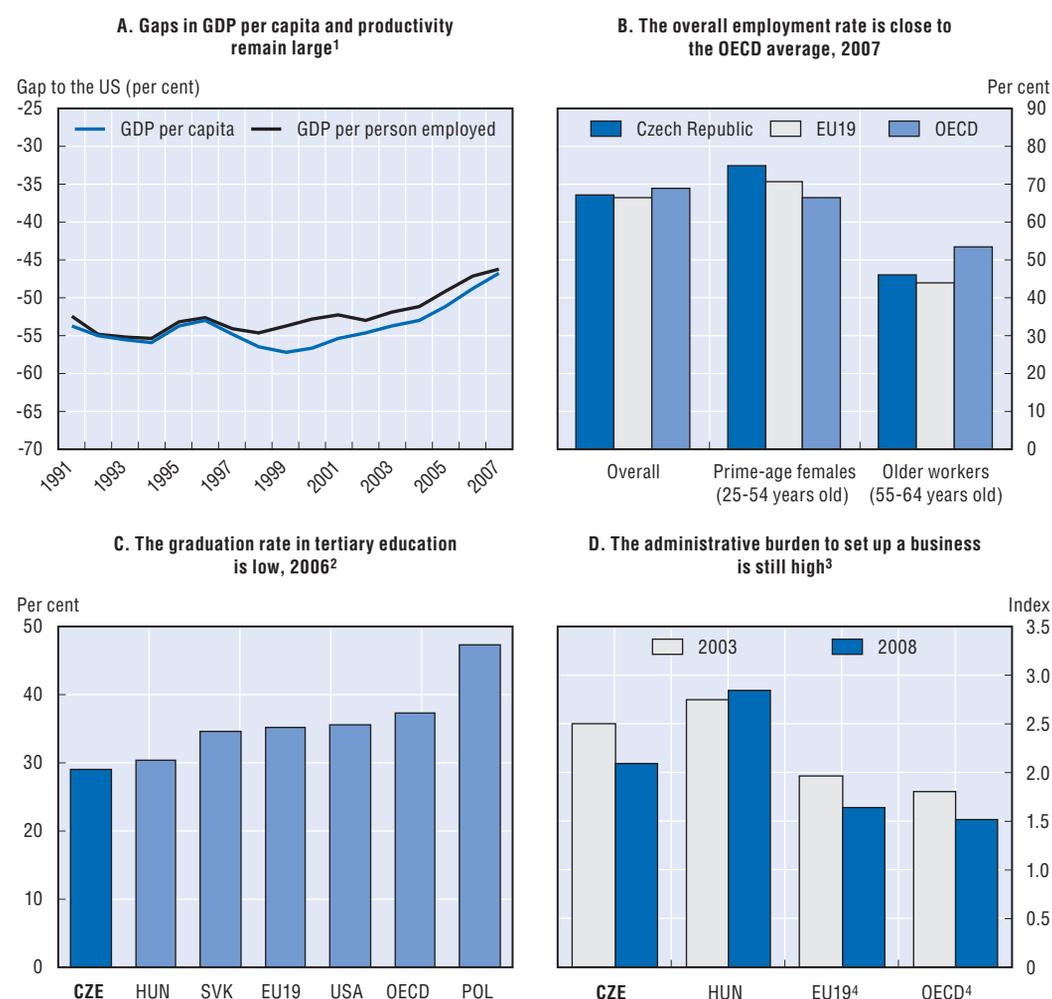
CZECH REPUBLIC

Structural indicators

Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	3.5	2.7	4.3
Labour utilisation	-0.3	-0.7	0.1
of which: Employment rate	0.1	-0.3	0.5
Average hours	-0.4	-0.4	-0.4
Labour productivity	3.8	3.4	4.2
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Number of students completing tertiary-type A programmes for the first time as a percentage of the relevant group.

3. Index scale of 0-6 from least to most restrictive.

4. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD (2008), Education at a Glance; Chart D: OECD, Product Market Regulation Database.

StatLink  <http://dx.doi.org/10.1787/533853331362>

DENMARK

The income gap with leading countries mainly reflects lower productivity, which has grown only modestly in recent years. Employment rates are high but working hours are low and many working-age adults are dependent on income benefits. Reforms over the past few years have focused on boosting human capital and encouraging later retirement, but more remains to be done, in particular in the areas below.

Reduce marginal taxes on labour income

Average hours worked are among the lowest in the OECD, due to fewer hours worked per week and fewer weeks worked per year. Moreover, unreported work is common in certain professions, e.g. in the case of skilled construction workers, who typically report earnings at the level where the high marginal tax rates set in.

Actions taken: From 2009, the threshold from where the first progression step, i.e. the 6% tax bracket, is paid will be moved up to just above average full-time earnings.

Recommendations: Continue the reforms by lowering the top marginal rates and/or moving up the threshold from where they are applied.

Reform sickness leave and disability benefit schemes

Sickness absence has risen sharply in recent years. Moreover, the inflow to subsidised employment for the disabled (Flexjobs) has risen, without a commensurate decline in the inflow to disability benefit schemes.

Actions taken: An action plan, put forward in June 2008, emphasises the health benefit from returning to work early and remaining active while waiting for or undergoing treatment. This is to be promoted via early dialogue between the employer, the person concerned, medical professionals and municipal case managers.

Recommendations: Make sure that benefit recipients gain financially by returning to work. This requires that benefits during sickness and disability, often topped up by compensation according to collectively-agreed schemes, be reduced. Pay in Flexjobs should be lower than in unsubsidised employment.

Enhance the competition framework

Business regulation is relatively liberal. However, restrictions exist in some sectors, notably retail trade, and competition in publicly-funded services has been slow to develop.

Actions taken: A leniency programme was introduced into the Competition Act. Limited reforms of price setting have taken place in electricity. Government ownership has been reduced in the postal sector. Competition in public services is gradually being enhanced, for example via the offer for publicly-funded private hospital care if waiting lists for public hospitals exceed one month.

Recommendations: Continue to liberalise opening hours in retailing and remove the local government discretion based on perceived market need in the Planning Act. Continue with privatisation and expose publicly-funded services to competition. Competition agencies should be further streamlined.

Other key priorities

- **Education.** Learning outcomes for 15-year-olds have improved slightly, but are still unsatisfactory relative to education spending. Progress in this respect should be continued, *inter alia*, by increasing the educational content of the introductory year for 6-year-olds and in facilities for 3 to 6-year-olds. Improvements in basic literacy would also lay the ground for raising the share of a youth cohort completing upper-secondary education.
- **Housing policies.** Rent regulation remains very strict and all forms of housing receive large direct and indirect tax subsidies. This hinders labour mobility, locks tenants into housing that no longer suits their needs, and nurtures informal and even illegal arrangements. To overcome these problems, rent regulations should be eased, subsidies cut, and effective housing taxation raised.

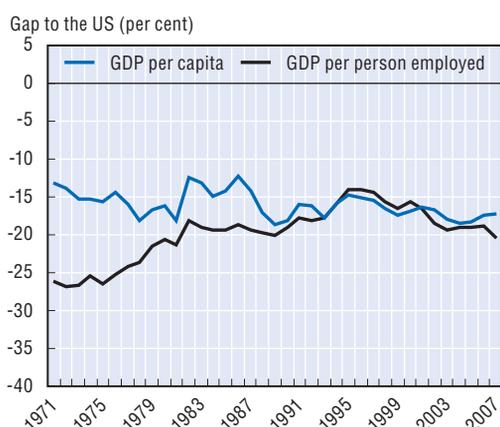
DENMARK

Structural indicators

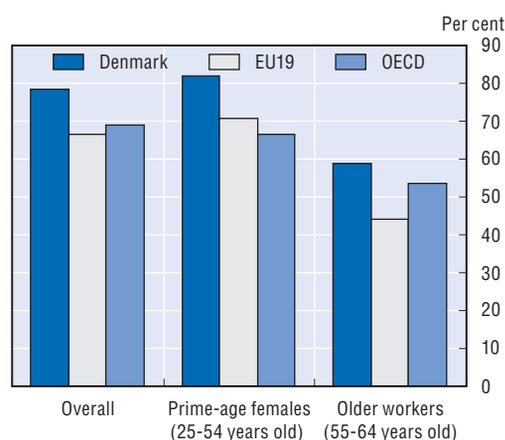
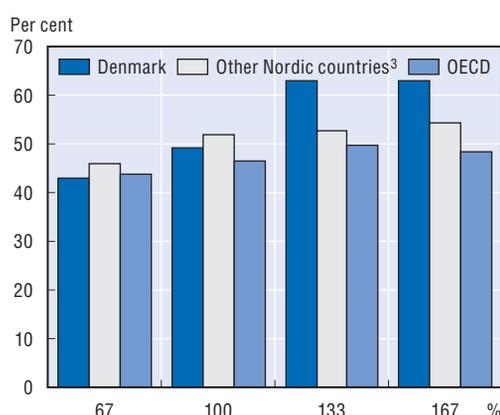
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.5	1.7	1.4
Labour utilisation	0.4	0.5	0.4
of which: Employment rate	0.1	0.0	0.1
Average hours	0.4	0.5	0.3
Labour productivity	1.1	1.2	1.0
of which: Capital intensity	0.9	0.9	1.0
Multifactor productivity	0.1	0.3	0.0

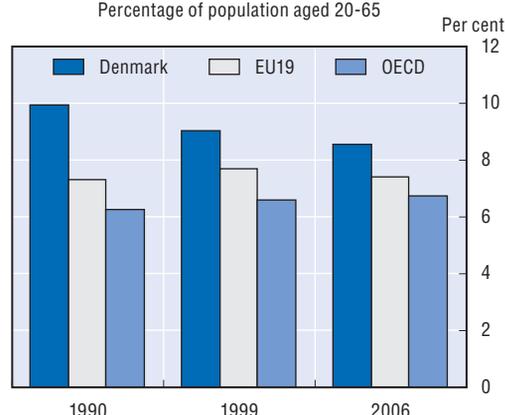
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity are persistent¹

B. Employment rates are high, 2007

C. Marginal tax wedges are high, 2007²D. The share of working-age population receiving disability benefits is high⁴

Percentage of population aged 20-65



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Evaluated at 67%, 100%, 133% and 167% of average earnings.

3. Average of Finland, Iceland, Norway and Sweden.

4. Disability benefits include benefits received from schemes to which beneficiaries have paid contributions (contributory), programmes financed by general taxation (non-contributory) and work injury schemes.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Taxing Wages Database; Chart D: OECD (2003), Transforming Disability into Ability and OECD estimates.

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EUROPEAN UNION

The income gap relative to the United States has narrowed slightly, reflecting improvements in EU labour utilisation and a reduction in the gap between productivity growth in the US and that in the EU. Nonetheless, productivity and labour utilisation levels in the European Union remain below those in the United States. The single market programme has already strengthened competitive pressures in product markets, but further reforms are required, especially in the following areas.

Priorities supported by indicators

Ease regulatory barriers to business operations

Substantial barriers to internal trade remain, especially in services sectors, with continued impediments to cross-border establishment and the mutual recognition of professional qualifications and business licences. These limit the capacity of the internal market to increase productivity.

Actions taken: The Services Directive was passed in 2006 and is due to be fully transposed into national law during 2009. This will ease barriers to cross-border establishment. However, some service sectors are exempt from the legislation. The Better Regulation Agenda, adopted in 2005, is simplifying existing regulations. The Single European Payments Area (SEPA), launched in January 2008 and due for implementation by November 2009, will reduce cross-border financial transactions costs.

Recommendations: Continue to reduce obstacles to internal trade and ensure the full transposition of the Services Directive. Adopt EU-wide standards where mutual recognition is difficult. Identify additional measures to reduce administrative burdens on business. Strengthen competition in the EU public procurement regime. Further improve the quality of regulatory impact assessments undertaken by the Commission prior to introducing regulatory reforms.

Raise competition in network industries

Barriers to competition remain high in some network industries. Liberalisation at the EU level is not always matched by rigorous implementation at the national level.

Actions taken: Agreement has been reached on a legislative package to separate supply and production activities from network operations in energy markets, although this stops short of full ownership unbundling. A new regulatory agency is also being introduced to oversee co-operation between national energy regulators. Competition has been enhanced in air services by the first-stage EU-US Air Transport Agreement.

Recommendations: Focus competition policy on reaping the potential gains from liberalising network industries through further integration of markets. Further liberalise ports and push ahead with the creation of an EU-wide energy market. Continue to reduce limits on services by foreign carriers in EU air services.

Reduce producer support to agriculture

Agricultural support under the Common Agricultural Policy (CAP) creates distortions, keeping resources in low-productivity activities and maintaining prices received by farmers above world market levels. At the same time, the stipulation of a target of 10% by 2020 for the share of biofuels in total fuel consumption for transportation has contributed to boosting world market prices for agricultural products.

Actions taken: No major recent actions, but policy changes agreed under the 2003 and subsequent reforms have continued to reduce support prices. The proportion of support not linked to production doubled between 2005 and 2007.

Recommendations: Improve market access for non-EU countries. Continue to reduce production-linked support, including the energy crop premium for biofuel production.

Other key priorities

- **Labour mobility:** Raise labour mobility within the EU by improving the portability of occupational pension and social welfare benefit rights and following through on proposals for “researcher passports”.
- **Financial market integration:** Deepen financial market integration by accelerating efforts to integrate retail financial markets, especially mortgage lending. Follow through on the EU Council roadmap to update existing financial stability arrangements.

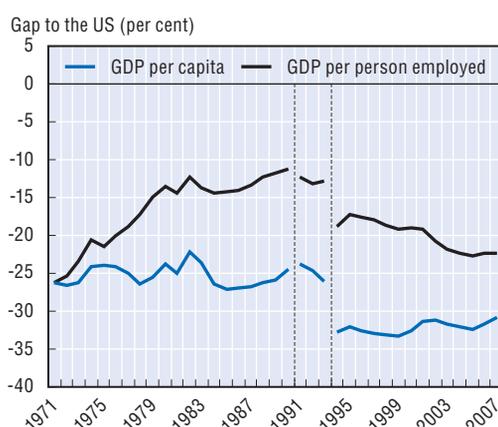
EUROPEAN UNION

Structural indicators

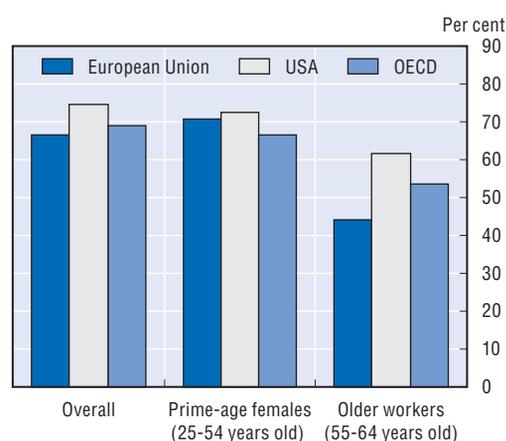
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.9	2.1	1.6
Labour utilisation	0.2	0.2	0.2
of which: Employment rate	0.5	0.6	0.5
Average hours	-0.4	-0.4	-0.3
Labour productivity	1.7	1.9	1.4
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

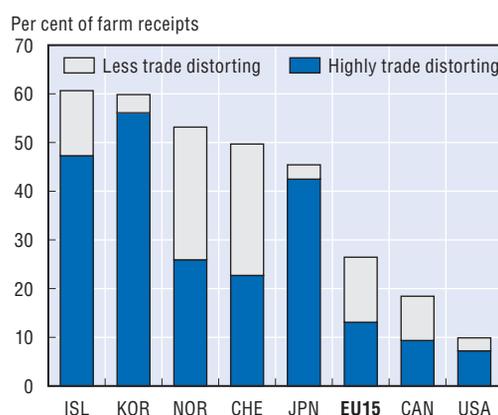
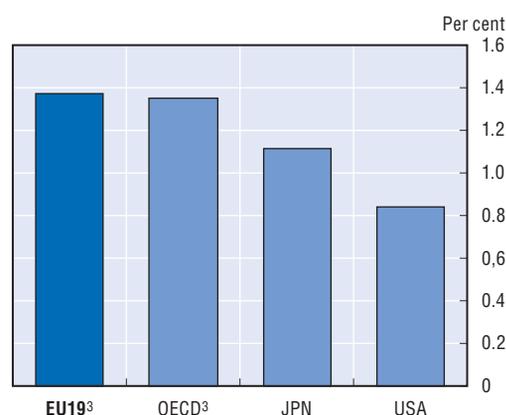
A. Gaps in GDP per capita and productivity are large¹

B. Employment rates are relatively low, 2007



C. Agricultural support is high, 2007

Producer support estimate

D. Economy-wide product market regulation is tight, 2008²

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs). Break in the series in 1991 due to reunification of Germany and in 1994 when data start to refer to EU19. Before 1994 data refer to EU15.
2. Index scale of 0-6 from least to most restrictive.
3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Producer and Consumer Support Estimates Database; Chart D: OECD, Product Market Regulation Database.

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FINLAND

GDP-per-capita convergence with the best performing economies has continued, but part of it has been offset by ICT-driven terms-of-trade losses. The GDP-per-capita gap reflects shortfalls in both labour utilisation and productivity. Recent reforms have included some moves to strengthen labour force participation and an attempt to reform the wage-setting framework; however, more reforms are still needed, in particular in the following areas.

Priorities supported by indicators

Reduce the tax wedge on labour income

Average and marginal tax wedges on labour income are among the highest in the OECD. In combination with the compressed wage structure, this poses problems for the employment of the low-skilled and for both attracting high-skilled workers and retaining high-skilled jobs.

Actions taken: The government had announced the intention to cut labour taxes, which are likely to be brought forward. The government has appointed a committee to analyse and propose structural changes in the overall tax system.

Recommendations: Continue to reduce taxes on labour income and ensure fiscal sustainability by shifting the tax burden towards less distortionary revenue sources.

Phase out early retirement pathways

Implicit taxes on continued work at older ages are high so that the effective retirement age continues to be below the OECD average and well below the average of the other Nordic countries, reducing labour utilisation.

Actions taken: No actions have been taken since the pension reform of 2005, which had the objective of extending working lives by 2-3 years by improving financial incentives to continue to work and restricting some early retirement pathways.

Recommendations: Abolish the special treatment of unemployed workers aged 59 and over (the “unemployment pipeline”) with a view to lifting the effective retirement age. Grant the disability pension only on medical grounds rather than on social criteria as permitted under the current system. Increase the activation of persons on disability schemes with some work capacity.

Reform the unemployment benefit system

Net replacement rates, that take into account taxation and social benefits received by the unemployed, are among the highest in the OECD for long unemployment spells. This reduces incentives to work.

Actions taken: Although the government has formed a committee to reform the social protection system, no actions have been taken since the 2006 activation reform for the long-term unemployed. This reform intensified activation after 500 days and made receipt of unemployment benefits conditional on participating in active labour market programmes, thus helping to offset the disincentive effects associated with high replacement rates.

Recommendations: Ensure that the activation reform is strictly enforced, including the requirement that the unemployed relocate if offered employment in other regions of the country. In addition, reduce the financial support available to the long-term unemployed to increase the incentive to take up work, including tapering unemployment benefits over time.

Other key priorities

- **Wage bargaining.** Promote employment and economic flexibility by negotiating a larger share of annual wage increases at the firm level and allowing opt-out clauses from central collective agreements, thus making wages more responsive to local conditions.
- **Tertiary education.** Reduce the waiting time to gain entry to tertiary education to lower the average age of university students, which is currently amongst the highest in Europe. Address long university study times (particularly for first degrees) by improving incentives for students to progress rapidly through tertiary education and into the labour force by introducing tuition fees and expanding the availability of student loans.

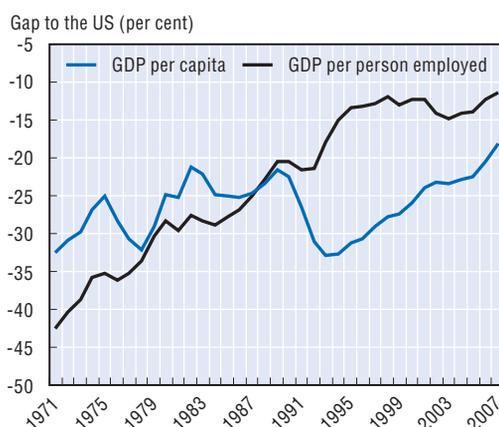
FINLAND

Structural indicators

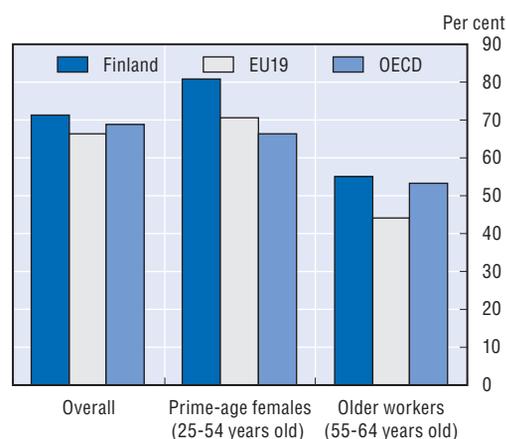
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	2.9	3.0	2.8
Labour utilisation	0.5	0.6	0.4
of which: Employment rate	0.8	0.9	0.7
Average hours	-0.3	-0.3	-0.3
Labour productivity	2.3	2.4	2.3
of which: Capital intensity	0.4	0.4	0.5
Multifactor productivity	1.9	1.9	1.9

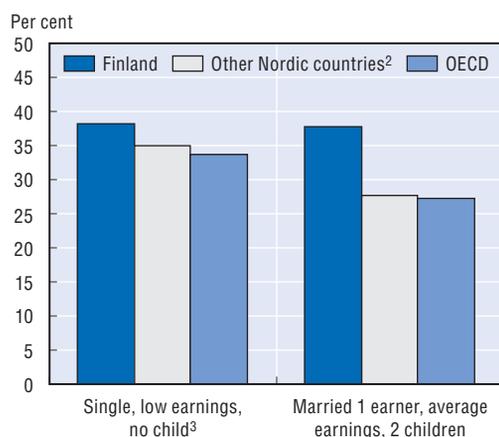
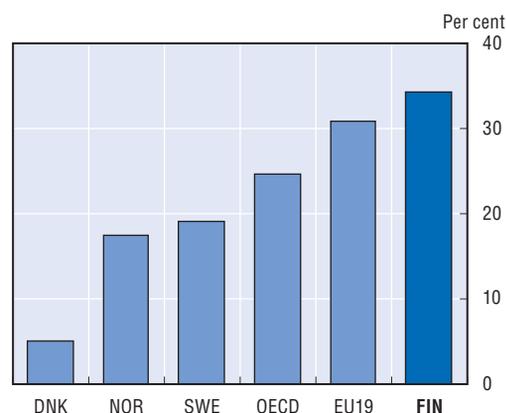
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Convergence in GDP per capita has been sustained since the mid-1990s¹

B. Employment rates are comparatively high, 2007



C. Average tax wedges are relatively high, 2007

D. The implicit tax on continued work at older ages is well above OECD average, 2007⁴

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
2. Average of Denmark, Iceland, Norway and Sweden.
3. Low earnings refer to two-thirds of average earnings.
4. Average of implicit tax on continued work in early retirement route for 55 and 60-year-old workers.

Source: Chart A: OECD, *National Accounts Database*; Chart B: OECD, *Labour Force Statistics Database*; Chart C: OECD, *Taxing Wages Database*; Chart D: Duval, R. (2003), "The Retirement Effects of Old-Age Pension and Early Retirement Schemes in OECD Countries", *OECD Economics Department Working Papers*, No. 370 and OECD calculations.

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FRANCE

Low employment rates, especially among youth and older workers, as well as relatively short average annual hours worked, still account for most of the gap in GDP per capita vis-à-vis leading countries. Reforms have been undertaken in recent years with the objective of raising work incentives and opportunities for specific groups, but additional measures are still needed, especially in the areas below.

Priorities supported by indicators

Reduce the minimum cost of labour

The high minimum cost of labour relative to the median reduces job opportunities, especially for young and low-skilled workers, while not effectively reducing poverty.

Actions taken: For the second year in a row, the increase in the minimum wage in 2008 was limited to the statutory adjustment, which compensates for inflation and half the increase in the basic hourly real wage, without any discretionary component (*coup de pouce*).

Recommendations: Continue to limit future increases in the minimum wage so as to allow the minimum cost of labour to fall in relative terms. Create an independent commission making recommendations on the minimum wage level, thus ending the automatic adjustment mechanism. Also, take advantage of the introduction of the new income support scheme to integrate the existing scheme in order to have a single earned income tax credit so that it is more effectively targeted on low-wage earners.

Reform employment protection legislation

Complex and strict procedures for dismissals of permanent workers, especially compared with those for temporary workers, discourage the hiring of workers on permanent contracts, fostering the development of a dual labour market with potentially adverse consequences for long-run productivity.

Actions taken: The government has transposed into legislation the agreement reached by social partners in early 2008. The main changes include the introduction of a new fixed-term contract for specific projects and a reduction in the frequency of cases requiring a court ruling, in return for higher severance payments. At the same time, special and more flexible contracts for small firms were abolished.

Recommendations: Pursue efforts to ease employment protection legislation and to further increase the predictability of dismissal costs, in particular in the case of layoffs on economic grounds, so as to limit the need for court intervention.

Reduce regulatory barriers to competition

In a number of sectors, mainly retail distribution and professional services, competition is restricted by the regulatory framework, hindering productivity growth and the development of employment.

Actions taken. A new law voted in 2008 has created a new competition authority, made the prohibition on resale-below-cost less binding for distributors, and allowed them to negotiate prices more freely with suppliers. Also, the threshold area above which special authorisations apply for setting up a new store has been raised from 300 to 1 000 square meters.

Recommendations. Ensure that the new competition authority has enough resources and investigative power to act effectively and independently, with consumer welfare as the sole objective. Eliminate (rather than merely soften) the special authorisation procedure for the setting-up of new stores, and phase out quota restrictions in a number of professions, including those related to law and medical services. Ease restrictions on Sunday shop opening.

Other key priorities

- **Old-age work incentives.** Further reduce the implicit tax on continued work at older ages. Despite the recent decision to remove the job-search exemption for older workers receiving unemployment benefits and to extend the number of years of contribution for full pension entitlements, the financial incentives to pursue activity beyond the statutory retirement age remain weak. Ease the restrictions on combining pension and work incomes.
- **Tertiary education.** Extend the autonomy of universities beyond what has been achieved in 2007, in particular in the area of budget management, recruiting and staff remuneration. Also, while access of universities to grants from private foundations has recently been facilitated, further measures to boost private funding of universities should be taken, including greater use of tuition fees, along with student loans with income-contingent repayment.

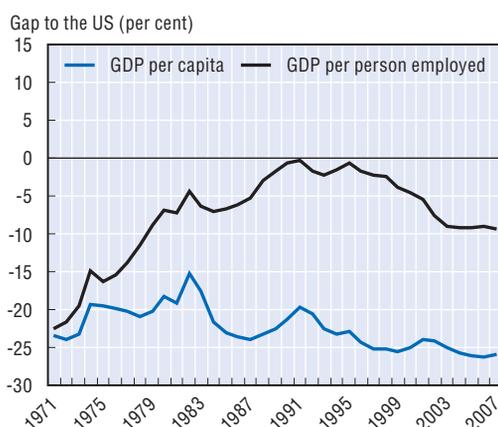
FRANCE

Structural indicators

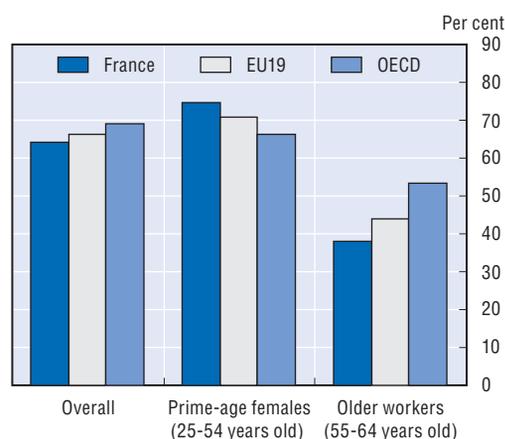
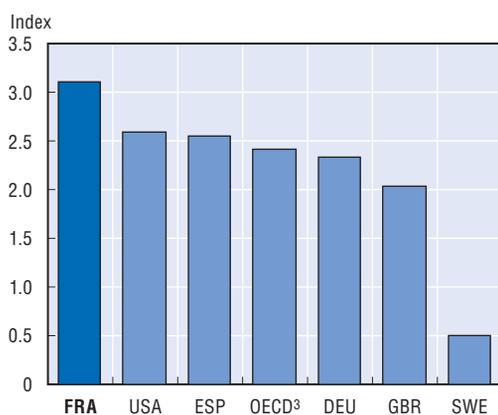
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.5	1.8	1.2
Labour utilisation	-0.1	-0.1	-0.1
of which: Employment rate	0.3	0.4	0.2
Average hours	-0.5	-0.6	-0.4
Labour productivity	1.6	1.9	1.3
of which: Capital intensity	0.8	0.8	0.7
Multifactor productivity	0.8	1.1	0.6

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity have been stable in recent years¹

B. The employment rate of older workers is very low, 2007

C. Restriction of competition in retailing is very high, 2008²

D. The minimum cost of labour is one of the highest in the OECD



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Product Market Regulation Database; Chart D: OECD, Taxing Wages and Minimum Earnings Databases.

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GERMANY

The income gap vis-à-vis the best performing countries has widened since the mid-1990s. This reflects relative declines in labour productivity as well as in labour utilisation, as the lower relative number of hours worked per employed person has more than offset the increase in overall employment. While some reforms have taken place recently in healthcare, education and the labour market, particular weaknesses still remain in the following areas.

Priorities supported by indicators

Reduce average tax wedges on labour income

Notwithstanding some cuts in recent years, the average tax wedge remains high in comparison with other OECD countries, mostly reflecting high social contributions, reducing incentives to work.

Actions taken: Following the lowering of social contribution rates in connection with the rise in VAT rates in 2007, contribution rates for unemployment insurance have been further reduced, over-compensating smaller increases in contribution rates for healthcare and long-term care. Contributions rates for unemployment insurance were lowered further in early 2009.

Recommendations: Social security contribution rates should be lowered further. Reductions should be financed by raising the efficiency of healthcare spending through more competition as well as by continuing to shift more of the tax burden to other bases (one option being to review the current application of the reduced VAT rate and considering whether to raise the rate to the regular level for products for which a reduction is no longer justified).

Reduce regulatory barriers to competition

Regulations in many activities, in particular barriers to entrepreneurship, limit competition with adverse effects on productivity. Specifically, the license and permit system is more restrictive than in many other OECD countries. Also, administrative burdens for corporations remain excessive and the size of the public enterprise sector is large.

Actions taken: Measures taken include the introduction of incentive-based regulation in the electricity and gas markets, the facilitation of private equity stakes in the state controlled railway company, easing of entry barriers in some protected handicrafts and further steps to reduce bureaucratic obstacles.

Recommendations: Lower the additional qualification-related requirements, which are specific to opening a business in the crafts professions, and abolish the compulsory membership in associations for liberal professions. Enhance competition in network industries by facilitating non-discriminatory entry.

Improve education outcomes

While overall education achievement of 15-year-olds is around the OECD average, the share of those with weak education results is large and socio-economic background has a large impact on outcomes. In addition, the tertiary graduation rate of younger age groups is lower than in other OECD countries.

Actions taken: Some states introduced the right for universities to select students and to introduce tuition fees, thus raising input flexibility. University courses have been shortened and *numerus clausus* restrictions have been eased.

Recommendations: Increase participation in, and enhance the quality of, early child care and education to better prepare young people for subsequent studies. Make schools and teachers more accountable for outcomes and reduce the large degree of segmentation of the school system by delaying the first tracking decision and combining the *Hauptschule* and *Realschule* tracks into one school type. Grant universities more flexibility in their student intake in those states which have not yet done so.

Other key priorities

- **Incentives for women to work.** Reduce fiscal impediments to full-time female labour force participation by lowering the tax burden for second-earners through moving to individual taxation of couples and by introducing a health insurance charge for non-working spouses. Continue with plans to increase the number of childcare places to facilitate the employment of young mothers.
- **Employment protection.** Promote regular work contracts by relaxing employment protection legislation applicable to such arrangements.

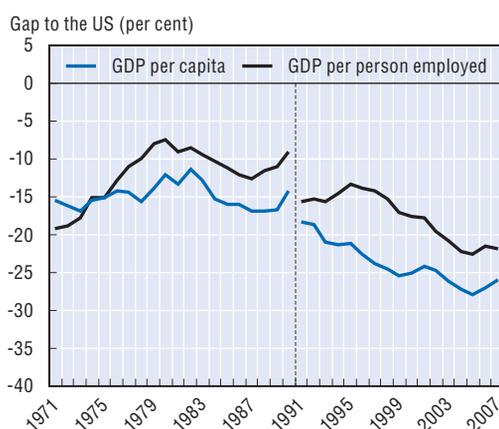
GERMANY

Structural indicators

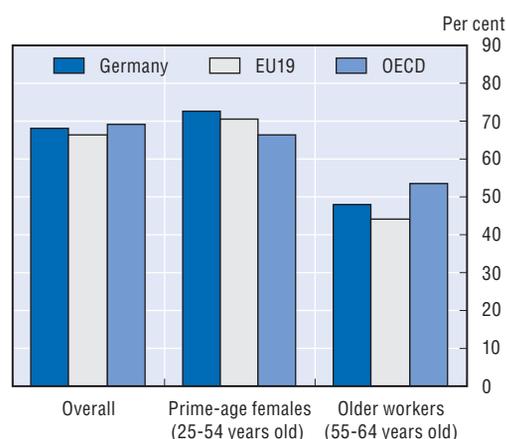
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.3	1.3	1.3
Labour utilisation	-0.2	-0.4	-0.1
of which: Employment rate	0.3	0.3	0.2
Average hours	-0.5	-0.7	-0.3
Labour productivity	1.6	1.8	1.4
of which: Capital intensity	0.8	0.9	0.6
Multifactor productivity	0.8	0.9	0.8

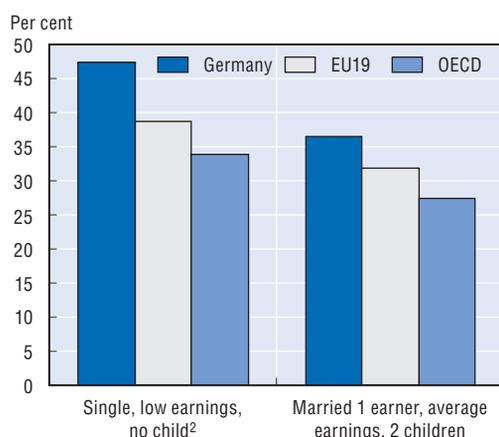
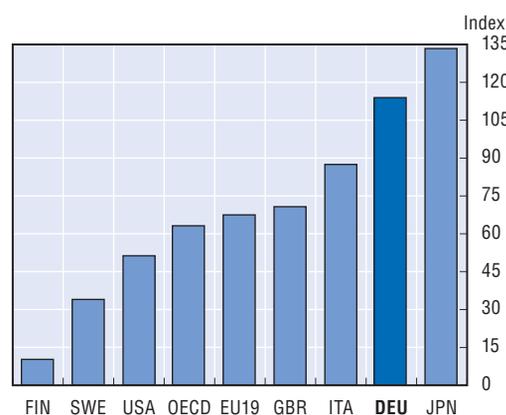
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity remain large¹

B. The overall employment rate is close to the OECD average, 2007



C. Average tax wedges are comparatively high, 2007

D. Schools' socio-economic profile heavily determines student performance, 2006³

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs). Break in the series in 1991 due to reunification.
2. Low earnings refer to two-thirds of average earnings.
3. Sensitivity of student performance on the science scale associated with the socio-economic profile of the school in which the student is enrolled, using the PISA index of economic, social and cultural status.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Taxing Wages Database; Chart D: OECD, PISA 2006: Science Competencies for Tomorrow's World, Vol. 1.

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GREECE

The income gap vis-à-vis the best performing OECD economies has narrowed considerably over the past decade but labour utilisation and productivity gaps remain large. Although reform initiatives in recent years have aimed at enhancing competition in network industries, improving efficiency in higher education and reducing incentives for early retirement, important weaknesses still remain in the following areas.

Priorities supported by indicators

Reduce the implicit tax on continued work at older age

Financial disincentives to continue working at older ages are among the highest in the OECD, leading to a low employment rate among older cohorts. An important channel for early retirement is via special provisions for those in “arduous” occupations.

Actions taken: A pension reform was passed in 2008 aiming at the reduction of early retirement through the rationalisation of special retirement age limits (including for women with under-aged children) and a reduction of financial disincentives to continue work. In addition, the law provides new financial incentives for workers (including in the public sector) to continue to work for three years after the age of pension eligibility. Discussions on limiting the occupations benefiting from the arduous-work clause are underway.

Recommendations: Pension reform needs to proceed further, including a change in entitlement ages and accrual rates of the system. The categories benefiting from the arduous-work clause should be defined more narrowly. Access to disability pension should be strictly enforced on medical criteria, judged by independent doctors.

Reduce barriers to entry in network industries

Competition in the network industries remains weak, holding back productivity performance. The ownership stake of the government in key public utilities remains high, and price and non-price regulation is pervasive, hampering the emergence of genuine competition.

Actions taken: The state’s stake in the Hellenic Telecommunications Organisation was reduced. Supervisory interventions to ensure competition in the telecommunication market have been intensified.

Recommendations: Privatisation should proceed, in particular in the energy and transport sectors as soon as financial markets stabilise. The unbundling of the local loop in telecommunications should be speeded up. The operations (generation, transmission and distribution) of the partially state-owned incumbent in the electricity sector should be unbundled. Price restrictions and barriers to entry in the road freight sector should be lifted.

Reduce the tax wedge on labour income

A high tax wedge on labour income hampers employment creation, and encourages tax evasion and informal activities.

Actions taken: Personal income taxes have been reduced, accompanied by measures to curtail tax and social security evasion. Evasion should also be curtailed by the creation of a unique employment and social security identification number for all citizens introduced by the 2008 pension reform.

Recommendations: Reduce tax wedges over the medium term, financed by cutting public spending, particularly for public administration which absorbs a relatively high share of government outlays, with no evidence that the services delivered are superior. Continue efforts to combat tax evasion.

Other key priorities

- **Formal education.** Raise the quality of formal education through improvements in teaching quality and advanced technology at schools. Address the school-dropout problem and facilitate the school-to-work transition through more flexible curricula. Implement rigorously the recent reforms of the higher education sector, and follow up with more decisive changes, providing universities with greater autonomy and linking their funding to performance evaluations.
- **Minimum cost of labour.** Ease entry to the labour market by reducing the minimum cost of labour through the setting of sub-minimum wages that take into account high unemployment rates of youth, and the lowering of social security contributions for low-paid workers, financed by savings elsewhere in the budget, for example through a reduction of over-staffing in the public sector.

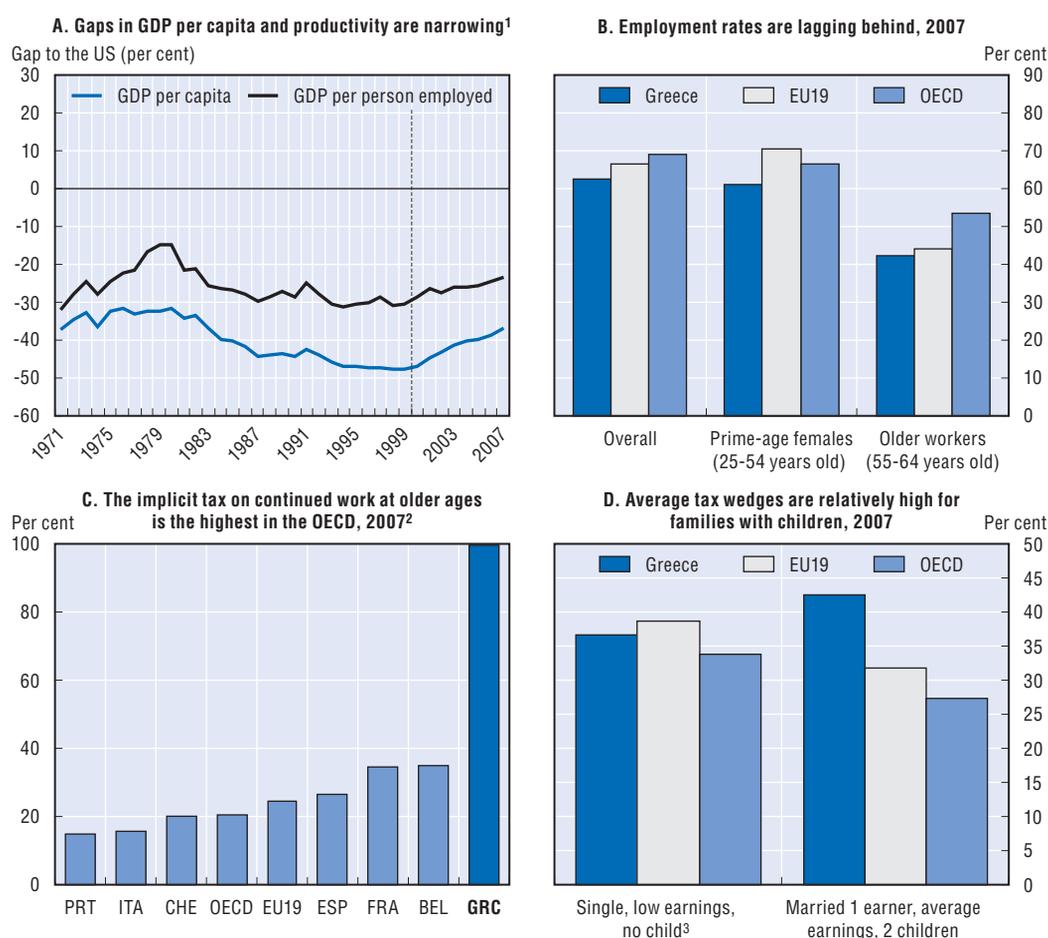
GREECE

Structural indicators

Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	3.4	3.4	3.5
Labour utilisation	0.3	0.1	0.4
of which: Employment rate	0.6	0.4	0.8
Average hours	-0.3	-0.3	-0.3
Labour productivity	3.2	3.3	3.1
of which: Capital intensity	1.5	1.7	1.4
Multifactor productivity	1.6	1.6	1.7

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs). Official data for the GDP level of Greece are only available from 2000 onwards. For the period before, these data were estimated using growth rates based on previous National Accounts data.
2. Implicit tax on continued work embedded in the regular old-age pension scheme for 60-year-olds.
3. Low earnings refer to two-thirds of average earnings.

Source: Chart A: OECD, *National Accounts Database*; Chart B: OECD, *Labour Force Statistics Database*; Chart C: Duval, R. (2003), "The Retirement Effects of Old-Age Pension and Early Retirement Schemes in OECD Countries", *OECD Economics Department Working Papers*, No. 370 and OECD calculations; Chart D: OECD, *Taxing Wages Database*.

StatLink  <http://dx.doi.org/10.1787/533853331362>

HUNGARY

GDP per capita has converged towards the OECD average but the gap remains substantial because of large shortfalls in both labour utilisation and productivity levels. Some progress has been made to encourage labour supply in recent years, but more efforts are needed, notably in the following areas.

Priorities supported by indicators

Reduce the tax wedge on labour income

The average tax wedge on single earners and one-earner households are among the highest in the OECD, reflecting high social charges for employers. This reduces the demand for labour and encourages under-reporting of economic activities.

Actions taken: Recent government initiatives aim at reducing effective taxes on low-income workers. In particular, the government has introduced employment-conditional tax credits that lower the effective marginal tax rate for this group.

Recommendations: Lower tax wedges over the medium run by reducing social charges and finance the reduction by maintaining the momentum of public spending cuts, in particular addressing social transfers and subsidies, as well as through further efforts to raise the efficiency of government services. To improve net income of low-wage workers, continue efforts to replace tax allowances and deductions with earned-income tax credits.

Reduce disincentives to withdraw early from the labour force

The availability of disability benefits, though not initially intended to provide retirement income, has ended up discouraging continued work by older workers, thus contributing to the observed upsurge in early retirement. This problem is compounded by the possibility of retiring via unemployment benefit schemes.

Actions taken: Legislation implemented in early 2008 strengthens incentives to work by increasing the emphasis on rehabilitation when assessing the extent of disability. A 2008 amendment makes the criteria for early retirement considerably more stringent, initially raising the contribution years for eligibility in early retirement programs, effective in 2009, and abolishes the early retirement option that allows individuals to retire on a full pension from 2013 onward. No action has been taken that would reduce the possibility of retiring via unemployment benefit schemes.

Recommendations: Support the emphasis on rehabilitation by tackling administrative bottlenecks in the job placement system. Encourage continued work of older workers by raising the standard age of retirement and through further adjustment of pensions for early and late retirement.

Ease business regulations

High administrative burdens on enterprises discourage entrepreneurship, hindering productivity growth. Special requirements restrict entry in professional services and retail trade. In network industries, incumbents still have excess market power in some instances.

Actions taken: Recent actions in the energy sector have focused on promoting vertical separation and reducing price subsidies for household consumption. In 2007, the government privatised the national airline company, and in 2008, it launched the privatisation of the rail freight segment of the national railway company.

Recommendations: Simplify entry and exit procedures and reduce statutory regulations of retail trade and professional services. Further limit state involvement in the operations of network industries by reducing price controls. Lift remaining constraints preventing freedom of choice between telecommunications service suppliers as a means to strengthen competition in that sector.

Other key priorities

- **Education system.** Make the education system more efficient and equitable, postponing early tracking of students and reforming teacher education and training, while also addressing incentive problems in their pay scales. Strengthen vocational training by making it more relevant for the labour market and providing career guidance to students on the range of programmes available as well as their respective outcomes. Introduce university study fees accompanied by student loans with income-contingent repayments.
- **Public sector efficiency.** Promote more efficient ways to manage public spending by bringing forward programmes to modernise public administration as well as to ensure cost-efficient delivery of services. At the local level, foster collaboration between municipalities by providing more effective incentives to exploit economies of scale. Also, facilitate the monitoring and evaluation of goal achievement by public administrations.

HUNGARY

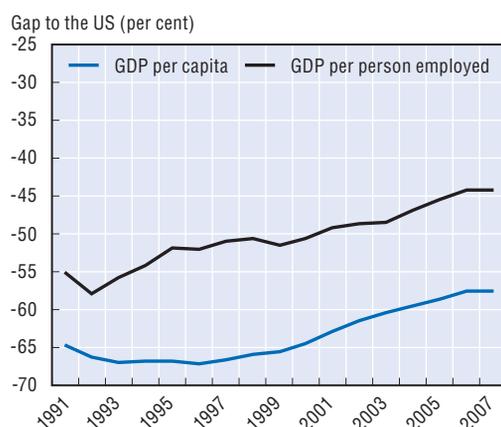
Structural indicators

Average annual trend growth rates, per cent

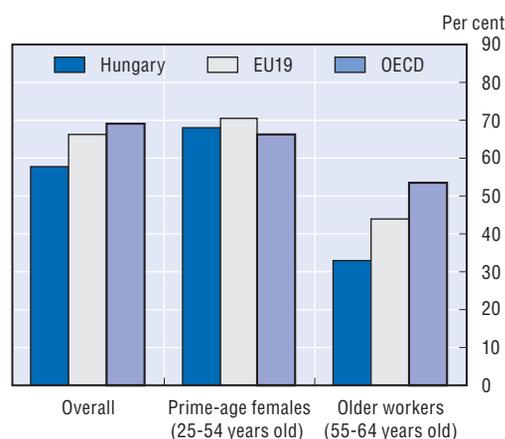
	1997-2007	1997-2002	2002-2007
GDP per capita	4.2	4.7	3.8
Labour utilisation	0.8	1.3	0.4
of which: Employment rate	1.0	1.3	0.7
Average hours	-0.1	0.0	-0.3
Labour productivity	3.4	3.3	3.5
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

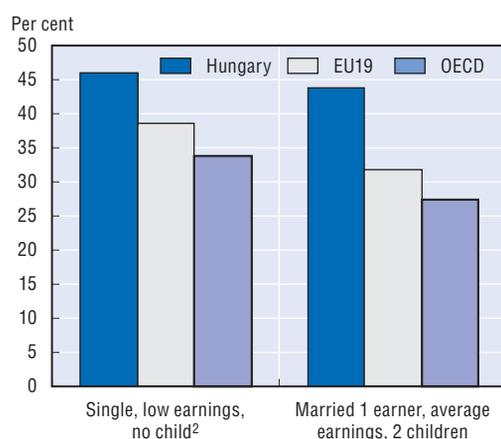
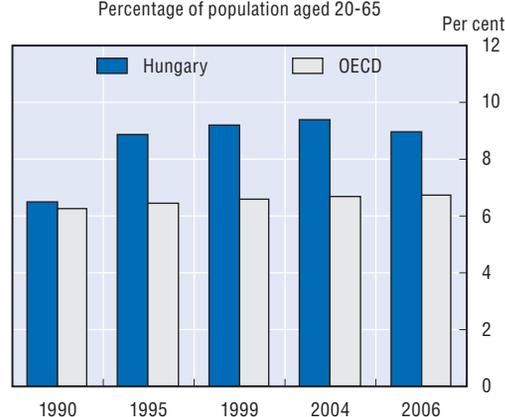
A. Gaps in GDP per capita and productivity are narrowing but remain large



B. The employment rate of older workers is very low, 2007



C. Average tax wedges are relatively high, 2007

D. The share of working-age population receiving disability benefits remains high³

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Low earnings refer to two-thirds of average earnings.

3. Disability benefits include benefits received from schemes to which beneficiaries have paid contributions (contributory), programmes financed by general taxation (non-contributory) and work injury schemes.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Taxing Wages Database; Chart D: OECD (2003), Transforming Disability into Ability and OECD estimates.

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ICELAND

The income gap vis-à-vis the United States had been narrowing until the recent crisis owing to high growth in labour productivity, although the productivity level remains relatively low in contrast to labour utilisation. Following substantial structural reforms in the late 1990s and early 2000s, there have been few reforms in recent years, and further action will be required in coming years, particularly in the areas below.

Improve education outcomes

PISA-test scores (for 15-year olds) are below the OECD average in science and reading and many young people still do not complete upper-secondary education, with adverse effects on the efficiency of the workforce.

Actions taken: Legislation has been introduced recently that increases teacher qualification requirements, obliges the state to educate everyone up to the age of 18, and promotes vocational training.

Recommendations: Strengthen school accountability for education outcomes. Improve teacher quality, especially in rural areas, where children's PISA scores are particularly low. Increase effective teaching time and adjust the curriculum to enhance the acquisition of core competences.

Reduce producer support to agriculture

Agricultural support remains very high by international comparison: support amounts to two-thirds of farm income, which is twice the EU level and four times the US level – and is concentrated in highly trade-distorting forms. Such support imposes a heavy burden on consumers and taxpayers and keeps resources in low-productivity activities.

Actions taken: Import tariffs for meat have been cut.

Recommendations: Reduce agricultural support, notably by lowering tariffs and abolishing import quotas on agricultural products, and by reducing other forms of producer support and delinking it from production.

Lower barriers to entry for domestic and foreign firms

High barriers to entry of foreign firms remain in the energy and fisheries sectors, and public ownership in the electricity sector limits competition, with potentially adverse effects on prices and productivity performance.

Actions taken: A committee has been formed to review legislation on foreign investment.

Recommendations: Reduce foreign ownership restrictions in the fisheries and energy sectors. Divest the National Power Company's generation activities so that they no longer benefit from advantageous borrowing costs resulting from government ownership, thereby creating a more level playing field in generation.

Other key priorities

- **Financial sector regulation and supervision.** Strengthen independence and accountability of main financial regulators. Review rules on liquidity management, connected lending, large exposures, cross-ownership, and the “fit and proper” status of owners and managers and strengthen them as necessary. Tighten capital requirements for foreign assets.
- **Public sector reform.** Accelerate the introduction of output-based budgeting, performance measurement and management reforms in the public sector to enhance efficiency.

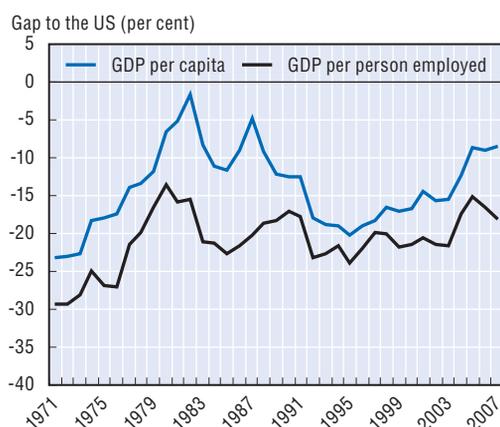
ICELAND

Structural indicators

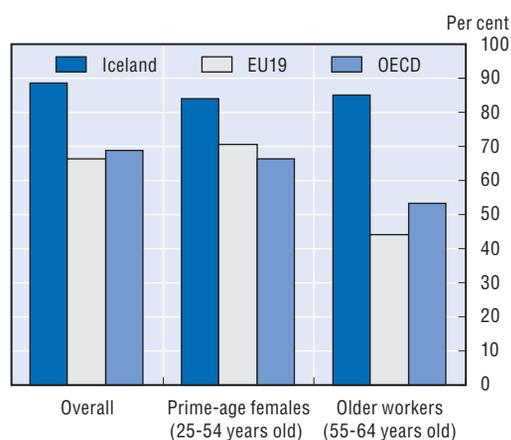
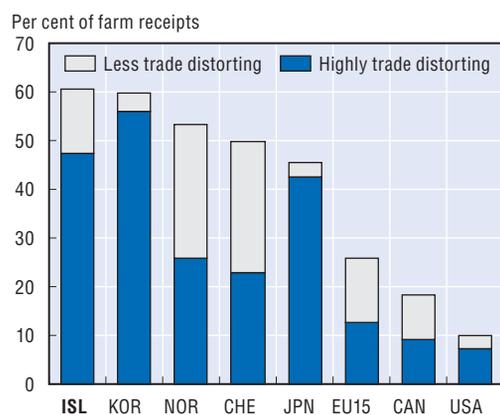
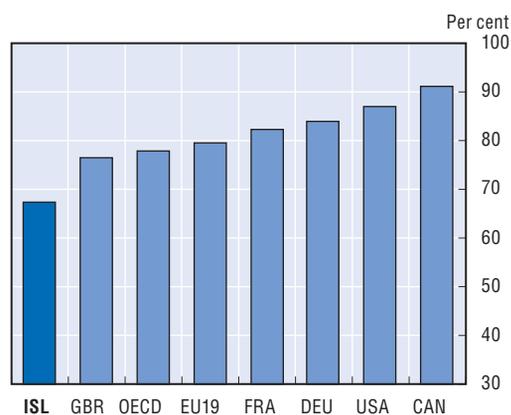
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	2.9	2.5	3.3
Labour utilisation	0.3	0.3	0.3
of which: Employment rate	0.5	0.4	0.6
Average hours	-0.3	-0.2	-0.3
Labour productivity	2.6	2.2	3.0
of which: Capital intensity	0.7	0.2	1.2
Multifactor productivity	1.9	2.0	1.8

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. The gap in GDP per capita narrowed until recently¹

B. Employment rates are very high, 2007

C. Agricultural support is very high, 2007
Producer support estimateD. Upper-secondary education attainment is lagging, 2006
Percentage of population aged 25-34

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Producer and Consumer Support Estimates Database; Chart D: OECD (2008), Education at a Glance.

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IRELAND

Growth in GDP per capita had been among the highest in the OECD until the current downturn. Recent and planned reform efforts aim to improve infrastructure and enhance innovation capacity, but additional measures are required, notably in the areas below.

Priorities supported by indicators

Strengthen work incentives for women

The female participation rate remains below the EU average, despite a rapid rise over recent years. Participation is held back by a lack of affordable childcare and disincentives in the tax-benefit system.

Actions taken: The National Childcare Strategy aims to provide 50 000 additional childcare places by 2010.

Recommendations: Improve the targeting of child support to strengthen the incentives for second earners and lone parents with young children to work. Further increase the supply of childcare places.

Strengthen competition in telecommunications and transport industries

Weak competition in telecommunications and transport industries reduces productivity, raises prices and adds to infrastructure bottlenecks.

Actions taken: The telecommunications regulator (COMREG) has issued a consultation document on the pricing of access to the unbundled local loop. The government has committed to reforming bus licensing regulation, although a proposal to open some new routes in Dublin to competition has been shelved.

Recommendations: Ensure that there is effective unbundling of the local loop and improve competitive practices in the telecommunications sector. Liberalise the bus market, appoint an independent bus regulator and allow more private firms to compete on routes.

Enhance R&D spending and innovation

Innovation capacity is weak, with adverse effects on productivity levels. Government spending on R&D as a share of national income is below the OECD average, despite recent increases, and public resources in this area could be used more effectively.

Actions taken: Substantial additional resources have been channelled through the Strategy for Science, Technology and Innovation (SSTI), which is part of the National Development Plan.

Recommendations: Government support may benefit from being less widely spread across different institutions and bodies. Improve links between universities and the private sector.

Other key priorities

- **Infrastructure.** Continue to upgrade the infrastructure to remove bottlenecks. Apply comprehensive user charges to ensure that the use of infrastructure is efficient, particular in water-related services. Introduce a congestion charge in Dublin when public transport is sufficiently developed.
- **Educational standards.** Extend the availability of pre-primary education. Consider a system of upfront tuition fees for higher education financed by loans to make institutions more responsive to students' needs.

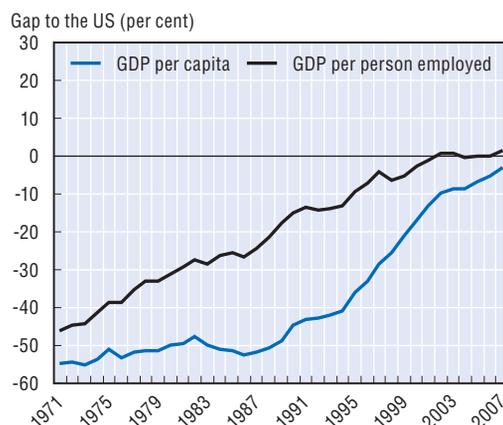
IRELAND

Structural indicators

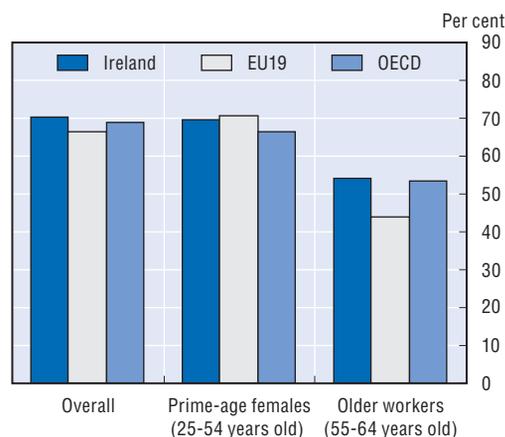
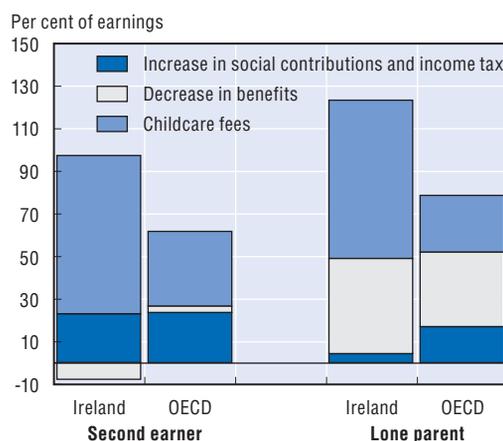
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	4.8	6.5	3.2
Labour utilisation	0.8	1.2	0.4
of which: Employment rate	1.9	2.5	1.4
Average hours	-1.1	-1.2	-0.9
Labour productivity	4.0	5.2	2.8
of which: Capital intensity	1.6	2.0	1.2
Multifactor productivity	2.4	3.2	1.6

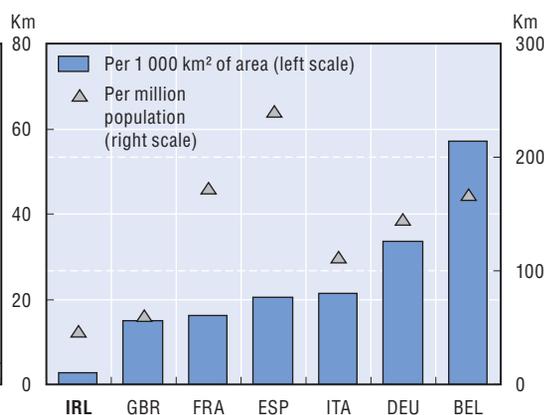
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. The remaining gap in GDP per capita is small¹

B. Employment rates are close to the OECD average, 2007

C. Disincentives to labour force participation for women with children are relatively high, 2004²

D. The motorway network is sparse, 2004



- Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
- Based on implicit tax on returning to work, defined as the cost of childcare, reductions in income-related benefits and increases in social contributions and personal income taxes, all relative to earnings in the new job. Measured for second earners and for lone parent with income equal to two-thirds of average earnings.

Source: Chart A: OECD, *National Accounts Database*; Chart B: OECD, *Labour Force Statistics Database*; Chart C: OECD, *Benefits and Wages*; OECD Indicators; Chart D: European Commission (2007), *Panorama of Transport and New Chronos Database*.StatLink  <http://dx.doi.org/10.1787/533853331362>

ITALY

The income gap vis-à-vis the best performing countries continues to widen, in particular due to weak productivity growth. Labour utilisation remains low, especially among youth, the elderly and women, and in southern Italy. There have been significant product market reforms in recent years, but more progress remains to be made, especially in the following areas.

Priorities supported by indicators

Reduce public ownership and regulatory barriers to competition

High levels of public ownership and constraining regulation in professional services and transport hamper productivity growth.

Actions taken: The second package of the 2007 structural reform reduced regulatory barriers in retail trade, retail banking, insurance and professional services. A proposed law to privatise local public service providers did not complete the parliamentary process. The 2009 budget law contains plans to continue deregulation and privatisation.

Recommendations: Eliminate entry barriers to professional services, and abolish price ceilings on such services set by professional organisations. Reduce state ownership and involvement in business activities in electricity, gas, post and transport, and limit local government involvement in enterprises that provide local services.

Improve educational outcomes

Tertiary education attainment is low compared with the OECD average. High drop-out rates from tertiary studies seriously reduce the supply of human capital and waste resources in higher-education establishments.

Actions taken: A law was adopted in August 2008 that allows public universities to take the status of private foundations. A law passed in January 2009 is intended to increase the share of output-based funding but details of implementation have yet to be fixed.

Recommendations: Increase the amount of private financial investment in tertiary education through higher tuition fees and private sector financing, to increase the supply (quality and quantity) of university places and reduce drop-out rates; introduce student loans with income-contingent repayment.

Reduce the tax wedge on labour income

The tax wedge, especially for low-skilled workers, remains high and depresses labour utilisation.

Actions taken: The 2008 budget included a one-off lump sum payment for low-income earners; in May 2008 taxation on earnings from overtime work and local productivity-related pay increases for low-paid workers was cut. A 2008 White Paper on tax reform discusses various measures including lower marginal tax rates, a switch to joint taxation of couples, a negative income tax or in-work benefit and streamlining and simplification of the current tax system. No action has yet been taken on this.

Recommendations: Marginal tax rates should be decreased, especially for low-income groups, without introducing excessive complexity, financed by reduced public expenditures and strengthened tax enforcement. Since joint taxation is detrimental to women's labour force participation, already among the lowest in the OECD, separate taxation of couples should be maintained.

Other key priorities

- **Wage bargaining.** To reduce regional disparities in labour utilisation, promote decentralisation in wage bargaining, starting with differentiating wages in the public sector, so as to take into account regional differences in productivity and the cost of living.
- **Innovation incentives.** To foster innovation and growth, consider increasing the current low rate of R&D expenditure through careful use of tax incentives, in addition to strengthening competition in product markets. Promote research partnerships between industry and universities. Make recruitment procedures for researchers more transparent.

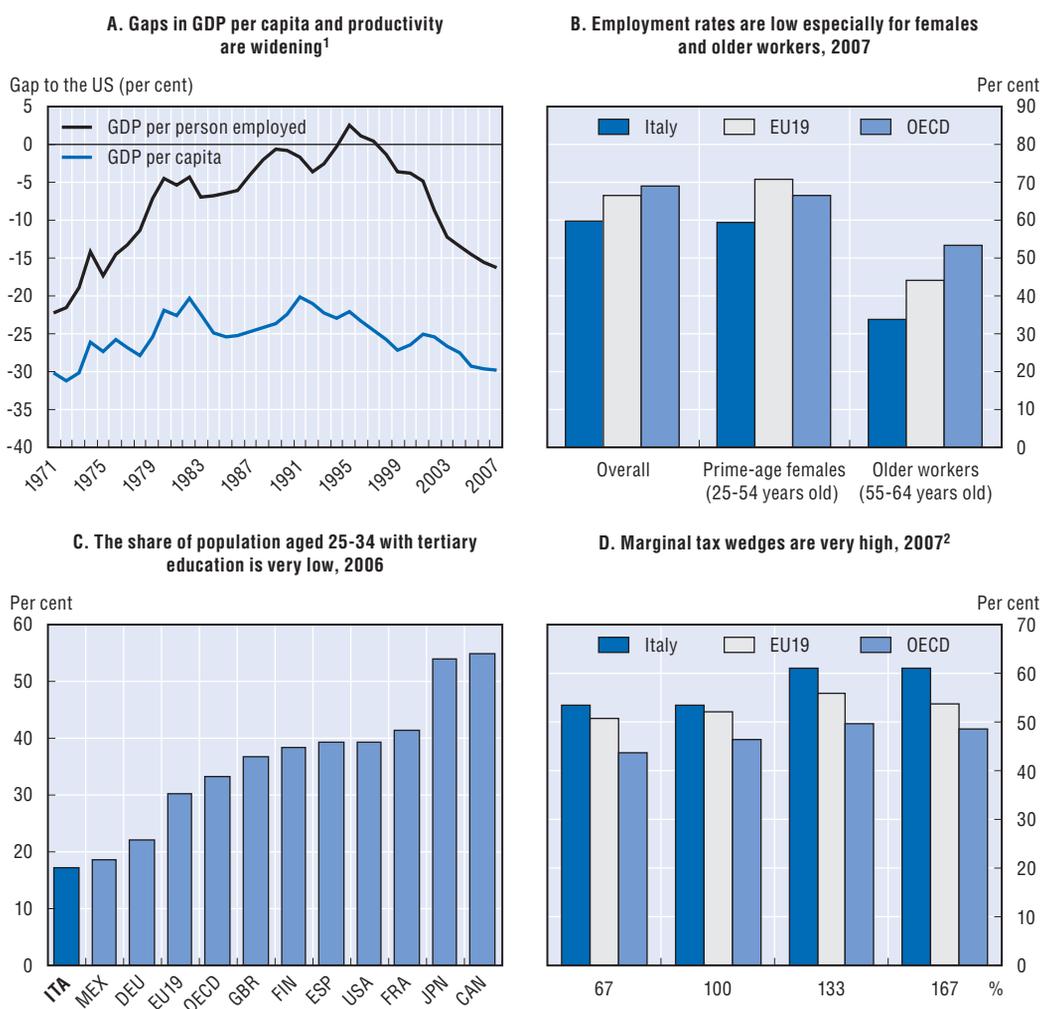
ITALY

Structural indicators

Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	0.9	1.2	0.5
Labour utilisation	0.4	0.4	0.3
of which: Employment rate	0.7	0.7	0.6
Average hours	-0.3	-0.3	-0.3
Labour productivity	0.5	0.7	0.3
of which: Capital intensity	0.7	0.8	0.7
Multifactor productivity	-0.2	-0.1	-0.4

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Evaluated at 67%, 100%, 133% and 167% of average earnings.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD (2008), Education at a Glance; Chart D: OECD, Taxing Wages Database.

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JAPAN

The income gap relative to the best performing countries remains large, principally owing to a major productivity shortfall in services. Some structural reform has taken place through the “Special Zones” programme, although further nation-wide reform is needed, especially in the following areas.

Priorities supported by indicators

Ease regulations in network industries

Competition in network industries is limited, with Japan scoring worst among OECD countries on the OECD’s indicator measuring legal restrictions on entry, the degree of vertical integration and the independence of sectoral regulators. This has an adverse impact on productivity in these industries and in the economy more generally.

Actions taken: The division of Japan Post into four companies in 2007 is the first step in its privatisation. Competition was increased in the gas sector in 2007 by reducing the threshold for allowing consumers to choose their suppliers. Following the Asian Gateway Initiative, Japan has reached bilateral agreements with seven countries and regions to increase the number of flights, carriers and entry points. The regulation setting a floor under the price of airplane tickets was abolished in March 2008.

Recommendations: Establish independent regulators to promote competition in both electricity and gas sectors, and further expand the share of consumers allowed to freely choose their suppliers. Remove remaining regulatory obstacles to the operations of new entrants and actively pursue the unbundling of vertically-integrated incumbents through legal separation. Introduce market mechanisms in the allocation of landing slots at airports to fully utilise capacity and reduce entry barriers, and promote the privatisation of airport management. Complete the privatisation of Japan Post in the medium term.

Reduce producer support to agriculture

Support for agricultural producers is still double the average in the OECD area, keeping resources in low-productivity activities, while distorting trade and maintaining consumer prices of agricultural products far higher than world prices.

Actions taken: No actions taken since 2007 when the government introduced three new direct payment schemes, in part to concentrate support on larger, more efficient farms, and the system of administered prices for wheat and barley was relaxed. The share of market price support in total producer support to agriculture remained very high at 93% during 2005-07.

Recommendations: Further scale back the level of support to agriculture, while shifting its composition away from market price support and towards direct support for farmers to reduce the distortion of trade and production decisions.

Reform employment protection legislation for regular employment

The rise in the proportion of non-regular workers, from 27% in 2001 to 34% in 2007, deters on-the-job training that promotes growth and the take-up of new technology. It also creates equity concerns, given the limited coverage by the social security system of such jobs and their precarious nature.

Actions taken: No action has been taken to ease employment protection for regular workers as the 2008 Labour Contract Law simply incorporated judicial precedents into the law. The implementation of the law on part-time workers (the largest category of non-regular workers) in 2008 aims in part at achieving more balanced treatment between part-time and regular workers, although it may discourage the hiring of part-time workers.

Recommendations: Reduce employment protection for regular workers, thereby lowering incentives to circumvent strict conditions for dismissal by hiring non-regular workers. Expand the coverage of social insurance systems to include more non-regular workers, thus reducing the gap in labour costs, while improving their training opportunities.

Other key priorities

- **Tax reform.** The tax system should rely more on indirect taxes to generate revenue, while cutting the corporate tax rate and broadening the base of direct taxes to eliminate provisions that distort the allocation of capital and discourage labour supply.
- **Foreign investment restrictions.** To encourage greater foreign direct investment, ensure that the M&A market is fully open to all firms, limit foreign ownership restrictions that are based on national security and strategic reasons, and ease product market regulations, especially in the service sector and network industries.

JAPAN

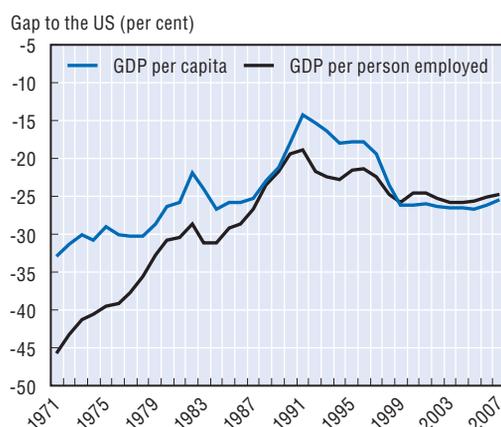
Structural indicators

Average annual trend growth rates, per cent

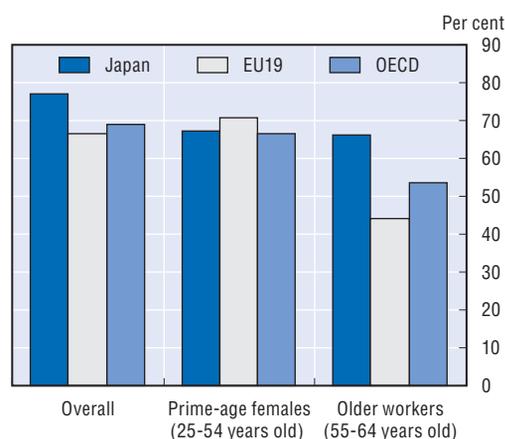
	1997-2007	1997-2002	2002-2007
GDP per capita	1.1	0.9	1.2
Labour utilisation	-0.7	-0.9	-0.5
of which: Employment rate	-0.2	-0.2	-0.2
Average hours	-0.4	-0.7	-0.2
Labour productivity	1.8	1.9	1.7
of which: Capital intensity	0.6	0.8	0.4
Multifactor productivity	1.2	1.1	1.3

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

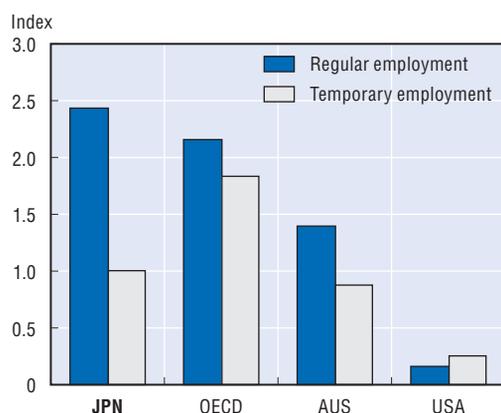
A. Gaps in GDP per capita and productivity remain persistent¹



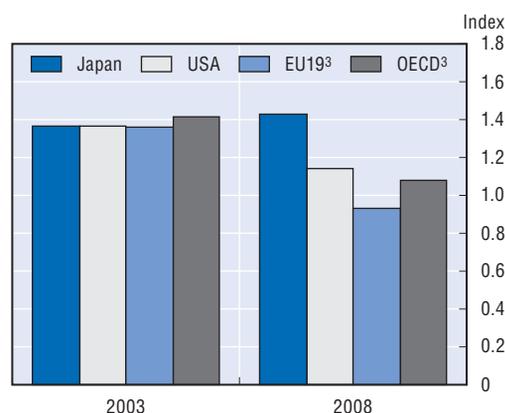
B. Employment rates are high but only close to average for females, 2007



C. Employment protection legislation is restrictive, 2006²



D. Legal barriers to entry in network industries have increased²



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD National Accounts Database; Chart B: OECD Labour Force Statistics Database; Chart C: OECD (2004), OECD Employment Outlook and OECD estimates; Chart D: OECD, Product Market Regulation Database.

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KOREA

While GDP per capita continues to converge to that of the best performing countries, the gap is still very large due to a significant productivity shortfall which is only partially offset by high labour utilisation. After several years with little progress, a renewed push for structural reforms is required, notably in the areas below.

Priorities supported by indicators

Ease regulation in network industries

Restrictive product market regulations limit competition in network industries, contributing to the productivity gap between manufacturing and services, which is the largest in the OECD area.

Actions taken: The government introduced a “Roadmap for Telecommunication Policy and Regulation” in 2007, which allows number portability, relaxes price regulation and the interconnection system and lowers entry barriers. The Korea Broadcasting Commission and the Korea Communications Commission were combined into a single regulator in 2008.

Recommendations: Introduce reforms along the lines of the telecommunication reform in other network industries, including electricity, where the privatisation of power-generating companies has stalled. Lower or remove foreign ownership ceilings in network industries, such as telecommunications, transport and electricity, to reap benefits associated with inflows of foreign direct investment.

Reduce producer support to agriculture

Support for agricultural producers remains more than double the OECD average, distorting trade and forcing consumers to pay far above the world price for agricultural products, while keeping resources in low-productivity activities.

Actions taken: No action since the free trade agreement (FTA) was negotiated with the United States in 2007 that will gradually reduce barriers to a number of major products, including wheat, corn and beef. Despite the introduction of a payment to farmers based on paddy field area, the proportion of market price support – the most distortive type of support – rose to over 90% in 2007.

Recommendations: Increase openness to imports of agricultural products *inter alia* through the implementation of the FTA with the United States and agreements with other trading partners. Shift the composition of assistance from market price support to direct income payments while reducing the overall level of support.

Reform employment protection legislation for regular employment

The proportion of temporary workers has risen from 17% of employees in 2001 to 28% in 2007. The precarious nature of such jobs, their limited coverage by the social insurance systems and the lack of training creates both equity and efficiency concerns.

Actions taken: The provision of the Non-Regular Worker Act, which is aimed in part at preventing discriminatory treatment of non-regular workers by allowing them to submit complaints to the government, was extended to companies with between 100 and 299 employees in July 2008.

Recommendations: Ensure that the Non-Regular Worker Act does not reduce overall employment. Reduce the incentives to hire non-regular workers by easing employment protection for regular workers and expanding the coverage of the social insurance systems, while improving training opportunities for non-regular workers.

Other key priorities

- **Innovation incentives.** Improve the innovation system by upgrading the quality of universities through deregulation and competition and increasing their relatively limited role in R&D.
- **Childcare facilities.** To encourage female labour force participation, enlarge the role of private childcare facilities by eliminating the ceiling on fees and provide vouchers to parents rather than expanding the capacity of public childcare.

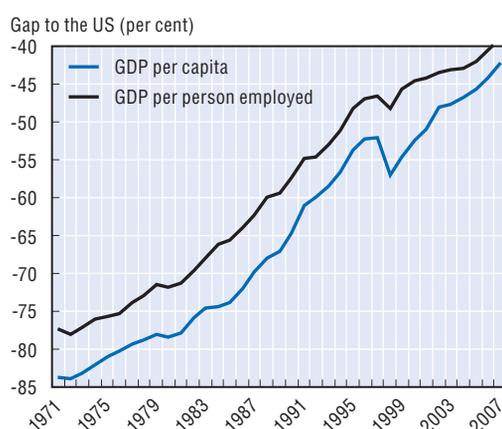
KOREA

Structural indicators

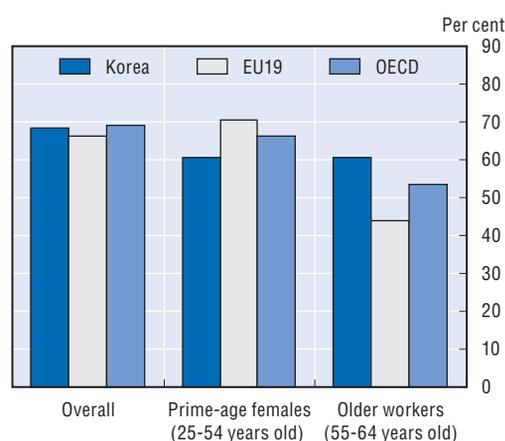
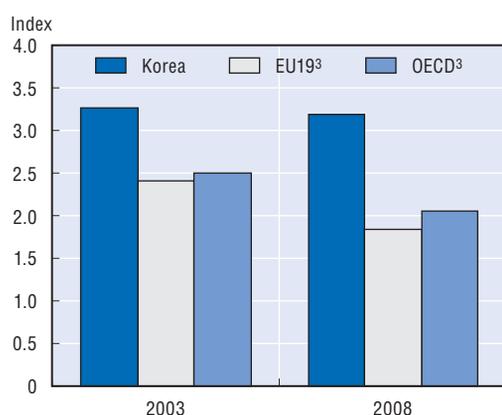
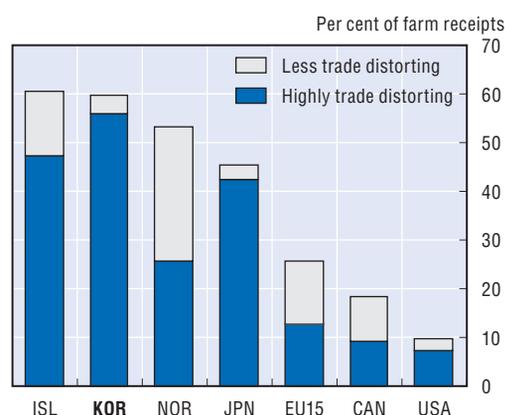
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	4.0	4.0	4.1
Labour utilisation	-0.4	-0.5	-0.3
of which: Employment rate	0.6	0.5	0.8
Average hours	-1.0	-1.0	-1.1
Labour productivity	4.5	4.5	4.4
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Convergence in GDP per capita and productivity remains strong¹

B. The overall employment rate is close to the OECD average despite low rates for females, 2007

C. Product market regulation in network industries is stringent²D. Agricultural support is high, 2007
Producer support estimate

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Product Market Regulation Database; Chart D: OECD, Producer and Consumer Support Estimates Database.

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LUXEMBOURG

GDP per capita, adjusted for cross-border workers, continues to increase from a level that is already one of the highest in the OECD. However, labour force participation of some groups remains low. Recent measures have aimed at facilitating younger people's entry into the labour market, but more broad-based measures are needed, particularly in the areas below.

Priorities supported by indicators

Reduce disincentives for the unemployed

Unemployment benefit replacement rates are high by OECD standards and benefits are accessible without an employment record. Moreover, generous social assistance (RMG) further raises incentives to remain inactive.

Actions taken: Younger people with difficulties in entering the labour market are now receiving early activation. Moreover, the modification of the indexation mechanisms has led to a decrease in social assistance replacement rates.

Recommendations: Decouple RMG and complementary benefits from minimum wage increases. Tighten access conditions to unemployment benefits for the young.

Improve achievement in primary and secondary education

Educational achievement (controlled for the socio-economic background of students) tends to be similar across schools, but the level is low. Moreover, the language-rich curriculum does not fully reflect labour market needs.

Actions taken: A series of reforms aiming at improving language education and reducing class repetition have been enacted but are not yet fully implemented.

Recommendations: School autonomy should increase to allow headmasters and teachers to adjust their school programme in line with student needs. In addition, language education should be rebalanced in order to make school education better reflect labour market requirements.

Reduce the implicit tax on continued work at older ages

Generous pre-pension and early retirement schemes, a high rate of imputed years of contributions and high net replacement rates for old age pensions have contributed to an internationally low employment rate for 55 to 64-year-olds.

Actions taken: No action taken.

Recommendations: Phase out existing pre-pension and early retirement schemes. Reduce the high net replacement rates that can reach more than 100% of the last wage for low-income earners, preferably by adjusting the pension indexation mechanism.

Other key priorities

- **Professional services.** Barriers for entry into professional services remain high. Licensing and education requirements should be lowered and language requirements limited to only one of the official languages.
- **Regulation of labour.** Employment protection legislation is one of the strictest among the OECD countries. In particular, the regulation of collective dismissals should be made more flexible as it currently acts as a barrier to firm growth.

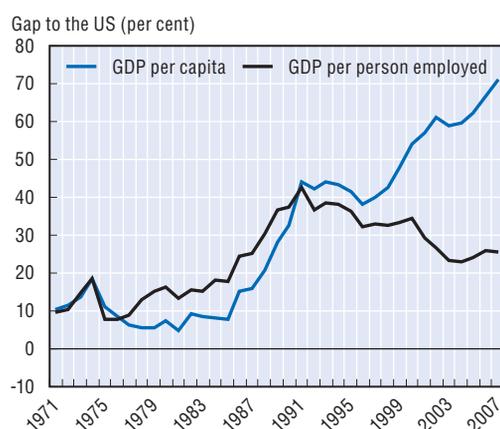
LUXEMBOURG

Structural indicators

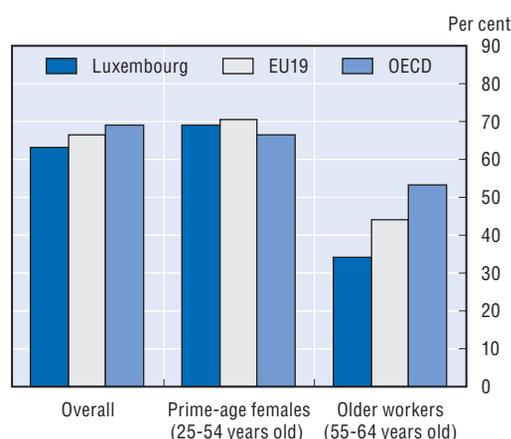
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	3.3	3.7	3.0
Labour utilisation	1.6	1.9	1.2
of which: Employment rate	2.4	2.7	2.1
Average hours	-0.8	-0.7	-0.9
Labour productivity	1.7	1.7	1.8
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

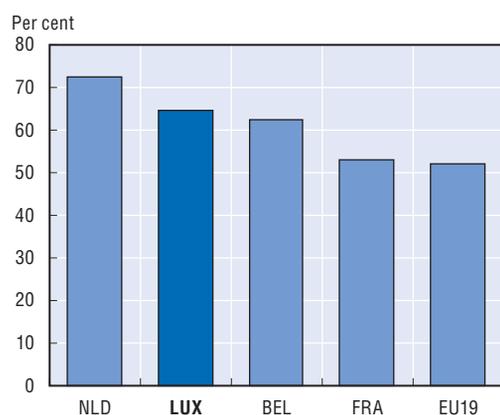
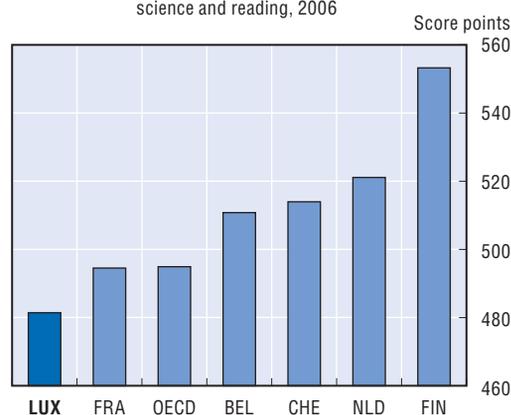
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. The positive productivity gap has declined¹

B. The employment rate is low for older workers, 2007



C. Net replacement rates for the long-term unemployed are very high, 2006

D. Education performance is poor at the compulsory level
Average mean PISA scores in mathematics, science and reading, 2006

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Benefits and Wages Database; Chart D: OECD, PISA 2006 Database.

StatLink  <http://dx.doi.org/10.1787/533865864603>

MEXICO

Growth in GDP per capita has been insufficient to narrow the very wide income gap vis-à-vis the OECD average. The gap is mainly due to a very large productivity shortfall. Pension and fiscal reform have been undertaken in the past few years and a recent healthcare reform has been implemented, but further reforms are required, especially in the following areas.

Priorities supported by indicators

Raise achievement in primary and secondary education

The educational attainment of the population is low and improvements from one generation to the next have been slow. Investment in human capital, as measured by the share of education spending in GDP, has increased over the past decade and is now slightly above the OECD average, but this is not yet reflected in educational outcomes. According to PISA scores, students' results in reading and mathematics are the lowest in the OECD. This has depressed productivity performance.

Actions taken: The conditional programme *oportunidades* now provides scholarships to low-income youth staying in upper-secondary education. The modernisation of curricula continues. School evaluation and the publication of some of these results are in progress.

Recommendations: In the allocation of education spending, put more focus on non-wage items and secondary schooling. Review incentives for teachers, with the introduction of performance-based evaluation. Further strengthen technical and vocational education.

Reduce barriers to entry in network industries

Competition in some key sectors is hampered by restrictive regulations; in others, pro-competition regulations are lacking or are not effective or enforced. Telecommunications, electricity, railroads and the media sectors are some of the areas where competition is weak.

Actions taken: The government has launched a broad review of laws and regulations to identify and eliminate unnecessary restraints on competition. The competition commission (CFC) has increased its capacity for economic analysis of competition cases.

Recommendations: Reduce regulation that is restricting competition and increase the effectiveness and enforceability of competition-enhancing access regulations that facilitate the entry of new participants. In railways, clarify rules for setting trackage and interconnection tariffs. In telecommunications, establish a clear legal framework for setting access prices, facilitate an increase in the types of networks, unbundle the local loop, and effectively regulate mobile termination charges. Clearly separate the generation of electricity from its transmission and give the CFC broader powers over competition issues in the electricity sector.

Reduce barriers to foreign ownership

Restrictions on foreign direct investment (FDI) are still in place in many sectors, hampering competition, technological transfer from abroad and lessening the pressure to innovate.

Actions taken: No action taken.

Recommendations: Ease restrictions on FDI in services and infrastructure sectors, such as telecommunications (with fixed line telephony), domestic land transport, coastal shipping and airports.

Other key priorities

- **Reform the state-owned oil company.** Improve the governance of PEMEX by lifting the public works constraints that apply to investment, increasing labour mobility (within the company) and strengthening the company's accountability to ensure efficient operation. Facilitate risk and profit sharing with other companies to access the technology needed to increase output.
- **"Rule of law".** Improve the "rule of law", further by increasing transparency, clarifying property rights, and ensuring more effective and predictable law enforcement.

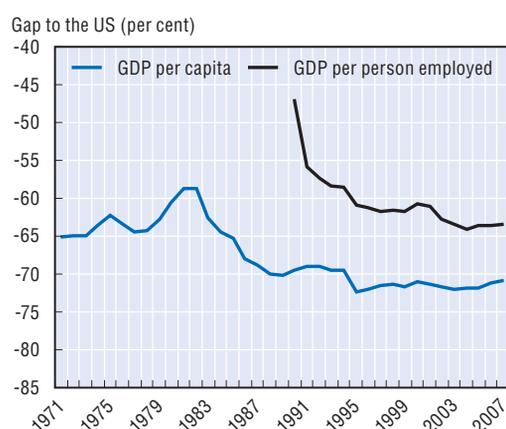
MEXICO

Structural indicators

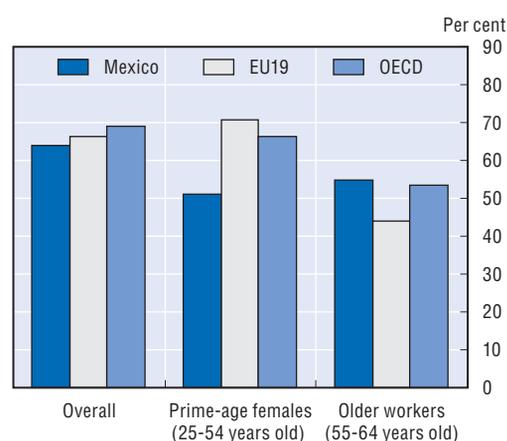
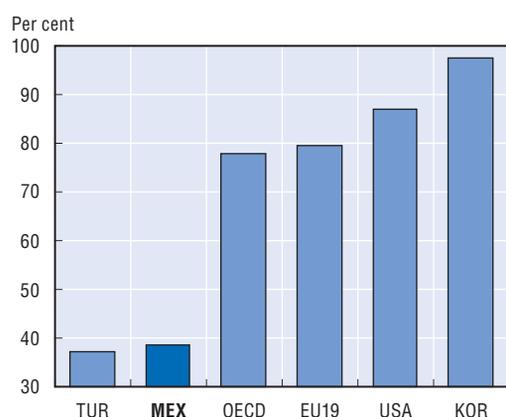
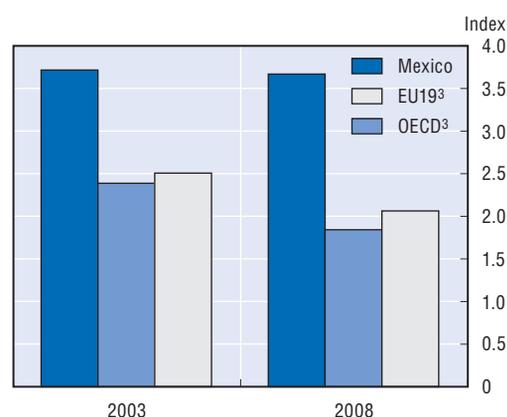
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.9	1.8	1.9
Labour utilisation	0.9	1.0	0.8
of which: Employment rate	0.9	0.9	0.9
Average hours	0.0	0.1	-0.1
Labour productivity	0.9	0.8	1.1
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Little convergence in GDP per capita and productivity despite large gaps¹

B. Employment rates for females are low, 2007

C. Upper-secondary education attainment is lagging, 2006
Percentage of population aged 25-34D. Product market regulation in network industries is strict²

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD (2008), Education at a Glance; Chart D: OECD, Product Market Regulation Database.

StatLink  <http://dx.doi.org/10.1787/533865864603>

NETHERLANDS

The income gap vis-à-vis the United States reflects lower average hours worked, employment rates and hourly productivity levels being relatively high. Recent government measures have focused on expanding labour supply, particularly of females and older workers, but additional measures are required, notably in the following areas.

Priorities supported by indicators

Reform employment protection legislation for regular employment

Employment protection legislation for regular contracts is characterised by a dual system that imposes either high severance payments (the court route) or bureaucratic barriers that allow local public employment services to prevent layoffs. This limits workplace reorganisation and hampers the diffusion of new technology.

Actions taken: In October 2008, the government and the social partners agreed on capping severance payments at 100% of the annual pay for workers earning more than EUR 75 000 per year. New internal guidelines to determine the amount of severance payments in court cases that were adopted in November 2008 should imply a substantial fall in actual firing costs.

Recommendations: Make the current dual system of dismissal simpler and more predictable. In particular, the rules governing layoffs should be clearly specified in law, with appeal to local courts only possible as an *ex post* option, in case one of the parties feels unfairly treated. Moreover, in order to safeguard labour market opportunities for workers after the age of 50, the rate of accumulation of their severance payment rights should be aligned with that of other workers.

Lower marginal effective tax rates

Marginal effective tax rates are high, in particular for low-income households, lowering their hours worked and participation rates. Marginal tax rates are also high for second earners due to the transferability of the individual tax credit.

Actions taken: As earlier decided, the transferability of the individual tax credit will be phased out over 15 years. Moreover, in-work benefits are being increased by replacing the current general tax credit and the tax credit for second earners in families with children with an earned income-dependent scheme.

Recommendations: The transferability of the individual tax credit should be phased out more rapidly. Moreover, more of the family-income-based child tax credit should be shifted to the individual or second-earner child tax credit. In addition, the tapering-off rate for housing and child benefits should be reduced further and certain work-related entitlements and tax credits could be conditioned on the number of hours worked.

Reform disability benefit schemes

Recent reforms have sharply reduced the inflow into disability. However, the stock of disability benefit recipients is still high, with adverse effects on employment performance.

Actions taken: The required sickness absence period paid by employers has been expanded from one to two years; a “no-risk policy” with respect to sickness pay for employers hiring partially disabled workers has been introduced; and disability benefits are now partly dependent on the hypothetical earnings capacity of benefit recipients. Further reform of the eligibility rules for the disability benefit scheme for young disabled people (Wajong) has been announced.

Recommendations: Further limit or phase out the initial disability periods where benefits are based on previous earnings. Apply the new stricter medical testing criteria in the periodic medical reassessment to the existing pool of disability recipients.

Other key priorities

- **Incentives for the long-term unemployed.** Activation policies for the long-term unemployed should be strengthened further to raise overall labour participation; and benefit duration should be shortened.
- **Retail trade regulation.** Retail distribution should be further liberalised by phasing-out the restriction on shop-opening hours, facilitating the entry of large retail stores and easing zoning regulations.

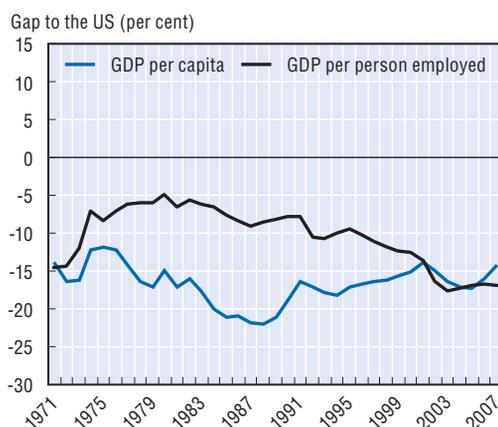
NETHERLANDS

Structural indicators

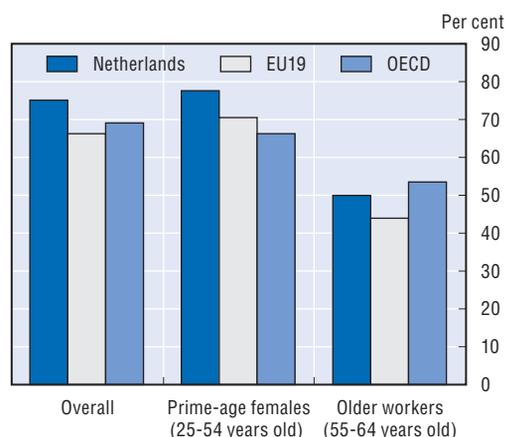
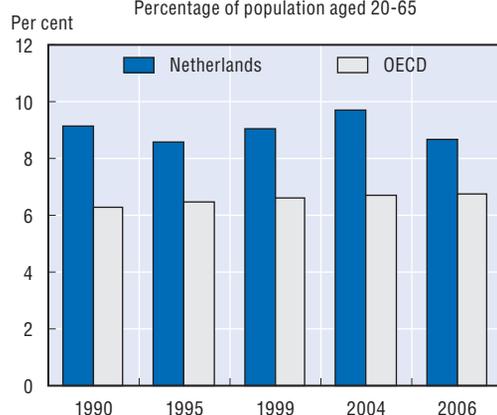
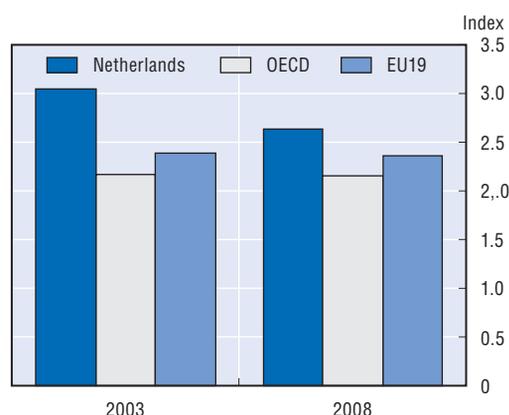
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	2.0	2.1	1.9
Labour utilisation	0.7	0.7	0.7
of which: Employment rate	0.8	1.0	0.5
Average hours	-0.1	-0.3	0.2
Labour productivity	1.3	1.4	1.2
of which: Capital intensity	0.5	0.6	0.5
Multifactor productivity	0.8	0.9	0.7

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity are persistent¹

B. Employment rates are high except for older workers, 2007

C. The share of working-age population receiving disability benefits remains high²D. Employment protection legislation on regular contracts is still restrictive³

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
2. Disability benefits include benefits received from schemes to which beneficiaries have paid contributions (contributory), programmes financed by general taxation (non-contributory) and work injury schemes.
3. Indicator scale of 0-6 from least to most restrictive.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD (2003), Transforming Disability into Ability and OECD estimates; Chart D: OECD (2004), OECD Employment Outlook and OECD estimates.

StatLink  <http://dx.doi.org/10.1787/533865864603>

NEW ZEALAND

Trend growth of GDP per capita has slowed, and its level remains significantly below the OECD average, essentially reflecting low hourly labour productivity. Reforms have been taken to introduce market-based mechanisms to address climate change, but additional measures are required, in particular in the following areas.

Priorities supported by indicators

Reduce barriers to competition in network industries

Significant barriers to competition and regulatory uncertainty in electricity, air and rail transport, and telecommunications are hampering needed investments in these sectors and limiting productivity advances in the economy.

Actions taken: In late 2008, a comprehensive emissions trading scheme was legislated, though the new government is expected to amend it after a review is completed. A new National Energy Strategy, seeking to boost energy market competition, was announced. The mobile telephone regulatory and competitive framework is also being strengthened. However, the rail network has been re-nationalised and ownership restrictions *de facto* tightened in the case of an attempted foreign take-over of Auckland airport.

Recommendations: Remove investment uncertainties by clarifying the regulatory framework for competition, water property rights and the new emissions trading scheme. In mobile telephony, regulate termination charges and inject competition to improve broadband uptake. Divest public ownership and dismantle FDI restrictions and entry barriers in international air transport and rail.

Reduce educational under-achievement among minority groups

Long-standing and widening disparities in school achievement has left a large number of people with poor qualifications, notably in Maori and Pacific Island population groups (together accounting for 23% of the population), with adverse effects on human capital.

Actions taken: In consultation with unions, the government has attempted to place performance measures in teachers' contracts, so far without success.

Recommendations: Teachers' pay and career advancement should be linked to ongoing professional development and to success in improving educational outcomes for groups at risk of under-achievement.

Raise effectiveness of R&D support

The lack of R&D tax credits, inadequate coordination of R&D support programmes and a particularly low stock of skilled human capital in the form of researchers, scientists and engineers in the private sector contribute to below average R&D intensity.

Actions taken: Schemes have been launched to improve firms' ability to access researchers worldwide, while an ongoing review of immigration policy seeks to improve the competitive recruitment of talent. On the other hand, a recently introduced R&D tax credit has been cancelled by the new government.

Recommendations: Facilitate the transfer of knowledge between universities and private firms, for instance through collaborative research efforts and sabbaticals for researchers. Continue to adapt immigration, education and labour-market policies to supply needed innovation skills. Improve co-ordination among agencies responsible for delivery of public support and systematically evaluate programmes, ensuring that grants are delivered in a contestable and transparent manner. Consider reduced use of grants with more extensive use of tax incentives and make more public R&D conditional on private sector co-financing. Encourage the development of venture capital markets to further help fund innovative business start-ups.

Other key priorities

- **Health sector efficiency.** In the health sector, increase incentives for public sector managers to identify and implement efficiency improvements, and to this end, develop output measures for a much larger share of the sector and robust price and volume measures for major classes of inputs. Continue to improve access and service quality for minority groups, along with an increased focus on prevention of chronic conditions.
- **Road infrastructure.** Develop and implement an effective congestion charging scheme for key urban areas and relax the regulatory framework for road infrastructure to make it easier to construct toll roads.

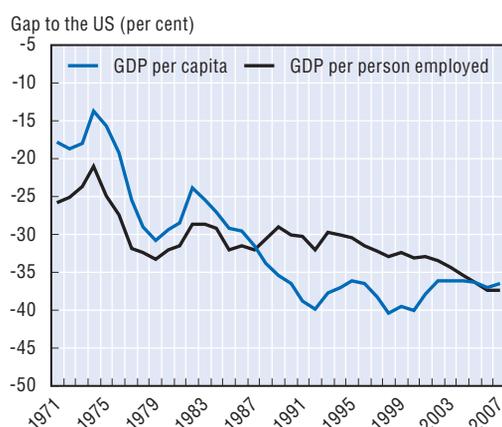
NEW ZEALAND

Structural indicators

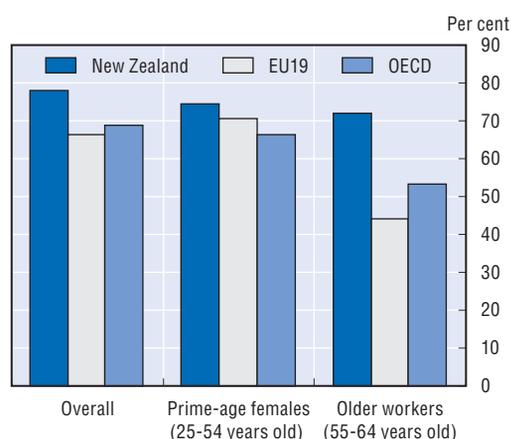
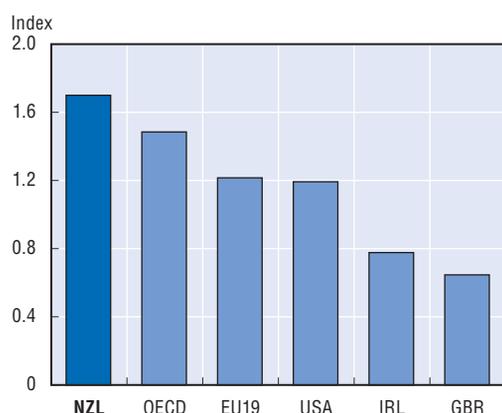
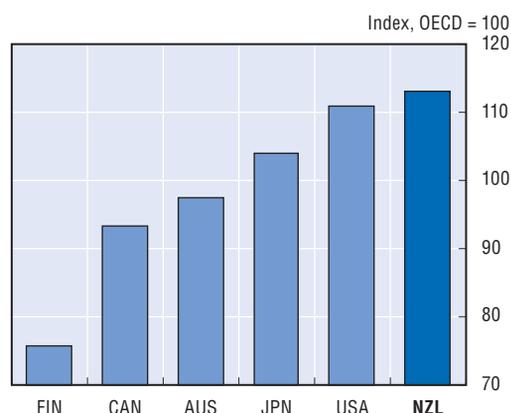
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.9	2.2	1.7
Labour utilisation	0.6	0.6	0.5
of which: Employment rate	0.8	0.8	0.9
Average hours	-0.3	-0.1	-0.4
Labour productivity	1.4	1.6	1.2
of which: Capital intensity	1.1	1.2	1.0
Multifactor productivity	0.3	0.4	0.2

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity remain large¹

B. Employment rates are high, 2007

C. Barriers to foreign direct investment are higher than the OECD average, 2006²D. The variation in student performance is high, 2006³

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
2. Indicator scale of 0-10 from least to most restrictive.
3. Average variation in student performance in mathematics, science and reading (only mathematics and science for the United States).

Source: Chart A: OECD, *National Accounts Database*; Chart B: OECD, *Labour Force Statistics Database*; Chart C: T. Koyama and S.S. Golub (2006), "OECD's FDI regulatory restrictiveness index: revision and extension to more economies", *OECD Economics Department Working Papers*, No. 525; Chart D: OECD, *PISA 2006 Database*.

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NORWAY

Mainland GDP per capita is among the highest in the OECD, thanks to high productivity. However, labour utilisation is mediocre, reflecting low annual average hours worked. Following a period of substantial reform, the past few years have seen less change, but particular weaknesses remain in the following areas.

Priorities supported by indicators

Reduce the scope of public ownership

Public ownership is high and widespread, covering a broad range of sectors such as petroleum and aluminium production, network industries, banking, telecommunications and chemicals. This can be detrimental to competition, foreign direct investment, innovation and growth, even if many state-owned companies are profitable.

Actions taken: Privatisation is on hold, and public ownership has risen. The government has increased its stake in the dominant petroleum company and taken a minority share, with significant veto rights, in a holding company in the sector providing services to energy production. State ownership remains an active policy lever for the government.

Recommendations: Resume privatisation, with priority for telecommunications, banking and industry, as soon as financial market conditions permit.

Reform disability and sickness benefit schemes

Labour utilisation is held back by extensive use of sick leave arrangements and disability schemes, often leading directly to early retirement.

Actions taken: Since 2007, participants in long-term sickness and disability schemes have been required to actively plan with their employers to get back to work. An ongoing merger of the welfare system and the employment services network should create one-stop shops to improve coordination of these services.

Recommendations: Further tighten access to sickness and disability benefits, notably by mandating the involvement of independent medical experts (not family doctors) in disability assessments. With due allowance for impaired work capacity, use the ongoing merger of the welfare system and the employment services network to impose similar conditionality on partial disability benefit recipients as on the unemployed.

Reduce producer support to agriculture

Agricultural support remains among the highest in the OECD, including outright bans on imports of certain items at certain times, keeping resources in low-productivity activities.

Actions taken: None.

Recommendations: Cut high explicit and implicit tariffs and reduce production subsidies. Where intervention is aimed at income support, provide it in targeted form, rather than protecting the whole sector. Consider subjecting aid to the same consumer interest test that would be used in competition policy cases.

Other key priorities

- **Education efficiency.** To improve educational performance and cost-efficiency, raise teacher training standards. Consider using merit pay to improve incentives for school principals and teacher performance. Publish the results of the nation-wide standardised assessment for each school and provide direct feedback on students' results to teachers. Merge small and medium-sized schools to gain economies of scale.
- **Marginal tax rates.** Reduce high marginal income tax rates to increase labour supply and encourage human capital investment and risk-taking.

NORWAY

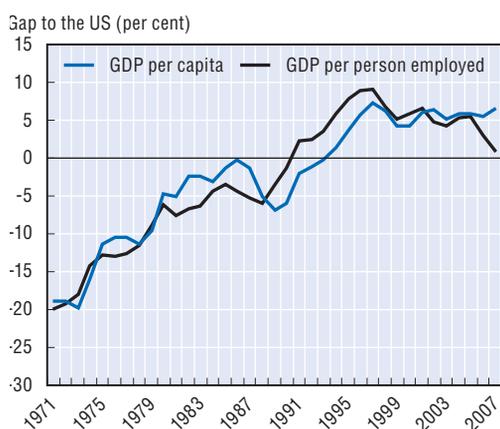
Structural indicators

Average annual trend growth rates, per cent

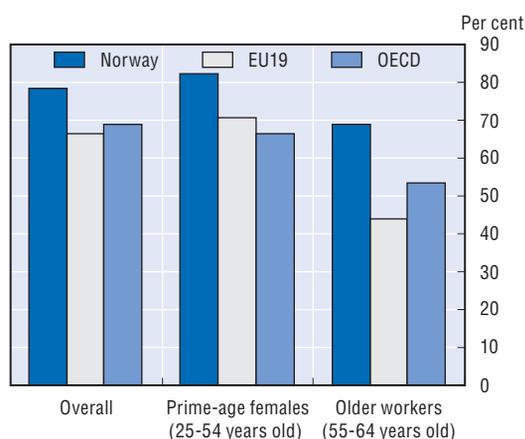
	1997-2007	1997-2002	2002-2007
GDP per capita	2.5	2.3	2.8
Labour utilisation	0.1	-0.2	0.5
of which: Employment rate	0.6	0.6	0.7
Average hours	-0.5	-0.8	-0.2
Labour productivity	2.4	2.5	2.3
of which: Capital intensity	-0.4	-0.1	-0.6
Multifactor productivity	2.8	2.7	2.9

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

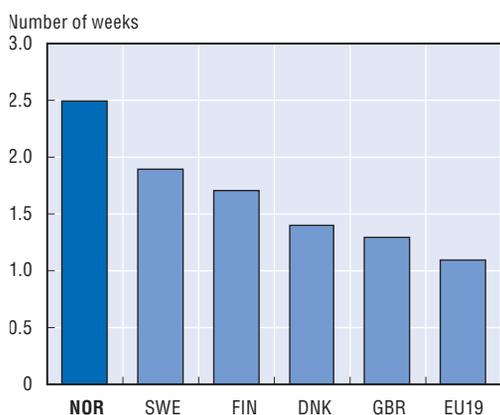
A. GDP per capita and productivity are among the highest in OECD¹



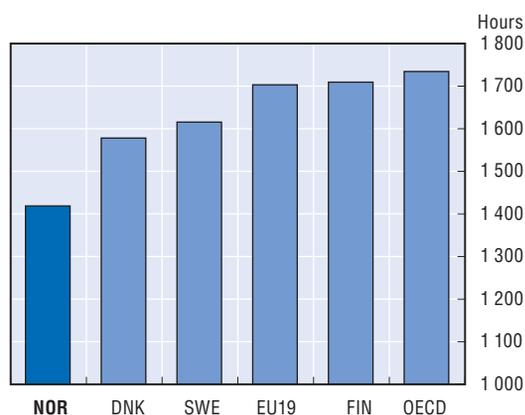
B. Employment rates are high, 2007



C. The average number of weeks lost per employee due to sickness is very high, 2007



D. Average annual hours worked per person employed are among the lowest in the OECD, 2007



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD (2004), OECD Employment Outlook and OECD estimates; Chart D: OECD (2008), Employment Outlook.

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POLAND

Strong trend growth has led to convergence in GDP per capita vis-à-vis the EU average. However, trend productivity growth has slowed and the labour force participation rate – among the lowest in OECD – has not risen. Some reforms have been undertaken recently to improve work incentives, but particular weaknesses still remain in the areas below.

Priorities supported by indicators

Remove barriers to entrepreneurship

Administrative burdens on start-ups and compliance costs on existing businesses are high by OECD standards, discouraging new entry and efficiency.

Actions taken: The authorities have agreed to deliver binding legal interpretations of tax legislation on request by entrepreneurs, increased the turnover threshold above which a full accounting system must be in place and allowed firms with no employees to temporarily suspend their activities while exempting them from social security contributions at the same time.

Recommendations: Streamline the system of licences and permits, reduce the vulnerability of businesses to arbitrary (and often conflicting) decisions by the two main tax-inspection bodies by merging them into one institution, create a one-stop-shop for start-ups and speed up the privatisation process.

Reform the tax and benefit system

Work incentives are poor and labour force participation is significantly below the OECD average as a result of high tax wedges and early retirement schemes.

Actions taken: The tax wedge has been lowered by the reductions in rates of social security contributions, the introduction of a child allowance and the simplification and cut in personal income tax rates as from 2009.

Recommendations: Further reduce the tax wedge on low-income workers with targeted cuts in social security contributions and turn the child allowance into a non-wastable tax credit while lowering its value so as to keep the budgetary cost unchanged. Significantly reduce access to early-retirement pensions so that only those whose work conditions result in substantially lower life expectancy remain eligible.

Improve the efficiency of education

Attendance at the pre-school level is very low and access varies across regions. There remain questions of equity and efficiency of resource allocations in tertiary education.

Actions taken: No significant action taken.

Recommendations: Further improve provision of free pre-school education at ages 3 to 5, focusing particularly on poor and rural areas. Introduce tuition fees for full-time students in public higher-education institutions together with more generous systems of means-tested grants and student loans with income-contingent repayments.

Other key priorities

- **Transport infrastructure.** In order to step up the implementation of transport infrastructure investments, reform public procurement legislation by limiting the abuse of appeal procedures, simplify the issuance of building permits and environmental impact assessments, and give more consideration to public-private partnerships.
- **Housing policy.** Increase housing supply by making compulsory the release of zoning plans by municipalities, introduce escrow accounts to protect buyers' advances, and overhaul the functioning of the rental market by working towards further easing of controls on rent increases. Reform the programme of social housing by granting a buy-back option to tenants.

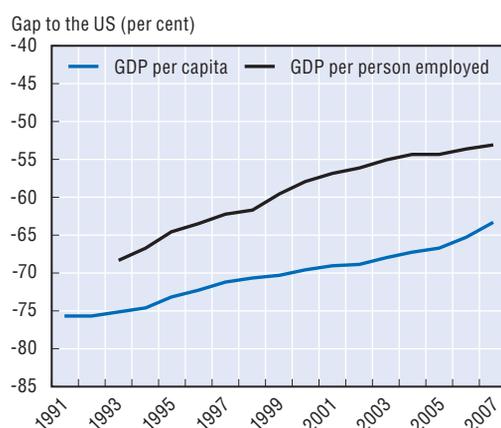
POLAND

Structural indicators

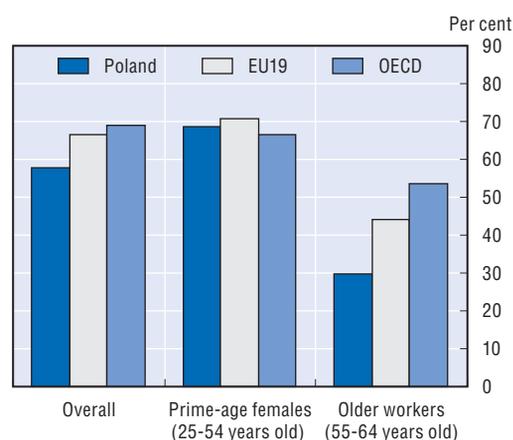
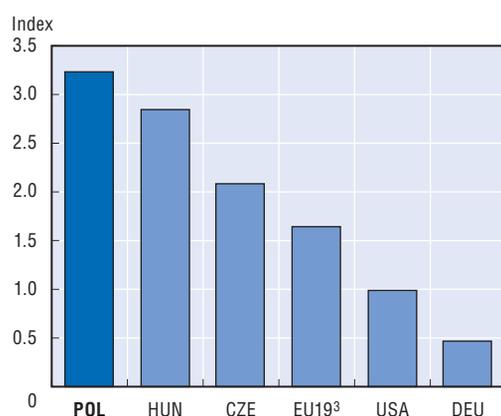
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	4.0	4.2	3.8
Labour utilisation	-0.4	-1.4	0.5
of which: Employment rate	-0.3	-1.0	0.4
Average hours	-0.2	-0.4	0.1
Labour productivity	4.5	5.7	3.3
of which: Capital intensity	1.5	2.1	0.9
Multifactor productivity	3.0	3.6	2.4

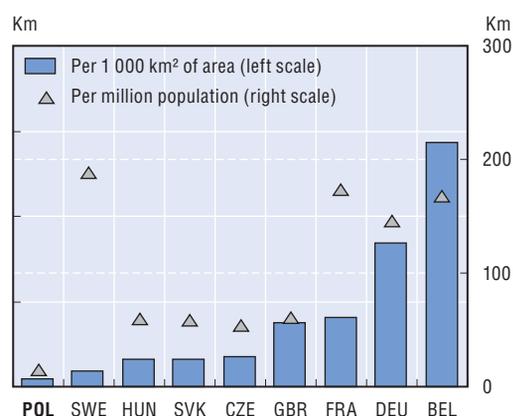
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity continue to narrow but remain large¹

B. Employment rates are low especially for older workers, 2007

C. Administrative burdens on start-ups are heavy, 2008²

D. The motorway network is sparse, 2004



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Product Market Regulation Database; Chart D: European Commission (2007), Panorama of Transport and New Chronos Database.

StatLink  <http://dx.doi.org/10.1787/533865864603>

PORTUGAL

Convergence towards average OECD living standards has suffered a reversal since 2000 due to particularly weak labour productivity growth. Recent reforms have included some easing of employment protection legislation and improved upper-secondary education, but additional reforms are still necessary, notably in the following areas.

Priorities supported by indicators

Improve secondary education attainment

The educational attainment of the working-age population is low and intergenerational educational mobility has been slow by international comparison. The international student performance survey (PISA) shows that reading, mathematics and science results are well below the OECD average. Low investment in human capital depresses productivity performance.

Actions taken: Very small schools have been closed to increase efficiency, and changes to teachers' timetables are allowing a more efficient allocation of human resources. Teachers' training has been overhauled. Upper-secondary education has been diversified to incorporate technical and vocational courses. The government is expanding the *New Opportunity* initiative aimed at preventing school drop-outs and up-skilling the adult population.

Recommendations: Increase the proportion of education spending on non-wage items. Continue to strengthen teachers initial and on-the-job training. Fully implement a performance-based evaluation and career-progression system for teachers. Continue developing vocational and technical education. Monitor and evaluate results of the *New Opportunity* initiative, as its scale expands.

Reduce administrative burdens on business

Starting, running and closing a business have been hampered by onerous regulation, including a cumbersome licensing regime that has weakened competition and thus productivity growth throughout the economy. Insufficient harmonisation of regulations with major trading partners has impeded trade, particularly in services.

Actions taken: The government is implementing SIMPLEX, a wide-ranging initiative to ease product market regulation, including replacing traditional over-the-counter services with online services. Licensing procedures requiring government consent are being progressively replaced by trust-based declarations and the "silence is consent" rule.

Recommendations: Fully implement the SIMPLEX programme, including replacing licensing by trust-based declarations for most business activities. Increase collaboration between central government and municipalities to ensure efficient implementation at the local level. Harmonise regulations with major trading partners, including service sector standards and qualification requirements.

Reform employment protection legislation

The protection of workers against individual dismissal has been one of the most restrictive in the OECD, with very cumbersome procedures. Temporary employment is restricted to specific situations with ceilings on the maximum number of renewals and cumulated duration. Restrictive EPL may encourage informal activities and dualism in the labour market with adverse effects on efficiency in the long term.

Actions taken: In the second half of 2008, the government put forward new legislation that, when enacted, will significantly simplify dismissal procedures. The most important changes include notice periods for dismissals being reduced for employees with less than four years tenure, a distinction to be made between dismissals that are illegal and those that are merely irregular, and the length of time that employees will have to launch an unfair dismissal claim will be reduced from one year to 60 days.

Recommendations: Despite the importance of the recent reforms, protection of regular workers against dismissals will remain more restrictive than in the average OECD country. There is scope to further ease restrictions for temporary employment. It is essential that the reform measures be implemented promptly and enforced.

Other key priorities

- **Network competition.** In telecommunications, ensure no discrimination of mobile telephone termination charges between calls within and across networks. Increase the ownership independence of the newly separated copper-wire and cable-owned telecommunications networks. Encourage price competition in port services by facilitating yard-stick competition. Introduce competitive tendering for rail services. Encourage an increase in new entrants' electricity generation capacity through expansion of the Virtual Power Plants scheme and issuance of licenses to new power plants.
- **Tax system.** Simplify the tax system and broaden the corporate tax base. Reduce tax expenditures and avoid frequent changes to the tax code.

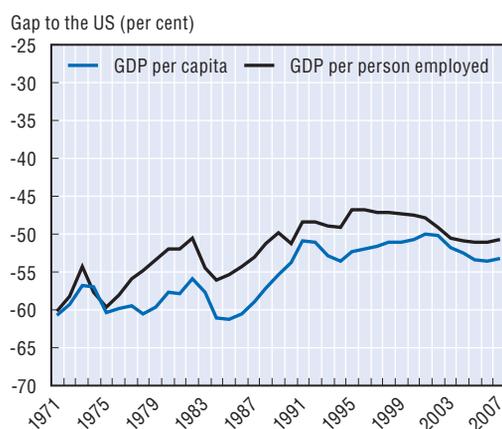
PORTUGAL

Structural indicators

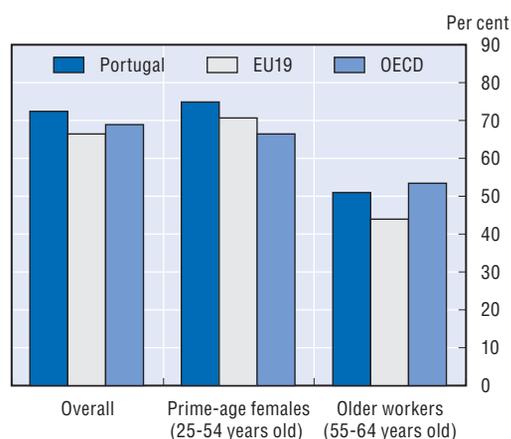
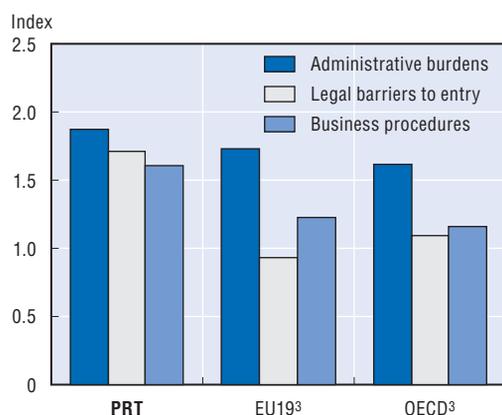
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	1.5	1.9	1.1
Labour utilisation	-0.2	-0.2	-0.2
of which: Employment rate	0.3	0.4	0.3
Average hours	-0.5	-0.6	-0.4
Labour productivity	1.7	2.1	1.3
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

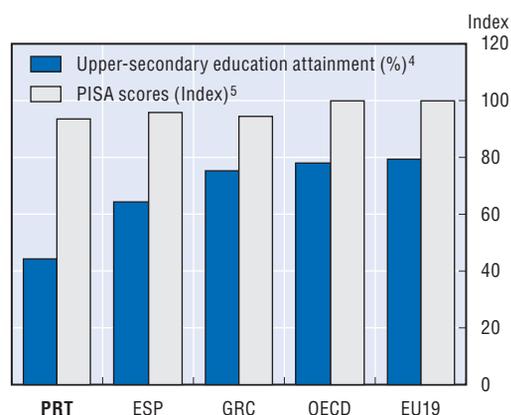
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity are wide¹

B. The overall employment rate is above the OECD average, 2007

C. Product market regulation is relatively strict, 2008²

D. Secondary school attainment and achievement are poor, 2006



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Index scale of 0-6 from least to most restrictive.

3. Excluding Greece, Ireland and the Slovak Republic.

4. Percentage of population aged 25-34 that has attained at least upper-secondary education.

5. Average mean score of mathematics, science and reading scale. OECD = 100.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Product Market Regulation Database; Chart D: OECD (2008), Education at a Glance and OECD, PISA 2006 Database.

StatLink  <http://dx.doi.org/10.1787/533865864603>

SLOVAK REPUBLIC

Convergence in GDP per capita has continued, but the gap with the best-performing OECD countries remains large, reflecting still low levels of labour utilisation and productivity. Recent reform plans include improving the entrepreneurial environment and modernising the framework for R&D, but reform efforts should go further, in particular in the following areas.

Priorities supported by indicators

Raise education achievement and tertiary attainment

Education achievement is below the OECD average and unduly influenced by socio-economic background. Tertiary education attainment, albeit increasing, is low compared with other OECD countries, with negative effects on labour market outcomes and productivity developments.

Actions taken: Universities were allowed to set tuition fees for part-time students. The Modernisation Programme Slovakia 21 was launched, envisaging short and medium-term measures to enhance the institutional framework of education.

Recommendations: Foster the integration of Roma children into the education system and further reduce stratification of the school system. Make tertiary education more attractive by offering 2-3 year occupationally-oriented programmes. Extend tuition fees to full-time students and introduce student loans with income-contingent repayments.

Reduce regulatory barriers to competition

Despite some progress in making economic regulation more competition-friendly, substantial impediments to competition remain, particularly in network industries and liberal professions, limiting productivity growth. Entry barriers are high in most sectors and administrative burdens remain excessive.

Actions taken: The government passed a law on unfair practices in commerce. In addition, the government is planning to enhance the regulatory framework within the Modernisation Programme Slovakia 21, with specific measures still being under discussion.

Recommendations: Facilitate the entry of new market participants, particularly in the energy and telecommunications sectors and in liberal professions, where compulsory chamber membership should be abolished. Reform the public sector in order to reduce administrative burdens on corporations.

Eliminate barriers to female labour force participation

While overall female labour force participation is relatively high, employment rates are very low for mothers, in particular those with young children. This mainly reflects fiscal disincentives for second-earners. In addition, generous parental leave benefits over a long period may lead to skill attrition, which makes it more difficult for women to return to work.

Actions taken: Kindergarten fees were abolished for 5-year-olds.

Recommendations: Shorten the duration of parental leave entitlements in favour of childcare subsidies. Reduce the tax wedge on second earners by cutting the tax allowance and by phasing out free health insurance for non-working spouses.

Other key priorities

- **Housing policies.** Facilitate labour mobility by removing hurdles for the establishment of an effective private rental market. Review regulations regarding the supply of new housing, ease the rights of existing tenants and improve the targeting of housing subsidies.
- **Work incentives for the unemployed.** Improve the activation of the long-term unemployed by expanding training measures, introducing job search and job acceptance requirements and strengthening the capacity of the public employment service. In addition, narrow the targeting of subsidised job creation to the long-term unemployed.

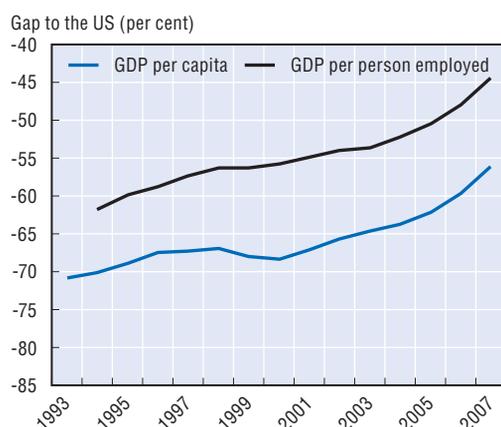
SLOVAK REPUBLIC

Structural indicators

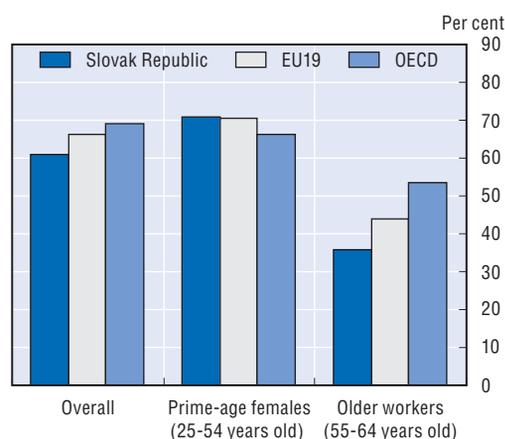
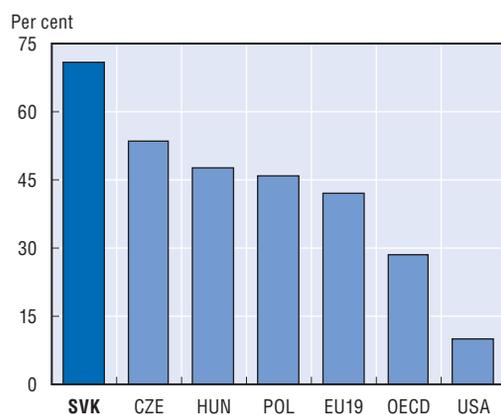
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	4.9	4.0	5.8
Labour utilisation	0.1	-0.8	0.9
of which: Employment rate	0.7	0.0	1.4
Average hours	-0.6	-0.7	-0.5
Labour productivity	4.8	4.8	4.8
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

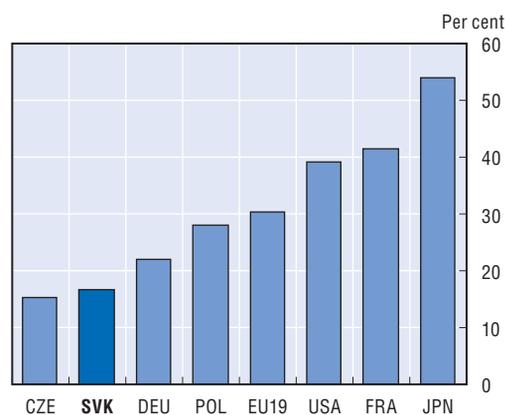
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity have continued to narrow but remain large¹

B. Employment rates are low except for females, 2007

C. The incidence of long-term unemployment is very high, 2007²

D. The share of population aged 25-34 with tertiary education is low, 2006



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Persons unemployed for 12 months and more as a percentage of all unemployed persons.

Source: Chart A: OECD, National Accounts Database; Charts B and C: OECD, Labour Force Statistics Database; Chart D: OECD (2008), Education at a Glance.

StatLink  <http://dx.doi.org/10.1787/533865864603>

SPAIN

Convergence of GDP per capita vis-à-vis best performing OECD countries has continued through increased labour utilisation and capital accumulation. Nonetheless, underlying productivity growth has been very weak. Recent measures have been taken to improve competition in product markets, including an overhaul of competition law, but particular weaknesses remain in the following areas.

Priorities supported by indicators

Improve educational attainment in secondary education

High drop-out rates in lower-secondary education, following a high degree of grade repetition, implies low enrolment in upper-secondary education, notably of children from poor socio-economic backgrounds, which in turn weakens productivity performance. Limited accountability and autonomy of individual schools slow progress in improving learning outcomes.

Actions taken: Pedagogical skill requirements for newly hired schoolteachers have been raised, as have early-childhood education and childcare coverage. Regional governments are gradually implementing legislation, introduced in 2006, giving public schools somewhat more autonomy, for example, to influence hiring decisions. Some regions have introduced centralised testing procedures for all pupils.

Recommendations: Introduce standardised school testing in all regions, and use test results to identify best practices at the school and regional levels. Further raise school autonomy with respect to hiring decisions and curricular content. Limit the criteria for granting promotion to subsequent grades to core competencies. Increase financial support for low-income families with children attending secondary schools above the compulsory school age limit, for example by making more generous child benefits conditional on school attendance.

Limit the extent of administrative extension of collective agreements

Wages are negotiated mainly at the sectoral and regional levels, and application of agreements is compulsory for all firms. This, coupled with the widespread use of indexation clauses, results in excessive nominal rigidities, and has adverse effects on international competitiveness and on employment opportunities for certain groups.

Actions taken: No actions taken.

Recommendations: Make it easier for firms to opt out of the application of wage agreements and encourage the elimination of inflation catch-up clauses.

Ease employment protection legislation for permanent workers

The level of severance payments for workers with permanent contracts is very high, especially when compared with those of temporary workers. This has created a segmented labour market with a negative effect on productivity growth, and has hampered the full labour market integration of women, young people and immigrants.

Actions taken: No actions taken since the 2006 reform.

Recommendations: Further reduce severance payments for workers with permanent contracts and promote a single contract by bringing in gradual increases in required severance payments linked to length of service.

Other key priorities

- **Housing policies.** In order to spur the development of the private rental market, speed up court procedures to resolve conflicts between landlords and tenants, and remove the generous tax subsidies for owner-occupied housing over the medium term. In order to avoid reducing geographical mobility of workers created by providing housing assistance through social housing at the local level, redirect such assistance towards the provision of means-tested housing-related cash benefits for low-income households.
- **Retail competition.** In order to strengthen competition in the retail distribution sector, dismantle the numerous barriers put in place by regional governments to the establishment of new supermarkets and shopping centres.

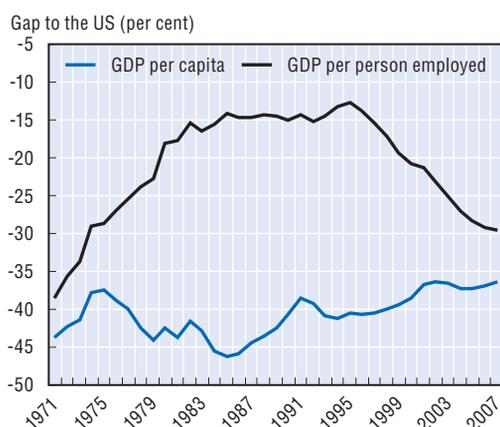
SPAIN

Structural indicators

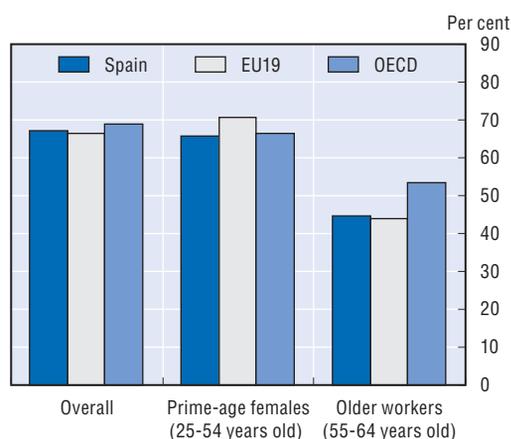
Average annual trend growth rates, per cent

	1997-2007	1997-2002	2002-2007
GDP per capita	2.1	2.5	1.7
Labour utilisation	1.5	1.7	1.3
of which: Employment rate	1.9	2.0	1.8
Average hours	-0.4	-0.3	-0.5
Labour productivity	0.6	0.8	0.4
of which: Capital intensity	0.9	1.0	0.7
Multifactor productivity	-0.2	-0.2	-0.3

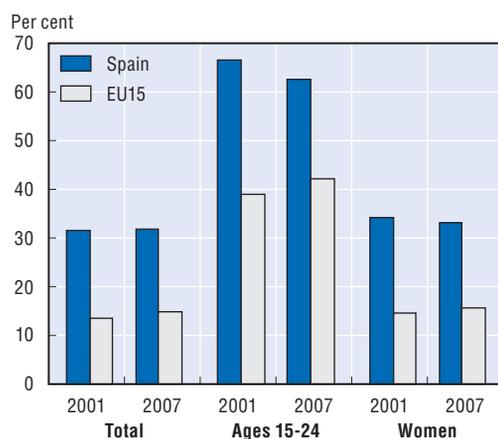
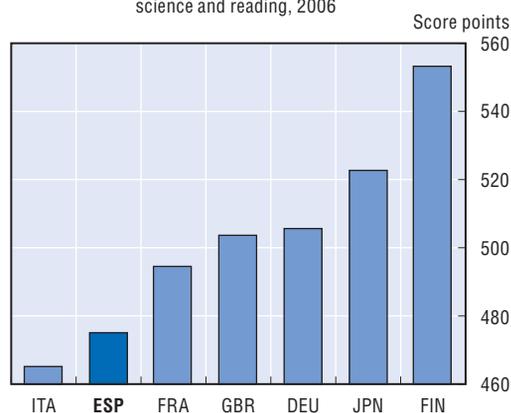
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. The GDP-per-capita gap has improved while the productivity gap continues to widen¹

B. The overall employment rate is close to the OECD average, 2007



C. The share of temporary workers is among the highest in the European Union

D. Education performance is poor at the compulsory level
Average mean PISA scores in mathematics, science and reading, 2006

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

Source: Chart A: OECD, National Accounts Database; Charts B and C: OECD, Labour Force Statistics Database; Chart D: OECD, PISA 2006 Database.

StatLink  <http://dx.doi.org/10.1787/533865864603>

SWEDEN

Despite recent gains in productivity and labour utilisation, an income gap with the United States remains. Employment rates are high, but average hours worked are low. Broad-ranging reforms have been undertaken in the past few years to address long-standing problems with benefit dependency and labour market exclusion, but particular weaknesses still remain in the areas below.

Priorities supported by indicators

Reduce marginal taxes on labour income

Average hours worked are among the lowest in the OECD. Three quarters of this gap reflect fewer weeks worked per year, and the remainder fewer hours worked per week. Short hours partly reflect the fact that social security contributions and income taxes combine to a marginal tax wedge above 60%, even for incomes modestly above average full-time earnings.

Actions taken: Effective in 2009, the marginal tax wedge was reduced as employer contributions were cut by one percentage point, the in-work tax credit was expanded and the threshold from where the state income tax is paid was moved up by 5% more than what standard indexation would imply.

Recommendations: Continue the 2009 reforms, giving priority to reducing the state income tax – either cutting the rate or moving up the threshold from where it is paid.

Reform sickness and disability benefit schemes

Sickness absence has come down markedly from the exceptional heights reached in 2002, but remains high compared with other countries. Inflows into disability benefit schemes have fallen for most age groups, but have risen sharply for youth.

Actions taken: Stronger administrative controls are in the process of being implemented. From July 2008 these measures were supplemented by stricter eligibility requirements for sickness benefits: receipt of sickness benefits can only continue after six months if the person is unable to do any work, and after one year, the gross replacement rate falls from 80% to 75%.

Recommendations: Careful monitoring is required to ensure that recent changes to administrative procedures and benefit rules are implemented as intended.

Reform employment protection legislation

Employment protection rules governing individual dismissal are very strict compared with other OECD countries, including the Nordic neighbours. This creates a dual labour market where much of the recent employment gains have been in the form of temporary contracts.

Actions taken: The rules for temporary contracts have been eased so that these can be used without particular reason and longer than previously. Meanwhile, no changes have been made to the rules governing permanent contracts.

Recommendations: Encourage regular employment by widening the definition of a fair dismissal and lengthening the trial period for regular contracts. This would enhance the employability of youth and immigrants as employers are reluctant to hire applicants whose capabilities are hard to assess.

Other key priorities

- **Education.** Learning outcomes for 15-year-olds are unsatisfactory and have tended to deteriorate in recent years. Increase the use of regular tests to monitor each child's progress and introduce accreditation to enhance teacher competence. Shift financial support for students' living costs away from grants towards loans, and introduce tuition fees to speed up labour market entry.
- **Housing policies.** The rigidity of the housing market makes for inordinate queuing and impedes labour mobility. The planned easing of rent regulations will substantially improve housing market flexibility, even if adjustment could be faster. Measures need to be taken to boost competition in the construction sector and to simplify the land planning process. The cut in housing taxation from 2007 should be reversed over the medium term.

SWEDEN

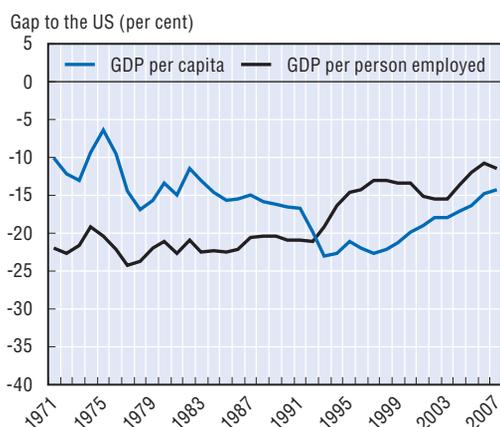
Structural indicators

Average annual trend growth rates, per cent

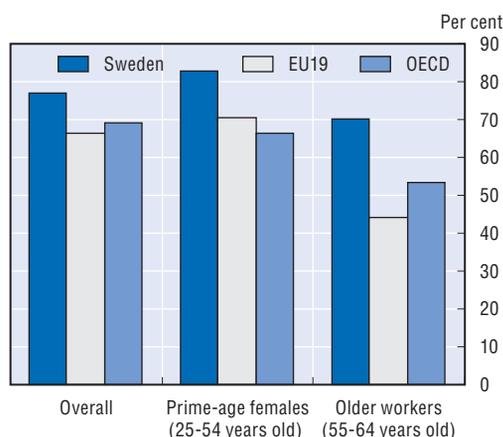
	1997-2007	1997-2002	2002-2007
GDP per capita	2.6	2.7	2.6
Labour utilisation	0.2	0.3	0.2
of which: Employment rate	0.2	0.2	0.2
Average hours	0.0	0.0	0.0
Labour productivity	2.4	2.4	2.4
of which: Capital intensity	0.9	1.1	0.8
Multifactor productivity	1.5	1.4	1.6

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

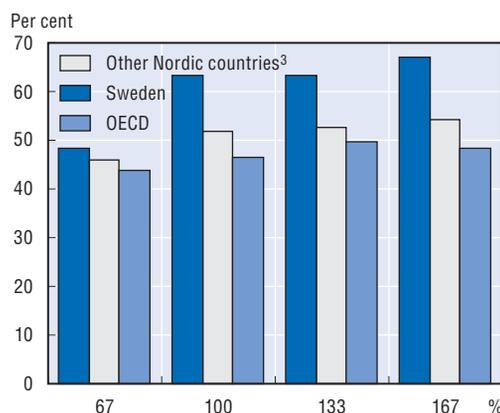
A. GDP per capita and productivity gaps are narrowing¹



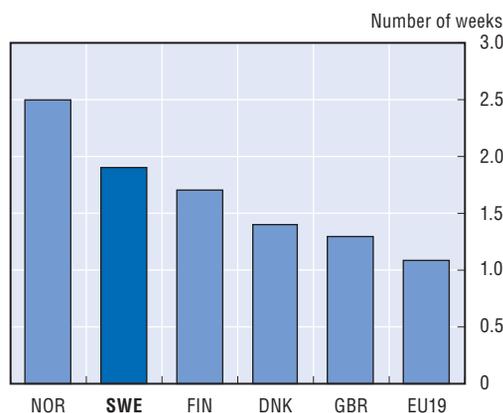
B. Employment rates are high, 2007



C. Marginal tax wedges are high, 2007²



D. The average number of weeks lost per employee due to sickness is still very high, 2007



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Evaluated at 67%, 100%, 133% and 167% of average earnings.

3. Average of Denmark, Finland, Iceland and Norway.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Taxing Wages Database; Chart D: OECD (2004), OECD Employment Outlook and OECD estimates.

StatLink  <http://dx.doi.org/10.1787/533865864603>

SWITZERLAND

GDP per capita has fallen relative to best performing countries, with a widening gap in productivity performance. Competition in product markets has been reinforced through a reform of the general competition law, but particular weaknesses remain in the following areas.

Priorities supported by indicators

Remove barriers to competition in network industries

Framework conditions limit room for entry of competitors, allowing vertically integrated incumbent operators to retain a dominant position in many segments of telecommunications, postal services, energy and rail transport markets. Network access price regulation generates insufficient incentives to reduce costs. Lack of competition and ineffective regulatory arrangements limit productivity advances.

Actions taken: The legislative process has been initiated to reform postal market regulation, which aims at strengthening the independence of the regulator, removing administrative privileges of the incumbent and phase out by 2011 the remaining legally protected monopoly over letter-delivery services.

Recommendations: Strengthen vertical separation in the electricity industry. Remove the legal restrictions on competitors' access to the incumbent's local loop network in telecommunications. In the railways, guarantee access of competitors to the rolling stock. Privatise remaining government stakes in telecommunications, electricity generation and the postal services. Strengthen the independence and powers of industry regulators and apply incentive regulation for the determination of network access prices.

Reduce producer support to agriculture

Domestic agricultural production is protected by tariff and non-tariff trade barriers, keeping consumer prices of agricultural products higher than world prices. Total support to agriculture was worth 1.1% of GDP in 2007 and farm-land regulation generate high costs to the taxpayer and contribute to misallocation of resources.

Actions taken: Legislation is being implemented to hold producer support payments constant in nominal terms until 2011, and to remove export subsidies and controls on the price of land.

Recommendations: Lower the border protection of domestic production. Accelerate the replacement of subsidies linked to production by targeted income support. Limit the level of support to incumbent farmers rather than to farming businesses, ensuring that it is phased out as the former retire. Remove regulations governing land use, which also bias inheritance decisions towards the continued use of land for agricultural production.

Facilitate full-time labour force participation for women

Limited availability of pre-school education makes it difficult to reconcile work with raising children. Marginal incomes taxes on secondary earners are still higher than for main earners, further discouraging full-time female labour market participation.

Actions taken: A reform of personal income taxation that came into force in 2008 reduced the difference in marginal tax rates on secondary workers relative to main earners. Central government co-funding for childcare facilities will end in 2011.

Recommendations: Enhance pre-school education services through better co-ordination of the provision of such services between different levels of government. Move from joint to individual tax assessment of each spouse's income.

Other key priorities

- **Health system efficiency.** Contain health-system costs by assigning hospital funding to insurers in full, allowing insurers more freedom to contract with individual providers and improving the system of transfers that compensates insurers for differences in risk characteristics among insurees.
- **Tertiary education.** Raise graduation rates from tertiary education by developing quality assessments of universities and introducing loans with income-contingent repayments while allowing universities to raise further resources through higher fees.

SWITZERLAND

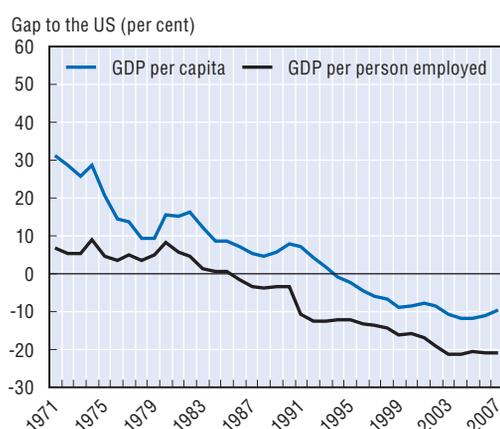
Structural indicators

Average annual trend growth rates, per cent

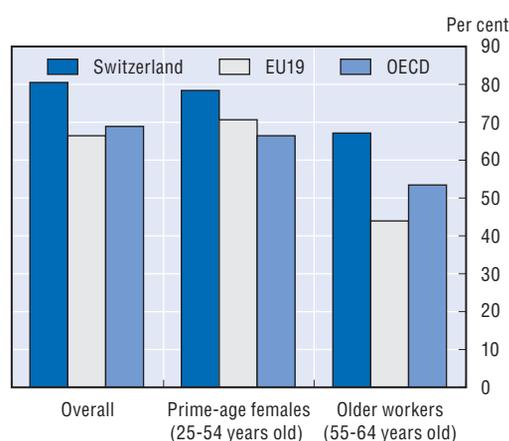
	1997-2007	1997-2002	2002-2007
GDP per capita	1.1	1.0	1.3
Labour utilisation	0.0	-0.3	0.3
of which: Employment rate	0.2	0.0	0.3
Average hours	-0.2	-0.3	-0.1
Labour productivity	1.2	1.2	1.1
of which: Capital intensity	0.8	0.9	0.7
Multifactor productivity	0.4	0.3	0.4

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. The divergence in GDP per capita has been arrested¹

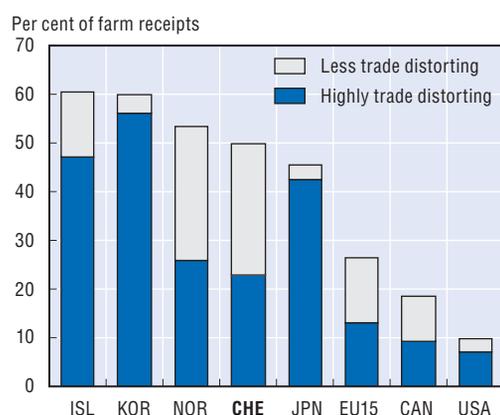


B. Employment rates are high, 2007

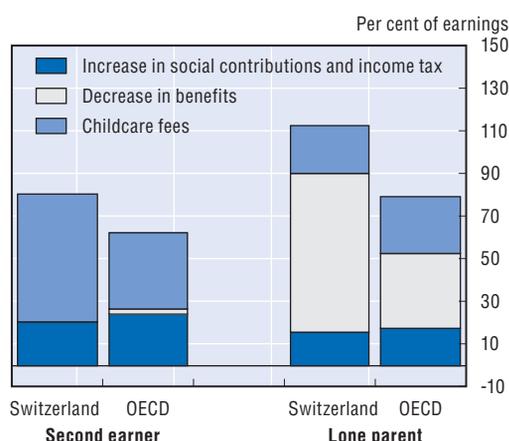


C. Agricultural support is very high, 2007

Producer support estimate



D. Disincentives to full-time work for women with children are high, 2004²



1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
2. Based on implicit tax on returning to work, defined as the cost of childcare, reductions in income-related benefits and increases in social contributions and personal income taxes, all relative to earnings in the new job. Measured for second earners and for lone parent with income equal to two-thirds of average earnings.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Producer and Consumer Support Estimates Database; Chart D: OECD, Benefits and Wages: OECD Indicators.

StatLink  <http://dx.doi.org/10.1787/533865864603>

TURKEY

The process of catch-up with the OECD average GDP per capita resumed in the 2000s, but the gap remains very wide due to major productivity and labour utilisation shortfalls. Measures to ease restrictions on foreign direct investment have been introduced in recent years, but strong reform efforts are needed, especially in the areas below.

Priorities supported by indicators

Reduce the minimum cost of labour

A high minimum wage relative to the average wage and high payroll taxes keep legal employment costs of low-skilled workers very high. This discourages the hiring of these workers by firms in the formal sector, in particular in regions and sectors where labour productivity is low.

Actions taken: A personal income tax allowance was introduced in 2007, reducing the labour tax wedge by 3 percentage points for workers earning 67% of the average wage. An *Employment Package* adopted in March 2008 reduced the wedge by an additional 2½ percentage points – applicable from end-2008.

Recommendations: Reduce the very high minimum wage/average wage ratio by containing the growth of mandatory minimum wages and creating a framework to differentiate minimum wages across sectors and regions. Continue cuts in the labour tax wedge, especially on low earnings, without undermining long-term financial balances of the pension system.

Improve educational achievement

The average academic performance in secondary education, and enrolment rates in tertiary education, remain very low in international comparison. The lack of basic skills for a large share of the population results in low productivity and hampers growth.

Actions taken: No new action taken, although curriculum reforms decided previously are still being implemented.

Recommendations: Increase spending on public education and finance it by broadening the tax base through an increase in formalisation of economic activities. Schools should be funded on a per pupil basis, and provided with greater managerial responsibility and accountability. New universities should be adequately funded, and expenditure per student should be increased.

Reform employment protection legislation

Employment protection is rigid in the formal sector for both permanent and temporary workers. This contributes to maintaining resources in inefficient informal activities.

Actions taken: No action taken.

Recommendations: Ease employment protection in the formal sector by facilitating temporary work and reforming severance pay entitlements.

Other key priorities

- **Product market regulation.** To improve productivity performance, simplify product market regulations, in particular the sectoral licensing rules which hinder market entry, and advance privatisations and encourage greater competition in network industries.
- **Work incentives in the formal sector.** To stimulate employment in the formal sector, reduce incentives for early retirement from the formal sector to take up work in the informal sector, by lowering net pension benefits and establishing a health insurance contribution for young retirees.

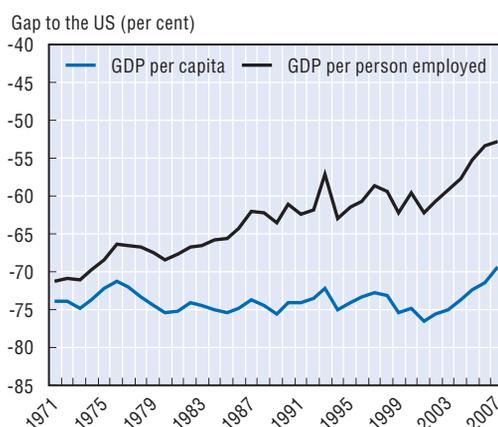
TURKEY

Structural indicators

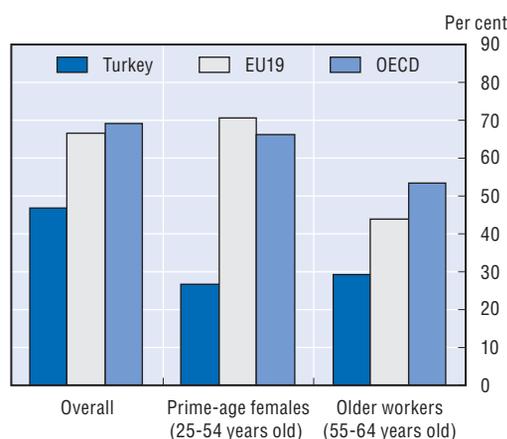
Average annual trend growth rates, per cent

	1997-2006	1997-2002	2002-2006
GDP per capita	3.4	2.3	4.6
Labour utilisation	0.2	-0.3	0.7
of which: Employment rate	0.1	-0.6	0.7
Average hours	0.1	0.3	0.0
Labour productivity	3.2	2.6	3.8
of which: Capital intensity	..	..	..
Multifactor productivity	..	..	..

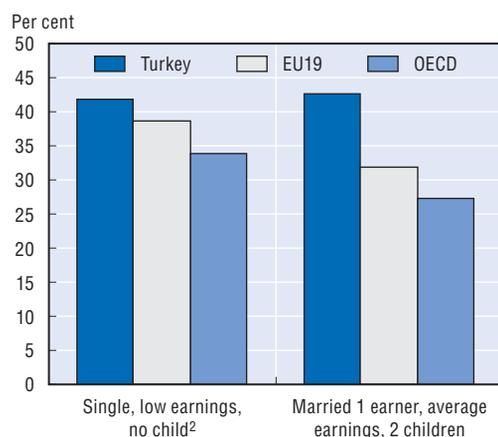
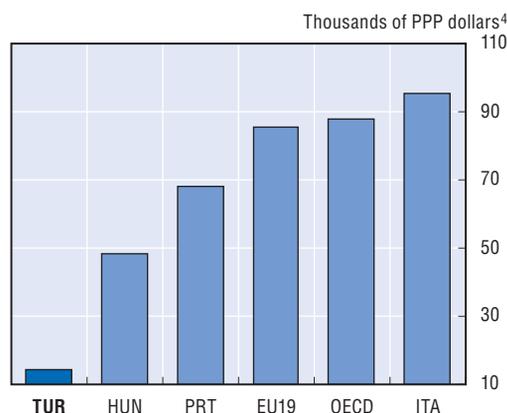
Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Gaps in GDP per capita and productivity are narrowing but remain large¹

B. Employment rates are well below OECD average, 2007



C. Average tax wedges for low and middle-income earners are high, 2007

D. Cumulative expenditure per student in primary and secondary education is low, 2005³

1. Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).

2. Low earnings refer to two-thirds of average earnings.

3. Public institutions only, except for EU19 and OECD. Year 2004 for Turkey.

4. In equivalent USD converted using GDP PPPs.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, Taxing Wages Database; Chart D: OECD (2008), Education at a Glance.

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UNITED KINGDOM

Employment rates are high but there has been little convergence of GDP per capita or labour productivity in recent years, leaving a still large gap vis-à-vis the best performing countries. Incentives for labour market participation have been strengthened, but more needs to be done, notably in the following areas.

Priorities supported by indicators

Further reform disability benefit schemes

The number of disability-related benefit recipients as a percentage of the working age population has fallen slightly but remains high in international comparison, particularly among prime-age men.

Actions taken: After a trial period covering 40 per cent of the country, the Pathways to Work programme for new claimants was rolled out across the whole country in April 2008. A White Paper was issued in December 2008 that proposed a broadening of the reforms to all claimants. New welfare legislation replaced the current system of incapacity benefits with a simplified disability employment allowance at the end of 2008.

Recommendations: Continue with the plans to extend the Pathways to Work scheme to all existing claimants rather than just new claimants. Limit the number of those entering the incapacity benefit scheme by monitoring the health status of applicants earlier than the mandated 13 weeks.

Improve the education achievement of young people

Performance of young people on international tests of cognitive ability is low and the share of students leaving school before completion of upper-secondary education remains high, adversely affecting productivity performance. Moreover, the variation in performance across schools is large in comparison with other OECD countries.

Actions taken: The Education Maintenance Allowance has helped to raise education participation of 16 and 17-year-olds and the Education and Skills Act will gradually phase in a higher school leaving age from 2013. New diplomas for 14 to 19-year-olds will be gradually introduced from 2008.

Recommendations: Raise participation in quality early-childhood education. Put more emphasis on the acquisition of core literacy and numeracy skills. Reduce the focus on testing and targets and ensure adequate support for weak students and schools, including by promoting a more equitable allocation of funding across schools and pupils. Evaluate returns to the new diplomas carefully.

Improve public infrastructure, especially for transport

Under-investment in public infrastructure has resulted in road and airport congestion, and an unreliable rail system, which add to business costs and constrain productivity.

Actions taken: Transport investment has picked up slightly in recent years, and further increases have been announced as part of measures to address the economic crisis. Reforms to the management of the rail network are ongoing, road pricing trials are underway and plans to increase the efficiency and the capacity of airports have been announced.

Recommendations: Follow through with targeted spending in key strategic growth areas and ensure that investment does not fall below the levels envisaged in the Government's 2000 Ten Year Plan for Transport. Continue with preparations for a national road pricing scheme.

Other key priorities

- **Public sector efficiency.** Improve the efficiency of health and other publicly-funded services so that higher expenditure results in higher standards of service delivery. Design all public sector targets in a way that limits the potential for gaming, by ensuring a more interactive and dynamic performance management system.
- **Planning regulations.** Improve planning regulations so that they give more weight to economic considerations and encourage firm entry. Free up more land for both commercial and housing development by reconsidering the boundaries of the "green belts" in fast-growing areas, and consider other ways to improve incentives for land development.

UNITED KINGDOM

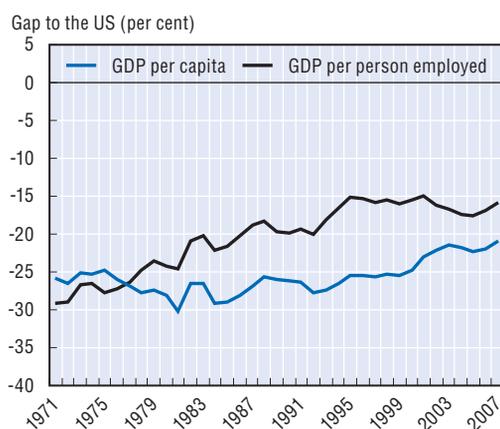
Structural indicators

Average annual trend growth rates, per cent

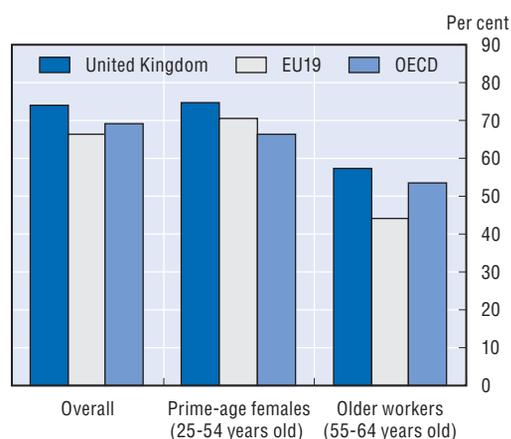
	1997-2007	1997-2002	2002-2007
GDP per capita	2.2	2.6	1.9
Labour utilisation	0.1	0.2	0.0
of which: Employment rate	0.5	0.6	0.3
Average hours	-0.4	-0.4	-0.4
Labour productivity	2.1	2.4	1.9
of which: Capital intensity	1.1	1.2	1.0
Multifactor productivity	1.0	1.1	1.0

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

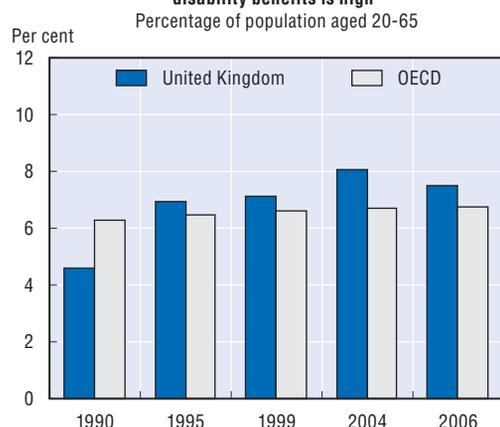
A. There has been a slow convergence of GDP per capita¹



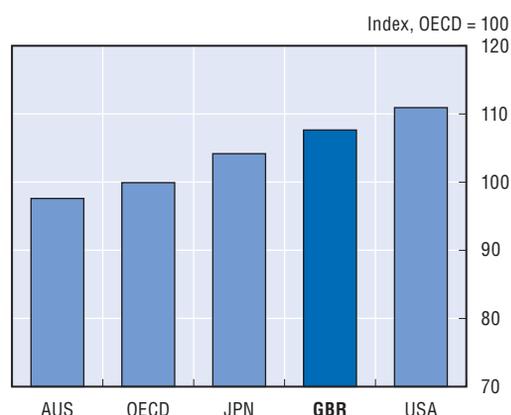
B. Employment rates are high, 2007



C. The share of working-age population receiving disability benefits is high²



D. The variation in student performance is high, 2006³



- Percentage gap with respect to US GDP per capita and per person employed (in constant 2000 PPPs).
- Disability benefits include benefits received from schemes to which beneficiaries have paid contributions (contributory), programmes financed by general taxation (non-contributory) and work injury schemes.
- Average variance in student performance in mathematics, science and reading (only mathematics and science for the United States).

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD (2003), Transforming Disability into Ability and OECD estimates; Chart D: OECD, PISA 2006 Database.

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UNITED STATES

Productivity has grown at a relatively rapid pace and material living standards are high on average. Nevertheless, labour utilisation has been falling and income inequality is high and rising. No major reform programme has been carried out in recent years. Efficiency and equity gains can be achieved by addressing weaknesses in the following areas.

Priorities supported by indicators

Improve primary and secondary education

Despite higher spending per pupil than in most other OECD countries, the outcomes of compulsory education are poor, with PISA scores among the worst in OECD, constraining productivity gains.

Actions taken: No major action taken since the enactment of “No Child Left Behind” in 2002 and its reauthorisation in 2007. The Administration has proposed substantial investments to renovate schools and to fund educational programmes.

Recommendations: Complete the implementation of “No Child Left Behind” in all states and extend its framework to upper-secondary education. Improve accountability and transparency of the scheme by requiring a systematic measure of performance. Furthermore, students at under-performing schools should be free to choose alternative schools.

Restrain health care costs

The overall health status of the US population does not compare favourably with that in most other OECD countries, despite relatively high healthcare expenditure per capita. Many Americans lack adequate health insurance. In the longer term, rising Medicare expenditure is the main threat to the sustainability of public finances.

Actions taken: The State Children’s Health Insurance Program, which provides free health insurance cover for children in low-income families, has been prolonged and extended to cover more children. The Administration plans to computerise all medical records within five years.

Recommendations: To reduce the impact of adverse selection risks and administrative costs on the individual insurance market, regulation should require community-rated and guaranteed issue policies and make health insurance compulsory. Means-tested subsidies should be introduced to help low-income persons afford health insurance. To fund these subsidies and reduce moral hazard, the open tax exclusion for employer-provided health insurance should be capped or terminated.

Reduce producer support to agriculture

Support for agriculture, while still below the OECD average, is highly distortionary and maintains excessive resources in low productivity activities.

Actions taken: In part to reduce greenhouse gas emissions, 2007 legislation set mandatory fuel standards to increase the share of renewable sources in overall fuel use beginning in 2008, with the aim of displacing 15% of projected gasoline use by 2017. The 2008 Farm Act extended these standards to displace an estimated 25% of gasoline use by 2022. By putting upward pressure on some commodity prices, these measures provide indirect additional support to farmers.

Recommendations: Subsidies for agricultural producers should be reduced and not tied to specific inputs or outputs. In particular, tax incentives and other requirements (including tariffs on imported ethanol) that boost demand for corn-based domestic bio-fuels should be phased out.

Other key priorities

- **Financial regulation.** Improve and streamline the regulatory framework to make it more unified and comprehensive, building on the Treasury’s “Blueprint for a Modernised Financial Regulatory Structure”, so that the US financial system can more efficiently play its key role of intermediating between savers and investors and foster economic growth. Reforms need to strengthen regulation of systemically important financial institutions. After the financial crisis has passed, housing financing should be left entirely to a well-regulated private sector.
- **Structure of the tax system.** Reduce the efficiency cost of taxation by broadening the tax base and shifting the weight of taxation from personal income taxation towards consumption-based taxes, especially on carbon-based energy consumption, which would also improve environmental outcomes. Such changes would help to create budgetary room for lower income taxes for most US families, as promised by the Administration, and to pay for the fiscal costs associated with the ongoing financial crisis.

UNITED STATES

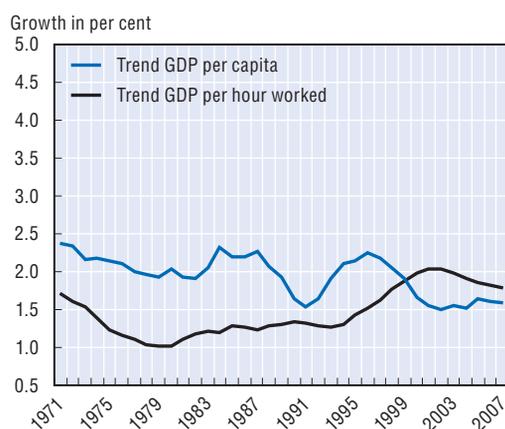
Structural indicators

Average annual trend growth rates, per cent

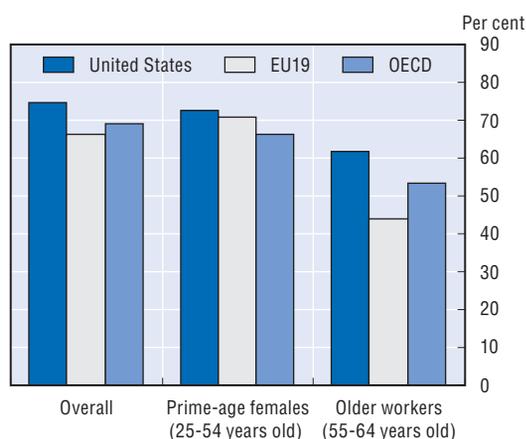
	1997-2007	1997-2002	2002-2007
GDP per capita	1.7	1.7	1.6
Labour utilisation	-0.2	-0.2	-0.3
of which: Employment rate	-0.1	0.0	-0.1
Average hours	-0.2	-0.2	-0.2
Labour productivity	1.9	1.9	1.9
of which: Capital intensity	1.1	1.3	1.0
Multifactor productivity	0.8	0.7	0.9

Source: Estimates based on OECD Economic Outlook, No. 84, Vol. 2008/2.

A. Trend growth in GDP per capita has fallen

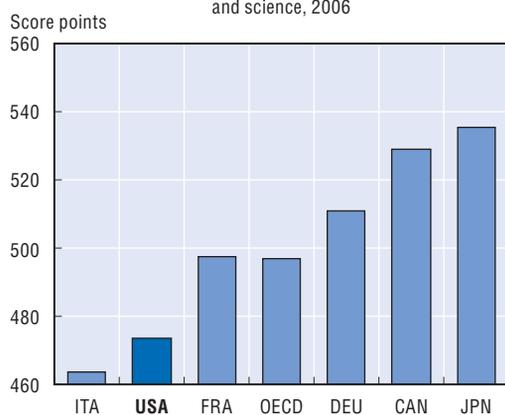


B. Employment rates are high, 2007

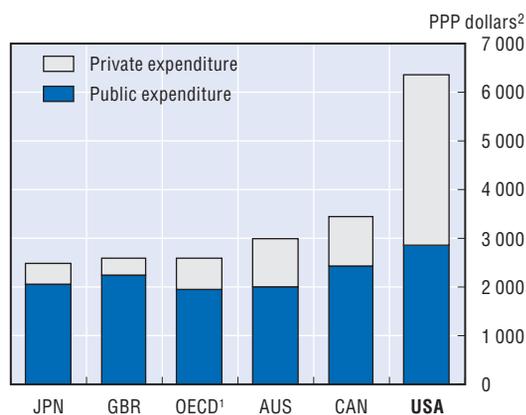


C. Education performance is poor at the compulsory level

Average mean PISA scores in mathematics and science, 2006



D. Health spending per capita is very high, 2005



1. Weighted average of OECD countries excluding the United States.

2. USD converted using GDP PPPs.

Source: Chart A: OECD, National Accounts Database; Chart B: OECD, Labour Force Statistics Database; Chart C: OECD, PISA 2006 Database; Chart D: OECD, Health Database.

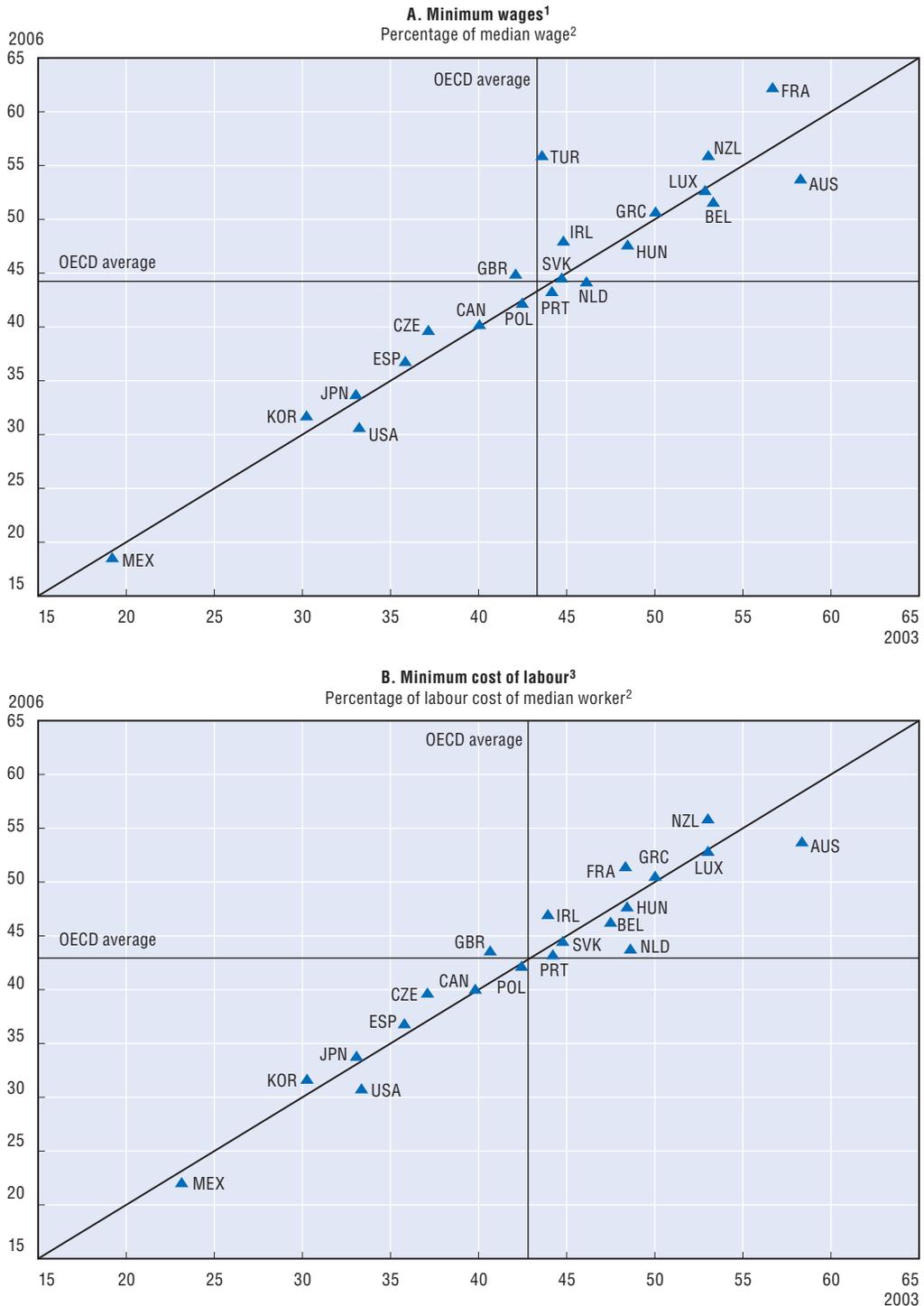
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PART I
Chapter 4

Structural Policy Indicators

This chapter contains comparative OECD indicators for labour costs and labour taxation; unemployment, disability and sickness income support; labour market and product market regulation; barriers to competition, trade and investment, sectoral regulation, educational attainment and achievement; health expenditure; and public investment. These indicators have been used to identify the policy priorities that are discussed in this report.

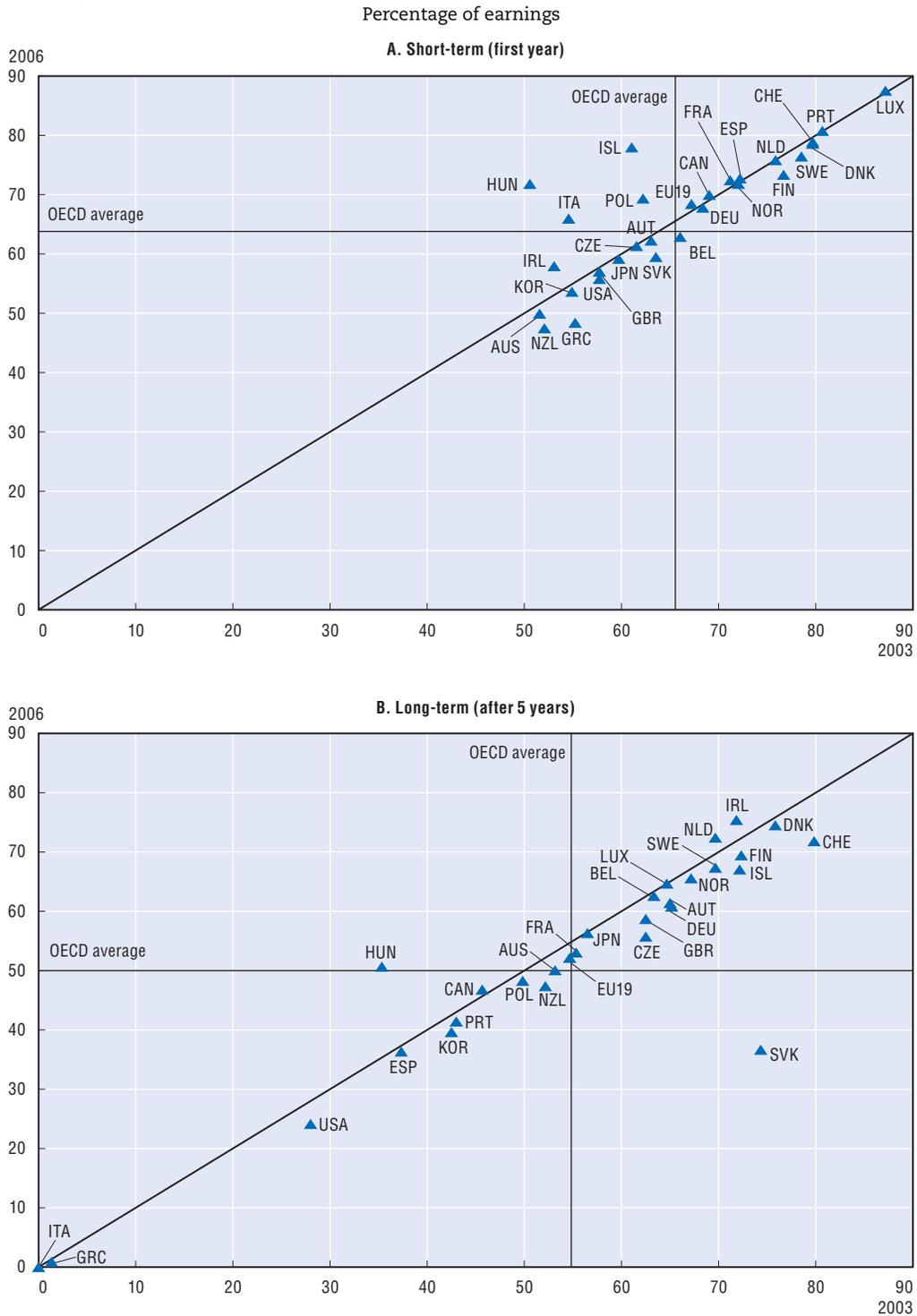
Figure 4.1. **Cost of labour**



1. Missing countries do not have a statutory minimum wage.
2. Exactly half of all workers have wages either below or above the median wage. Data for 2006 for Greece, Mexico and Turkey refer to 2005.
3. The cost of labour is the sum of the wage level and the corresponding social security contribution paid by employers.

Source: Chart A: OECD, *Labour Force Statistics Database*; Chart B: OECD (2008), *OECD Employment Outlook* and OECD, *Taxing Wages Database*.

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Figure 4.2. Net income replacement rates for unemployment benefits¹

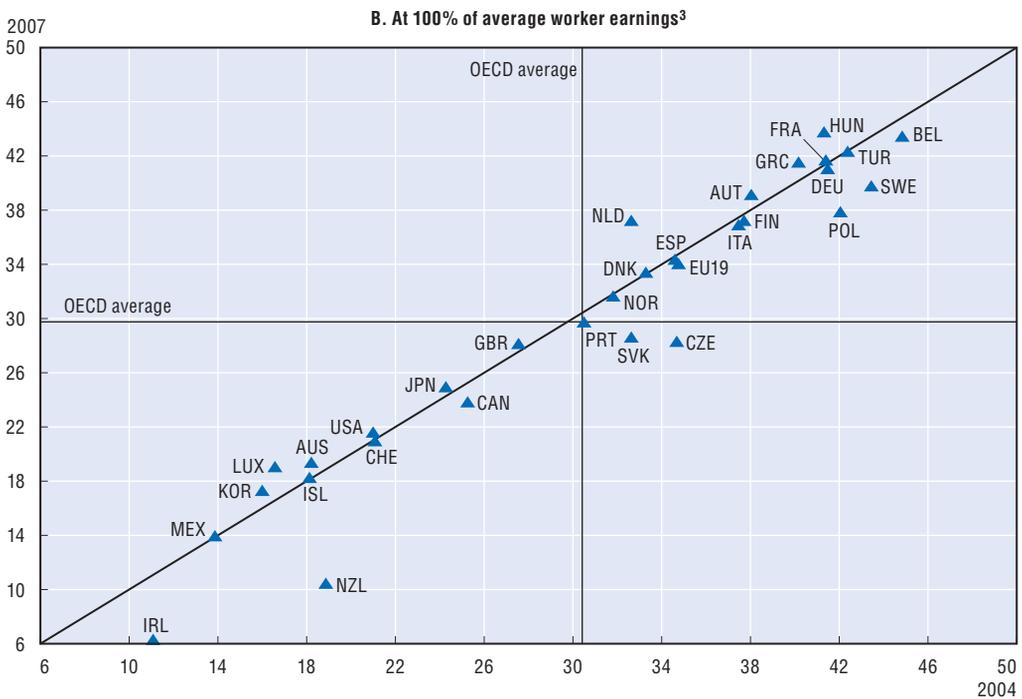
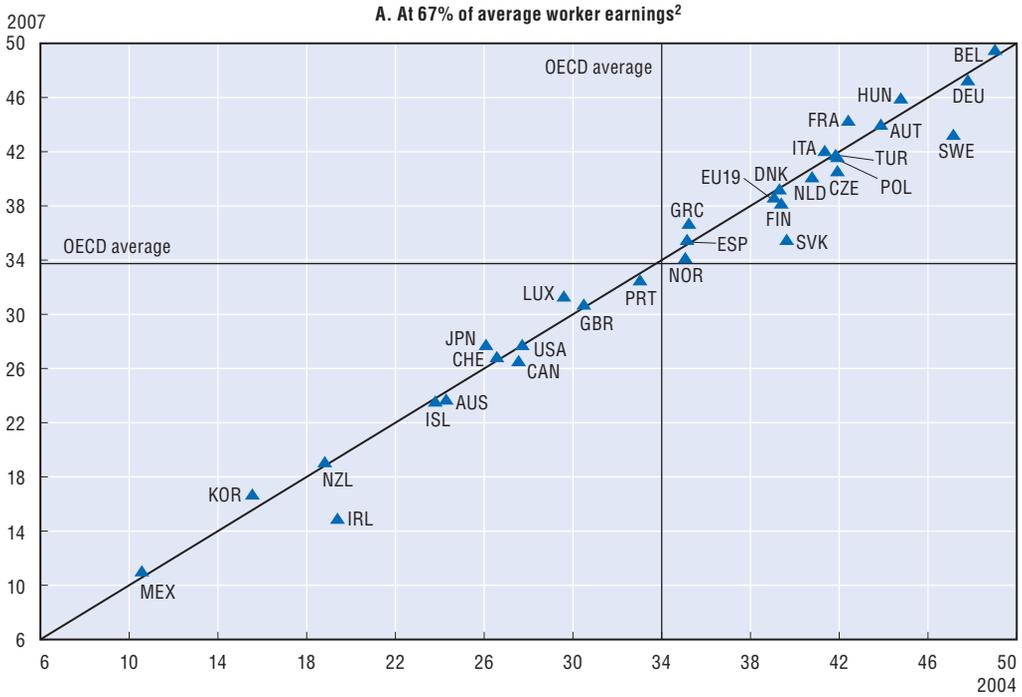
1. Average of replacement rates for unemployed persons who earned 67% and 100% of average worker earnings at the time of losing job.

Source: OECD, *Benefits and Wages Database*.

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Figure 4.3. **Average tax wedge on labour**¹

Percentage of total labour compensation

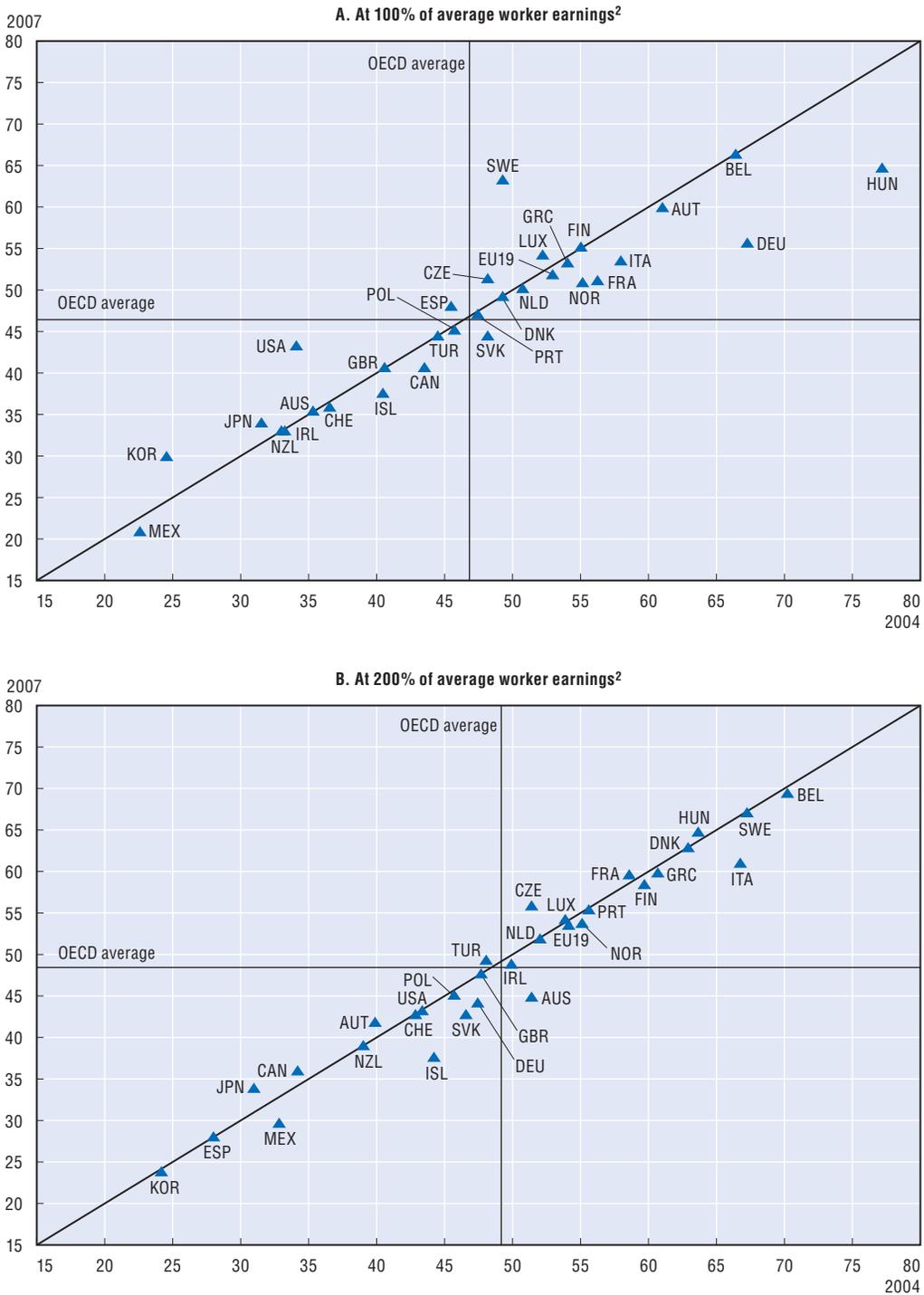


1. Measured as the difference between total labour compensation paid by the employer and the net take-home pay of employees, as a ratio of total labour compensation. It therefore includes both employer and employee social security contributions.
2. Single person with no child.
3. Couple with two children, average of three situations regarding the wage of the second earner.

Source: OECD, Taxing Wages Database.

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Figure 4.4. **Marginal tax wedge on labour**¹
Percentage of total labour compensation

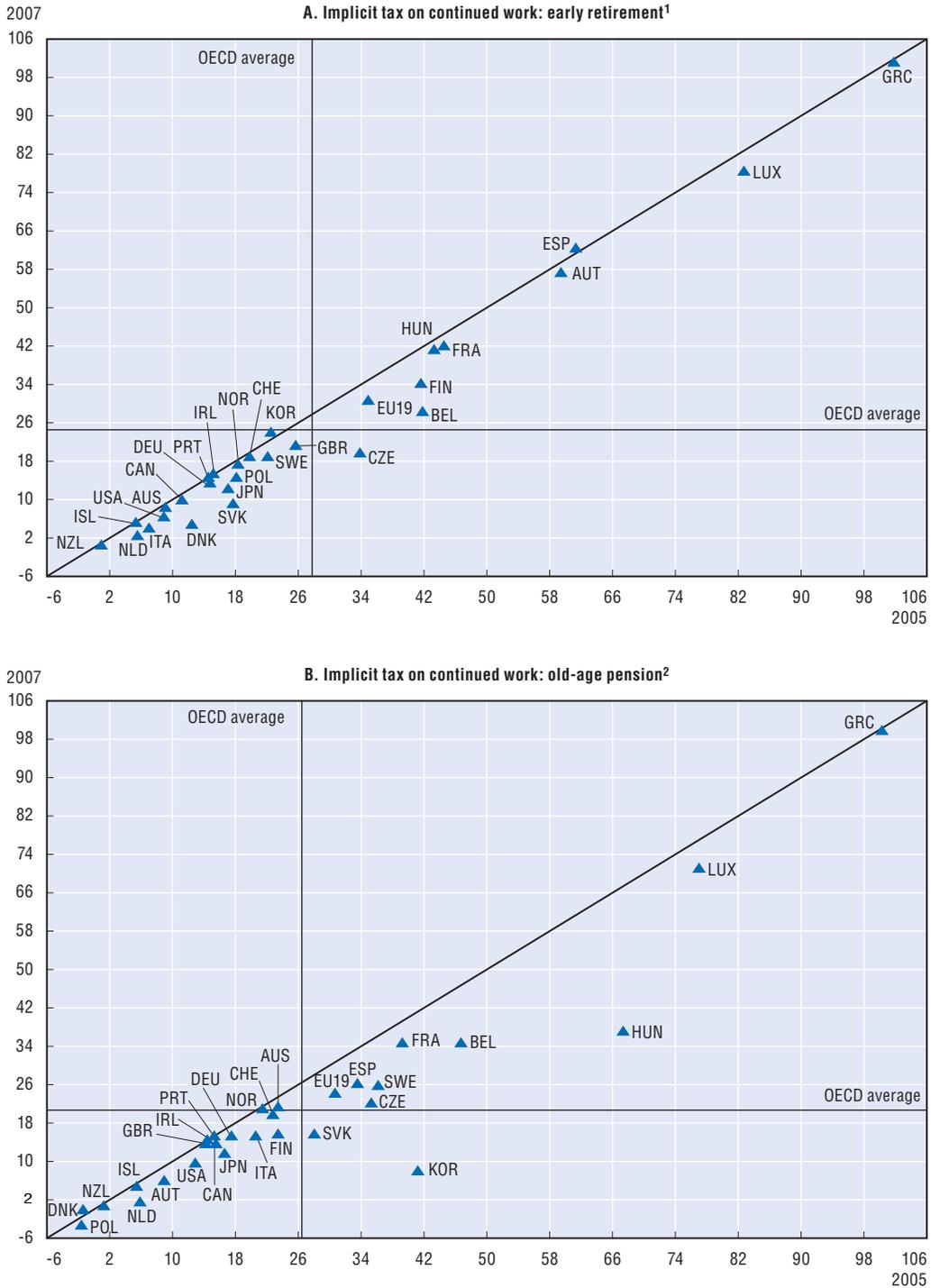


1. Measured as the difference between the change in total labour compensation paid by employers and the change in the net take-home pay of employees, as a result of an extra unit of national currency of labour income. The difference is expressed as a percentage of the change in total labour compensation.
2. Single person with no child.

Source: OECD, Taxing Wages Database.

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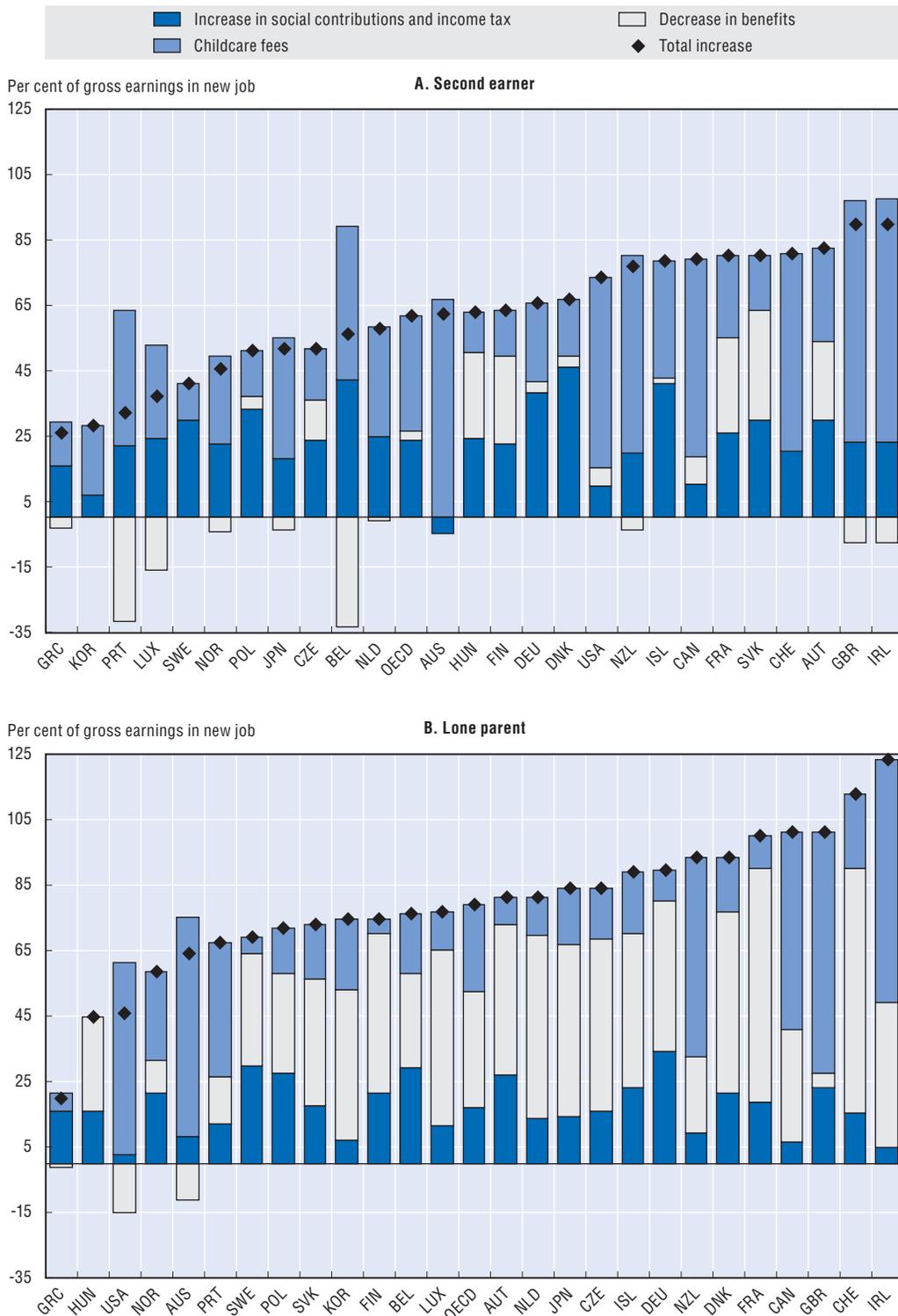
Figure 4.5. **Labour taxation**
Percentage of average worker earnings



1. Average of implicit tax on continued work in early retirement route, for 55 and 60-year-olds.
2. Implicit tax on continued work in regular old-age pension systems, for 60-year-olds. The 2005 estimates for Czech Republic, Finland, France, Japan and Slovak Republic have been revised from those reported in earlier editions of *Going for Growth*.

Source: Duval, R. (2003), "The Retirement Effects of Old-Age Pension and Early Retirement Schemes in OECD Countries", OECD Economics Department Working Papers, No. 370 and OECD calculations.

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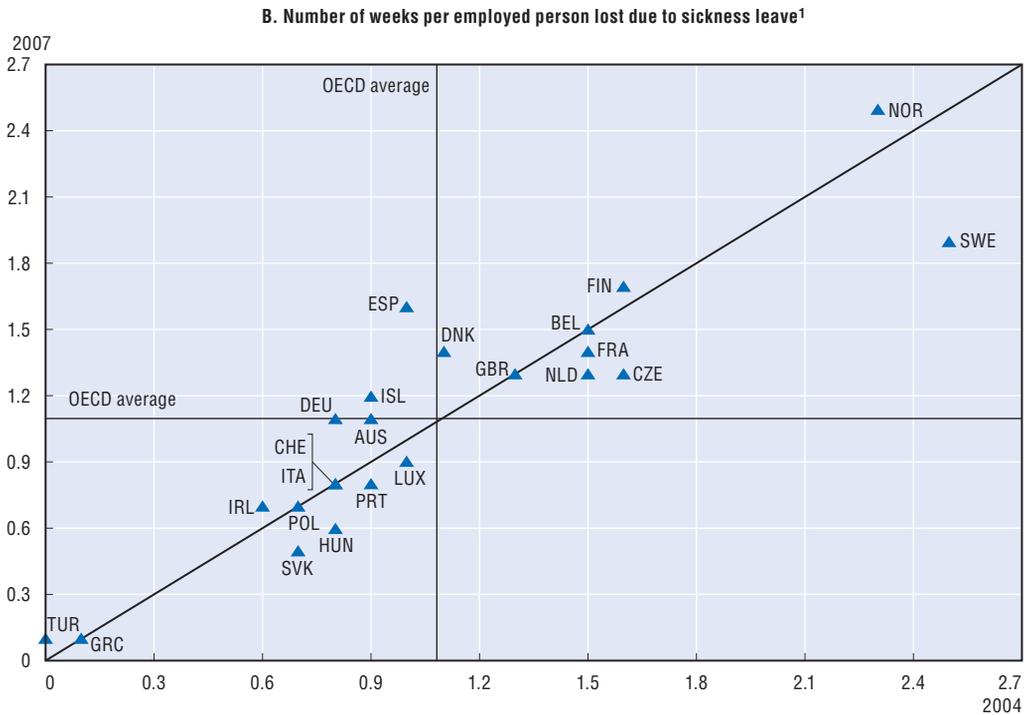
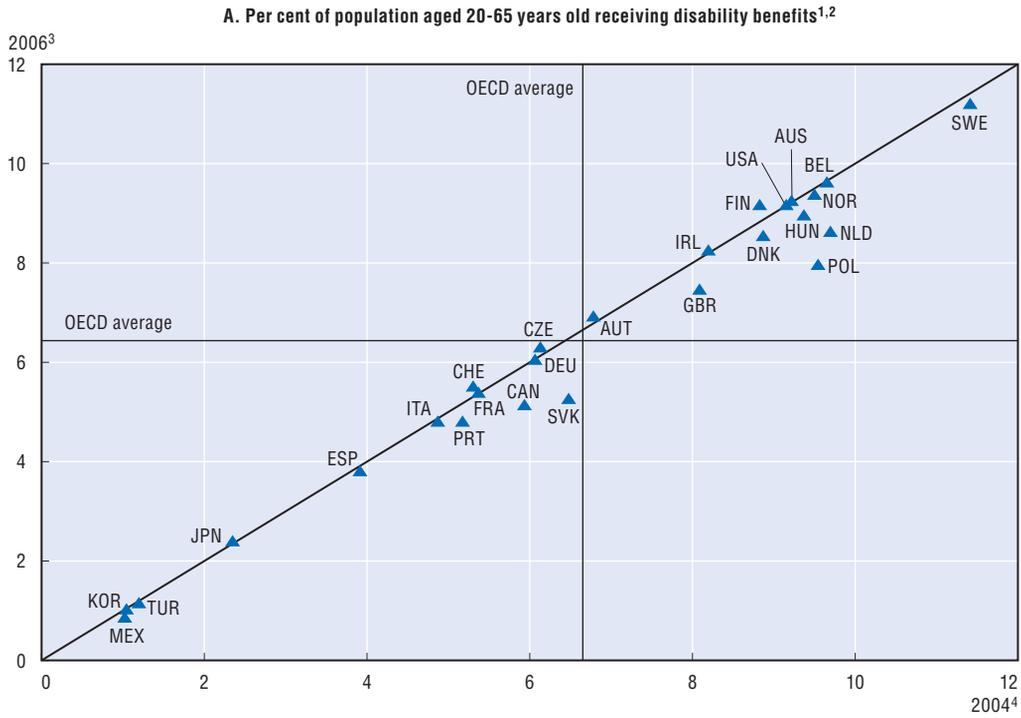
Figure 4.6. **Implicit tax on returning to work, 2004¹**

1. Taking into account childcare fees and changes of taxes and benefits in case of a transition to a job paying two-thirds of average earnings.

Source: OECD, *Benefits and Wages: OECD Indicators*.

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Figure 4.7. **Income support for disability and sickness**

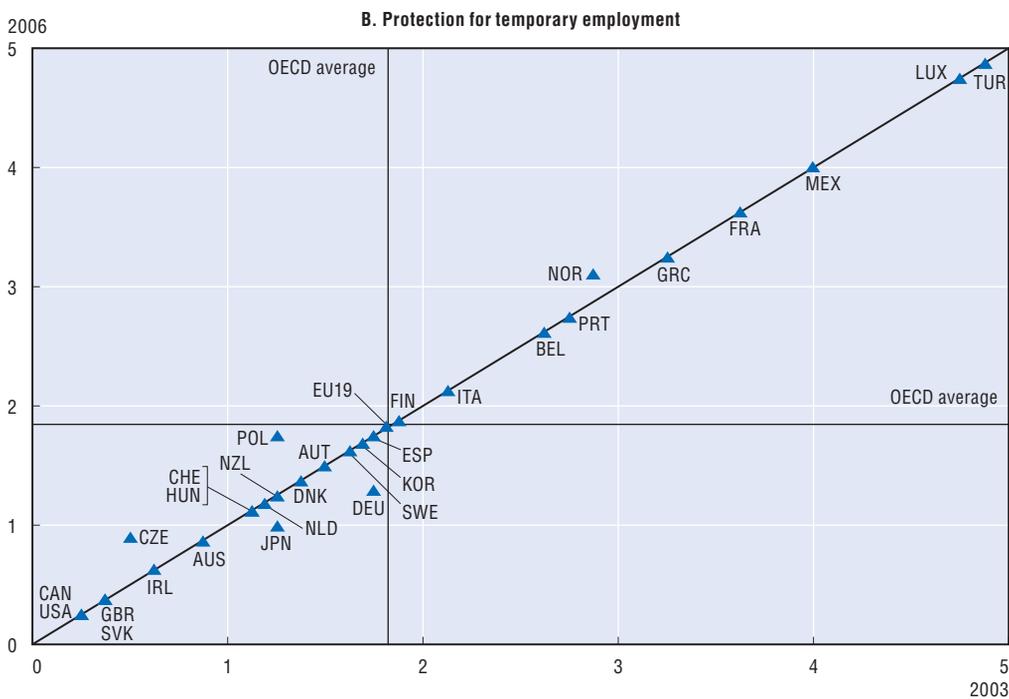
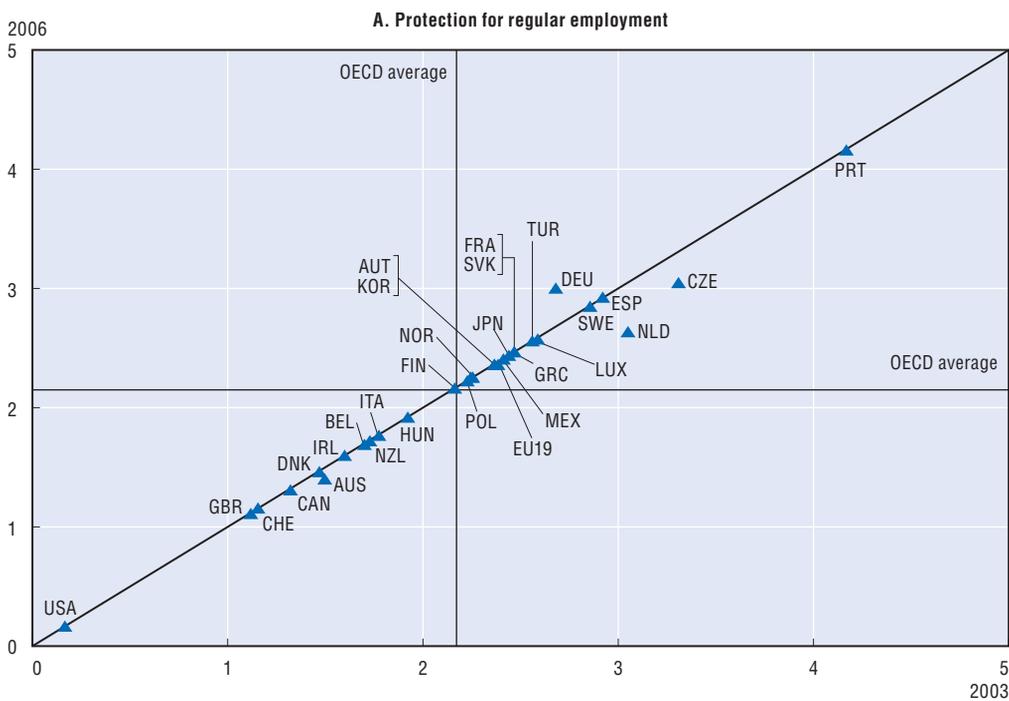


1. OECD average only for the countries shown on the graph.
2. Disability benefits include benefits received from schemes to which beneficiaries have paid contributions (contributory), programmes financed by general taxation (non-contributory) and work injury schemes.
3. Data for France, Germany and Korea are for 2004.
4. Data for Canada refer to 1999.

Source: Chart A: OECD (2003), *Transforming Disability into Ability* and OECD estimates; Chart B: OECD (2008), *OECD Employment Outlook*.

StatLink  <http://dx.doi.org/10.1787/533876870334>

Figure 4.8. Employment Protection Legislation (EPL)
 Index scale of 0-6 from weakest to strongest protection

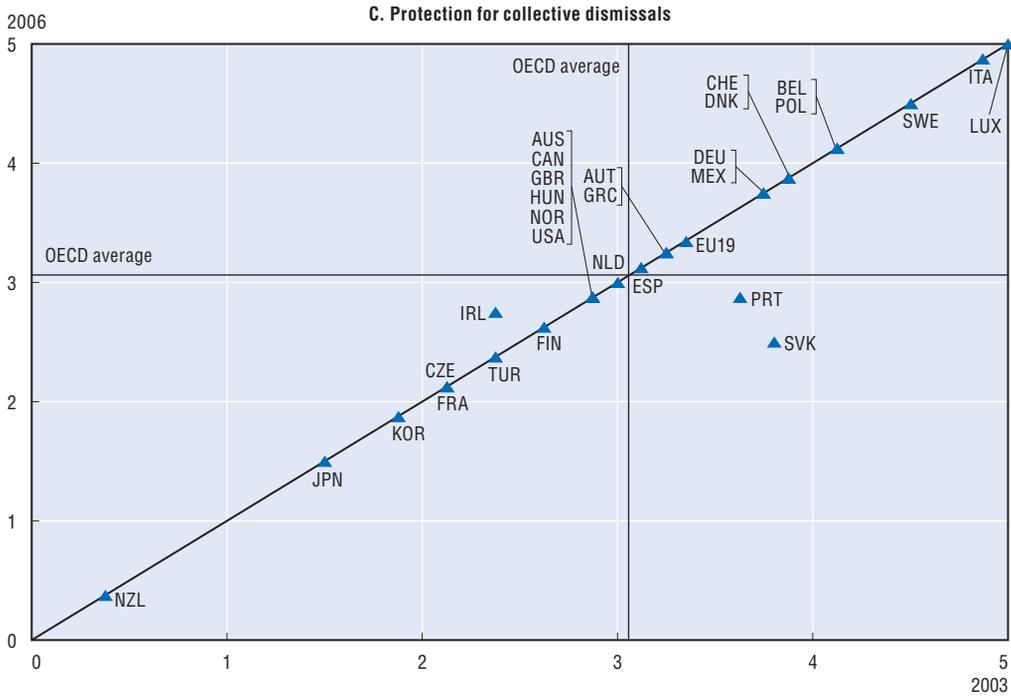


Source: OECD (2004), OECD Employment Outlook and OECD estimates.

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Figure 4.8. **Employment Protection Legislation (EPL)** (cont.)

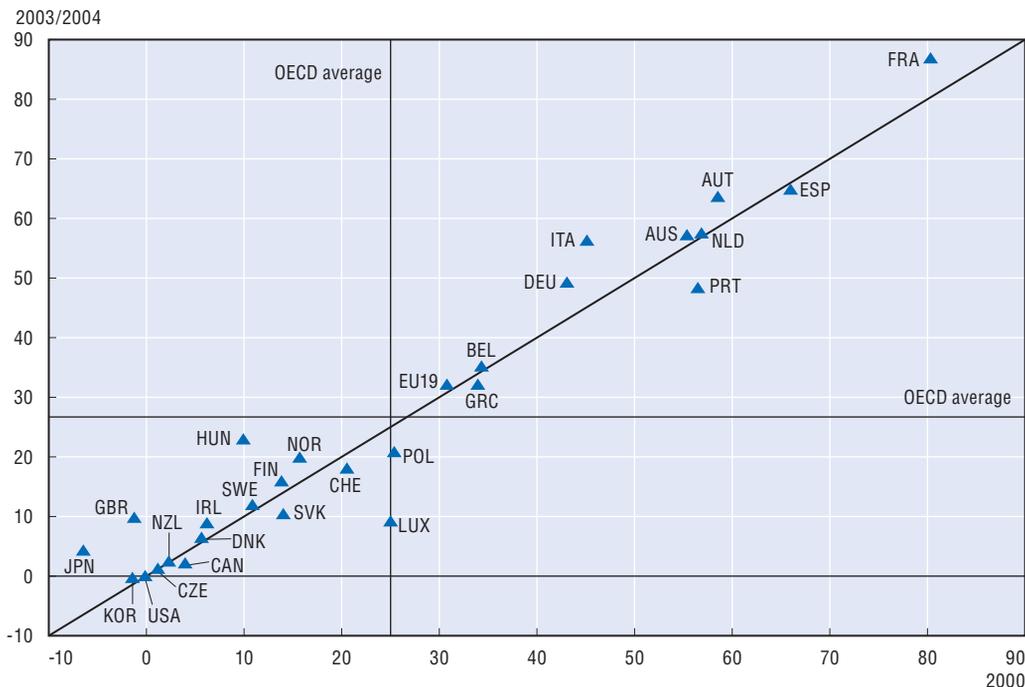
Index scale of 0-6 from weakest to strongest protection



Source: OECD (2004), OECD Employment Outlook and OECD estimates.

StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.9. **Difference between coverage rates of collective bargaining agreements and trade union density rates**¹



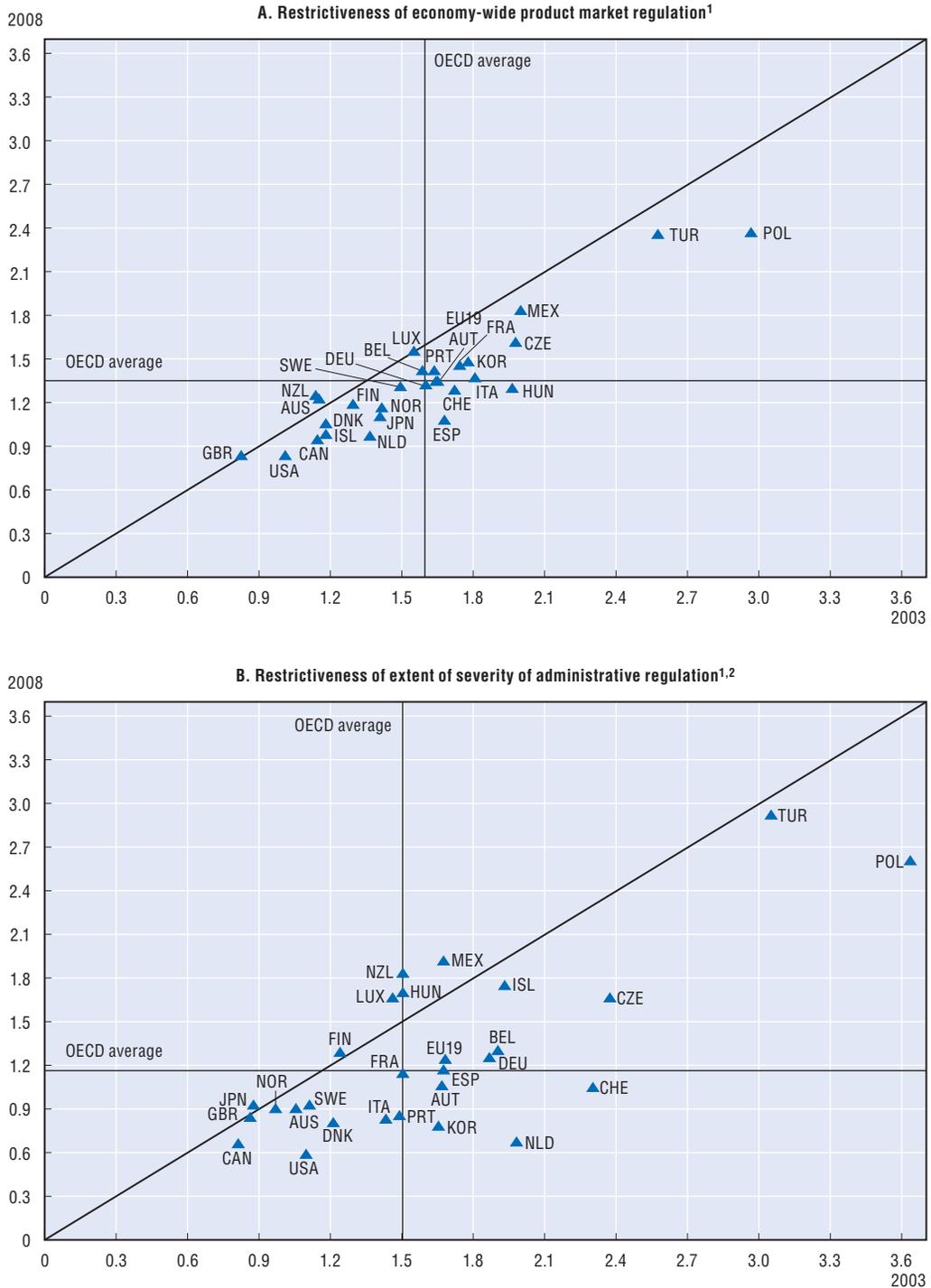
1. The coverage rate is measured as the percentage of workers who are covered by collective bargaining agreements, regardless of whether or not they belong to a trade union. The union density rate is the percentage of workers belonging to a trade union. Each data point on the figure is calculated as the simple arithmetic difference between the two rates.

Source: OECD (2004), OECD Employment Outlook and OECD estimates.

StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.10. **Product market regulation**

Index scale of 0-6 from least to most restrictive



1. Data for Greece, Ireland and the Slovak Republic are not available for 2008, and have been excluded above.

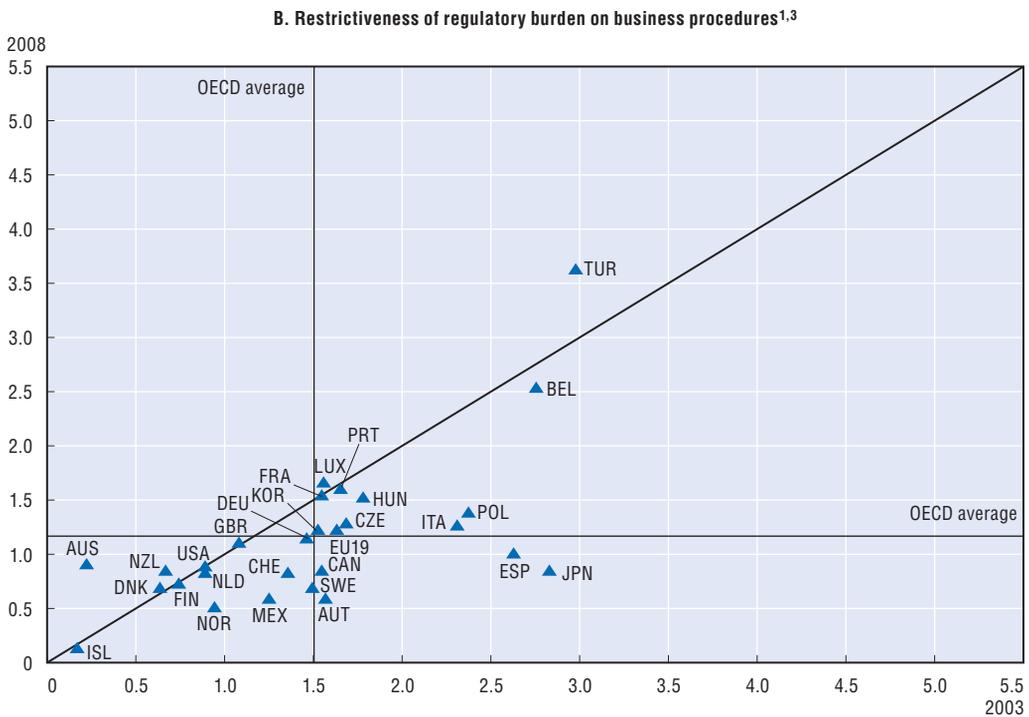
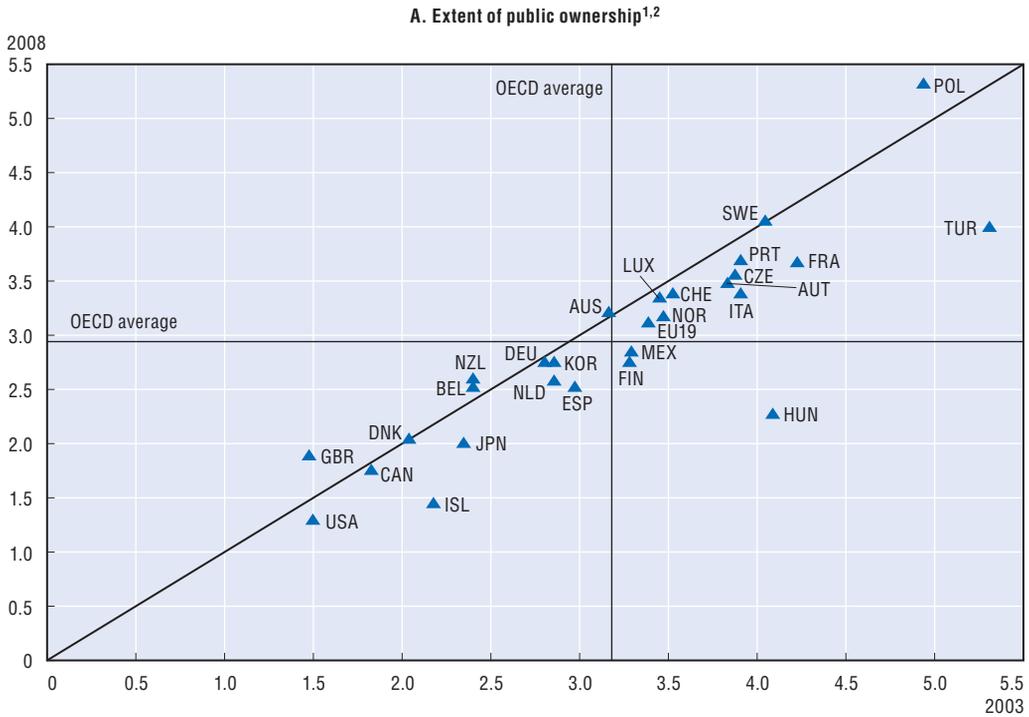
2. Includes reporting, information and application procedures, and the burdens on business start ups, implied by both economy-wide and sector-level requirements.

Source: OECD, Product Market Regulation Database.

StatLink  <http://dx.doi.org/10.1787/533876870334>

Figure 4.11. **State control of business operations**

Index scale of 0-6 from least to most restrictive



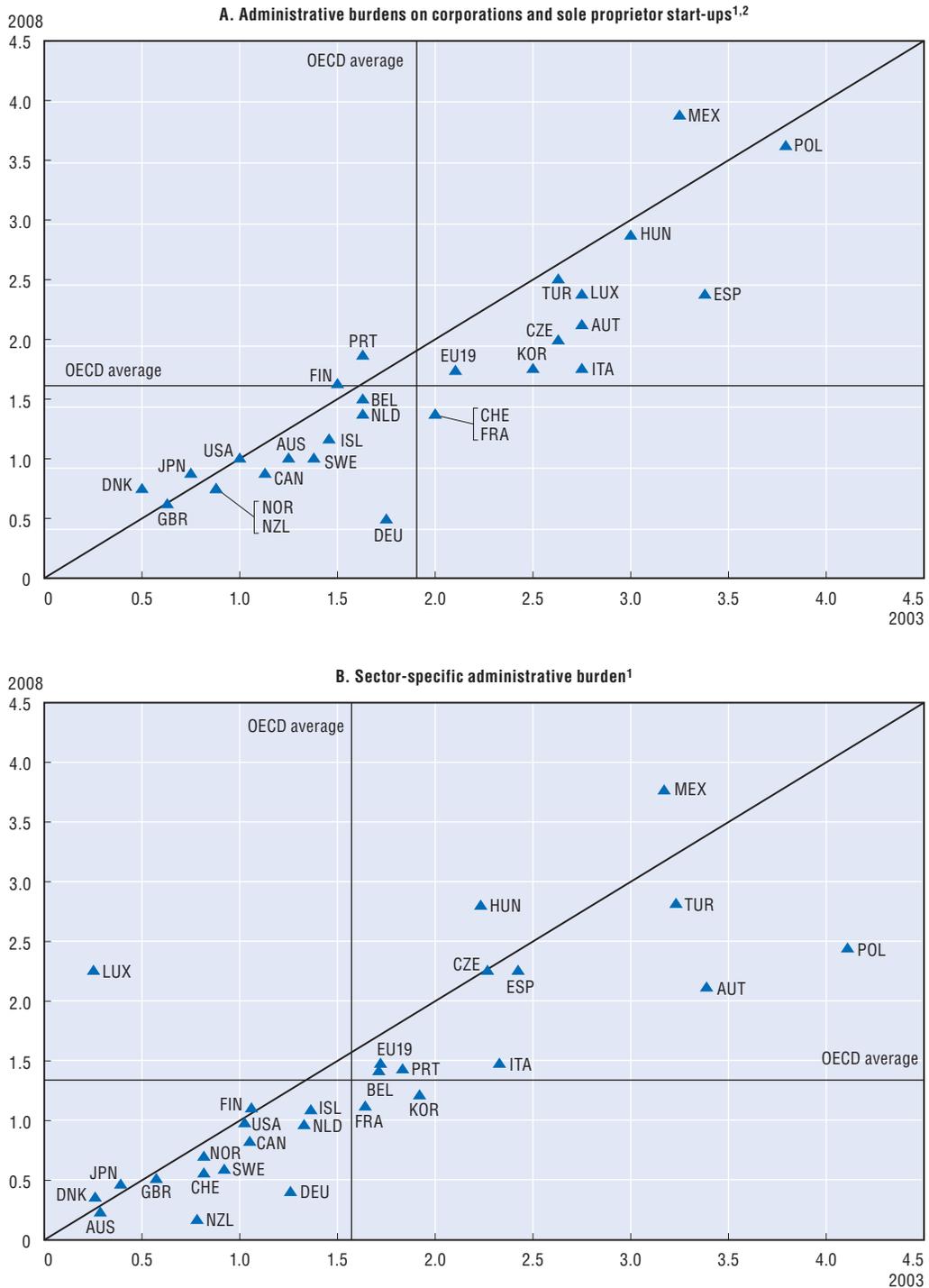
1. Data for Greece, Ireland and the Slovak Republic are not available for 2008, and have been excluded above.
2. Covers scope and direct state control over business enterprise (via voting rights or legislative bodies).
3. Concerns the involvement of the state in business operations via price controls or the use of command and control regulation.

Source: OECD, Product Market Regulation Database.

StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.12. **Barriers to entrepreneurship**

Index scale of 0-6 from least to most restrictive

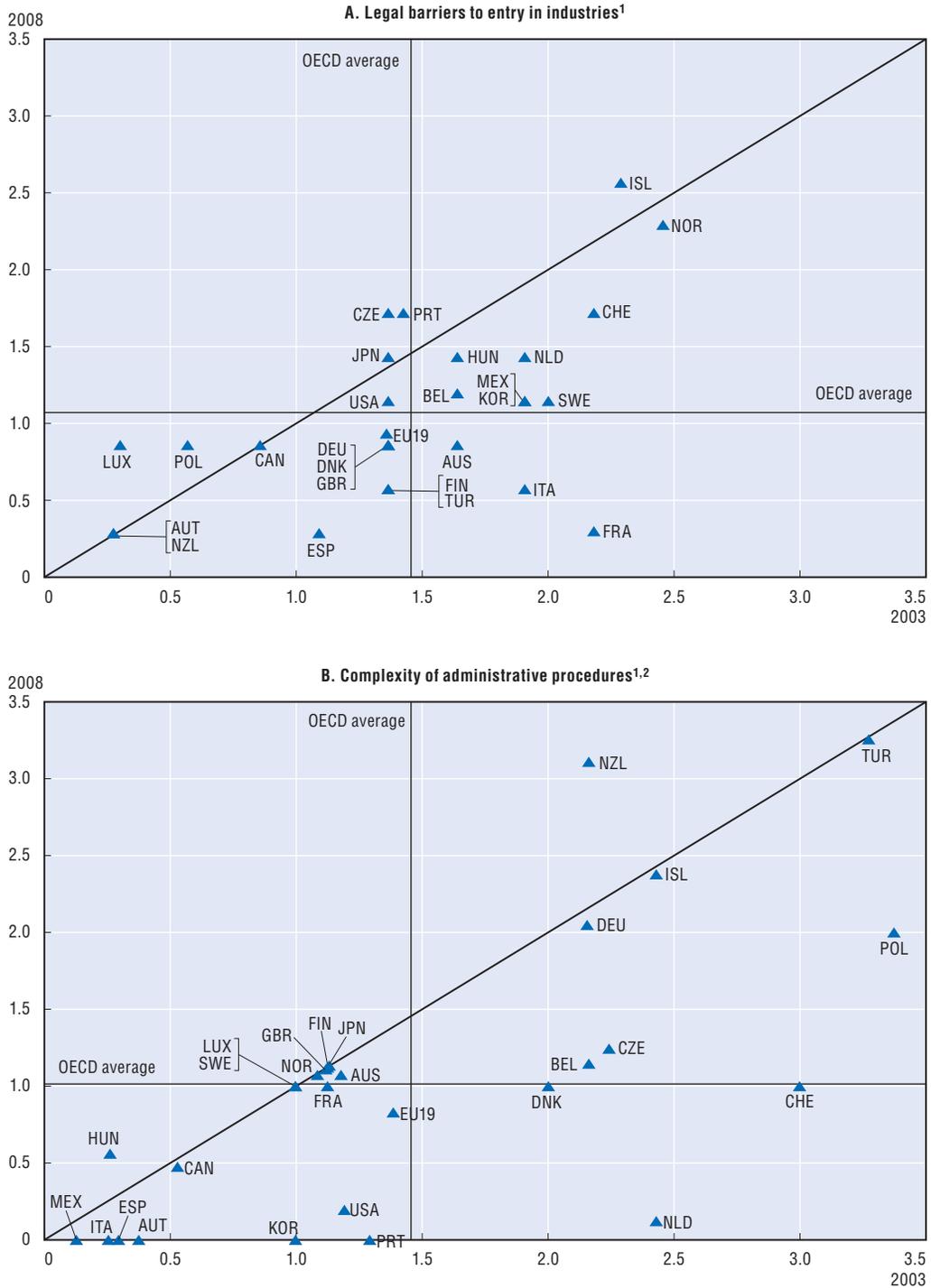


1. Data for Greece, Ireland and the Slovak Republic are not available for 2008, and have been excluded above.
2. This is a simple average of the two indicators of administrative burdens on corporations and sole proprietor start-ups.

Source: OECD, Product Market Regulation Database.

StatLink  <http://dx.doi.org/10.1787/533876870334>

Figure 4.13. **Barriers to entry**
Index scale of 0-6 from least to most restrictive



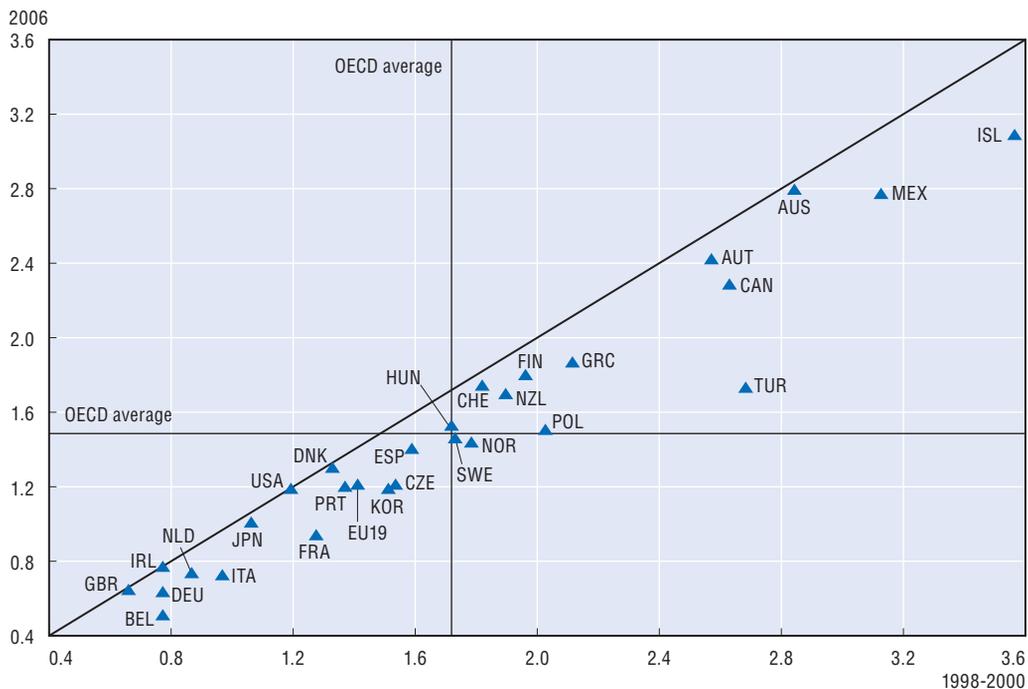
1. Data for Greece, Ireland and the Slovak Republic are not available for 2008, and have been excluded above.
2. Concerns complexity of government communication of rules and procedures as well as of licences and permit systems.

Source: OECD, Product Market Regulation Database.

StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.14. **Barriers to foreign direct investment**

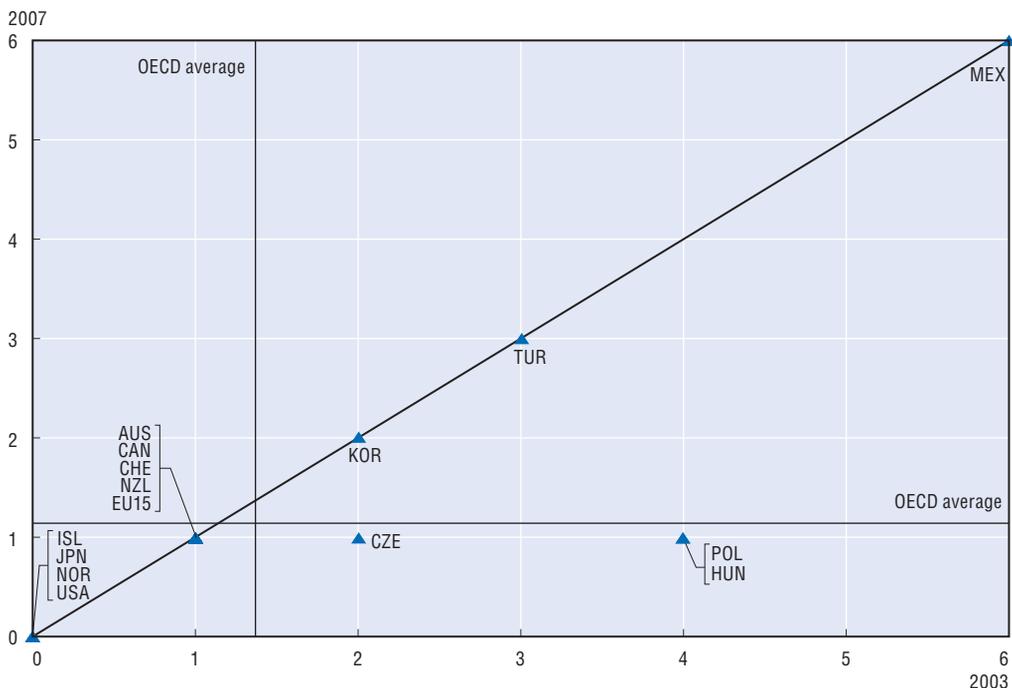
Index scale of 0-10 from least to most restrictive



StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.15. **Importance of external trade tariffs**¹

Index scale of 0-6 from least to most restrictive

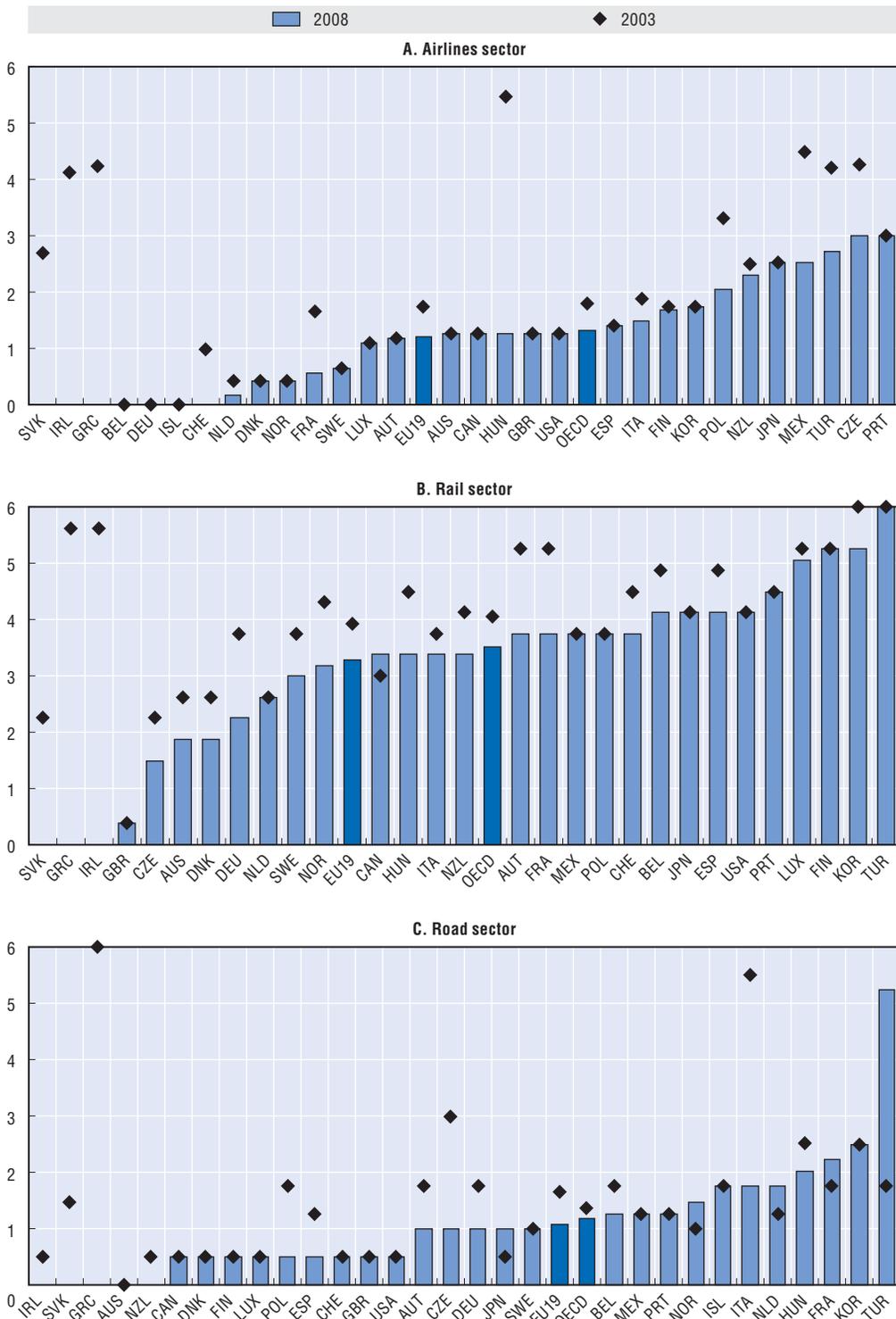


Source: Chart A: Koyama, T. and S. S. Golub (2006), "OECD's FDI regulatory restrictiveness index: revision and extension to more economies", OECD Economics Department Working Papers, No. 525; Chart B: OECD, Product Market Regulation Database.

StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.16. **Sectoral regulation in the transport sector**¹

Index scale of 0-6 from least to most restrictive

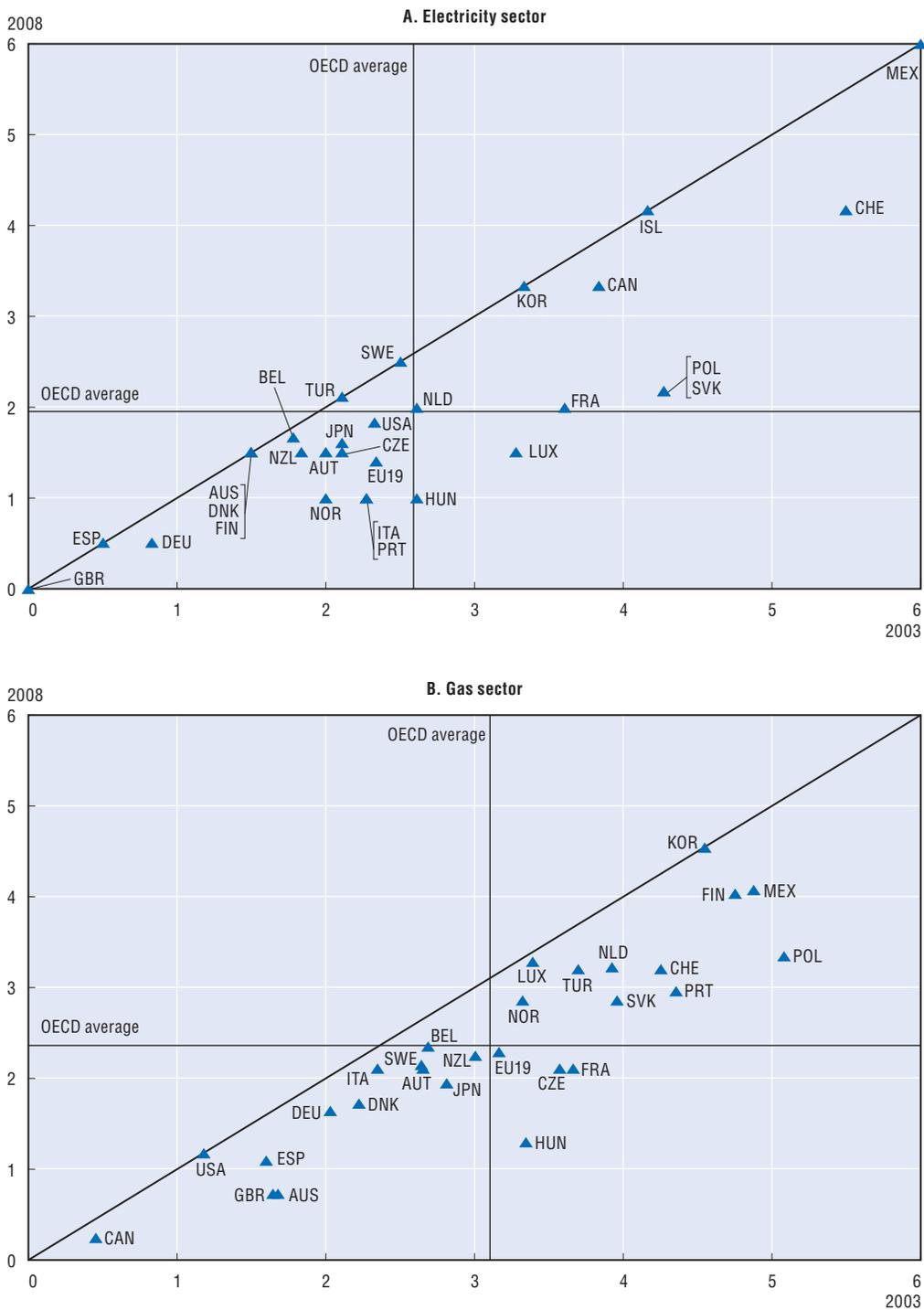


1. EU19 and OECD averages exclude Greece, Ireland and the Slovak Republic because 2008 data are not available for these countries.

Source: OECD, Product Market Regulation Database.

StatLink  <http://dx.doi.org/10.1787/533876870334>

Figure 4.17. **Sectoral regulation in the energy sector**¹
 Index scale of 0-6 from least to most restrictive

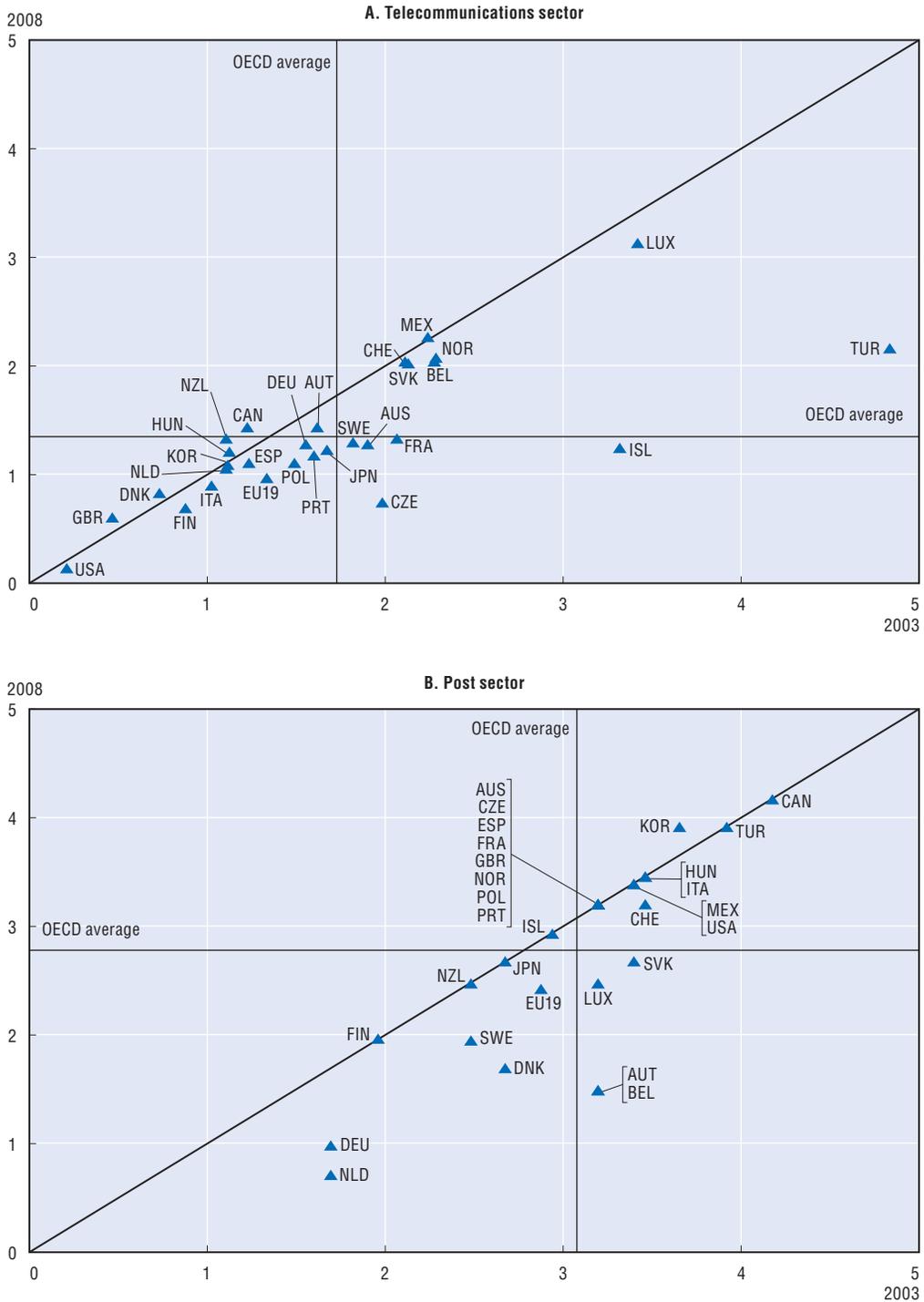


1. Data for Greece, Ireland and the Slovak Republic are not available for 2008, and have been excluded above.
 Source: OECD, Product Market Regulation Database.

StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.18. **Sectorial regulation in the post and telecommunications sector**¹

Index scale of 0-6 from least to most restrictive



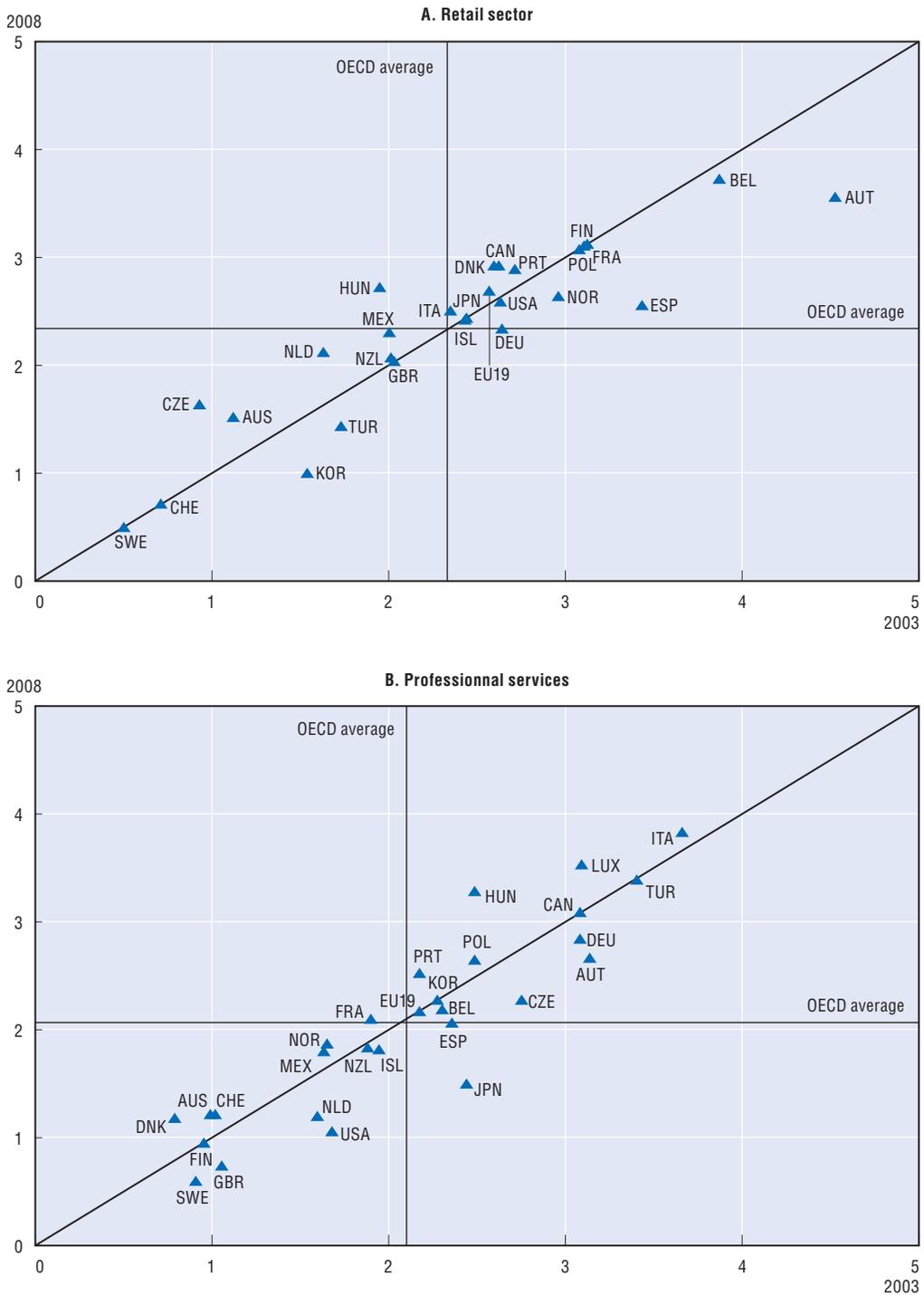
1. Data for Greece, Ireland and the Slovak Republic are not available for 2008, and have been excluded above.

Source: OECD, Product Market Regulation Database.

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Figure 4.19. **Sectoral regulation in retail and professional services**¹

Index scale of 0-6 from least to most restrictive



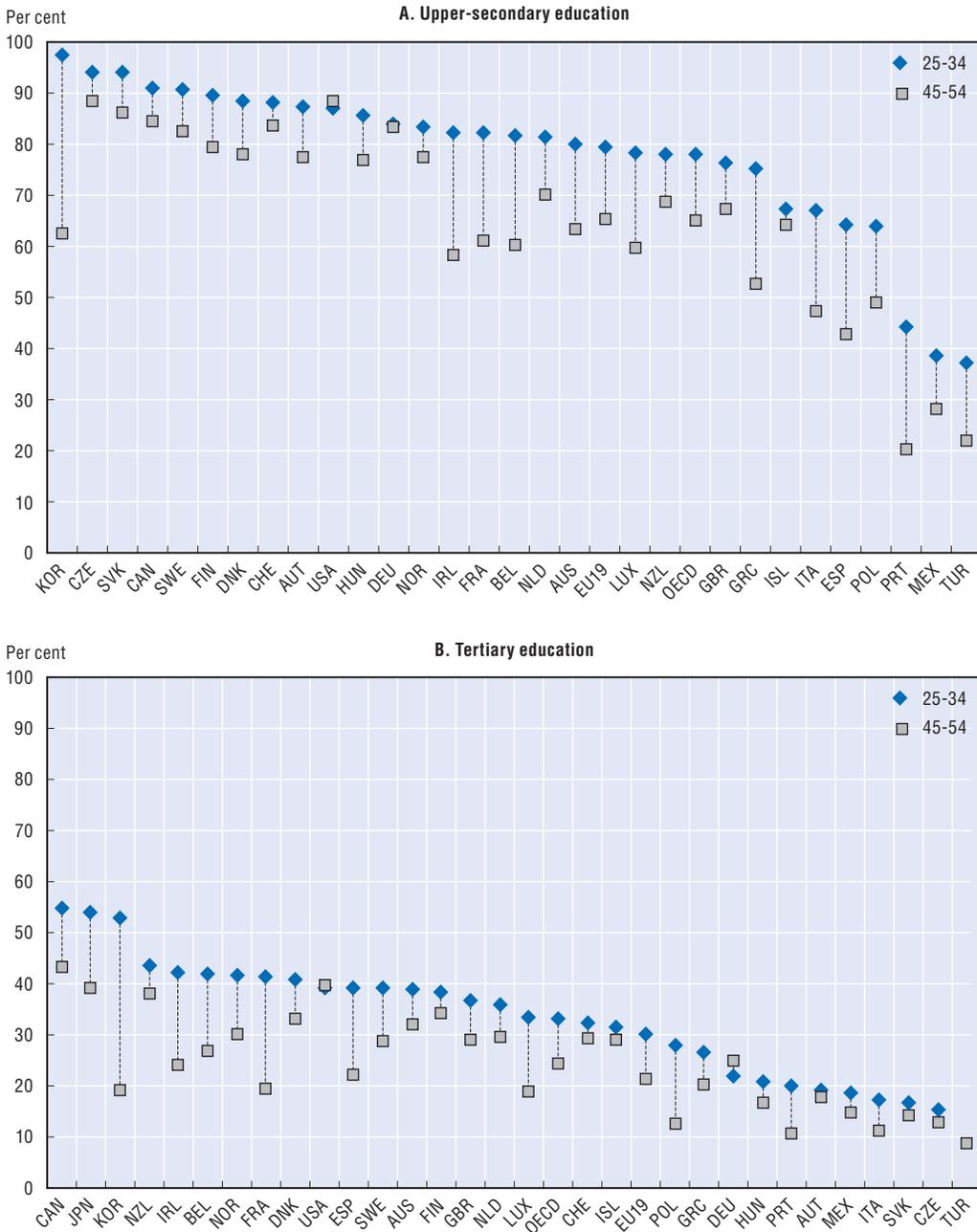
1. Data for Greece, Ireland and the Slovak Republic are not available for 2008, and have been excluded above.

Source: OECD, Product Market Regulation Database.

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Figure 4.20. **Educational attainment, 2006**

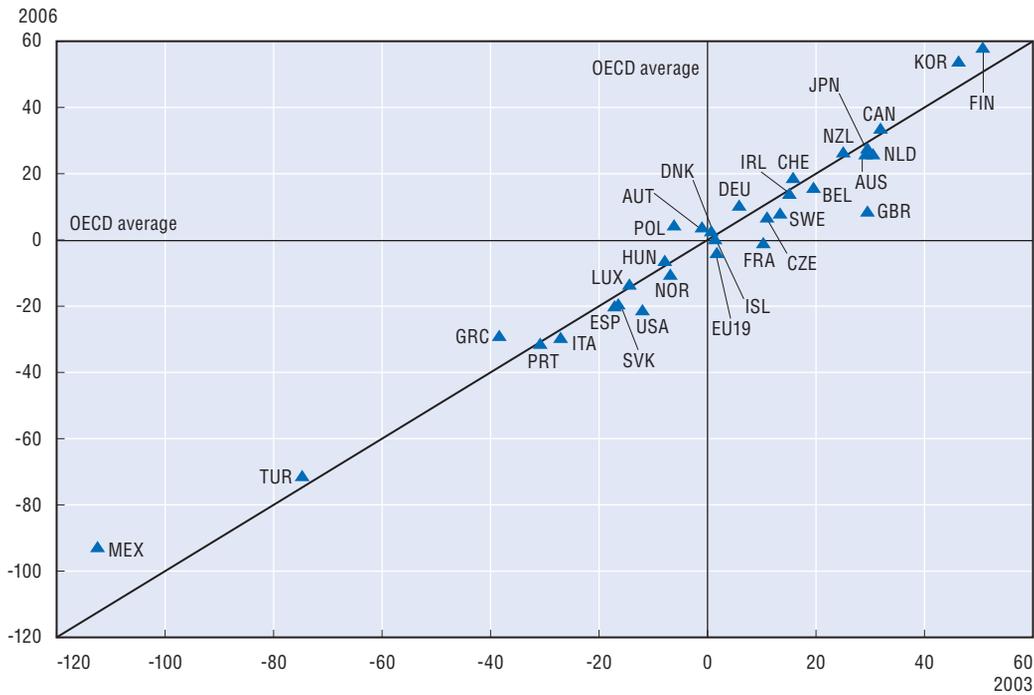
Percentage of population aged 25-34 and 45-54



Source: OECD (2008), Education at a Glance.

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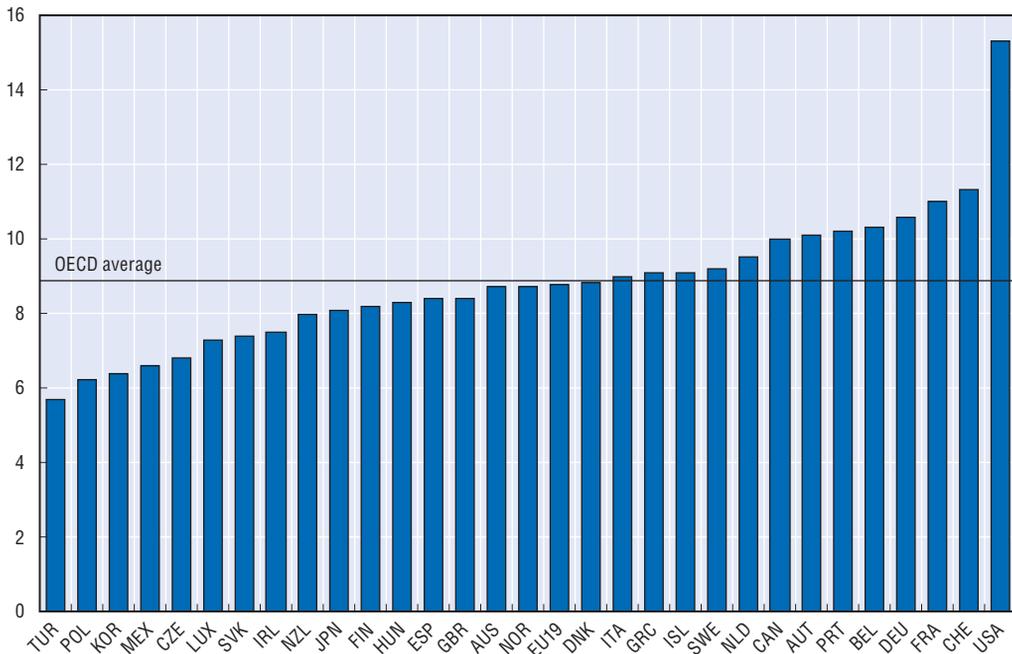
Figure 4.21. Educational achievement
Average of PISA scores in reading, mathematics and science¹



1. PISA stands for Programme for International Student Assessment.
 2. For the United Kingdom, science only, and for the United States, average of PISA scores in mathematics and science.
- Source: OECD, PISA 2006 Database.

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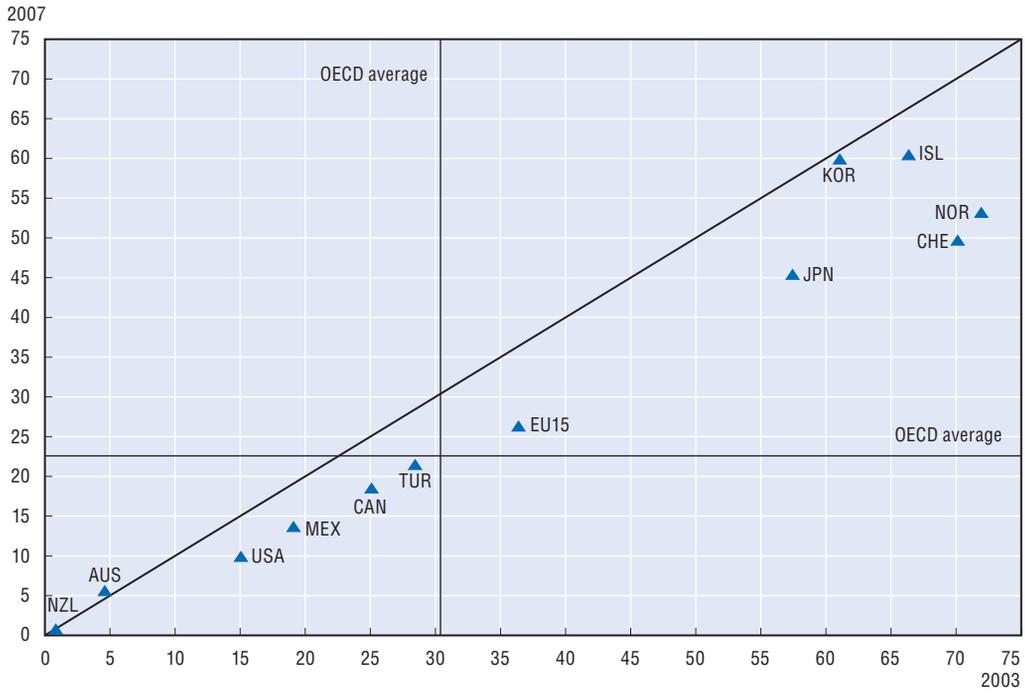
Figure 4.22. Health expenditure, 2006¹
Percentage of GDP



1. 2005 for Turkey; 2004 for the Netherlands; 2003 for New Zealand and 2002 for Denmark.
- Source: OECD, Health Database.

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Figure 4.23. **Producer support estimate to agriculture**¹
Percentage of farm receipts

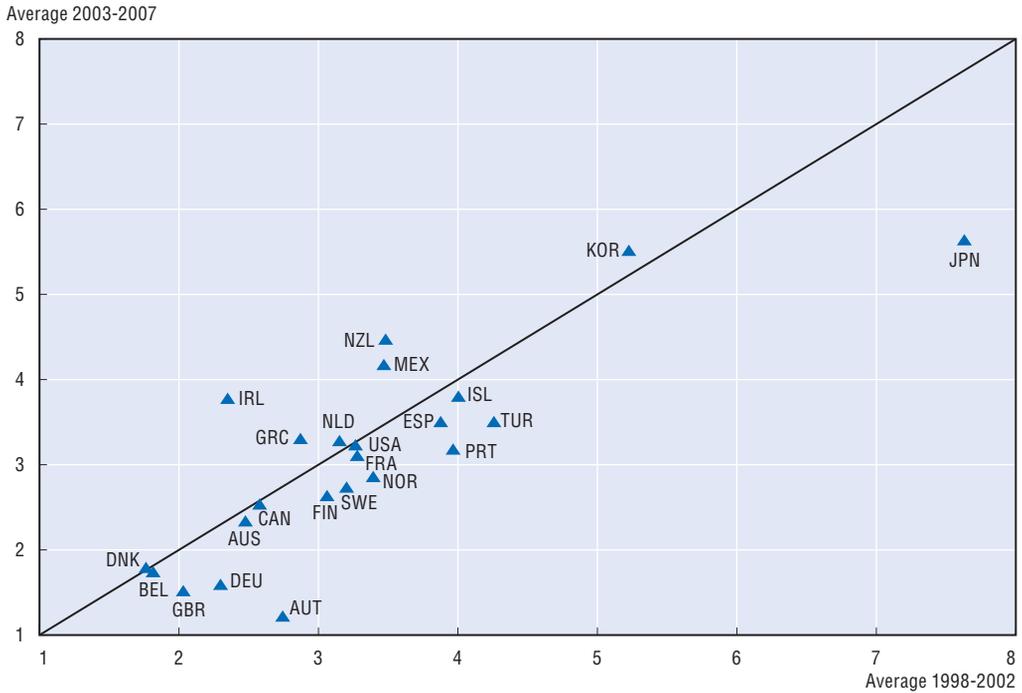


1. A single producer support estimate is calculated for EU countries.

Source: OECD, *Producer and Consumer Support Estimates Database*.

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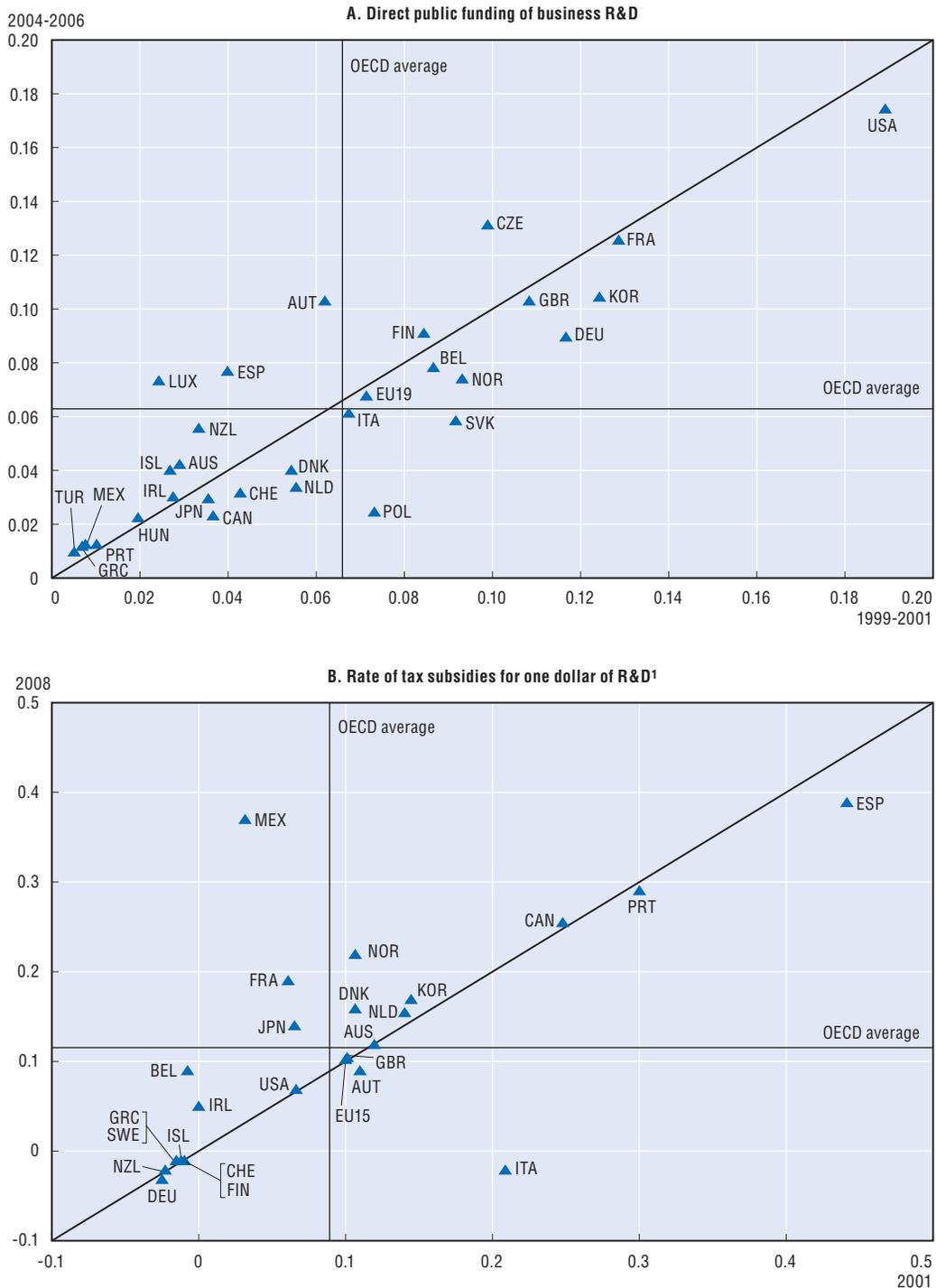
Figure 4.24. **Public investment**
Percentage of GDP



Source: OECD Economic Outlook, No. 84, Vol. 2008/2.

StatLink <http://dx.doi.org/10.1787/533876870334>

Figure 4.25. Financial support for private R&D investment



1. Measures the generosity of tax incentives to invest in R&D, on the basis of the pre-tax income necessary to cover the initial cost of one dollar R&D spending and pay corporate taxes on one dollar of profit (B-index). A value of zero on the chart would mean that the tax concession for R&D spending is just sufficient to offset the impact of the corporate tax rate.

Source: OECD, Main Science and Technology Indicators Database.

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PART II

Thematic Studies

PART II
Chapter 5

Taxation and Economic Growth

Tax systems differ widely across OECD countries and these variations explain part of the differences in economic performance and, in turn, differences in living standards. This chapter examines how to design tax systems to be less of a drag on economic growth. Corporate taxes are found to be the most harmful for growth, followed by personal income taxes, and then consumption taxes. Recurrent taxes on immovable property appear to have the least impact. A revenue neutral growth-oriented tax reform would, therefore, be to shift part of the revenue base from income taxes to less distortive taxes such as recurrent taxes on immovable property or consumption.

Introduction

Tax systems differ across OECD countries and these variations contribute to differences in economic performance. This is because taxes affect the decisions of individuals to save, work and enhance their education; the decisions of firms to produce, create jobs, invest and innovate; as well as the choice of savings channels and assets by investors. What matters for these decisions is not only the level of taxes but also the way in which different tax instruments are designed and combined to generate revenues (henceforth referred to as *tax structures*).

Recognising this, over the past decades many OECD countries have undertaken tax reforms to make tax structures less of a restraint on economic growth. These reforms have generally been aimed at creating a fiscal environment that encourages saving, investment, entrepreneurship and work. At the same time, it has to be emphasised that tax revenues are themselves used in large part to finance such expenditures as infrastructure, education, health, and a stable and predictable legal framework, all of which raise productivity and promote investments in human and physical capital. Hence the issue is not so much reducing the overall tax burden (although that might be desirable in some countries) but rather re-designing tax structures so as to minimise their negative impact on growth while safeguarding revenues. Against this background, many reforms have involved cuts in tax rates and broadening of the bases on which taxes are levied. Other policy objectives than growth, notably concerns with equity, also influence tax policies, however. In response to the ongoing financial crisis, many countries have used their tax systems to stimulate aggregate demand, but in most cases without durably influencing tax structures. To the extent higher taxes will be needed in the future to redress the run-up in public debt as a result of the crisis, it will be important to avoid negative side-effects on economic growth (see Chapter 1).

This chapter investigates how tax structures could best be designed to support GDP per capita growth.¹ It does not consider how changes in overall tax pressure, which are inseparable from the changes in government spending which they finance, may affect growth. The main findings are as follows:

- Empirical analysis suggests that corporate taxes are the most harmful type of tax for growth, followed by personal income taxes and then consumption taxes, with recurrent taxes on immovable property being the least harmful.
- Taxes on immovable property have relatively small effects on decisions of households and firms concerning labour supply, investment in education and how much to produce, invest and innovate; they can even enhance growth if they reduce the tax advantages of housing in comparison to other types of investment.
- Consumption taxes can weaken work incentives but do not affect incentives to save; they will have the least impact on growth when the main consumption tax is set at a single rate for all goods and services. However, additional specific consumption taxes

can be employed to reduce the consumption of products with unwanted side effects, such as pollution.

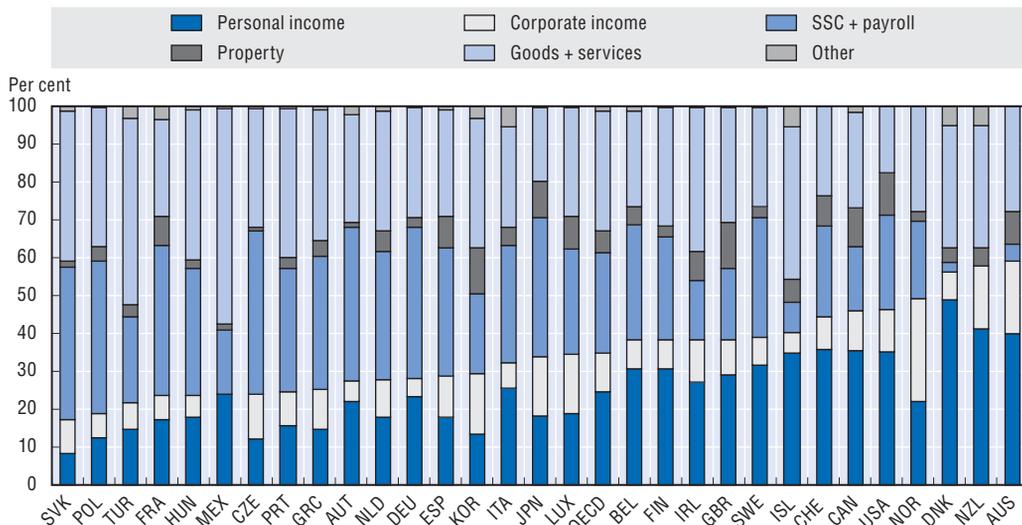
- Personal income taxes reduce employment and human capital investment, as well as weaken productivity performance through various channels, including by dampening entrepreneurial activity. Particular disincentives to work at low earnings can be reduced with well-designed “in-work benefits”; entrepreneurial activity can be stimulated by reducing progressivity of the tax system but this may conflict with equity objectives.
- Corporate taxes weaken incentives for firms to produce and create jobs, and hold back domestic and foreign investment, as well as investment in innovative activities; some degree of support for research and development through the tax system may help to increase private spending towards the socially desirable level in this area; and, while corporate taxation is only one among other determinants of firms’ location decisions, tax rates in line with those abroad will limit such impacts.

Tax structures and growth

Despite some significant differences in tax levels and tax structures across OECD countries, tax revenue in most countries comes from three main sources: personal and corporate income taxes, social security contributions, and taxes on goods and services (Figure 5.1). Countries vary considerably in their reliance on each of these revenue sources, but there are some general trends as regards development over time. One is increased reliance on value added taxation, with the United States now being the only OECD country without a value added tax. A second trend is the growth in social security contributions, which now nearly raise as much revenue in OECD countries as the personal income tax.

Figure 5.1. **Composition of tax revenues, 2005**¹

Percentage of total tax revenues



1. Countries are ordered according to the combined share of personal and corporate incomes in GDP. For Mexico, personal income tax revenues include all taxes on income including corporate income. Taxes on goods and services include tariff revenues and excise duties in addition to value-added and general sales taxes.

Source: OECD Revenue Statistics Database.

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These differences in tax structures play a role in explaining differences in economic performance. Many taxes are likely to affect only the level of GDP per capita (with reforms influencing growth only temporarily), but some taxes may exert a more long-lasting influence on the growth rate of the economy, particularly those affecting investments in human capital, innovative activities and entrepreneurship. However, level and growth-rate effects can be difficult to distinguish in empirical analysis.

New empirical analysis suggests a “tax and growth ranking” of taxes with regard to their negative effect on GDP per capita in the following order from the most to the least harmful for growth:²

1. Corporate income taxes.
2. Personal income taxes.
3. Consumption taxes.
4. Recurrent taxes on immovable property.

This ranking implies that replacing part of the revenues from income taxes with revenues from taxes that have smaller distortionary effects, for a given overall level of the tax burden, could bring economic gains.

The explanation for this finding relates to the way different taxes affect economic decisions of individuals and firms. In general, income taxes have larger effects on these decisions than other taxes, and therefore they create larger welfare losses, *ceteris paribus*. More specifically, corporate income taxation influences firms’ decisions to produce and to create jobs and holds back domestic and foreign investment, as well as firms’ incentives to invest in innovative activities, with negative consequences for productivity and growth. In a similar way, personal income taxes on labour income and social security contributions reduce workers’ incentives to supply labour and to invest in education, and they also add to firms’ labour cost, thereby reducing employment. Consumption taxes also affect economic decisions of individuals and firms, but the negative effects are likely to be smaller because consumption taxes are often levied on a broad base, do not involve progressive elements that can distort human capital investment and do not influence the return on saving. Property taxes, especially those levied on residential property appear to have the least impact on economic decisions of households and firms.

One policy implication that emerges is that a revenue-neutral growth-oriented tax reform would be to shift part of the revenue base from income to consumption and property.³ However, the tax policy changes that are most likely to increase growth in any particular OECD country will depend on the starting point, in terms of both the current tax system and the areas of relative economic weakness, such as employment, investment or productivity growth. Also, there may be limits to raising growth by changing tax structures since it is probable that there are diminishing growth returns to adjusting tax composition. Moreover, changing the balance between different tax sources should not be seen as a substitute for improving the design (*e.g.* broadening the base) of individual taxes in OECD countries. Indeed, the reform of individual taxes can complement a revenue shift.

Effects of different taxes on GDP per capita

Property taxes

Apart from apparently having a less negative impact on growth than other types of taxes, recurrent taxes on immovable property have a number of other favourable features.

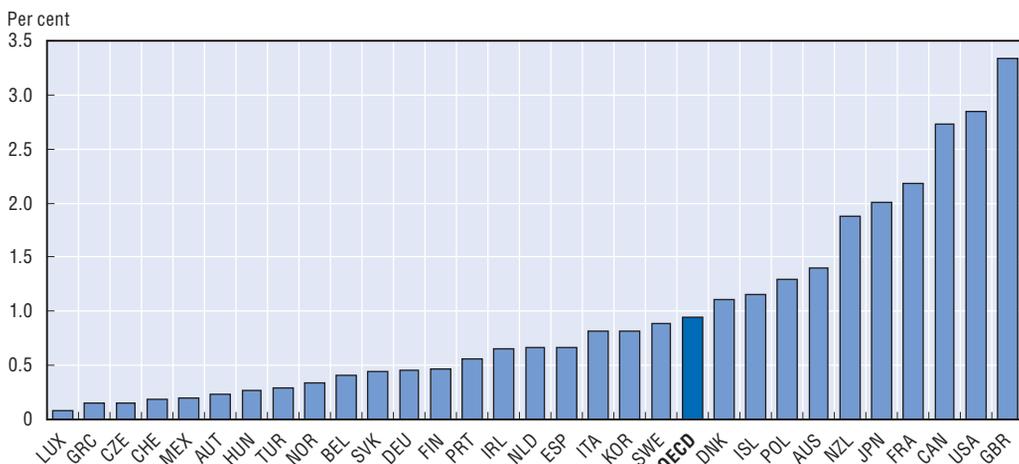
For example, these taxes draw on an immovable tax base in a period in which globalisation of economic activities makes many other tax bases mobile across tax jurisdictions. The design of property taxes on land and buildings can also be used as an instrument to improve land development and land use. For example, taxes on vacant property and undeveloped land can encourage the appropriate utilisation of land and business property in urban areas. However, despite the economic and enforcement advantages of property taxation, only a few OECD countries (e.g. the United Kingdom, the United States and Canada) raise substantial revenue from this source of taxation (Figure 5.2).

Many OECD countries have a favourable tax treatment of owner-occupied housing relative to other forms of investment. This may result in excessive investment in housing with a negative impact on business investment.⁴ Tax advantages coupled with restrictions in the rental market for housing can also reduce labour mobility, possibly preventing the matching of workers and jobs across regions. In these circumstances, increasing taxes on immovable property could reduce welfare losses and raise growth. More generally, the removal of the differential tax treatment of housing and other investments would be the most appropriate setting to support growth. This could be done by taxing the imputed rent from owner-occupation and allowing interest deductibility. If taxing of imputed rent is not feasible, then the removal of mortgage interest deductibility and the use of property taxes can instead provide a “second best” approach. However, local government control over property taxes makes it difficult in many cases to implement this approach in a co-ordinated fashion.

Net wealth taxes and inheritance taxes are also potentially less harmful for growth than other types of taxes. At the same time, they may be thought to have a fairness-enhancing distributional profile, at least if they are based on total net wealth. Still, these taxes may discourage saving of the people to whom they apply, though in practice there are doubts as to how responsive saving is to the after-tax real interest rate (see below). Inheritance taxes are like net wealth taxes, but they are levied only at the end of a person’s life. Inheritance taxes may also be seen as a way of taxing income or capital gains that were not taxed while the person was alive.⁵

Figure 5.2. **Recurrent taxes on immovable property, 2006¹**

Percentage of GDP



1. 2005 for Austria, Belgium, Greece, Iceland, Japan, Mexico, Poland and Portugal.

Source: OECD (2007), Revenue Statistics.

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In contrast, taxes on financial and capital transactions are likely to have substantial negative effects on growth. In fact, they discourage not only the ownership of the taxed assets but also the transactions that would allocate these assets towards their most productive uses. For example, by discouraging people from buying and selling houses, they discourage them from moving to areas where their labour is in greatest demand, with negative consequences for economic growth.

Consumption taxes

Consumption taxes are thought to have smaller adverse effects on growth than most other types of taxes. One reason for this is that consumption taxes apply the same tax rate to current and future consumption (provided that tax rates are constant over time) and therefore they do not influence the rate of return on savings and individuals' saving choices, whereas income taxes depress the post-tax rate of return. In theory, the impact of changes in after-tax interest rates on savings is ambiguous, since higher rates both raise the incentive to save, but also lower the rate of saving required to achieve a target asset level. Some studies have found sizeable effects of interest rates on saving while other studies have found no effects at all (*e.g.* Hall, 1988; Summers, 1982). To the extent that a switch towards consumption tax boosts private saving, it can be expected to raise future net national income, provided that budgetary policy remains stable and allows the savings to flow into (possibly foreign) income-earning investments.

Specific consumption taxes that penalise the production and consumption of goods and services with adverse side effects, such as pollution, health and congestion, can improve environmental outcomes and are cost-effective instruments to address the challenges of climate change and pollution. Examples are excise duties on petrol and diesel. However, their positive effects on welfare do not preclude such taxes from affecting GDP negatively.

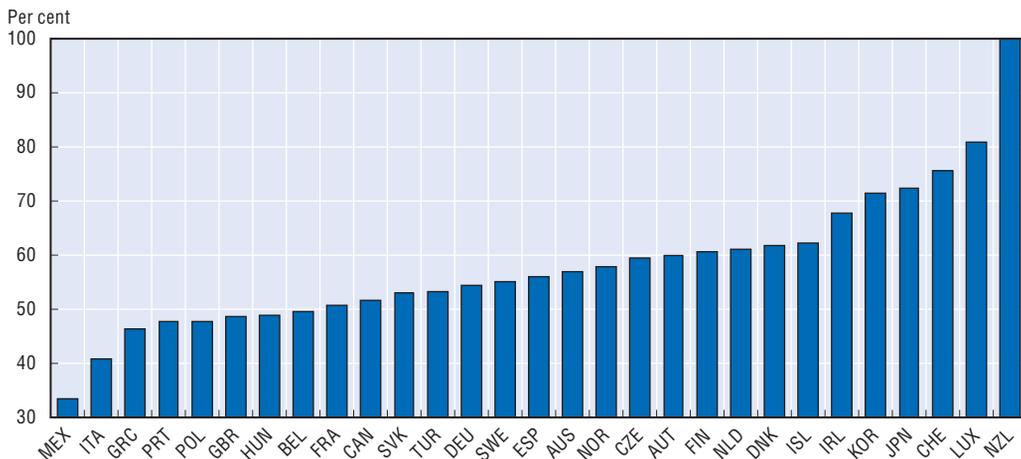
Because consumption taxes lower the purchasing power of real after-tax wages, these taxes reduce individuals' incentives to work in a similar way as a proportional income tax, potentially curbing labour supply, and thereby employment and economic growth. However, with consumption taxes being less progressive than personal income taxes, the effect on labour supply is smaller. Alternatively, but ultimately also with a negative impact on employment, consumption taxes may lead to stronger wage pressure and lower labour demand. Some recent studies have included the consumption tax in the wedge that taxes create between the cost of labour to firms and the take-home pay of workers, the so-called "tax wedge". Those studies have found that a rise in this wedge reduces market work, with no evidence that consumption taxes are different from other taxes (*e.g.* Nickell, 2004).

Also, the pattern of consumption taxes can affect labour supply. Relatively high consumption taxes on goods complementary to leisure (such as golf clubs) could encourage work by making leisure activities more costly, as could relatively low consumption taxes (or even subsidies) on goods complementary to work (such as childcare) (*e.g.* Corlett and Hague, 1953; Heady, 1987). In practice, it is difficult to clearly identify those goods for which the economic gains of taxing at a special rate outweigh the additional administrative and compliance costs. So, for the few goods for which such gains are to be expected, the best and most transparent way to reap them is by imposing special excise taxes or by providing subsidies rather than by a multi-rate VAT or sales tax system (Ebrill *et al.*, 2001).⁶ Some countries have also tried to discourage the move of certain easily hidden activities to the underground economy by applying lower tax rates on these goods

and services. But differentiated consumption taxation is often an ineffective way to deal with the underground economy, both because it is difficult to exactly identify the goods and services that fall into this area, and because many consumer purchases can be made with cash.⁷

While there are valid arguments for the use of differentiated consumption taxes in particular cases, mainly related to the environment and work incentives, none of them is strong enough to overcome the merits of a broad-based single-rate VAT. One measure of the broadness of the tax base, the extent of reduced rates and the effectiveness with which taxes are collected is the “VAT-revenue ratio” (Figure 5.3), which expresses the revenue collected from the actual VAT in a country as a proportion of the revenue that would be raised if the main rate of VAT were applied to all consumption items. A high ratio suggests a uniformly applied VAT on a broad base with effective tax collection, while a low ratio may indicate an erosion of the tax base either by exemption or reduced rates, poor compliance or poor tax administration, or some combination of these.

Figure 5.3. VAT revenue ratio, 2005¹
Index increasing in efficiency



1. The VAT revenue ratio is defined as the share of VAT revenues to consumption divided by the standard rate, expressed as a percentage $((\text{VAT revenues}/\text{National consumption} \times 100)/(\text{Standard VAT rate})) \times 100$. National consumption includes salaries and wages of the public sector which are generally not subject to VAT. Hence, variations of the VAT revenue ratio across countries to some extent reflects different sizes of the public sector.

Source: OECD (2008), *Consumption Tax Trends, VAT/GST and Excise Rates, Trends and Administration Issues*.

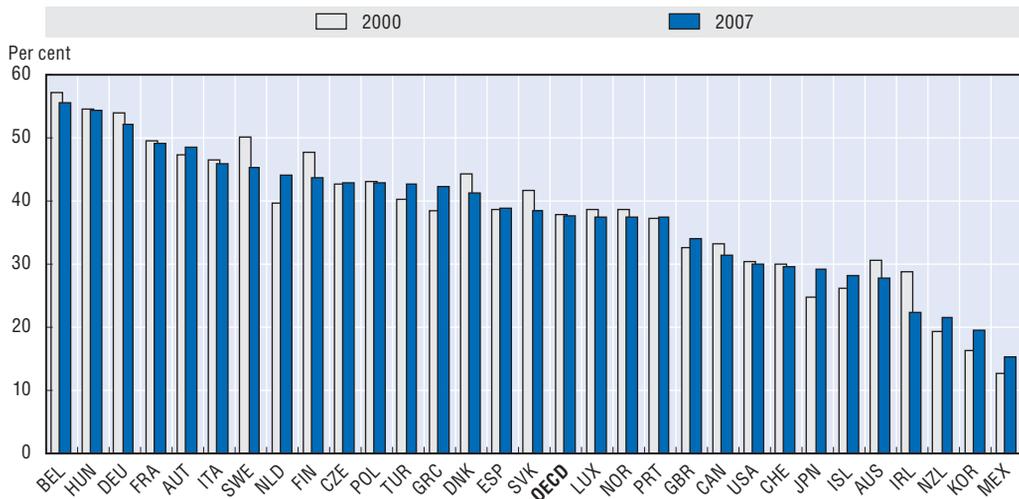
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Personal income taxes

Labour taxes, employment and hours worked

The main ways in which personal incomes are taxed in OECD countries are taxes on labour income, social security contributions and capital income taxes. As with consumption taxes, personal income taxes and employers' and employees' social security contributions can have adverse effects on individuals' decisions to seek work and/or work more hours, as well as employers' decisions to hire workers, because these taxes contribute to drive a wedge between employees' take home pay and the firm's labour cost (Figure 5.4).

Figure 5.4. **Tax wedge for a single individual at average earnings¹**
Percentage of total labour costs



1. The tax wedge measures the amount of personal income tax, employees' and employers' social security contribution and payroll taxes less cash benefits as a proportion of labour costs, defined as the wage plus employers' social security contributions and payroll taxes. Consumption taxes are not included in the tax wedge.

Source: OECD Taxing Wages Database.

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In general, empirical studies have found hours worked to be only modestly responsive to labour taxes while participation is much more responsive (e.g. Heckman, 1993; Blundell et al., 1998; and Box 5.1 for an overview of recent OECD evidence).⁸ Most studies have also found that the hours worked by men are little affected by changes in the after-tax (marginal) wage while hours worked by women and/or second-earners fall significantly with lower after-tax wages (e.g. Blundell and MaCurdy, 1999). As women have traditionally tended to be more responsible for childcare or other non-market activities (providing, therefore, a closer substitute for market work than is the case for men's non-market activities), the labour supply decision of women is usually found to be more responsive to taxes than that of men.

A rise in labour tax payments in combination with benefit withdrawal can create a serious disincentive to move from inactivity, such as unemployment, to low-paid work or from part-time to full-time work as little or no financial gains may be expected from taking up work or from working longer hours. In a few countries, recent tax reforms have aimed to reduce disincentives to participate in the labour market, especially for low-income and low-skilled households, by introducing so-called "in-work benefits". These schemes have had some success in reducing "inactivity traps" and raising participation of some groups of workers (Meyer and Rosenbaum, 2001; Blundell et al., 2000; Card and Robins, 1998). Moreover, "in-work benefits" increase the income of relatively low-income households, thus reducing inequality. However, these schemes have to be financed which will tend to raise tax rates. Moreover, as these benefits are typically phased out as income rises to avoid excessive fiscal costs, the resulting high marginal effective tax rates in the phase-out range further reduce work incentives. Thus, these schemes are more likely to succeed when carefully designed and in countries where wage distribution is wide so that fewer workers are affected by the phase-out (OECD, 2006a).

Box 5.1. Recent OECD evidence on the effects of taxation on economic performance**Employment**

The 2006 reassessment of the OECD Jobs Strategy explored the influence of labour taxation and possible interactions between taxation and other policies on employment and unemployment (OECD, 2006a, 2007a; Bassanini and Duval, 2006). The study found that the tax wedge between firms' labour cost and employees' take-home pay, after controlling for other policies (*e.g.* unemployment benefit replacement rates, product market regulations, employment protection legislation, union density and corporatism, childcare and maternity leave) reduces employment. According to the empirical results reported in the study, a ten percentage-point reduction of the tax wedge in an average OECD country would increase the employment rate by 3.7 percentage points (OECD, 2006a). Furthermore, tax incentives for second-earners to start working, either full or part-time, were found to have a significant impact on prime-age women's employment rates.

Another OECD study found that joint family taxation can discourage labour market participation of (potential) second-earners because of effectively heavier taxation relative to that of first-earners and singles in many OECD countries (OECD, 2006a, and Jaumotte, 2003). The high effective taxation of second-earners is partly explained by the existence of a dependent spouse allowance and of other family-based tax measures in many OECD countries, which are lost if both spouses work. Taxes also influence female participation and hours worked through the progressivity of the income tax system, which is likely to reduce employment of second-earners in the case of joint family taxation.* This suggests that a more neutral tax treatment of second-earners could raise female participation. Similarly, a combination of taxes and certain means-tested benefits, such as child tax credits, can create so-called "inactivity traps" where available employment opportunities become financially unattractive. In such cases an increase in gross in-work earnings fails to translate into a sufficient net income increase to justify starting work, reflecting higher taxation and benefit withdrawals (Immervoll and Barber, 2005). This discourages labour market participation by certain groups, especially lone parents and second-earners.

An OECD study exploring why hours worked differ among member countries found that high marginal tax wedges on second-earners is a key factor in explaining the relatively low working hours among this group (OECD, 2008a, and Causa, 2008). More precisely, marginal tax wedges appear to have a considerably stronger impact on the hours worked by women than on those worked by men. For example, a one percentage point reduction in the marginal tax rate is estimated to raise the hours worked by women by around 0.7% whereas for men the impact of the same reduction in the tax rate is close to zero.

Education

An OECD study on the determinants of higher education shows that the private return to education, which captures the economic incentives to study, is an important factor driving the demand for higher education (OECD, 2008a, and Oliveira Martins *et al.*, 2007). Tax policies affect individuals' returns by influencing both foregone earnings while studying (so-called opportunity cost) and after-tax wages after graduation (as well as, to a minor extent, expected post-tax unemployment and pension benefits). This study found that the influence of taxes on investment in higher education can be significant. A policy simulation showed that a five percentage point reduction in marginal tax rates (equivalent to a decrease in the tax progressivity), by increasing the returns to education leads to an increase of 0.3 percentage points in tertiary graduation rates on average.

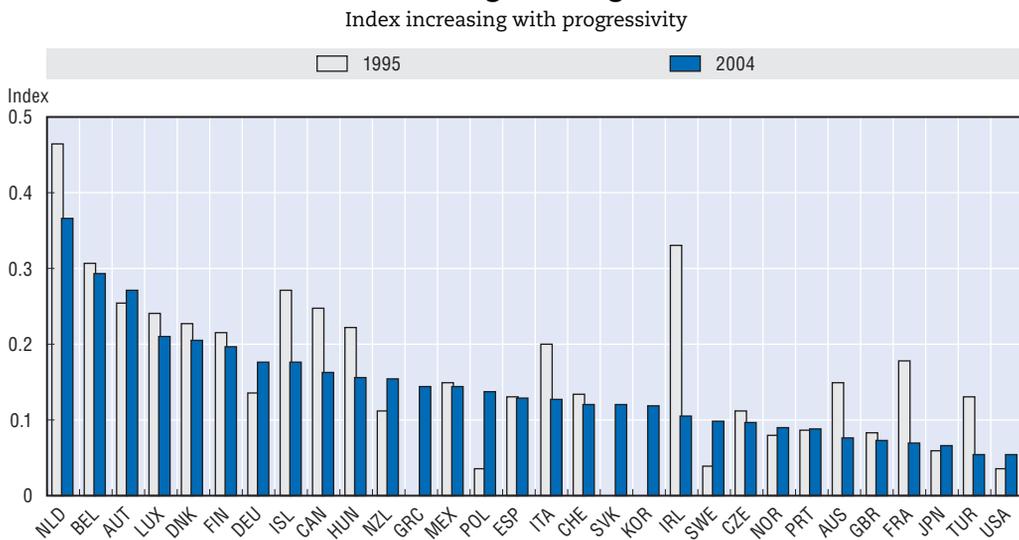
* This effect is likely to be even stronger when childcare costs are taken into account, though empirical analysis of this is not yet available.

Labour taxes also influence firms' cost of labour, and hence labour demand, especially when the tax burden cannot be shifted on to lower net wages. For example, there is evidence that high labour taxes at the lower end of the earnings distribution price low-skilled, low-productivity workers out of work, especially in countries that have relatively high (statutory or contractual) minimum wages (OECD, 2007a). In this case, lower taxes bring down labour costs and firms respond by increasing labour demand (e.g. Bassanini and Duval, 2006).

Tax progressivity, labour utilisation and productivity

The progressiveness of personal income taxes compounds their harmful effects on growth. Progressivity differs significantly across countries (Figure 5.5). This may reflect differences in social preferences, with a strong progressivity in countries where an emphasis is placed on a more equitable distribution of post-tax income and consumption.⁹ Since labour supply tends to be more sensitive to changes in taxes at low than at high incomes, a progressive income tax could lessen the negative effects of income taxes on overall labour supply. However, progressivity can reduce incentives to seek jobs and work more hours, particularly for second-earners in countries applying taxation on the household (as opposed to individual) level. Moreover, progressive income tax schedules can negatively affect individuals' decisions to take up higher education (e.g. Oliveira Martins *et al.*, 2007). Indeed, new OECD estimates point to sizeable adverse effects of progressive income tax schedules on GDP per capita which could originate from the responsiveness of labour supply and investment in education to progressivity as well as lower entrepreneurship and risk-taking. Thus, there is likely to be a non-trivial trade-off between tax policies that enhance GDP per capita and distributional objectives.

Figure 5.5. **Statutory income tax progressivity for single individuals at average earnings¹**



1. The measure of progressivity used is the difference between the marginal and average personal income tax rates, divided by one minus the average personal income tax rate, for a single person earning the average wage. Higher numbers indicate higher progressivity.

Source: OECD calculations based on various editions of OECD Tax Statistics: Taxing Wages.

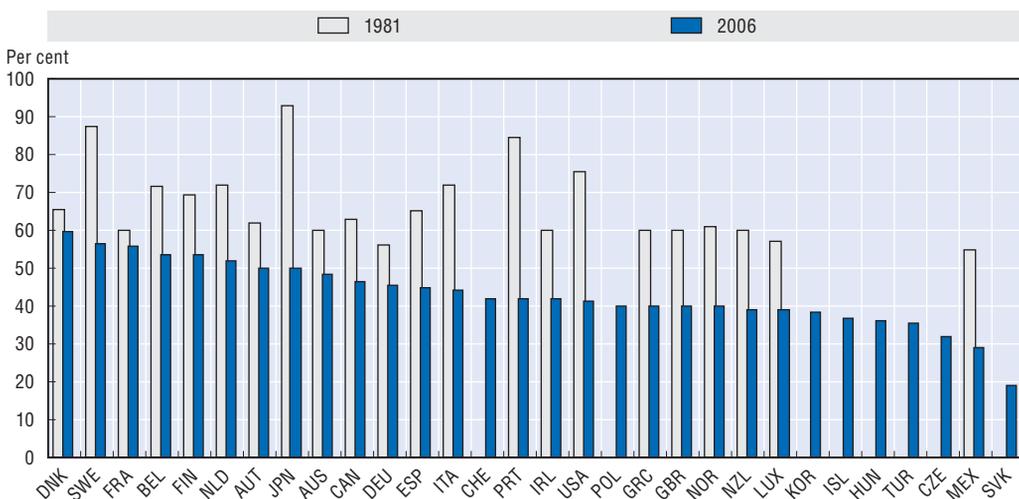
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Top marginal statutory income taxes and productivity

Over the past decades, one of the most marked changes in taxation has been the large cut in the top rate of personal income tax of most OECD countries (Figure 5.6), which has been driven in part by concerns over the impact of high rates on entrepreneurship, as well as by tax evasion of highly-paid employees and self-employed professionals. However, in principle, top marginal statutory rates on personal income can have conflicting effects on entrepreneurial activity. On the one hand, high top statutory income taxes reduce the after-tax income of a successful entrepreneur relative to an unsuccessful one and thus can reduce entrepreneurial activity and productivity growth. On the other hand, high tax rates provide for increased risk-sharing with the government if potential losses can be written off against other income (tax payments), which may encourage entrepreneurial activity and productivity (Myles, 2009). It has been suggested that the larger is the difference between the relevant marginal tax rates when an entrepreneur is successful and when unsuccessful (a measure of tax progressivity) the lower is risk-taking as the extra tax that applies to high profits is greater than the tax saving that is produced by losses, effectively reducing the strength of the risk-sharing effect (*e.g.* Gentry and Hubbard 2000).

Despite these conflicting ways in which entrepreneurship could be affected in principle by top personal income tax rates, new OECD empirical analysis suggests that a reduction in the top marginal tax rate raises productivity in industries with potentially high rates of enterprise creation. Thus, reducing top marginal tax rates may help to enhance economy-wide productivity in OECD countries that have a relatively large share of such industries. However, it is likely that other policies and institutional settings, such as those that affect the cost of business start-ups and the competitive environment, have a more direct impact on entrepreneurship (Scarpetta and Tressel, 2002; Brandt, 2005; Conway *et al.*, 2006). For instance, the analysis shows that the positive impact of lowering top marginal tax rates on productivity is stronger in countries whose product market policies discourage business start-ups, entry of new firms and strong competition, suggesting interactions between tax policies and policies that affect the business environment.

Figure 5.6. **Top statutory personal income tax rates on wage income**



Source: OECD Tax Statistics Database.

StatLink  <http://dx.doi.org/10.1787/534004746720>

Capital income taxes, investment and entrepreneurship

Taxes on personal capital income may affect private saving by reducing their after-tax return. However, these effects are uncertain, as described above.¹⁰ Nonetheless, differences in the personal income tax treatment of different forms of savings can be expected to induce investors to place their savings where tax treatment is more favourable rather than in areas that would be most productive for the economy, thereby reducing its growth potential. As most OECD countries do favour certain types of savings (such as owner-occupied housing (as discussed earlier) and private pension funds) over others (such as bank deposits), there is scope to increase growth by reducing these differential tax treatments. For example, tax incentives for pensions are likely to lead to changes in the composition of savings, but there is little evidence that they result in increases in overall private savings and since the tax breaks involved are likely to reduce public savings, their effect on GDP is at best uncertain (OECD, 2004).

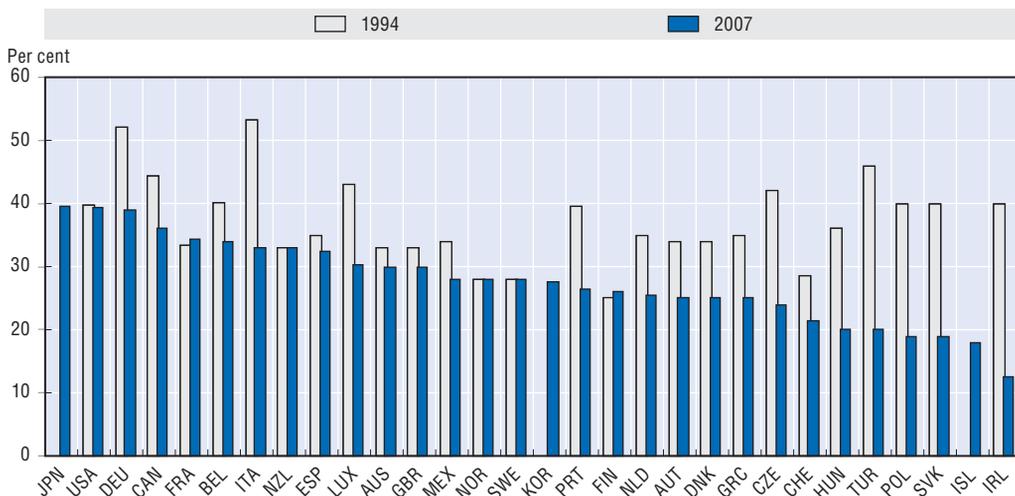
High capital gains taxes may affect both the demand for venture capital through entrepreneurs' career choice and the supply of funds (e.g. Poterba, 1989). Since venture capital is one important source for financing high-technology firm start-ups, financial support for these start-ups may be hindered by high capital gains tax, thus lowering the potential contribution of new firm entry to productivity growth. Moreover, the application of capital gains tax can "lock in" investment and prevent the effective reallocation of capital. However, exempting capital gains from taxation provides opportunities for tax avoidance by transforming taxable income into tax-free capital gains.

Corporate income taxes

Corporate income taxes and business investment

Firms' investment decisions are driven by the cost of, and the expected return to, investment projects. The after-tax return to an investment depends, among other things, on corporate taxation.¹¹ The statutory rate varies significantly across OECD countries but it has tended to come down (Figure 5.7). A higher statutory corporate tax rate reduces firms' investment because it lowers the after-tax return to investment, with negative

Figure 5.7. **Statutory corporate income tax rates**



Source: OECD Tax Statistics Database.

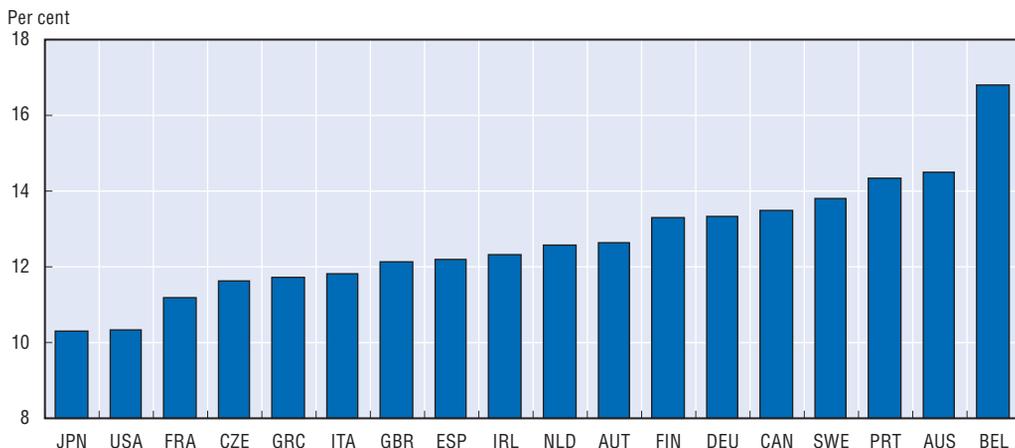
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consequences for growth.¹² The extent to which it is possible to write off the cost of the investment against tax liabilities (capital depreciation allowances) also matters in deciding on investment levels, with a faster depreciation for tax purposes than the actual wear and tear of equipment and structures reducing investment costs. Corporate taxation may not only reduce additional investment by incumbent firms; overall investment can also be reduced because potential new entrants may decide not to invest at all or to invest elsewhere.

One approach to assessing the effects of tax policy on firms' investment decisions is embedded in measures of the so-called user cost of capital. The user cost of investing is the cost or the price, including relevant taxes, for a firm of using capital (Figure 5.8).¹³ Lower user costs are likely to translate into higher investment levels. In fact, new OECD estimates that focused on a sub-set of OECD countries confirm that investment is adversely affected by corporate taxation through a measure of the user cost that takes into account statutory corporate rates, as well as the possibility to write-off the investment cost against tax liabilities.

These estimates also suggest that this adverse effect of taxes on investment may be different across different types of firms. Indeed, distinguishing the effect of taxes across firms differing in the number of employees and by age, suggests that older firms' investment react more strongly to corporate taxation than younger firms' investment. One possible explanation for this is that young firms are generally less profitable and have less taxable income than older firms, thus their business operations are less affected by taxes on profits. Another possible explanation is that in several OECD countries among young firms there is a large share of small firms which benefit from lower corporate tax rates.¹⁴

Figure 5.8. **Tax adjusted user cost (machinery and equipment), 2004¹**



1. The user cost takes into account the required rate of return of the investment, the economic depreciation and capital gains/losses due to a change in the before-tax price of the investment, as well as the statutory corporate tax rate and the present value of tax savings from depreciation allowances.

Source: Calculations based on OECD Productivity Database and Institute for Fiscal Studies (IFS) Database.

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Corporate income taxes and productivity

There are several channels through which corporate taxation can influence productivity:

- Statutory corporate tax rates and/or the user cost of capital can affect the relative prices of production inputs, making capital relatively more expensive compared with labour.

This could cause firms to be less capital intensive than in a lower corporate tax regime, hence lowering labour productivity, wages and possibly labour supply.

- High statutory corporate taxes and/or higher user cost of capital may reduce firms' incentives to invest in innovative activities by reducing the after-tax returns to these investments, which is an important source of productivity growth in OECD countries.
- High statutory corporate taxes discourage foreign direct investment and thereby the presence of foreign multinational enterprises with negative effects for productivity, since multinationals are found to boost productivity by facilitating technology transfers and knowledge spill-overs to domestic firms (Keller 2004; Griffith *et al.*, 2004; Criscuolo, 2006; Bloom *et al.*, 2007).
- Due to complex corporate tax codes, firms may face high tax compliance costs, with corresponding high administrative burdens for the government. This can absorb resources that would otherwise be used for productive activities, causing productivity and output losses.
- Corporate taxes can also influence productivity through their impact on corporate financing decisions. For instance, if corporate taxation favours debt over equity by making it possible for firms' to deduct interest payments but not dividends from tax liabilities, the allocation of investment across firms could be affected, favouring those that find it easy to raise debt finance and disadvantaging those that have to rely more on equity. In particular, this would disadvantage firms in knowledge-based industries investing heavily in intangible assets (*e.g.* human capital) that financial institutions find difficult to use as collateral, thereby making the access to debt financing more limited for these firms. Moreover, within each industry this can hold back innovative fast-growing firms that may rely on risk capital more than other firms.

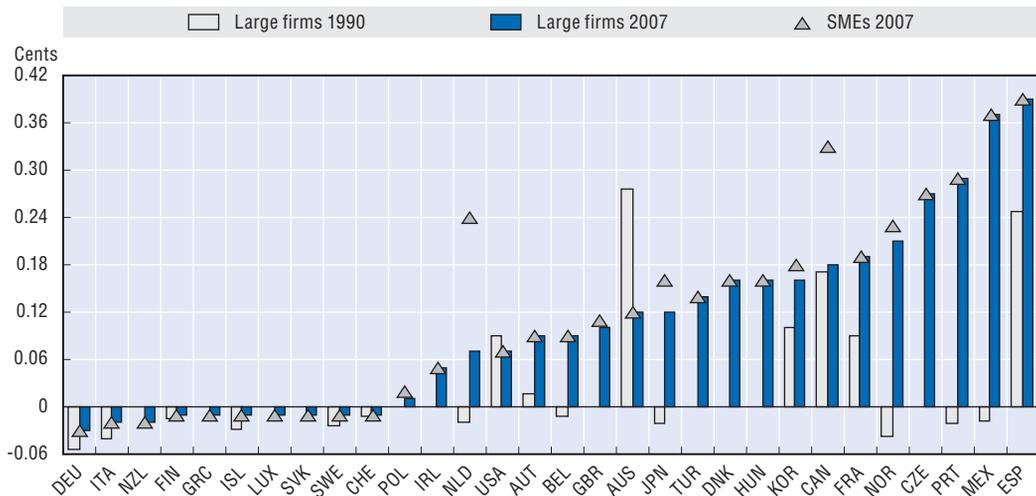
Indeed, new OECD analysis suggests that lowering statutory corporate taxes could boost productivity, particularly in industries that have structurally high returns and in the most dynamic firms. But the reduction of statutory corporate tax rates would seem to have a lesser impact on firms that are both young and small (start-ups). Statutory corporate taxes are also found to have a stronger negative effect on productivity in firms that are fast-growing and in the process of catching up with international best practice than in other firms. This may reflect that fast-growing firms are relatively more profitable than other firms, so that statutory corporate taxes have a relatively larger effect on their after-tax return on investments compared with other less profitable firms.

R&D tax incentives and productivity

Many OECD countries grant some type of R&D tax incentives in order to stimulate private-sector innovative activity (Figure 5.9). These incentives are generally meant to compensate innovators for not being able to fully appropriate the benefits of their R&D investments. The design of the incentive schemes differs across countries with respect to what kind of companies and what kind of R&D spending can benefit from tax advantages. For example, a few countries have introduced special tax incentives for small and medium sized firms.

Previous OECD work found that such tax incentives could help to raise R&D expenditure and innovative activity, but with long time lags and a relatively modest overall impact (OECD, 2006b, and Jaumotte and Pain 2005a, b). Nonetheless, these tax incentives were found to have stronger effects on both R&D expenditure and patents than direct

Figure 5.9. **Tax incentives for one USD of research and development in OECD countries, 2007¹**



1. Data refer to the amount of tax relief for a dollar of R&D expenditure compared to the benchmark situation of the immediate expensing of the R&D expenses. Negative values do not necessarily imply that R&D is not taxed favourably compared to other investment but only imply that R&D receives a tax treatment that is less generous than would be the case under full immediate expensing.

Source: OECD Main Science and Technology Indicators Database.

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public funding. Compared with outright subsidies for R&D, tax incentives leave decisions on which R&D projects to undertake to firms themselves and so are more likely to withstand market tests than projects selected by the authorities. At the same time, the risk of providing public support to firms that would have undertaken R&D investments even in the absence of such support may be larger for policies based on generalised tax breaks than for targeted direct grants.

Overall, new empirical analysis suggests that tax incentives for R&D enhance productivity in OECD countries. However, their effect appears to be relatively modest, although it is larger for industries that are more R&D-intensive. To the extent that tax-induced innovative activities in highly R&D intensive industries may translate into persistent productivity growth, tax reforms that enhance R&D spending may still be beneficial. In any event, conclusions about the advantage of these tax incentives over general cuts in corporate taxation for R&D outcomes should be based on the relative cost-effectiveness of these policies, which is an area that needs further investigation.

Foreign direct investment

Corporate taxes influence investment incentives of foreign investors in a similar way to those of domestic investors. A country's attractiveness as a location for foreign direct investment (FDI) depends, among other things, on how its tax system compares with that of possible alternative host countries. Aside from corporate taxes, fiscal influences on FDI include also other tax arrangements affecting cross-border incomes. The combined effect of the home and the host country's tax codes as well as bilateral and multilateral tax agreements matter. This includes, for example, withholding taxes that countries apply to payments abroad from firms operating in the domestic economy which may depend on tax treaties (see *e.g.* Yoo, 2003).¹⁵

Recent OECD analysis found evidence of an adverse effect of the effective corporate tax rate on FDI, but the effect seems to be small relative to that of taxes on labour income and other policies affecting the business environment (Hajkova et al., 2006).¹⁶ Some non-policy factors also affect how FDI responds to changes in different taxes. For example, the extent of the adverse effect on FDI can be expected to depend on the size of the economy or geographical concentration of economic activities (e.g. OECD, 2008b; Baldwin and Krugman, 2004). It is likely that larger countries are able to attract FDI aimed at supplying their large markets even if they maintain relatively high tax rates compared to other OECD countries having smaller markets. In contrast, FDI may be more sensitive to taxes in countries facing comparative disadvantages related to distance or transaction costs than in other countries.

Concluding remarks

The tax policy reform options to increase GDP per capita discussed in this chapter – partly shifting the tax structure away from income to consumption and/or property taxes, and lowering income tax progressivity and marginal rates – would tend to reduce the overall progressivity of the tax system and its role in redistributing income. For example, a shift from personal income to consumption taxes would reduce progressivity since consumption taxes are less progressive than personal income taxes, or even regressive. Similarly, shifting from corporate to consumption taxation would lower capital income taxation and boost share prices (by raising the after-tax present value of the firm). Such tax shifts therefore imply a non-trivial trade-off between equity and efficiency, which is likely to be evaluated differently across OECD countries. However, in deciding on tax structures, it is necessary to take into account the cost of high taxes in terms of reducing long-run GDP per capita.

Notes

1. This chapter is based on empirical analyses reported in Johansson et al. (2008), Arnold (2008), Schwellnus and Arnold (2008) and Vartia (2008). These papers provide extensive references to the literature on tax and growth. The tax structure may also have an effect on automatic macroeconomic stabilisation, but this effect is not considered here.
2. The empirical work underlying the evidence on the effect of tax structures on long-run GDP relies on adding tax structure indicators to a standard panel regression of GDP per capita, covering 21 OECD countries over the period 1970 to 2005. Throughout the analysis, differences across countries in the overall tax burden are controlled for by including the level of the tax-to-GDP ratio. The setup also takes into account the fact that use of one tax instrument reduces the amount of revenue that needs to be raised from other taxes. This allows conclusions to be drawn on the impact of a revenue-neutral shift from one tax instrument to another on long-run GDP.
3. The empirical analysis suggests that shifting tax revenues corresponding to 1% of GDP from income to consumption and property taxes for a given overall level of the tax burden would on average increase long-run GDP per capita by between 0.6 and 2.3 per cent in OECD countries. These estimates only give the average impact of incremental changes in tax structures and cannot be used to derive an overall GDP-per-capita impact of fundamental changes in tax structures in a particular country.
4. It can also amplify movements in property prices over the business cycle.
5. Some OECD countries have an estate tax rather than an inheritance tax.
6. Many OECD countries also use differentiated consumption taxes to reduce inequality by exemptions and zero ratings on certain goods and services, for instance, basic groceries. But direct targeted transfers to low-income households are more effective in enhancing equity than VAT exemptions/zero-ratings (Ebrill et al., 2001).

7. Also, it should be noted that VAT may discourage firms, especially those with substantial intermediate inputs, from operating in the informal market as this would prevent them from reclaiming VAT payments on inputs.
8. It has been argued (e.g. Disney, 2004) that social security contributions have a smaller impact on employment than other taxes because they have a counterpart in social benefits. However, in many countries there is only a loose relationship between the amount of social security contributions paid and the amount of benefits received. Perhaps for this reason, recent work has found only weak evidence that employees' social security contributions have less of an impact than personal income taxes in terms of reducing GDP per capita in OECD countries.
9. A progressive tax system is defined as one in which the average tax rate increases with income or, equivalently, in which the marginal tax rate is higher than the average tax rate at any income level. From a policy perspective it is the overall progressivity of the tax system which is relevant. Thus, for example, the potential regressive effects of VAT may be offset by progressive elements in other parts of the tax system.
10. At least in a closed economy where investment is financed by domestic savings, an increase in domestic private savings can be expected to raise investment. However, in an open economy with internationally integrated financial markets, domestic investment can be financed by foreign funds and foreign direct investment, thus the link between savings and investment is weaker. Nonetheless, increased private savings can be expected to increase future net national income.
11. Personal income taxation may also influence investment decisions by firms that are not incorporated and/or that have no access to international capital markets for investment projects. But, since most investment is undertaken by firms that have access to international funds, these taxes are likely to have a small effect on investment, and thereby growth.
12. However, to the extent that tax revenues finance growth-enhancing investment, this may partly compensate for the reduction of GDP due to the tax itself.
13. Despite having high corporate taxes, Japan and the United States have a relatively low tax-adjusted user cost of investment. This reflects higher tax savings on depreciation allowances and a lower contribution of the non-tax components (e.g. the economic depreciation and the rate of the return on the asset) to the overall tax-adjusted user cost.
14. About a third of OECD countries have some form of reduced corporate tax rates targeted at either small firms, certain business activities or firms operating in certain regions. For a discussion of such special rates, see Johansson *et al.* (2008).
15. Also, it matters whether the home country of a multinational firm exempts foreign source income from tax, or subjects it to domestic taxation while providing a credit for taxes already paid in the source country. A full credit system removes any difference in corporate tax between domestic and foreign investment by domestically owned firms. However, most countries limit the credit to the amount of tax that would have been due under domestic tax law. In the OECD over the past 15 years, there has been a gradual movement of countries from a credit to an exemption system, at least in part because of the competitive edge that this can give to their resident multinational firms.
16. The study finds that on average across OECD countries a one percentage point increase in the effective corporate tax rate of a host country can reduce its FDI stock by 1% to 2%.

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PART II
Chapter 6

Infrastructure Investment: Links to Growth and the Role of Public Policy

Infrastructure performs a vital role for the functioning of the economy. However, investments in the past have sometimes been wasteful. This chapter first assesses the impact of investment in energy, water, transport and telecommunication networks on the economy, showing that it has had effects on output over and above those of other types of investment. However, this relationship does not hold for all countries and types of infrastructure, and may have become weaker more recently. Policies that support a competitive environment, bolstered by greater independence of regulators and transparent decision making, determines whether public or private investment is more appropriate. Such policies help to ensure more efficient investment in infrastructure.

Introduction

Infrastructure – the networks of energy, water, transport and telecommunications – performs a vital role for the functioning of the economy. But more is not always better and investments in the past have sometimes been misallocated and wasted. With substantial investment in infrastructure expected over the coming years, it is important that the policy framework promotes investment that is conducive to growth. Furthermore, in light of recent fiscal packages incorporating infrastructure spending in many OECD countries to boost aggregate demand, having an effective policy framework in place can ensure that such investment is efficient, raising the productive capacity of the economy in the long run in addition to expanding demand over the short run. Those countries with a more effective policy framework will have greater scope to boost demand while at the same time ensuring that those investments are not wasteful. The extent to which increased infrastructure spending is an appropriate policy response at the current juncture is discussed in Chapter 1.

The nature of infrastructure networks can call for an active role of the central or sub-central government either in provision or regulation of infrastructure. This is the case, for example, because network services are often most efficiently provided by a single monopolist firm (so-called natural monopoly). Other characteristics of networks, such as irreversibility due to the inability following the investment to sell assets for other purposes, or high sensitivity to various risks, may call for active regulation. Recent developments in regulation and contracting techniques have created opportunities to implement investments more efficiently.

Against this background, this chapter examines the links between infrastructure investment and long-term growth and the role of public policies in promoting efficient investment.¹ The main results are:

- The network industries are important parts of the economy, particularly with respect to investment, where they account for between one-tenth and one-quarter of economy-wide investment. Over the past two decades investment in energy, water and transport has been falling as a share of GDP in most OECD countries. More recently, investment in the telecommunication sector has been growing rapidly.
- Like other investment, infrastructure expansion typically adds to the productive capacity in an economy. However, OECD empirical analysis suggests that infrastructure investment can have positive effects that go beyond the impact to be expected from a larger capital stock. Such effects, which reflect the influence of infrastructure on efficiency throughout the economy, appear to be stronger at lower initial levels of provision. At the same time, these effects are not shared by all OECD economies, with some evidence suggesting cases of both under and over-provision and of both efficient and inefficient use of infrastructure. Cost-benefit analysis of individual projects is key to ensuring efficient infrastructure investments.

- Past experience has shown that exclusive public sector ownership and provision can sometimes lead to inefficient investment decisions. Different organisational forms and new contracting techniques have been increasingly used in the network industries in order to allow more private sector involvement and better selection of investment projects. These innovations are not suitable for all projects, however, and the design of the contract is important for ensuring adequate and efficient investment.
- A competitive environment is generally supportive of more efficient use of resources and evidence suggests that removing barriers to entry in network-related but inherently competitive market segments can foster higher rates of investment in the network industries. Entry barriers can be reduced by, for example, requiring firms that own the network infrastructure to divest their activities in related competitive markets (so-called vertical unbundling or structural separation) or by establishing regulated regimes to set access conditions and prices to networks for all firms (third party access).
- Regulation of infrastructure access prices through price caps can mimic a competitive environment and thereby help ensure that investment is efficient. At the same time, independence and accountability of the sectoral regulators can establish a stable and credible framework for infrastructure investment, thereby lowering regulatory uncertainty. Empirically, price-cap regulation when combined with regulatory independence results in more efficient investment, especially in electricity and telecommunications.

Network infrastructure provision

Information about aggregate infrastructure provision that is comparable across countries and across time is generally not available (see Box 6.1).² Hence, it is not possible to assess to what extent the aggregate stocks of infrastructure capital differ across countries, though national accounts report gross addition to such stocks. In the absence of monetary measures of capital stocks, physical measures in selected areas – such as electricity generating

Box 6.1. The measurement of infrastructure

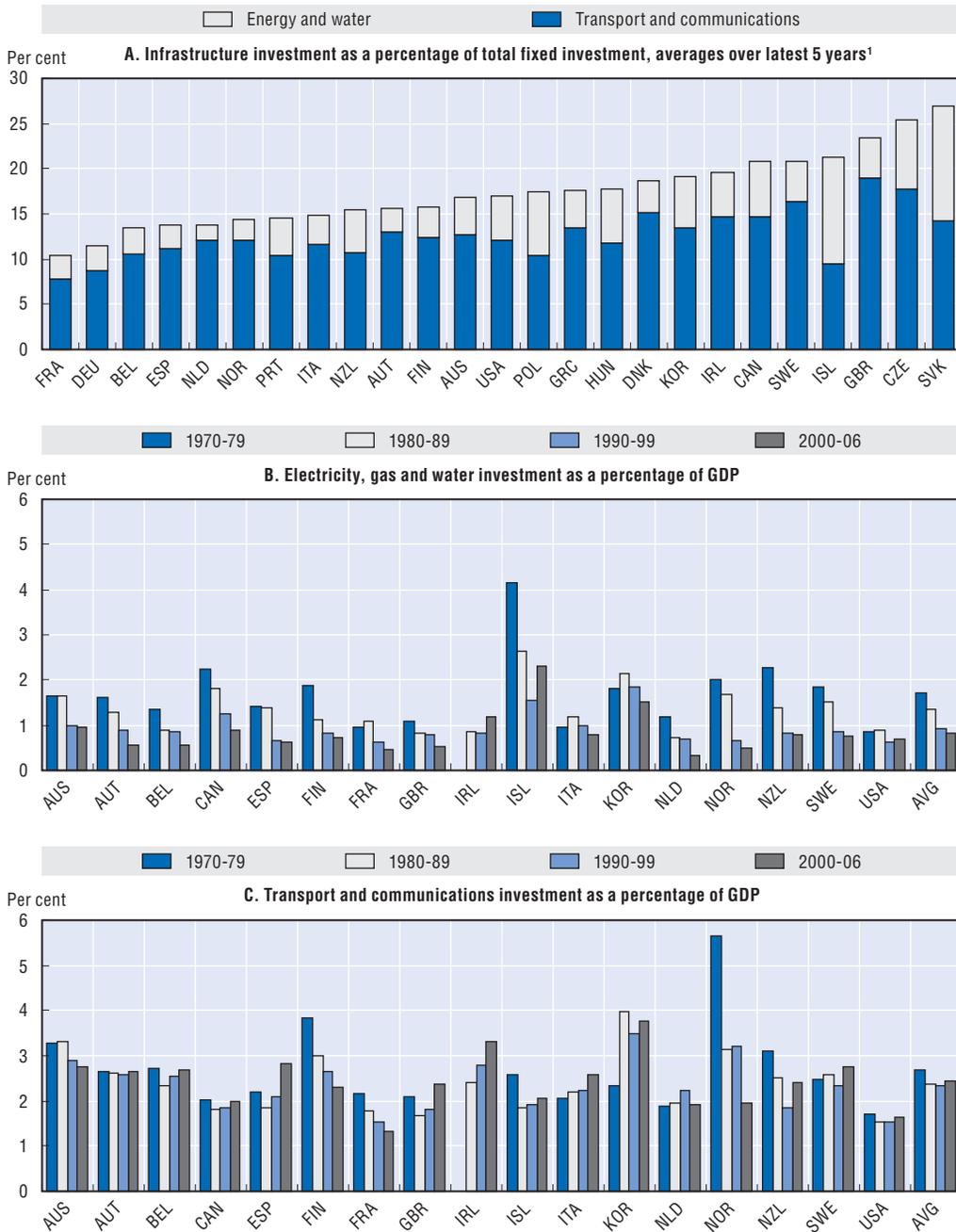
Only a few national statistical offices in the OECD publish estimates of the capital stock in infrastructure sectors of the economy. These estimates are often not strictly comparable across countries and often lack a significant time series dimension. Physical measures of infrastructure can provide an alternative measure of infrastructure. An advantage of such measures is that they are available for a number of countries and for long time periods. However, a problem with physical measures is that there is no simple way to aggregate the various measures of infrastructure. Further shortcomings include that they fail to capture the quality and the efficiency of the use of existing infrastructure.

The analysis supporting this chapter used physical measures of infrastructure provision when examining the links between infrastructure and growth. The analysis of the links between policy and investment behaviour was based on investment as recorded in national accounts, which includes investment made by both network operators and users. In contrast to some studies (such as Aschauer, 1989), where the rate of public investment is taken as a proxy for investment in infrastructure, this study uses aggregate investment in the key infrastructure sectors as the appropriate measure of gross addition to the capital stock. Public investment is an increasingly unreliable measure, since it is influenced by the extent of privatisation, corporatisation and involvement of the private sector in providing infrastructure services. It is also affected by public investment in non-network sectors, such as education and health.

capacity, the length of roads, highways and rail tracks, and the number of telephone mainlines and subscribers³ – can be employed to assess the level of service provision.

The provision of core infrastructure in the energy, water, transport and communication sectors often accounts for a large proportion of economy-wide fixed investment (Figure 6.1, Panel A). While physical indicators of infrastructure stocks have generally risen, core

Figure 6.1. Investment in infrastructure sectors



1. The latest years used in calculating the averages were 1999 to 2003, with the exception of Australia, Denmark, New Zealand and Poland for which 1996 to 2001 were used and France, the Slovak Republic and Spain for which 1997 to 2002 were used.

Source: OECD, STAN Structural Analysis Database.

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infrastructure investment has been falling as a share of GDP in most sectors (Figure 6.1, Panels B and C). By contrast, the investment rate in telecommunications has risen, albeit more recently and from a low base, as rapid technological change has promoted a switch from traditional mainlines to broadband and mobile telephony.

Infrastructure investment and economic growth

Infrastructure investment can have effects on growth over and above those arising from adding to the capital stock. These effects can occur through a number of different channels, such as facilitating trade and the division of labour, competition in markets, a more efficient allocation of economic activity across regions and countries, the diffusion of technology and the adoption of new organisational practices or through providing access to new resources. Furthermore, effects on growth can also differ depending on whether existing provision is small or large. For example, a small addition – such as interconnection between two networks – can have marked effects by increasing overall system efficiency, but subsequent investment may have a much smaller effect. This raises the possibility of a threshold above which investment in infrastructure will have relatively muted effects, below those of other categories of investment.⁴

Recent OECD empirical research has examined the link between infrastructure investment (including repairs and maintenance) and GDP performance over time and across countries.⁵ The findings reveal that investment in physical infrastructure can boost long-term economic output more than other kinds of physical investment.⁶ In particular, the gains have been larger for countries with comparatively poorly developed energy and telecommunications networks. For example, additional investment raising provision in such countries by 10% has been associated with around a 0.25 percentage-point increase in the long-term growth rate (almost four times larger than for countries with more developed networks). As networks have matured, the gains from additional investment have declined, and at present almost all countries have reached levels of provision where additional expansion would have relatively small effects on economy-wide activity (Table 6.1). In fact, some evidence was found of potential over-investment with additions to infrastructure having had a smaller impact on output than other types of investment, due to either an inefficient use of the extra infrastructure or genuine over-provision.

With respect to individual countries and infrastructure sectors, the results are as follows:

- **Energy.** Investment has been associated with higher output levels than other types of investment in most countries. In the past, however, in Ireland, Korea and New Zealand, there is some evidence of possible over-investment, creating a drag on growth. In these cases, reallocating investment away from energy infrastructure might have boosted output.
- **Roads.** Past investment in roads has been associated with higher GDP relative to other types of investment in Australia, Austria, Norway, Portugal and the United Kingdom. On the other hand, past investment in roads in France, Greece, Italy, Spain and Switzerland may have overshoot the level that is optimal for output.
- **Rail.** Investment in rail track has gone hand-in-hand in the past with higher aggregate output levels than in the case of other types of investment in Australia, Austria, Ireland and New Zealand. Investment in Italy, Spain and Switzerland, however, appears to have been less supportive to output than investment in other areas.

- *Telecommunications*. In the past, in comparison with other types of investment, a larger number of fixed mainlines has been associated with higher GDP in *e.g.* Austria, Greece, Italy, Japan, Mexico and Portugal, and lower GDP in Australia, Iceland, Ireland, New Zealand and the United Kingdom.⁷

Table 6.1. **Countries with relatively low levels of infrastructure provision, 1975-2006**

1975-1982	1983-1990	1991-1998	1999-2006
Austria	Austria	Austria	Slovak Republic
Belgium	Belgium	Belgium	
Greece	Korea	Czech Republic	
Ireland	Mexico	Mexico	
Italy	Portugal	Poland	
Korea	Switzerland	Portugal	
Mexico	Turkey	Slovak Republic	
Portugal		Switzerland	
Spain		Turkey	
Switzerland			

Note: OECD empirical analysis identified thresholds in the level of energy and telecommunication infrastructure provision. The impact of additional investment was found to be greater when provision was below the threshold than when provision was above the threshold. The table reports the countries where infrastructure provision was below this threshold and during which period.

Source: OECD estimates.

Although the empirical evidence suggests that investment in infrastructure is generally less likely to generate larger impacts on long-term output relative to other types of investment than has been the case in the past, in some countries and sectors particular projects may nonetheless still have large impacts. Good regulatory frameworks that help identify such projects – such as systematic use of cost-benefit analysis – and help determine appropriate use of public investment will also reduce the risk of that investment being wasted. Welfare considerations may favour certain types of environmental investments, whose GDP benefits may be harder to discern.

Role of public policies

The effect of infrastructure provision on GDP depends on government regulations affecting entry into and operations of the various segments of individual network industries. Indeed, the characteristics of network infrastructure may call for an active role of the state in provision and regulation of production and delivery of the associated services. In some cases, private investment may be difficult to generate, in these cases, governments may be better placed to make the investments.

In the context of the current crisis where increased public capital spending is planned in many countries in order to boost demand, an effective investment decision-making framework is key to ensuring that these investments are not wasted. Careful and comprehensive project selection procedures – such as the Australian government's *Building Australia* initiative that assesses a wide range of project proposals as opposed to individual ministries assessing only a subset of possible investment projects – can help identify not only which projects will give the highest return but also those projects that could be implemented with shorter lags. For example, projects to improve the quality of existing infrastructure

(including repairs and maintenance), which augment the productive capacity of the economy, may be quicker to initiate than additions to the existing stock.

But even if potential infrastructure projects are unlikely to yield high social rates of return because external effects have been exhausted, infrastructure spending may still have more positive effects on GDP per capita than many other fiscal measures to stimulate demand, notably those that will mainly increase public or private consumption.

While private investment will depend on standard determinants, such as the cost of capital, its often extremely large costs and irreversible nature (it is difficult to sell assets for other uses once the investment has been made) make investment decisions particularly sensitive to future changes in the regulatory environment, as they can have a significant impact on the expected benefits of investment. A good regulatory environment can thus support a higher level of private investment, other things being equal.

Ownership and provision

The public sector is involved in regulation and the supply of infrastructure for four broad sets of reasons:

- First, when the supply of infrastructure is provided by a single firm because this minimises the cost of production (i.e. a natural monopoly),⁸ the private sector should be willing to provide the service. However, it would do so at a level that is below, and a price that is above, that will maximise benefits to society as a whole (the social optimum). Bringing private sector supply closer to the level that is best for society will usually require some type of regulation.
- Second, the network may provide users with a service that cannot be priced – either because the costs of doing so would be prohibitive or it would be technically unfeasible – or it may be desirable to price network access below the level that would ensure full recovery of its cost (e.g. urban public transport). Such infrastructure may not be supplied at all in the absence of government intervention. For example, until relatively recently, the cost of collecting user charges from more than a few roads would have been too high, partly explaining the prevalence of public provision (financed from general taxation revenues) for this type of infrastructure.
- Third, the government may become involved in supply when the provision of network services helps meet other policy objectives. For example, governments have participated in the expansion and improvement of water supply and sewerage networks to address health and environmental concerns. In some cases, distributional concerns have induced governments to ensure access to infrastructure-related services at uniform and affordable prices.
- Finally, governments have become involved in the provision of infrastructure when vested interest groups blocked development or the government needed to co-ordinate network investments.

When the government provides infrastructure, investment decisions should target a level of provision that equates the benefits to society of additional investment to its cost, which includes the cost of raising the necessary public funds (e.g. through taxation).⁹ In this context, investments need to be carefully evaluated, using cost-benefit analysis for individual projects. In practice, public provision has sometimes failed to deliver efficient investment. For example, “empire building” behaviour has contributed to over-investment while budgetary constraints have contributed to periods of under-investment. In addition, investment may be misallocated

across sectors, regions or time due to political considerations. This experience has led to a reconsideration of the role of the state in infrastructure provision, and its direct role in such provision has indeed fallen over the past two decades.

Different delivery modes can involve the public and private sectors to a greater or lesser extent. These include public ownership and procurement, which have often characterised the water supply and road networks; concessions and so-called public-private partnerships (PPPs), which have increased the involvement of the private sector in the delivery of transport infrastructure; and fully privately-owned companies, which has often been the case in the energy sector and, increasingly so, in telecommunications.

Concessions and PPPs, if undertaken properly, can promote more efficient investment in a number of ways, as they can facilitate the introduction of competitive pressure in the provision of infrastructure services. For example, concessions can introduce market discipline at the bidding stage and in some cases through the use of so-called “yardstick” competition, where the performance is compared to that of similar operators either domestically or internationally. The main benefits of PPPs, which are a relatively new approach to infrastructure provision in many countries (Box 6.2), arise from bundling construction and operation together and from allocating different types of risk to the partner who is most suited to bearing it. As the private partner will usually be responsible for operation, bundling together construction and operation can create incentives for the firm to improve the quality of the construction. In order to capture the potential benefits from bundling, the contract needs to specify outputs rather than inputs. For projects where it is hard to specify the output – such as in areas of rapid technological progress – PPPs are likely to be less appropriate. For example, specifying the services a communication network should deliver in the future is much more difficult than determining in advance the services a road should provide. With respect to the allocation of risk, the private sector is normally better able to bear those risks under its control, such as construction and operational (or availability) risk, while governments have often assumed some demand-side risk.¹⁰

The design of concession and PPP contracts requires transparency and expertise in specifying conditions that will encourage adequate and efficient investment and its use.¹¹ First, the decision making about the use of concessions and PPPs should be transparent to ensure that they are the most appropriate method of investment and not, as may sometimes have been the case, a means of shifting public investment spending off budget with the risk of incurring greater costs over the long term than if investment had been undertaken by the public sector.¹² Second, in addition to sharing risk appropriately between the parties, the contract should provide the private partner with incentives to invest throughout the concession period. Without such incentives the private partner may under-invest in maintaining assets particularly as the end of the contract approaches. Third, adequate monitoring of investment decisions and performance evaluation throughout the contract period can help to get value-for-money if the contract is specified so as to let these factors influence the returns of the private partner. The extent to which actual PPP policies reflect these types of considerations (Annex 6.A1) varies substantially across countries, suggesting scope to improve policy in a number of them, particularly the Slovak Republic, Turkey and Norway.

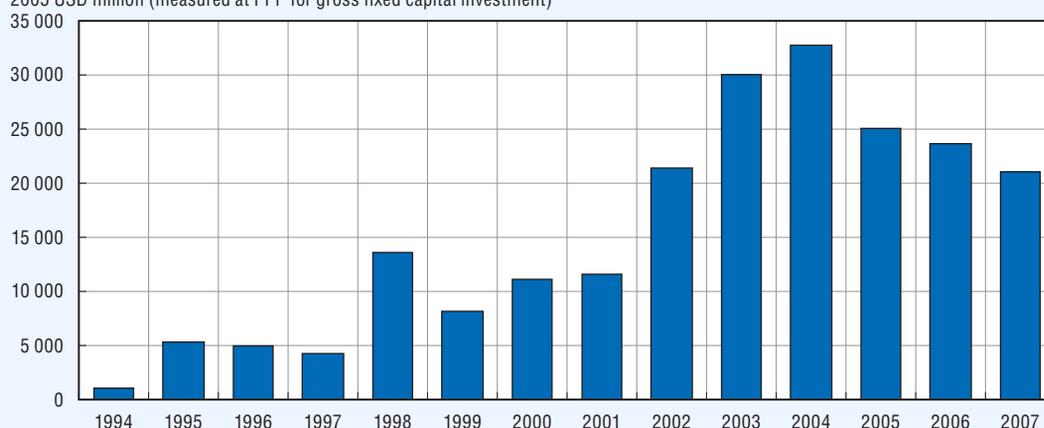
Box 6.2. Public-private partnerships (PPPs)*

Infrastructure PPPs have gained importance in many OECD countries, with the announced value of recorded deals higher than at the beginning of the decade despite declining more recently (see Figure below). The number of infrastructure projects covered by PPPs has increased, roughly doubling between the beginning of the decade and 2007. At the same time, the size of most individual projects has remained relatively stable at around USD 200-USD 300 million. However, a few extremely large individual projects, often in the transportation sector, account for large fluctuations in the value of announced deals over time. In particular, individual projects – such as the United Kingdom’s channel tunnel rail link in 1998, the London Underground in 2002 and the Italian Autostrade in 2003 – accounted for around one-third of the total value of announced deals in these years and several large projects boosted the total in 2004. The decline in the value of announced deals in the three years to 2007 reflects the fall in very large deals.

PPP deals were recorded in 23 OECD countries by the end of 2007, but only a small number of countries account for the majority of projects. In particular, the United Kingdom accounts for around 30% of the total number of recorded PPPs and the cumulative volume of deals in the OECD area. Just three countries – Korea, Spain and the United Kingdom – account for half of all recorded PPPs. More recently, PPP deals in Korea and the United States have become more frequent.

Value of announced public-private partnership deals in the OECD, 1994-2007

2005 USD million (measured at PPP for gross fixed capital investment)



Source: Dealogic Projectware Database (data extracted 19/02/08).

* This box draws on data from the Dealogic Projectware database, which gives a broad range of information on the use of public-private partnerships in OECD countries. In total, this database contains information on nearly 2 000 PPPs, of which around one-fifth are in infrastructure sectors. These data are based on project finance data, which covers: “The financing of long-term infrastructure, industrial projects and public services based upon a non-recourse or limited recourse financial structure where project debt and equity used to finance the project are paid back from the cashflow generated by the project.”

A competitive environment

Competitive pressures for efficient infrastructure investment can also be introduced in the inherently competitive market segments through reducing barriers to entry in the competitive markets serviced by the network and separating (*i.e.* vertically unbundling) the natural monopoly elements of networks from these markets. An attraction of coupling entry liberalisation in competitive markets with vertical unbundling of the network industries is that private enterprises will determine what they believe to be the appropriate level of

investment in the competitive segment of the industry. However, appropriate regulatory settings would still be needed to ensure an efficient level of investment in the core network.

Sector regulators can help raise the efficiency of investment in network infrastructure by – amongst other things – determining access conditions and pricing for the monopoly elements of the networks. However, regulators need to exercise care in setting access prices (see below), as setting them too high will induce wasteful investment by new entrants replicating existing infrastructure while setting them too low can lead to under-investment by the incumbent and new entrants alike.

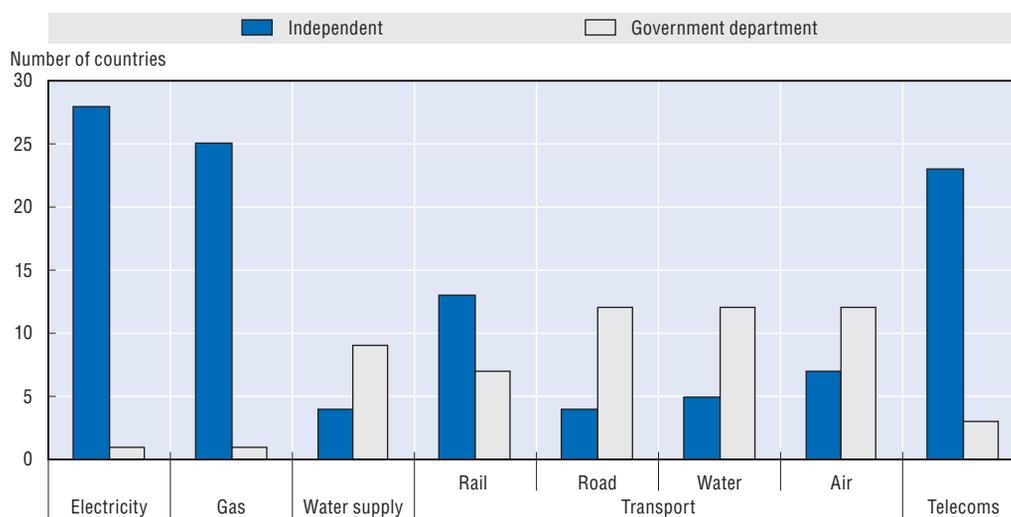
Vertical unbundling is not appropriate in all cases. The argument for retaining a vertically-integrated firm largely depends on the potential loss of economies of scale and scope and possible co-ordination problems and higher transaction costs in an unbundled industry. In some mature sectors, such as many electricity and gas networks, these factors may not be crucial, supporting their unbundling, which was implemented especially in the electricity sector of OECD countries over the past decade. In the rail sector, by contrast, the problems created by vertical separation have turned out to be daunting. It appears difficult to price access so that train operating companies are concerned with lowering high costs for the network operator, and the network operator is given adequate incentives to improve its services. This constellation of incentives may not only lead to under-provision of rail track services, but the resulting losses of economies of scope may also increase production costs and entail inefficient transport service provision.

Recent OECD empirical research has assessed the impact of reducing barriers to entry and vertical separation at both the sector and firm levels.¹³ This evidence suggests that vertical unbundling in the electricity sector is associated with higher investment, but such an effect was not found for the rail sector, possibly reflecting the difficulty in designing incentives for network operators in the rail sector to improve services. Reducing barriers to entry also has a positive effect on investment in the potentially competitive segments of network industries. Policies that enhance access to networks (such as introducing regulated third party access regimes) tend to increase investment (by users as well as providers of infrastructure).¹⁴ For instance, OECD estimates suggest that the effect of moving from unregulated to adequately regulated third party access could boost firm-level investment rates significantly (by around 6 percentage points from around 9% to 15%).

The regulator and pricing

The regulator's behaviour can have an important influence on investment in regulated network industries. In particular, uncertainty surrounding the regulator's decisions can create barriers to investment. Lack of policy consistency and credibility can be important sources of uncertainty. Lack of credibility may arise when relations with the government and the sector it is regulating are subject to political and private interest pressure. Ensuring the regulator's independence is central to preventing the regulator from being "captured" by industry or partisan political interests and enhances the stability and credibility of the regulatory framework, in a context where accountability to the government, the legislature and consumers should nonetheless be preserved.¹⁵ Greater independence may help reduce the relative shortage of information (*e.g.* with respect to production costs and/or product quality in the regulated firms) that the regulated firms may be unwilling to share with government. As can be seen in the indicator shown in Figure 6.2, the average degree of independence of regulators among OECD countries varies substantially across sectors. Furthermore, recent

Figure 6.2. **Independence of the regulator in OECD countries**¹
In late 2007, early 2008



1. A regulator is considered independent when it is independent from the government and has its own legal status and budget.

Source: Ad hoc OECD Questionnaire on Infrastructure Investment.

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empirical analysis demonstrates that independence of the regulator is associated with higher investment, presumably reflecting the effect of greater predictability and credibility.

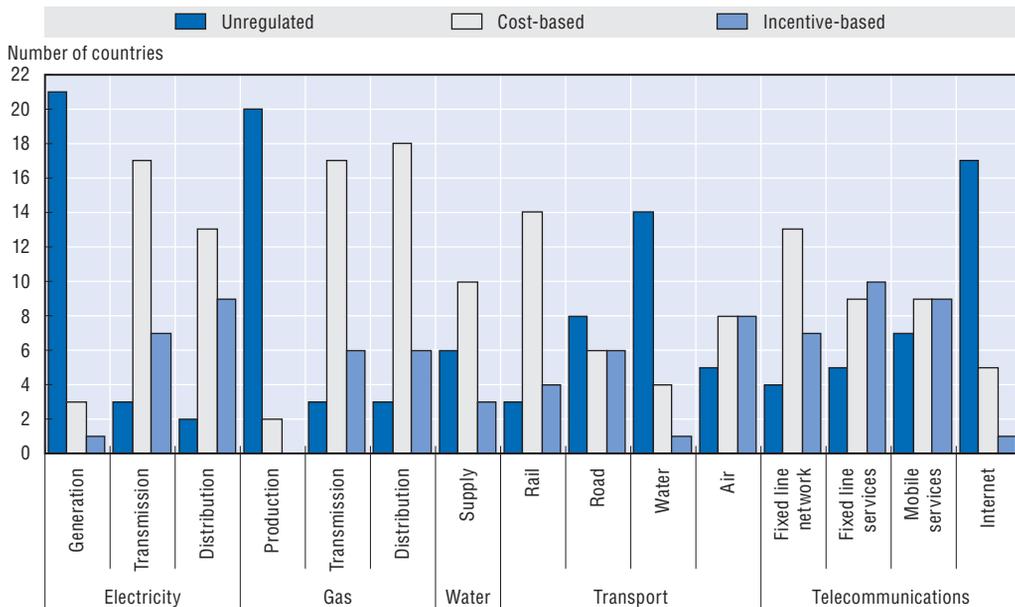
The regulator often needs to set costs for users, access prices or final prices, to an extent and in ways that differ depending on whether the network provider is vertically integrated or competition is feasible. A central difficulty is setting a price that maximises the potential benefits to society while ensuring that the network investment costs are covered. In some cases, setting the price for an additional user so that it reflects not only the direct costs of providing infrastructure for that user but also indirect costs for other users and non-users (such as costs related to congestion or pollution, for example) will both cover investment costs and ensure that infrastructure maximises benefits to society. In other cases, which can arise in particular with networks in their early stages of development, prices set this way will be too low to recoup investment costs. In these cases, subsidisation or government provision may be warranted.¹⁶

Regulatory pricing regimes that simulate competitive pressure can help by making investment better targeted to needs. So-called incentive price regulation, such as price caps for network services, gives strong incentives for network enterprises to invest in cost-saving technology. By contrast, cost-based price regulation (such as guaranteeing a given rate of return on capital) can create incentives to over-invest and invest inefficiently. Currently, cost-based price regulation is more prevalent than incentive-based regulation in OECD economies, particularly in the energy sector (Figure 6.3).

Empirical research by the OECD has found that incentive price regulation raises investment in infrastructure towards its optimal level when it is accompanied by an independent regulator. This underlines the importance of policy credibility and consistency in promoting efficient investment. Against this background a number of countries could enhance investment incentives by exploiting the synergies between the regulator's independence and incentive price regimes. For instance, the findings suggest

Figure 6.3. **Pricing regimes**

In late 2007, early 2008



Source: Ad hoc OECD Questionnaire on Infrastructure Investment.

StatLink  <http://dx.doi.org/10.1787/534024158375>

that in the electricity and (parts of) the telecommunication sectors of France, Portugal, Spain and the United Kingdom, where independent regulators exist, moving towards more incentive regulation could boost investment rates by around five percentage points. Similarly, greater independence of the regulator in the Danish, Japanese and Norwegian telecommunication sectors could enhance the effects of the incentive price regulation that is in place.

Ensuring efficient use

Finally, policymakers should also consider making the use of existing infrastructure more cost effective and beneficial to the users. Infrastructure in the network sectors is often prone to congestion, with congestion raising production costs and reducing value to users. One obvious means to address these problems is user charges. When such charges reflect the difference between the social cost of access of an additional user (reflecting network congestion costs and wear-and-tear of the infrastructure) and the private costs to the individual user they will ensure the efficient use of existing infrastructure and will damp the need for investment in additional capacity. Furthermore, comparison of the revenue raised from the congestion toll to the cost of additional investment will give important information as to whether new investment is warranted. When investments need to be large rather than incremental to expand capacity, such as the additions of runways at airports, both congestion costs and optimal user charges will rise before the investment and fall thereafter.

Concluding comments

Investment in infrastructure can boost economic output and societal welfare, but not in all cases. A sound policy framework helps ensure that the potential gains from

infrastructure investment are realised. Such a framework requires that the government decision making is robust when deciding whether investment is needed, that the appropriate partner (either public or private) undertakes the investment and is responsible for provision, that appropriate competitive pressures are introduced, that regulatory policies are coherent and that efficient use is made of infrastructure.

Notes

1. This chapter draws on recent OECD empirical analysis, see Sutherland *et al.* (2009), Araujo (2009), Araujo and Sutherland (2009), Egert (2009), and Egert *et al.* (2009). These papers provide extensive references to other studies on the impact of infrastructure on growth and the role of public policies.
2. There is no generally accepted definition of what constitutes infrastructure. In this chapter infrastructure is confined to network industries, but some other sectors, such as education, could also be included in a broader definition of infrastructure.
3. Such physical measures can, however, be misleading in sectors with rapidly evolving technology. For example, the number of telephone mainlines has fallen over the past decade as mobile phone subscriptions have risen. In addition, the services provided by telephone mainlines have changed with the expansion of fast broadband connections. As a result, overall telecommunication provision has increased despite the fall in the number of mainlines.
4. In some cases, this threshold will be at quite high levels of provision. For example, the major benefits of wastewater treatment are thought to materialise only when coverage reaches 70% of discharges.
5. The research was based on two approaches. The first estimated time-series growth regressions based on an exogenous growth model (Mankiw, Romer and Weil, 1992). The second approach used Bayesian model averaging techniques on cross-sections of OECD countries to identify whether measures of infrastructure provision improved the fit of estimated growth models and whether there were thresholds in the effect of infrastructure on growth (following Sala-i-Martin *et al.*, 2004).
6. For a study on the impact of investment in communications infrastructure on productivity growth, see OECD (2003).
7. These results are sensitive to the measure of telecommunication service provision. For example, some of these relationships for individual countries are reversed when the number of subscriptions (including to mobile telecommunications) instead of number of fixed mainlines are used to measure provision, possibly reflecting the technological change in the sector.
8. This would be the case when there are increasing returns to scale and network effects.
9. More precisely, it is related to the marginal cost of public funds and production costs (King, 1986).
10. OECD (2008) discusses risk allocation in PPPs.
11. The *OECD Principles for Private Sector Participation in Infrastructure* identify a number of framework conditions that are conducive to maximising the benefits of private-sector participation.
12. See OECD (2008) for examples of where budgetary considerations were instrumental for deciding on PPP projects.
13. This work was based on both firm-level and sectoral-level analysis of determinants of investment. The firm-level analysis was based on a panel of firms operating in the infrastructure sectors and used a standard investment equation. The sectoral-level analysis used Bayesian model averaging techniques to examine whether regulatory variables and their interactions improved the fit of the models when these variables were included.
14. In time-series regressions using sectoral data, reported by Alesina *et al.* (2005), lowering barriers to entry is also found to boost the investment rate, potentially raising the investment rate by 1½ percentage points on average in the countries covered by the study (the average investment rate being around 7%) if barriers to entry fell by a significant amount, taking a country from the third quartile to the first quartile of the country distribution of barriers to entry (as measured by OECD indicators).
15. To facilitate independence, desirable features for the regulator's operation include providing a legal mandate (including criteria and procedures for over-ruling decisions), ensuring the regulator is

separated and autonomous from the government, and defining how appointments and dismissals of regulators are to take place to minimise the possibility for pressure being applied to members.

16. Alternatively, the regulator may adopt an alternative pricing structure to cover investment costs. For example, multi-part tariffs can help preserve pricing that reflects short run marginal costs while recouping investment costs. In other cases, so-called Ramsey pricing, which allows prices to vary in line with the demand for different services, will minimise the welfare losses.

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ANNEX 6.A1

Public-private Partnerships: An Indicator of Framework Conditions

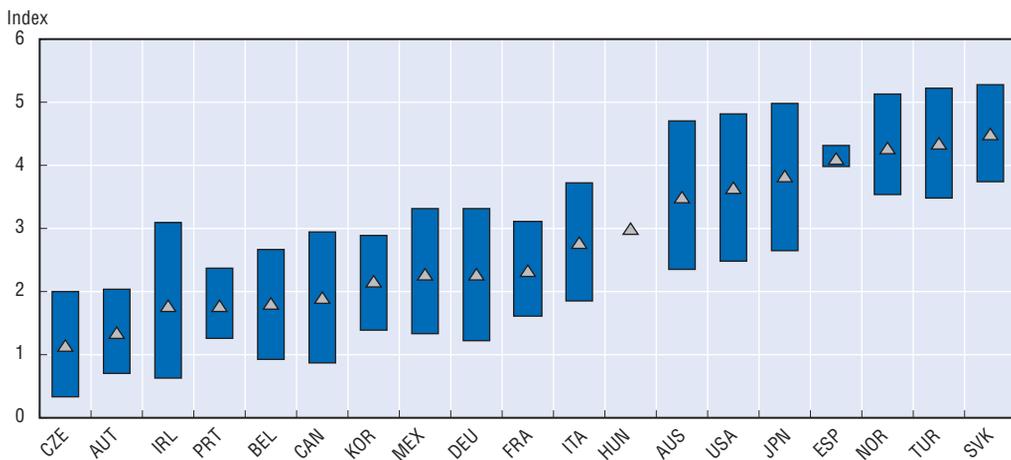
In order to summarise public-private partnerships (PPP) arrangements across OECD countries, a numerical indicator has been constructed, highlighting practices at the different stages of PPP contracting (see Figure 6.A1.1). Answers to an OECD questionnaire on countries' practices were converted into a composite indicator based on deviations from what are considered best practices. The indicator covers countries' practices in three main areas of policy design that were identified as potentially affecting the success of a PPP project.

- *The Institutional Decision Making Framework.* This covers aspects relating to how the public sector decides to finance an infrastructure project through PPPs, namely whether:
 - ❖ An independent agency or a consulting firm provides guidance on the desirability of specific infrastructure projects being delivered through PPPs.
 - ❖ An assessment of the costs and benefits of PPPs over traditional procurement is carried out.
 - ❖ The long-term fiscal implications of PPPs are accounted for as contingent liabilities in government accounts.
 - ❖ PPP performance is evaluated *ex post*, that is to say, whether the outcomes from a PPP are compared with the economic policy objectives set *ex ante*, including financial objectives.
- *Ways to minimise PPP costs.* Contracting an infrastructure facility through PPPs is more costly than through traditional procurement. The policies in this area focus on ways to minimise transactions costs and prevent delays and cost overruns, through:
 - ❖ Defining minimum project value for infrastructure being delivered through PPPs.
 - ❖ Allowing bundling of PPP contracts in order to meet minimum amount requirements.
 - ❖ Obtaining licenses and planning permissions before calls for tender are made.
- *Contract specification issues to ensure value for money.* This part focuses on contract clauses that can contribute to PPPs delivering cost effective infrastructure ensuring a sufficient amount of investment and good quality delivery. These include setting:
 - ❖ Output rather than relying exclusively on input specifications.
 - ❖ Minimum revenue from sales and revenue share.
 - ❖ Limits to the amount of debt the private partner is allowed to incur.

- ❖ Mechanisms to define the price at which the government will acquire the asset at the end of the contract.
- ❖ Conditions under which the contract can be reviewed before the established deadline for renegotiation.
- ❖ Arbitration mechanisms.

The composite indicator was constructed by first converting the questionnaire responses into cardinal measures and then aggregating these cardinal measures. In order to take into account the uncertainty in the relative importance of the different measures (see Araujo and Sutherland, 2009), random weights methods were used to generate confidence intervals for the composite indicator value, as shown in Figure 6.A1.1.

Figure 6.A1.1. **Indicator values of PPP policy settings**¹
Indicator scale of 0-6 from most to least conducive to efficient investment



1. The indicator is calculated for the 19 countries that provided a sufficient number of answers on PPPs in an *ad hoc* OECD questionnaire on infrastructure investment. The figure gives the average indicator value and 90% confidence intervals, which are calculated using random weights.

Source: *Ad hoc* OECD Questionnaire on Infrastructure Investment.

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PART II
Chapter 7

Reform of Product Market Regulation in OECD Countries: 1998-2008

This chapter presents patterns and developments in regulation that affect competition in product markets of OECD countries over the past ten years, using the updated and substantially revised OECD indicators of product market regulation (PMR). It shows countries' relative regulatory positions in 2008, assesses the extent of regulatory reforms, analyses the role of reforms in particular sectors for reforms in aggregate PMR, and points to the potential for future reform.

Introduction

More intensive competition in product markets tends to boost economic growth: empirical studies show that competitive product markets force companies to be more efficient and to increase productivity, a key component of growth in GDP per capita. Through a number of different mechanisms, including entry by new firms and changes in real wages, stronger competition in product markets may also have a positive effect on employment, another key component of growth in GDP per capita (see Box 7.1). As described in Chapter 1, removal of anti-competitive barriers may play a particularly useful role at the current conjuncture.

This chapter describes patterns and developments of regulation that affect product market competition in OECD countries over the past decade. The chapter uses the updates of the OECD system of indicators of product market regulation (PMR) for 2008.¹ In this update, the PMR indicators have also been substantially revised, in particular integrating information on regulation in particular sectors to a much larger extent than in the past and adapting a simpler and more transparent technique for aggregating detailed information into synthetic indicators of regulatory stance (see Annex 7.A1 for a detailed description of the indicators).²

The following main conclusions emerge from the analysis:

- OECD countries have extensively liberalised product markets over the past ten years.
- Reforms appear to have slowed in the most recent period (2003-2008) as compared with the earlier period (1998-2003). While countries tend to converge towards the policy stance of the most liberalised countries in both periods, this tendency is less pronounced in the more recent period.
- Over the whole period, easing of product market regulation appears to have been driven to a considerable extent by reforms in sector-specific regulation, notably as regards the gas, electricity and telecommunications markets. This underlines the importance of focusing on sector-specific regulation and individual regulatory areas in policy analysis.
- Despite ten years of liberalisation of regulation, considerable scope for further reform remains, especially as regards reducing controls of governments over businesses, in terms of public ownership and other forms of direct control over firm's decisions.
- Finally, though there has been much progress in reform in certain sectors, there is considerable scope for reform in others, such as professional services and retail trade.

Box 7.1. Product market regulation and economic growth

From the theoretical and empirical literature, two main channels can be distinguished through which pro-competitive product market regulation may spur economic growth. These channels correspond to the two main building blocks of GDP: productivity and employment.¹

Box 7.1. Product market regulation and economic growth (cont.)

First, empirical studies show that competitive product markets force companies to be more efficient and to increase labour or multi-factor productivity, for instance by adopting new technologies and being innovative.² Nicoletti and Scarpetta (2003), for instance, show that countries in which public ownership in the business sector is limited and barriers to entry are low are more successful at improving multi-factor productivity growth (MFP) than countries with stringent anti-competitive regulation. More generally, regulation that limits competitive pressures tends to lower long-run productivity and it appears that the burden of regulation is greater the further away a given country is from best-practice technology. Conway *et al.* (2006) look at the knock-on effects of product market regulation in some sectors on other sectors in terms of the regulatory burden that firms face indirectly via the use of intermediate inputs from highly regulated sectors. They highlight the detrimental effect from regulation in ICT producing sectors for labour productivity not only for these sectors but also for sectors using ICT. Finally, Arnold *et al.* (2008) analyse the regulation-productivity link at the firm-level – complementing the existing industry-level analyses. Their results suggest that burdensome regulation have been particularly harmful for firms operating close to the technological frontier.

Second, theoretical and empirical studies suggest that easing anti-competitive product market regulation may have a positive effect on employment (*e.g.* Blanchard and Giavazzi, 2003, Nicoletti and Scarpetta, 2005, Griffith and Harrison, 2004, Griffith *et al.*, 2007). Reducing barriers to entry would curb market power of incumbents and make entry of competitors possible, which again would raise the activity level and thus labour demand. Moreover, more intensive competition typically lowers prices of goods and services and raises real wages, which stimulates labour supply. In addition to these mechanisms, the results in Bassanini and Duval (2006) highlight the role of product market regulation as a burden on labour force participation and employment opportunities for female workers. Finally, some empirical evidence (*e.g.* Fiori *et al.*, 2007 and Griffith *et al.*, 2007) suggest that product market regulation is complementary to labour market regulation since easing product market regulation may have additional positive effects on employment by inducing job-friendly reforms of labour market institutions.³

1. For an overview of the channels through which less restrictive product market regulation may induce positive growth effects and for further references to empirical work analysing this link, see Crafts (2006), Nicoletti and Scarpetta (2006), Schiantarelli (2005), Høj *et al.* (2007) and Conway *et al.* (2006).
2. OECD empirical analysis has found little support for the notion that excessive competition can undermine the incentives to innovate, possibly because most OECD countries have protection regimes in place for intellectual property to ensure a return on innovation for the innovator.
3. One of the channels behind this is that the positive impacts of product market deregulation in terms of an increase in both employment opportunities and average real wages may weaken opposition to labour market reforms (Høj *et al.*, 2006). Another mechanism is by reducing “wait-unemployment” (OECD, 2003). See in this regard also Burda (1988).

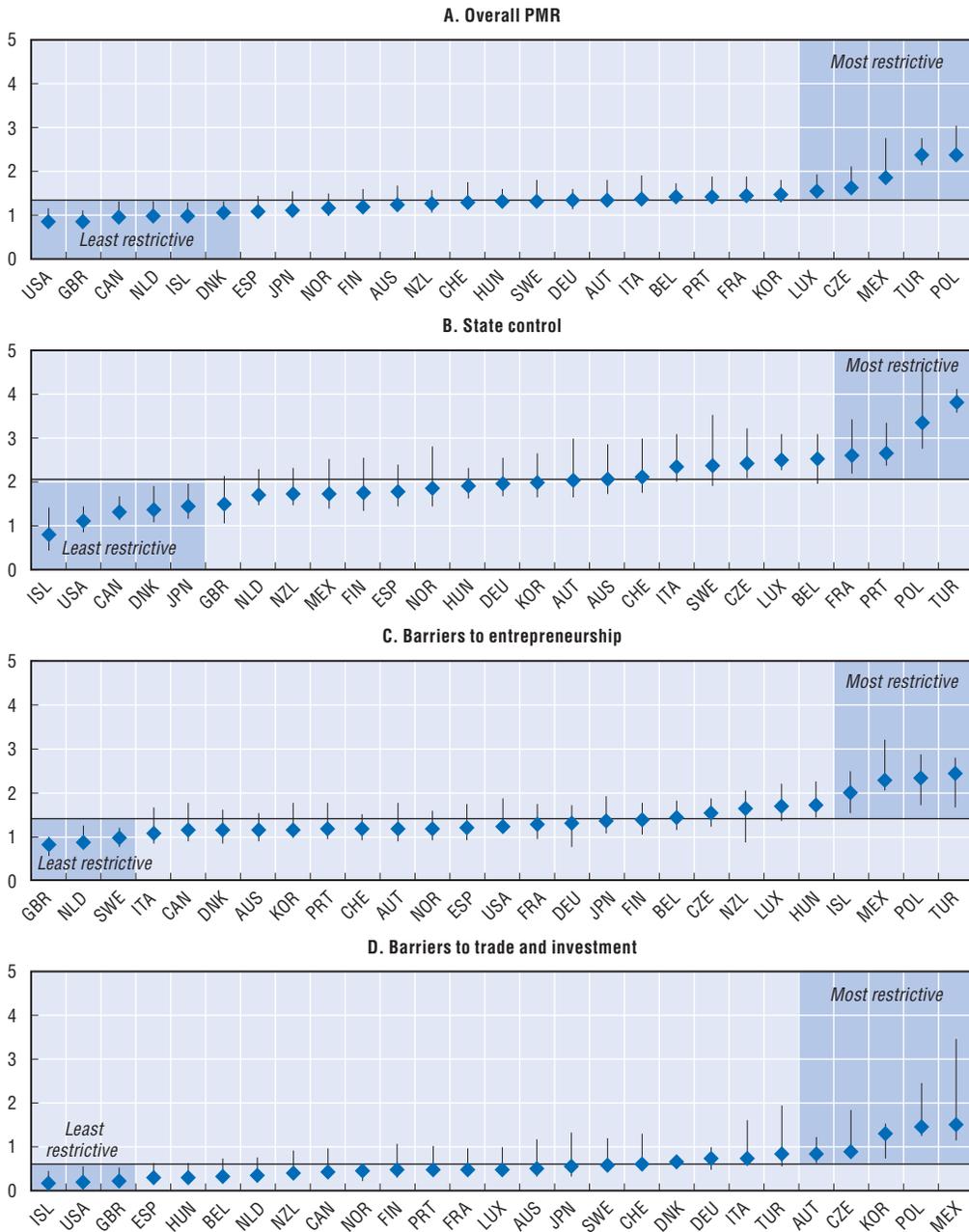
Countries' current regulatory stance

The update of the indicators of product market regulation provides a snapshot of countries' policy stance in early 2008 (Figure 7.1). The indicators represent the stringency of regulatory policy on a scale from 0 to 6 with higher numbers being associated with policies that are more unfriendly to competition (see Annex 7.A1 for more detail on the construction of the indicators).

At the aggregate level, and using standard statistical criteria to deal with the inherent uncertainty in the “scoring” of policies in different areas,³ three country groups can be

Figure 7.1. **Countries' relative positions in 2008**

Index scale of 0-6 from least to most restrictive



1. Countries are ranked according to the indicator score on aggregate or domain. Diamonds represent the indicator scores, lines represent confidence intervals (see note 3).

Source: OECD, Product Market Regulation Database.

StatLink <http://dx.doi.org/10.1787/534038444337>

distinguished with regard to their regulatory stance (Panel A). At one end of the spectrum is a group of countries characterised by a level of anti-competitive restrictions that is significantly lower than the OECD average. This group comprises the United States, the United Kingdom, Canada, Iceland, the Netherlands and Denmark. At the other end of the spectrum is a smaller group of countries, characterised by restrictions on competition that

are significantly higher than average. This group comprises Luxembourg, the Czech Republic, Mexico, Turkey and Poland. The remaining group of countries appears to have regulatory approaches that are close to the OECD average.

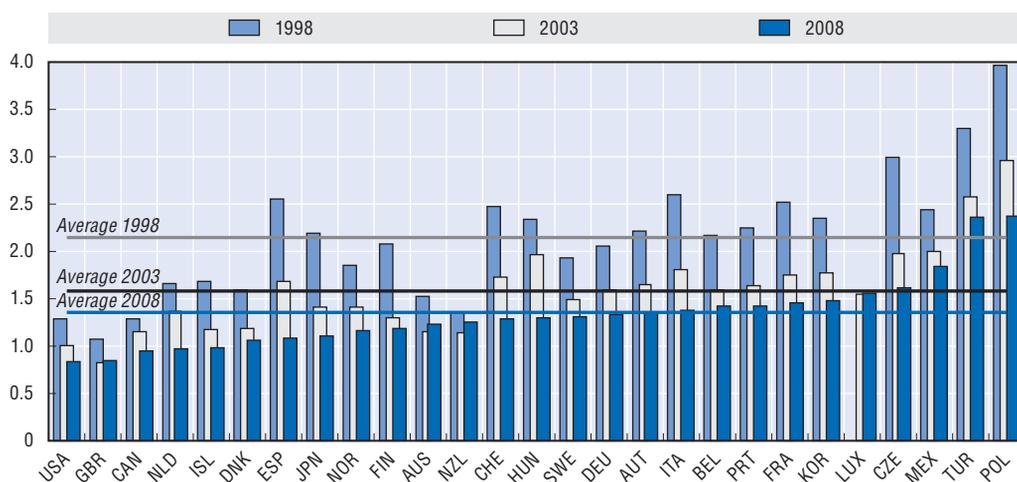
As to the composition of aggregate product market regulation, anti-competitive regulation appears to be concentrated in two regulatory domains. This concerns first, the domain “state control”, which reflects the extent to which governments influence firm decisions through public ownership, price controls or other forms of coercive – instead of incentive-based – regulation (Panel B). It concerns second, the domain “barriers to entrepreneurship” which reflects obstacles to easy access to information on existing regulation, general or sector-specific administrative burdens for business start-ups or other general or sector-specific regulations that hinder entry of firms (Panel C). In contrast, barriers to trade and investment, capturing barriers to foreign ownership of firms, tariffs and other non-tariff barriers to trade, play only a minor part in limiting competition in most OECD countries (Panel D).

Finally, the relative position of countries varies across the three main regulatory domains (Panels B to D). For instance, the importance of state control seems to be lower in Iceland than elsewhere in the OECD, and barriers to trade and investment still appear to play a relatively important role in limiting overall competitive pressures in Korea, Mexico and Poland.

Reform of product market regulation since 1998

The regulatory stance in 2008 is the result of extensive liberalisation of product markets over the past ten years as described in Figure 7.2. On average across OECD countries, the aggregate indicators of product market regulation moved from around 2.1 index points in 1998 to around 1.3 index points in 2008. These aggregate trends mask wide differences in reform across countries though. Reforms appear to have significantly changed the overall regulatory environment for about half of the countries over the 1998-2008 period, and notably in Spain, Japan, Switzerland, Italy, Hungary and the Czech Republic. In contrast, only limited progress

Figure 7.2. **Development of aggregate product market regulation since 1998**
Index scale of 0-6 from least to most restrictive



Source: OECD, Product Market Regulation Database.

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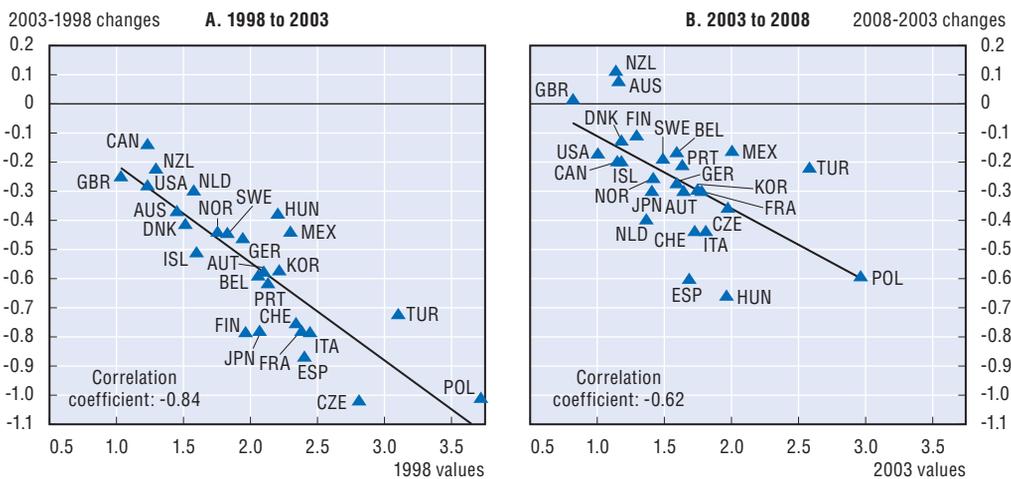
can be observed in countries where the regulatory stance was relatively competition-friendly already in 1998 or in 2003, such as the United Kingdom, the United States, Canada and Iceland.

The pace of liberalisation was not only different across countries but also not uniform over time. As indicated by the development of average regulation over time (Figure 7.2), strong easing of product market regulation between 1998 and 2003 was followed by a slowdown in reform between 2003-2008 in several OECD countries. As a result of these policy trends, the degree of convergence of product market regulation across OECD countries was stronger in the period 1998 to 2003 than in the period between 2003 and 2008 (Figure 7.3).⁴ Especially in the earlier period (1998-2003), convergence is reflected in strong regulatory reform in countries that were farther away from best practice, as confirmed by the correlation coefficient of -0.84 . While this tendency has continued in the most recent period for most countries, it was less evident in others, such as Turkey and Mexico where regulatory reforms were weaker than might have been expected given their original restrictive stance.

Based on the political economy factors influencing the extent and timing of product market reforms (Box 7.2), potential reasons for the slowing pace of reforms may be as follows: In general, the slowing of reform may suggest that further improvement becomes more difficult beyond a certain level of regulation in each area. It could signal the existence of declining marginal gains from reform in terms of economic benefits from competition. Alternatively, several countries that have reformed a large number of regulatory areas are increasingly left with some hardcore areas of regulation that are politically more difficult to reform. Finally, it may reflect that politicians want to evaluate the benefits and costs of past reform before launching further reform efforts.

Figure 7.3. **Convergence in aggregate PMR**

Level and change in index points; index scale of 0-6 from least to most restrictive



Source: OECD, Product Market Regulation Database.

StatLink <http://dx.doi.org/10.1787/534038444337>

Box 7.2. Factors influencing product market reform

Since less competition generates rents in the economy, product market reforms that can raise competition often meet opposition. This is often the case as the costs of implementing structural reform tend to be upfront and concentrated on relatively small and well-organised target groups (*e.g.* stakeholders in sheltered industries), while the associated benefits (*e.g.* for consumers) are less certain, thinly spread and take time to materialise.

As discussed in Høj *et al.* (2006) and Castanheira *et al.* (2006), the extent and timing of structural reform is influenced by a number of different factors, including initial economic and structural conditions, as well as the political orientation of governments and the political business cycle. For instance, the results in Høj *et al.* (2006) suggest that deep crisis have tended to encourage product market reforms in the past. In contrast, reforms may be hindered by poor fiscal positions insofar as measures to accommodate temporary negative effects of reforms on demand or employment would have to be financed.

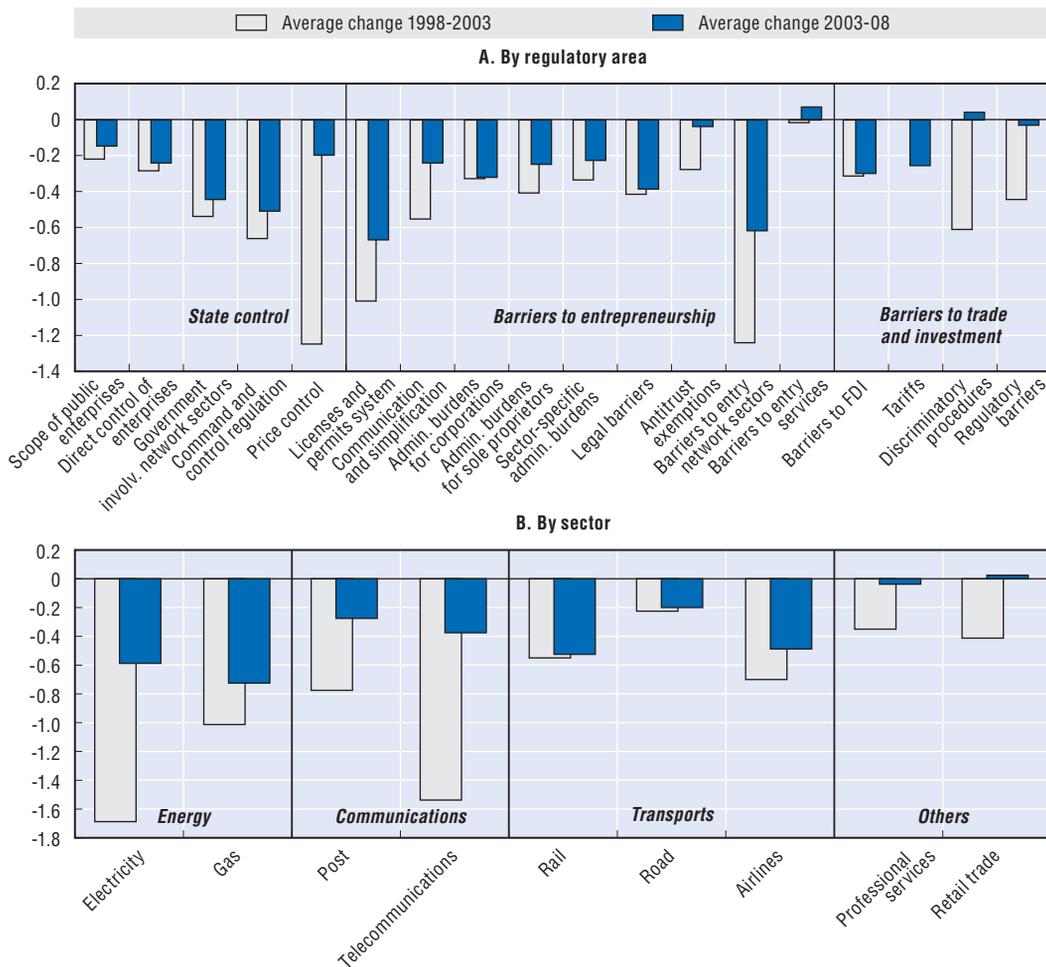
Technological progress, openness to trade, international integration as well as developments in regulatory techniques may also favour the implementation of product market reforms. For instance, in telecommunications, technological progress has tended to undermine natural monopolies and stimulate entry of firms and competition with positive effects in terms of lower prices and a larger variety of products. This in turn has made liberalisation and regulatory reform easier in this sector. Furthermore, the accession to the European Union of Poland, Hungary and the Czech Republic appears to have stimulated a large set of structural reforms. Finally, the refinement of regulatory techniques has made reform easier in sectors, such as electricity, where there are both competition and natural monopoly elements.

The sources of reform

In a wide range of OECD countries, liberalisation of product markets in both periods appears to have been driven to a considerable extent by reforms in sector-specific regulation. This is indicated in Figure 7.4, Panel A, which portrays the regulatory stance at a more detailed level within each of the three regulatory domains (see Annex 7.A1 for a detailed description of the different regulatory categories). In the “command and control” category for example, much of the reform is due to easing of regulations in road freight. Reductions or elimination of price controls in retail trade and road transport have contributed strongly to overall reform, as is equally the case for reductions in barriers to FDI in particular sectors. Moreover, additional evidence shows that reforms in regulatory categories that cover sector-specific regulation were widespread across countries while the strong average reduction in the indicator scores in more cross-cutting regulatory categories results from a strong change in a few countries only (Wölfl *et al.*, 2009). The latter is notably the case for the category “licenses and permits systems” which covers for instance the introduction of single contact points for obtaining information on licenses or notifications.

Particular reform progress in sector-specific regulation can be observed for network sectors (Figure 7.4, Panel B). For instance, almost all countries reduced entry barriers to network sectors, albeit with a marked slowdown in reforms in the more recent period. These reforms reflect largely an increasing recourse to regulated third party access in the gas and electricity markets and some unbundling within gas and electricity sectors. Reduced public ownership in the incumbent firms in such sectors, as well as in

Figure 7.4. Sources of reform in product market regulation¹



1. Negative (positive) changes indicate pro-competitive (anti-competitive) reforms.

Source: OECD, Product Market Regulation Database.

StatLink <http://dx.doi.org/10.1787/534038444337>

telecommunications, underpin the recorded decline in government involvement in network industries.

Potential for future reform

Despite significant easing of anti-competitive product market regulation over the past ten years, a large potential for reform still remains. This concerns regulatory areas or sectors that were characterised by restrictive regulation in 1998 and where little or no reform has been undertaken since then. Other areas or sectors are still characterised by relatively restrictive regulations, despite some past reforms. Figure 7.5 illustrates the remaining scope for reform by measuring the distance of regulatory indicator scores from best practice, which represents the absence of anti-competitive regulation.^{5, 6} Three main findings emerge:

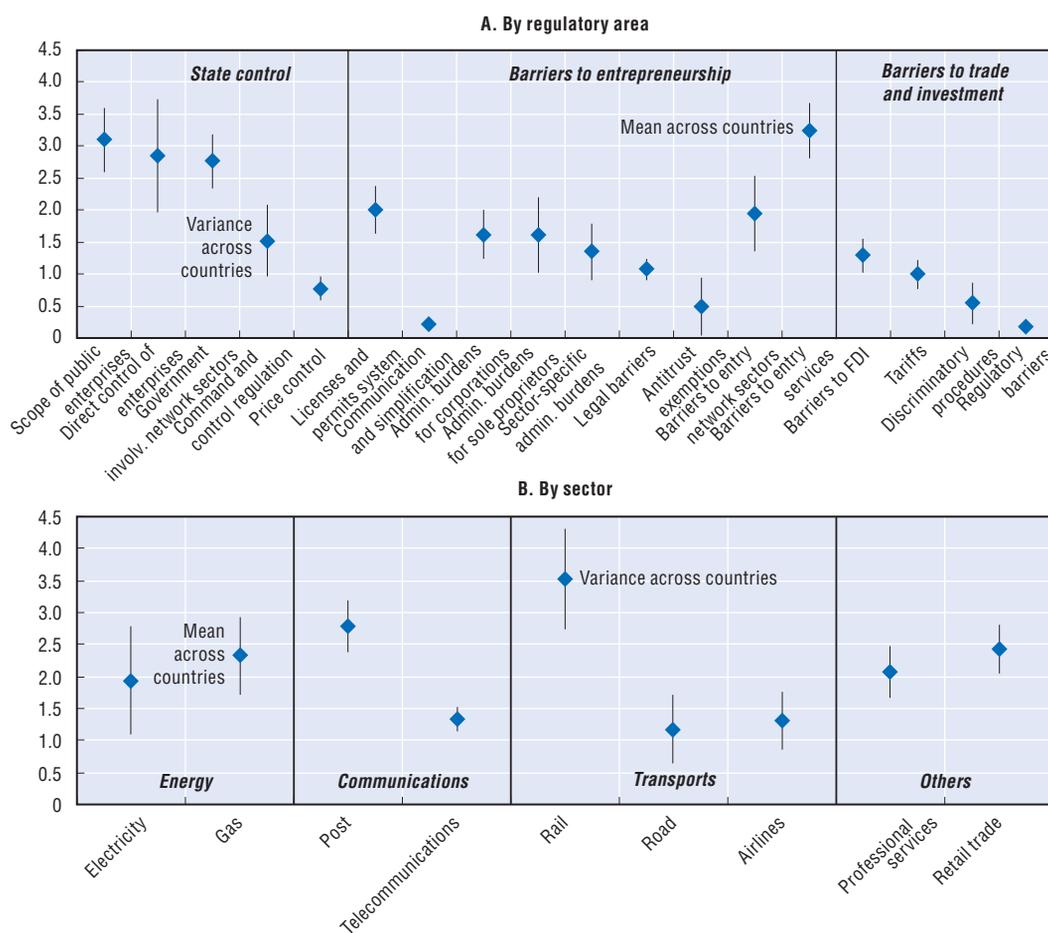
First, public ownership of businesses remains relatively strong, either in terms of the number of sectors in which governments have an equity stake in businesses (“scope of public enterprises”), the share of public ownership within the largest firms in network

sectors (“government involvement in network sectors”), or the extent to which governments exert other forms of “direct control over business enterprises” such as constraints on the sale of state-owned equity stakes or the extent to which legislative bodies control the strategic choices of public enterprises (Figure 7.5, Panel A, see also Annex 7.A1 for a detailed description of the different regulatory categories).

Second, even though the reform process was strong in certain sectors, other sectors still have scope for reform (Figure 7.5, Panel B). This is, for instance, the case for the postal sector where restrictive regulations reflect a large share of public ownership within the incumbent and relatively little liberalisation of competitive activities. And it is the case for professional services and retail trade where relatively restrictive regulation reflects stringent access requirements and constraints on business conduct in professional services and persistently restrictive licensing for setting up retail outlets.

Figure 7.5. **Distance from best practice regulation, 2008¹**

Index scale of 0-6 from least to most restrictive



1. Due to the discrete nature of scores in the case of “licenses and permits system” and “tariffs”, the mean is computed as the mode and the variance as the index of qualitative variation. The index of qualitative variation is analogous to the variance as the deviation from the mean. It is defined as one minus the sum over all classes of the squared proportions of observations that fall in a given class (in this case the scaling classes 0 to 6) (Gibbs et al., 1975).

Source: OECD, Product Market Regulation Database.

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Finally, in some regulatory areas as well as for some sectors, the regulatory stance varies strongly across countries as reflected in the variance around the mean in the two Panels of Figure 7.5. This suggests that in areas with competition-friendly average regulation, such as administrative burdens for start-ups as well as in air transport, there is still scope for future reform in a number of countries. It also demonstrates that as reforms of product market regulation have proceeded in many countries, the opportunities for further reform in other countries may become more apparent.

Notes

1. The necessary data to construct the PMR indicator for 2008 are only available for 27 countries, with the missing countries being Ireland, Greece and the Slovak Republic.
2. This chapter summarises the main findings from Wölfl *et al.* (2009). The data refer to early 2008. The last time the PMR indicators were updated was in 2003. The previous indicators and the regulatory developments based on them are described in Chapter 4 of the 2005 issue of *Going for Growth* and in Conway *et al.* (2005).
3. Constructing a composite indicator from qualitative information is always prone to uncertainty and measurement errors. To capture this uncertainty, the intervals around the aggregate, country-specific PMR values in Figure 7.1 represent intervals of confidence. These intervals reflect that if the aggregate PMR indicator was computed repeatedly using different assumptions on the way the individual indicator components on the lower level of the indicator tree structure would be measured and aggregated, in 95 out of 100 cases, intervals like presented in Figure 7.1 would include the true resulting aggregate PMR value. See Wölfl *et al.* (2009) for details on the algorithm with which these intervals are constructed.
4. Convergence is observed if there is a negative relationship between the level of aggregate regulation at the beginning of the period, represented on the horizontal axis, and the change in aggregate regulation since then, as represented on the vertical axis.
5. It should be noted that best practice, *i.e.*, a zero score on one individual indicator (regulatory category or sector) does not generally imply the absence of regulation, but just the absence of those regulations that unnecessarily restrict competition.
6. While in most cases, theoretical and actual best practices coincide, the reference here is theoretical best practice: a zero score of an individual indicator (category or sector) is theoretically possible even if it has not yet been actually achieved by any country, in other words even if no country has actually eliminated all hindrances to competition captured by this indicator. Note that while the different indicators provide an accurate picture of distance from best practice and it is thus possible to distinguish regulatory categories where on average the regulatory stance is relatively far from best practice as compared to others where the regulatory stance is relatively close to best practice, comparing precise scores across indicators is not appropriate as each of them reflects a different set of regulatory provisions.

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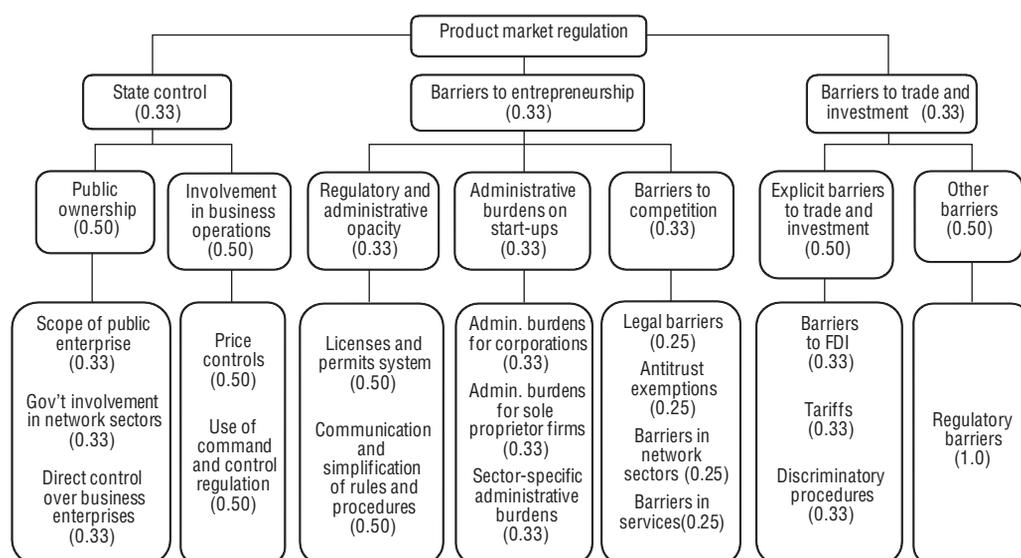
ANNEX 7.A1

The OECD Indicators of Product Market Regulation

Since the end of the 1990s, the OECD has been constructing a system of indicators, termed PMR indicators, to document the stance of product market regulation in OECD countries.¹ The basic idea of the PMR indicators is to turn qualitative information as concerns laws and regulations that may affect competition into quantitative indicators. They aim to measure regulations that are potentially anti-competitive in areas where competition is viable, and focus on policy inputs instead of market outcomes.

The economy-wide PMR indicator which is the focus of this chapter covers general regulatory issues in the domains “state control”, “barriers to entrepreneurship” and “barriers to trade and investment” (Conway *et al.*, 2005); it is computed with data for 1998, 2003 and 2008. These indicators are built in a bottom-up approach that makes it possible to trace the indicator scores back to individual policies (see Figure below): The qualitative information on which the indicators are based is mainly derived from answers to a questionnaire by national administrations, the results of which are subject to peer review, thereby guaranteeing a high level of comparability across countries. This information is coded by assigning a numerical value to each of the possible responses to a given question. The coded information is normalised over a scale of zero to six, reflecting increasing restrictiveness of regulatory provisions for competition and aggregated into low-level indicators at the bottom of the indicator tree (these low-level indicators are depicted in Figure 7.A1.1 and described in this annex). At each step up the indicator tree, higher-level (composite) indicators are calculated as weighted averages of their lower-level indicators using equal weights for aggregation.

In 2008, the indicator system has been substantially revised such as to preserve their policy relevance in light of evolving regulatory and competition issues in OECD countries.² For instance, the new “integrated PMR indicator” on which this chapter is based integrates previously separate sectoral indicators and embodies thus to a much larger extent than in the past information on sector-specific regulation.³ This enables and facilitates the analysis of changes in individual (economy-wide or sectoral) regulatory policies in OECD countries and their impact on the overall regulatory stance.

Figure 7.A1.1. **The tree structure of the integrated PMR indicator**

Source: OECD Regulatory Database.

The PMR System: Description of the Low-Level Indicators

Scope of public enterprises: measures the pervasiveness of state ownership across business sectors as the proportion of sectors in which the state controls at least one firm.

Government involvement in network sectors: measures the extent of public ownership in the energy, communications and transport sectors.

Direct control over business enterprises: measures the existence of government special voting rights in privately-owned firms, constraints on the sale of state-owned equity stakes, and the extent to which legislative bodies control the strategic choices of public enterprises.

Price controls: reflects the extent of price controls in competitive sectors, such as air travel, retail trade, road freight, professional services, and mobile communications.

Use of command and control regulation: indicates the extent to which government uses coercive (as opposed to incentive-based) regulation in general and in specific service sectors.

Licenses and permits systems: reflects the use of “one-stop shops” and “silence is consent” rules for getting information on and issuing licenses and permits.

Communication and simplification of rules and procedures: reflects aspects of government’s communication strategy and efforts to reduce and simplify the administrative burden of interacting with government.

Administrative burdens for corporations: measures the extent of administrative burdens on the creation of corporations.

Administrative burdens for sole proprietors: measures the extent of administrative burdens on the creation of sole proprietor firms.

Sector-specific administrative burdens: reflects administrative burdens in the road transport and retail distribution sectors.

Legal barriers: measures the pervasiveness of barriers to entry across business sectors as the proportion of sectors in which there are explicit legal limitations on the number of competitors.

Antitrust exemptions: measures the scope of exemptions to competition law for public enterprises.

Barriers to entry in network sectors: measures various kinds of entry barriers in network sectors, as well as the degree of vertical integration in energy, rail transport and telecommunication sector.

Barriers to entry in services: measures barriers to entry in retail trade and professional services.

Barriers to foreign direct investment (FDI): measures general and sector-specific restrictions on foreign acquisition of equity in public and private firms, obligatory screening procedures and operational controls for affiliates of foreign firms (e.g. nationality requirement for key personnel).

Tariffs: reflects the average of most-favoured-nation tariffs, computed from detailed product data on tariffs.

Discriminatory procedures: reflects the extent of discrimination against foreign firms at the procedural level.

Regulatory barriers: reflects other non-tariff barriers to trade, such as mutual recognition agreements or international harmonisation.

Notes

1. For more details and on the PMR indicator system, see Nicoletti *et al.* (1999), OECD (2001), Conway and Nicoletti (2006), and Conway *et al.* (2005). The OECD indicators of product market regulation are an essential element in the indicator base from which the Going for Growth policy priorities are drawn. The data and indicators are available at www.oecd.org/eco/pmr.
2. For details on the different steps involved in the current update and revision, see Wölfl *et al.* (2009). Once a time series is available – starting with the current round of revision and after extension to non-member countries – the integrated PMR indicators will provide also an ideal tool for testing the impact of regulation on economic variables such as competition and economic growth.
3. The sectoral indicators that are integrated into the economy-wide indicator concern first the indicators of regulation in non-manufacturing sectors (“NMR indicators”) (see Conway and Nicoletti, 2006). These cover i) the network industries energy, transport and communication (ETCR), with time series from 1975 to, 2007; and ii) retail trade and professional services, with values for 1998, 2003 and 2007. They concern equally the OECD FDI Regulatory Restrictiveness Indicator (Golub, 2003, Koyama and Golub, 2006). See Wölfl *et al.* (2009) for more detail on these indicators and how they are integrated.

PART II

Chapter 8

Population Structure, Employment and Productivity

The composition of the working-age population can influence aggregate employment and average productivity because both employment rates and productivity levels vary across population groups. This chapter assesses the quantitative importance of the working-age population broken down by age, gender and education in explaining differences in employment and productivity levels across countries. Differences in population structure are found to contribute importantly to variations in both labour utilisation and productivity performances. Combining these mechanical effects, differences in the composition of the working-age population account for around a third of the gap in GDP per capita for Europe (EU15) relative to the United States, mainly due to differences in educational attainment.

Introduction

The young, the old, women and the lower-educated often have a weaker attachment to the labour market than prime-age and higher-educated males; when in work, the young and lower-educated also have lower productivity. As a result, the composition of the population and the labour force can influence the aggregate labour market and productivity outcomes: countries where a large share of the working-age population is young or has low educational attainment can be expected to have lower aggregate employment rates and be less productive than countries where the shares of the prime-age population and the higher-educated are high. At the same time, countries with high employment rates may employ low-productivity workers more intensively, thus depressing average productivity levels. Conversely, low employment rates may be associated with low-productivity individuals not participating in the labour market, thereby raising average productivity as measured with output per hour worked.

This chapter assesses the quantitative importance of differences in the composition of the working-age population for cross-country variations in aggregate labour utilisation and productivity levels, and thus GDP per capita.¹ To this end, the chapter breaks down the working-age population of each OECD country into 30 groups (defined by age, gender and education), and calculates the mechanical impact on aggregate employment and average productivity if each country had the same group-specific population structure as in the United States. This procedure allows a decomposition of employment and productivity gaps between countries into differences due to the composition of the population and to effective performance.² In addition, and for given population structures, the chapter calculates the effect on average productivity of assuming group-specific employment rates to equal those of the United States.

The main findings of the analysis are as follows:

- Differences in the structure of the working-age population, especially as regards educational attainment, account for around a third of the employment rate gap, or about 2 percentage points, between Europe (EU15) and the United States, with significant heterogeneity within Europe between low and high-employment countries. In Korea, Japan and Norway, the population structure is more favourable to employment than in the United States.
- Aligning each country's working-age population structure with that of the United States would reduce the gap in output per hour worked *vis-à-vis* the United States, by around 4½ percentage points on average across OECD countries and by as much as 5 percentage points for Europe (EU15). Turkey, Mexico, Portugal, Italy, the Czech Republic, the Slovak Republic and Greece would record productivity gains in excess of 10%. Again, differences in educational attainment across countries account for most of these effects.
- Combining these mechanical effects on employment and productivity, the difference in the composition of the working-age population accounts, on average, for 6 percentage points of the GDP per capita gap *vis-à-vis* the United States, and for 7 percentage points

for Europe (EU15). This should be seen in the context of overall gaps in GDP per capita of about 40 and 25 percentage points, respectively. For central European countries, Turkey and Mexico, where gaps exceed 50 percentage points, they would narrow by around 10 percentage points.

- Over and above the effect of population structure, most low-employment countries tend to have a relatively small share of low-productivity workers in the workforce. Hence, the current employment-rate structure in these countries artificially boosts measured productivity compared with the United States. In Europe (EU15), average labour productivity is raised through this labour composition effect by about 1½ per cent.
- The diagnosis underlying the selection of policy priorities in *Going for Growth* is not seriously affected by the above adjustments. This is because the adjustments do not have major effects in shifting countries' areas of good and bad performance as they contribute to GDP per capita.

Population structures across OECD countries

Population structures differ across countries both as regards the proportion of people of working age (15-to-64) in the total population, and as regards the composition of the working-age population (Figure 8.1).³ Thus, the share of the working-age population in total population ranges from 63% in Mexico and the United Kingdom to more than 70% in Korea, the Czech Republic and the Slovak Republic.⁴ As concerns the working-age population, its structure differs markedly across countries, except in the gender dimension:⁵

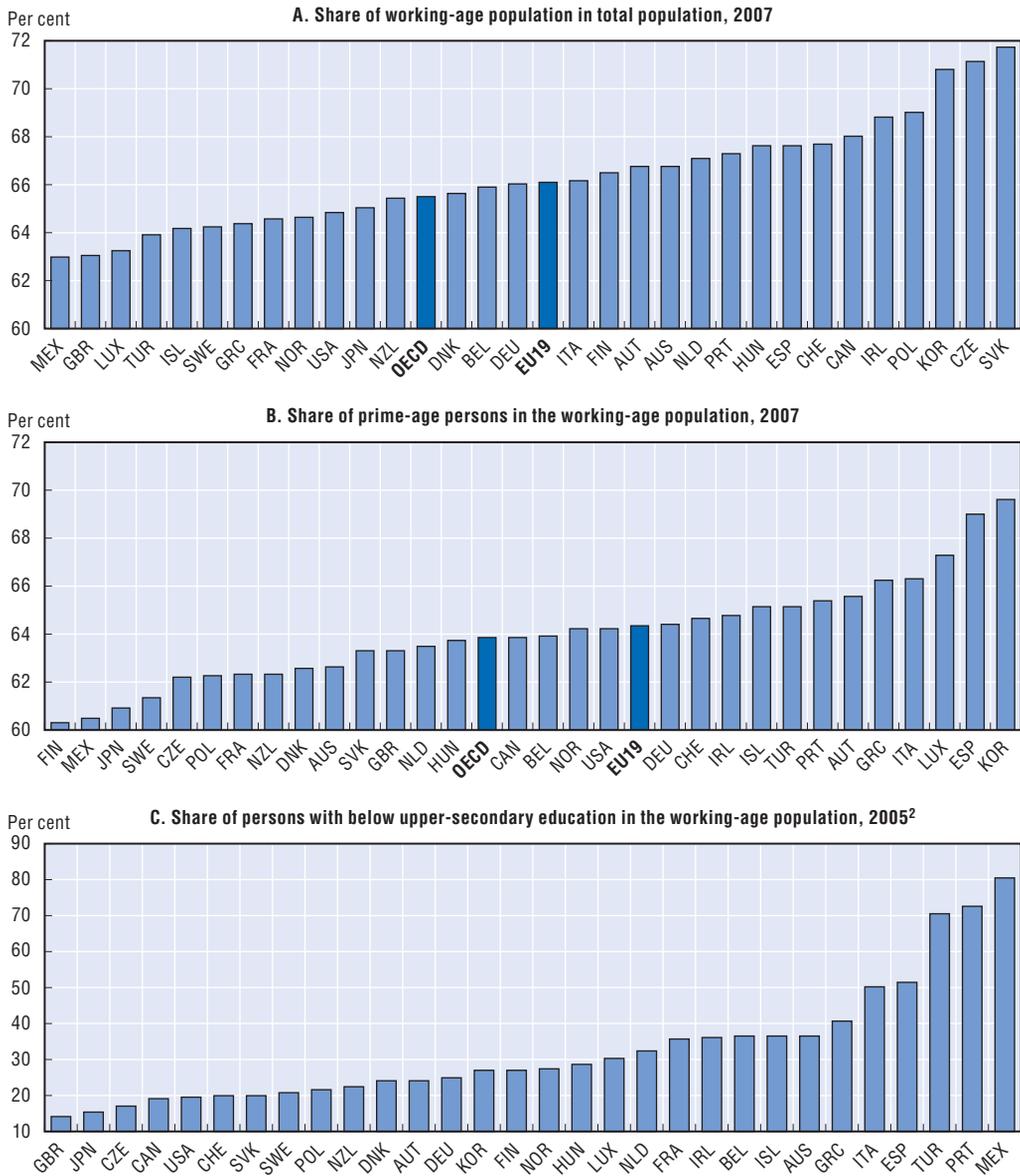
- Differences are important along the age structure, with the prime-age population (25-to-54) representing 60 to 70% of the working-age population depending on the country; the share is comparatively low in Finland, Mexico, Japan and Sweden and relatively high in Korea, Spain and Luxembourg.
- The largest variations are along the education dimension. The share of working-age persons with below upper-secondary education varies from some 15% for the United Kingdom and Japan to 40% or (considerably) above for Mexico, Turkey and the southern European countries.⁶

Working-age population structure and employment performance

Differences in employment rates across population groups are consistently observed in OECD countries.⁷ This might to some extent reflect institutional factors and disincentives embedded in government policies, but their consistent pattern across OECD countries suggests that some groups may have an inherent disadvantage to being employed. Therefore, population structure could be an important determinant of aggregate employment outcome.

Specifically, the employment rates for the lower-educated, the old and female workers are notably below the average in almost all OECD countries (Figure 8.2; this is true also for the young, not represented in the figure). Moreover, countries like Canada, the United Kingdom and the United States that have a good overall employment record have an employment rate for the low-educated group that is below or very close to the OECD average (56%). They have, however, a small share of individuals with below upper-secondary education (see Figure 8.1, Panel C).

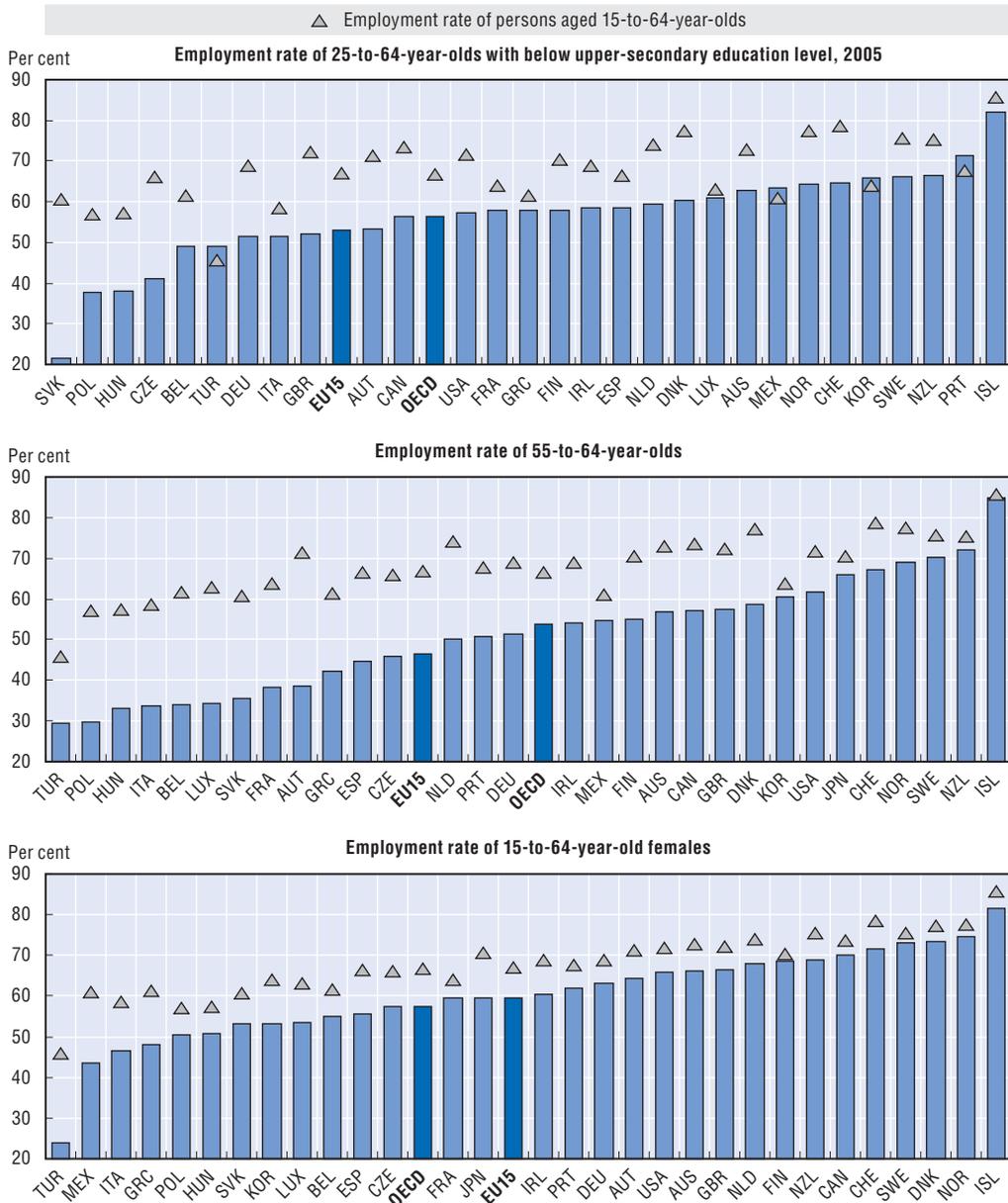
Figure 8.1. Differences in population structure across OECD countries¹



1. The working-age population refers to the population aged 15 to 64, the prime-age population refers to the population aged 25 to 54.
2. For Poland and the United Kingdom, this share might be significantly under-estimated as it excludes the “ISCED 3C Short” programme that is at the limit of the lower/upper-secondary level. “ISCED 3C Short” represents 34% of the working-age population in Poland, 19% for the United Kingdom in 2005; Iceland comes third with only 7%.

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The difference in countries’ total employment rates *vis-à-vis* that of the United States, can be broken down into a component due to differences in working-age population structure and another component reflecting the employment performance within groups.⁸ The former (“structural”) component measures the difference between a country’s total employment rate and the one that would obtain if this country had the US population structure while keeping its own group-specific employment rates.⁹ Conversely, the latter (“effective performance”) component measures group-specific employment-rate

Figure 8.2. **Group-specific employment rates vs aggregate employment rate, 2007**

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differences vis-à-vis the United States, weighted by the share of each group in the total US working-age population.

For EU15 countries on average, about a third of the difference in aggregate employment rates vis-à-vis the United States comes from the structural component (Table 8.1).¹⁰ This means that if these countries had the US working-age population structure while maintaining their own group-specific employment rates, a third of the total employment gap vis-à-vis the United States would disappear. The structural component is particularly large in Mexico, southern and central European countries, France and Ireland. The implication is that, given their population structures, these countries would have to perform better in terms of group-specific employment rates than the United States to

Table 8.1. **Population structure and employment performance, 2004**

Country ¹	Aggregate employment rate ²	Employment rate gap vs. the United States (<i>percentage points</i>)		
		Total	Population structure component	Effective performance component
Turkey	46.1	-25.1	-1.3	-23.8
Poland	51.9	-19.4	-5.2	-14.2
Hungary	56.8	-14.5	-5.6	-8.8
Slovak Republic	57.0	-14.2	-3.3	-10.9
Italy	57.4	-13.8	-6.5	-7.3
Greece	59.6	-11.6	-2.0	-9.6
Mexico	59.9	-11.4	-8.1	-3.3
Belgium	60.4	-10.8	-2.9	-7.9
Spain	62.0	-9.2	-3.2	-6.0
France	62.4	-8.9	-3.3	-5.6
Luxembourg	62.5	-8.8	1.4	-10.1
Korea	63.6	-7.6	4.1	-11.8
Czech Republic	64.2	-7.0	-2.3	-4.7
Germany	65.0	-6.2	-0.8	-5.4
Ireland	65.5	-5.7	-3.3	-2.4
Finland	67.2	-4.0	-1.3	-2.7
Austria	67.8	-3.5	-2.1	-1.3
Portugal	67.8	-3.4	-3.1	-0.3
Japan ³	68.4	-2.9	2.3	-5.2
Australia	70.3	-0.9	-2.6	1.7
United States	71.2	0.0	0.0	0.0
Netherlands	71.2	0.0	-2.5	2.5
Canada	72.5	1.3	0.7	0.6
United Kingdom	72.7	1.4	1.8	-0.3
Sweden	73.5	2.2	0.0	2.2
New Zealand	73.5	2.3	-0.9	3.2
Norway	75.6	4.4	2.1	2.3
Denmark	76.0	4.8	-1.1	5.9
Switzerland	77.4	6.2	-0.4	6.5
Iceland	82.9	11.7	-0.6	12.2
<i>European Union (EU15)</i>	<i>64.8</i>	<i>-6.4</i>	<i>-2.2</i>	<i>-4.2</i>
<i>OECD</i>	<i>65.1</i>	<i>-6.1</i>	<i>-1.3</i>	<i>-4.8</i>

1. Data for EU15 and OECD are weighted average based on population aged 15 to 64.

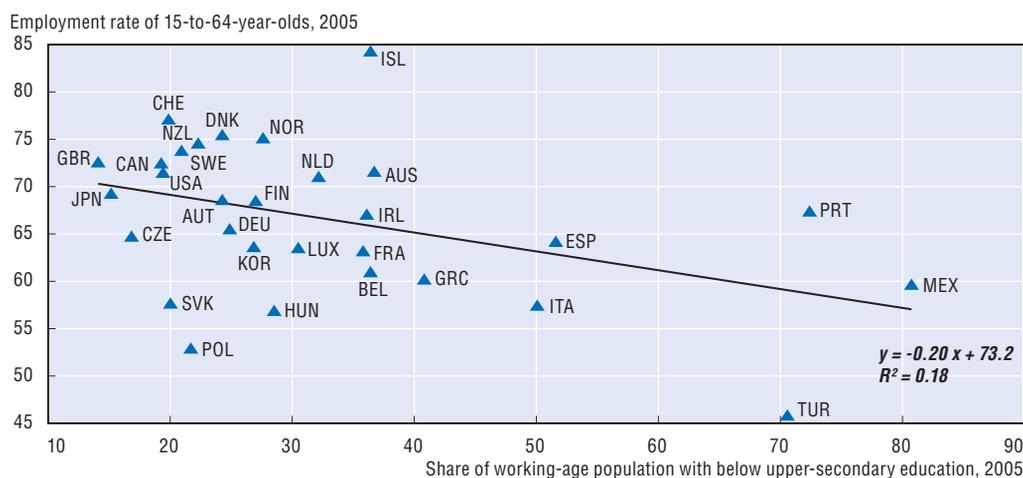
2. Employed persons as a percentage of the working-age population (15-to-64-year-olds).

3. 2003.

reach a similar aggregate employment rate. By contrast, the population structure in Korea, Japan, Norway and the United Kingdom seems more favourable to employment than that of the United States.

The link between population structure and the total employment rate appears clearly in the educational dimension. The share of the working age population not having an upper-secondary education is significantly and negatively correlated with the total employment rate across countries (Figure 8.3). Based on this very simple relation, a 10 percentage points lower share in the population having at most a lower-secondary education qualification would on average be associated with an increase in the total employment rate of 2 percentage points. This would imply that education affects GDP per capita beyond its effect on aggregate labour productivity.

Figure 8.3. **The share of population with below upper-secondary education is negatively correlated with the total employment rate**



Note: The regression coefficient is -0.20 with a standard error of 0.08 (P-value 0.02). When the countries recording a GDP per capita lower than half of the US level (Hungary, Mexico, Poland, the Slovak Republic and Turkey) are excluded, the coefficient is -0.17 (S.E. 0.09 , P-value 0.07). When Portugal and Iceland are further excluded, the coefficient is -0.34 (S.E. 0.09 , P-value < 0.01).

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Working-age population structure and productivity

Population structure can affect average labour productivity in different ways, beyond the well-recognised role of more widespread education in boosting individuals' long-term productivity levels. Indeed, an expanding literature has stressed the importance of demographics for productivity developments (*e.g.* Feyrer, 2008; Werding, 2008). Age structure can, in principle, have a large impact on productivity as individuals' productivity may systematically differ over the active period of life because of experience, depreciation of knowledge and age-related trends in physical and mental capabilities, though the net effect of these factors is open to debate.

In an attempt to give an order of magnitude of such productivity differences across population groups, Table 8.2 reports data on relative wages across age and education groups for a selected number of countries.¹¹ Based on this imperfect proxy for relative productivity, young workers with below upper-secondary education appear to be only about half as productive as the average worker, whereas the most productive groups (individuals older than 45 with tertiary education) are about 50% more productive. However, seniority wage profiles reflect other factors than productivity – such as attempts by enterprises to retain workers – and these measures should therefore be seen as indicative only.

Assuming that relative wages reflect productivity differences across groups within each country, aligning population shares for all groups in OECD countries on those in the United States would increase average productivity levels in almost all countries.¹² Based on this mechanical effect, differences in the composition of the working-age population compared with the United States penalise Europe (EU15) in terms of output per hour worked by 6%, while the effect for central European countries is about 10% and for Turkey and Mexico more than 20% in lost productivity (Figure 8.4, Panel A). It needs to be stressed that the structure of the working-age population in these calculations is not just

Table 8.2. Productivity levels by age groups and education levels
 Proxied by wages; average wage for workers aged 45-54 with upper-secondary education = 100

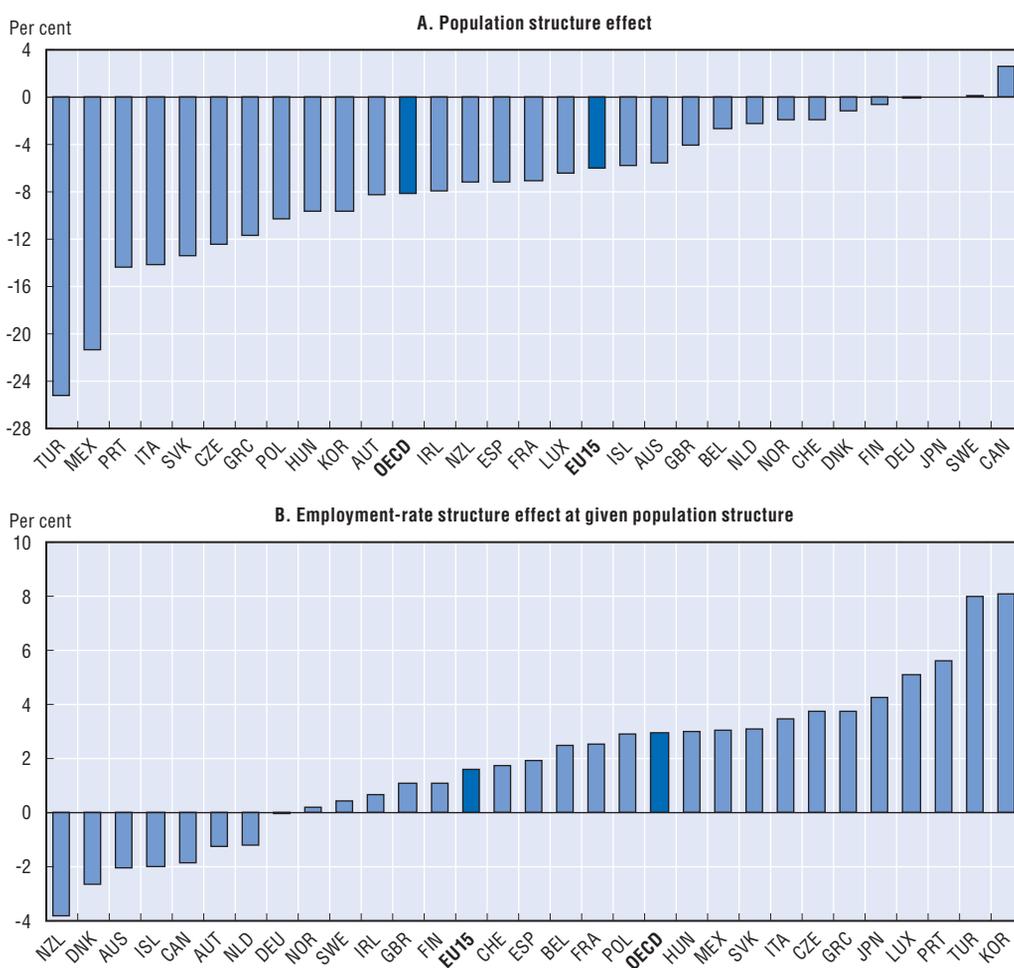
Wage measure: total wages/total hours worked ¹					
Age groups	15-24	25-34	35-44	45-54	55-64
Primary and lower-secondary education					
France	42	55	64	69	71
Germany	36	84	94	90	86
Italy	52	65	72	73	72
Spain	49	57	63	69	70
Sweden	51	85	93	92	92
United Kingdom	76	87	89	85	82
United States	45	69	78	82	83
Upper-secondary education					
France	30	58	82	100	119
Germany	63	90	98	100	97
Italy	56	72	88	100	107
Spain	53	62	80	100	98
Sweden	70	88	95	100	109
United Kingdom	71	88	99	100	91
United States	51	79	95	100	102
Tertiary education					
France	43	75	110	117	155
Germany	64	107	129	133	136
Italy	77	94	112	155	164
Spain	55	80	109	142	155
Sweden	61	101	130	125	147
United Kingdom	75	105	124	118	112
United States	72	116	151	149	159

1. See Boulhol (2009) for details.

something policy has to contend with: an important driver of the results is past education policies (see below).

Because group-specific employment rates differ across countries, the employment structure (by education, age and gender) influences differences in average productivity across countries beyond the sole effect of population structure.¹³ Indeed, in most countries, measured productivity is artificially boosted due to an employment-rate structure that is relatively more detrimental to low-productivity groups than in the United States: the effect on overall productivity is about 3% on average for the OECD and 1.5% for Europe (EU15) (Figure 8.4, Panel B). This means that aligning the group-specific employment rates with those of the United States at a given population structure would result in a decrease in average productivity of these respective amounts. Even though labour market reforms aiming at integrating these low-productivity individuals raise welfare, they are likely to generate a trade-off between employment and output per hour worked (see Box 8.1).

Figure 8.4. **Mechanical effect of population and employment-rate structure differences vis-à-vis the United States on average hourly productivity, 2004¹**



1. In France, for example, average hourly productivity is mechanically reduced by 7.0% compared with the situation where France had the same population structure as the United States while keeping its group-specific employment rates. Average hourly productivity is mechanically increased by 2.4% compared with the situation where France had the same employment-rate structure as the United States while keeping its group-specific population shares. Data for the EU15 and OECD (minus the United States) are weighted averages.

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Box 8.1. Long-term trade-off between labour utilisation and productivity

Some research suggests that there is a trade-off between employment and average measured productivity, and that, as a result, improved employment performance might have less effect on GDP per capita than might be expected (see *e.g.* Bourlès and Cette, 2005, and OECD, 2007, for a survey). There are a number of reasons for higher employment to be associated with lower average labour productivity. In the short term, the stock of capital is slow to adjust, and increases in employment might therefore have a negative impact on labour productivity as capital per worker declines (Gordon, 1997). In the long term, as capital adjusts, the trade-off may be less stark or even non-existent, and this may not have been satisfactorily taken into account in previous studies (McGuckin and van Ark, 2005). Nonetheless, changes in employment and in average productivity could still be linked through changes in the productivity of individual workers and through shifts in labour composition.

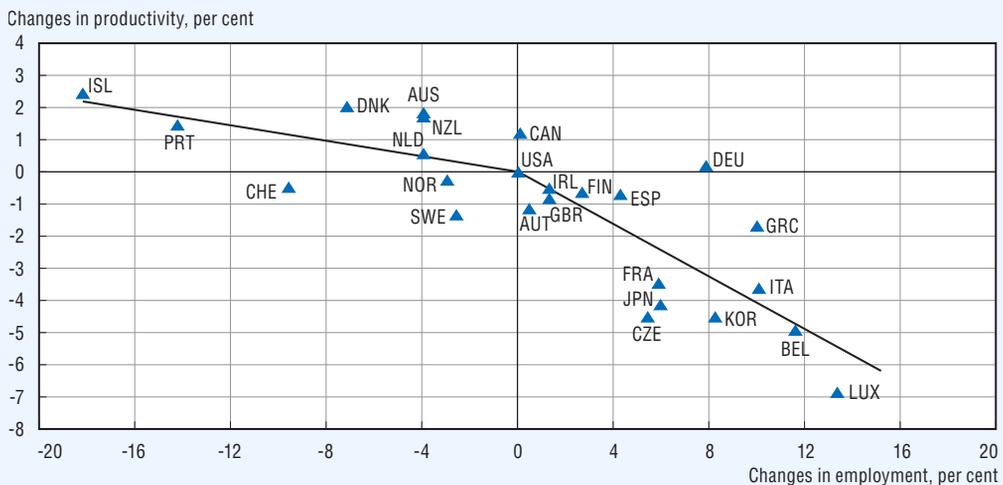
Box 8.1. Long-term trade-off between labour utilisation and productivity (cont.)

While OECD (2007) assesses the impact of labour market reforms on individuals' productivity through mechanisms such as the faster adoption of new technologies, the allocation of labour resources to new high-productivity activities and human capital depreciation following long-term unemployment spells, the focus here is on the effect of changes in labour composition.

If employment increases come from the inclusion of relatively low-productivity workers in the workforce, the average quality of the workforce diminishes, generating a persistent trade-off between employment and average productivity. The magnitude of the trade-off is then directly related to the productivity level of the newly integrated workers relative to that of the average worker. In most countries, employment rates are lower for low-productivity workers, and changes in these employment rates typically generate a trade-off. Conversely, if increases in employment are associated with a higher average education level of the workforce, productivity and employment are positively related.

The figure below summarises the impact on aggregate labour input and productivity, if employment rates in each population group, for each country given their population structure, were to match those in the United States (see Boulhol and Turner, 2009, for further details). Replicating the US employment-rate structure would generate a persistent trade-off between employment and productivity, an increase in labour utilisation of one per cent being associated with a decline in output per hour of $\frac{1}{4}$ per cent on average in OECD countries, based on estimates over 1997-2004. Of course, since the trade-off is only partial, an increase in labour utilisation raises GDP per capita.

Employment and productivity changes when matching US employment rates within each group, 2004¹



1. While the figure represents the cross-section of OECD countries for 2004 only, the elasticities reported in the box are estimated over the period 1997-2004.

Box 8.1. Long-term trade-off between labour utilisation and productivity (cont.)

However, the extent of the trade-off appears to differ across countries. For low-employment countries (on the right of the figure), aligning employment rates with the US ones implies a change in employment structure associated with lower aggregate productivity, with a trade-off sensitivity of about $\frac{1}{3}$ (instead $\frac{1}{4}$ on average across all countries) over 1997-2004, whereas for high-employment countries (on the left of the figure) the changes in employment are more equally distributed and therefore imply only a minimal trade-off. Thus, even for low-employment countries, around two-thirds of the employment gains would be reflected in GDP increases.

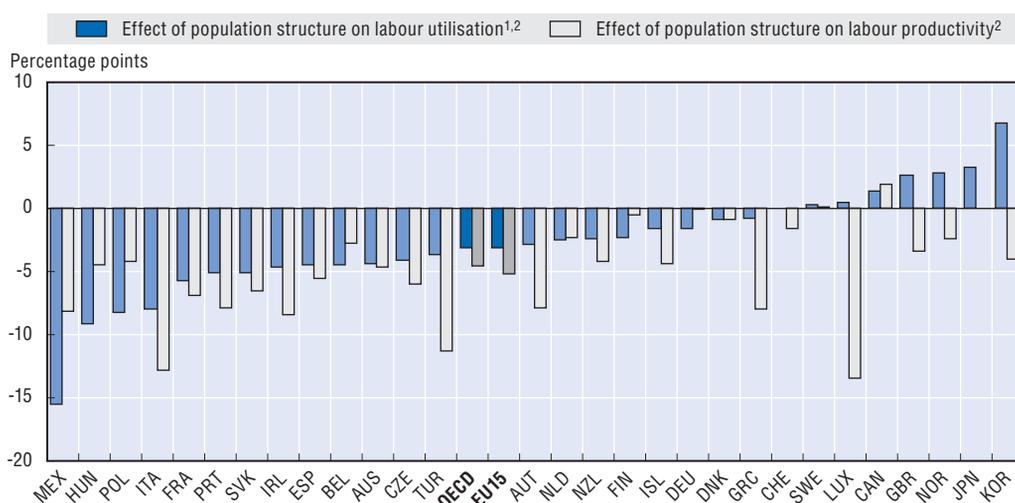
Conclusions and policy implications

This chapter has calculated, for each OECD country, the mechanical effect of a hypothetical shift of the working-age population structure to that of the United States. It is mechanical because group-specific employment rates are assumed to remain at their current level in each country. Figure 8.5 recapitulates the above results, bringing together the effects on labour utilisation and hourly productivity, measured as contributions to the respective gaps vis-à-vis the United States.¹⁴

Based on these mechanical calculations, the structure of the working-age population accounts for 6 percentage points of the GDP per capita gap vis-à-vis the United States for other OECD countries on average, and for 7 percentage points for Europe (Figure 8.6). These effects compare with overall GDP per capita gaps of 40 and 25 percentage points, respectively.¹⁵

Figure 8.5. Mechanical effect of population structure differences vis-à-vis the United States on labour utilisation and hourly productivity, 2004

Contribution to the gap vis-à-vis the United States (USA = 100, current PPPs)

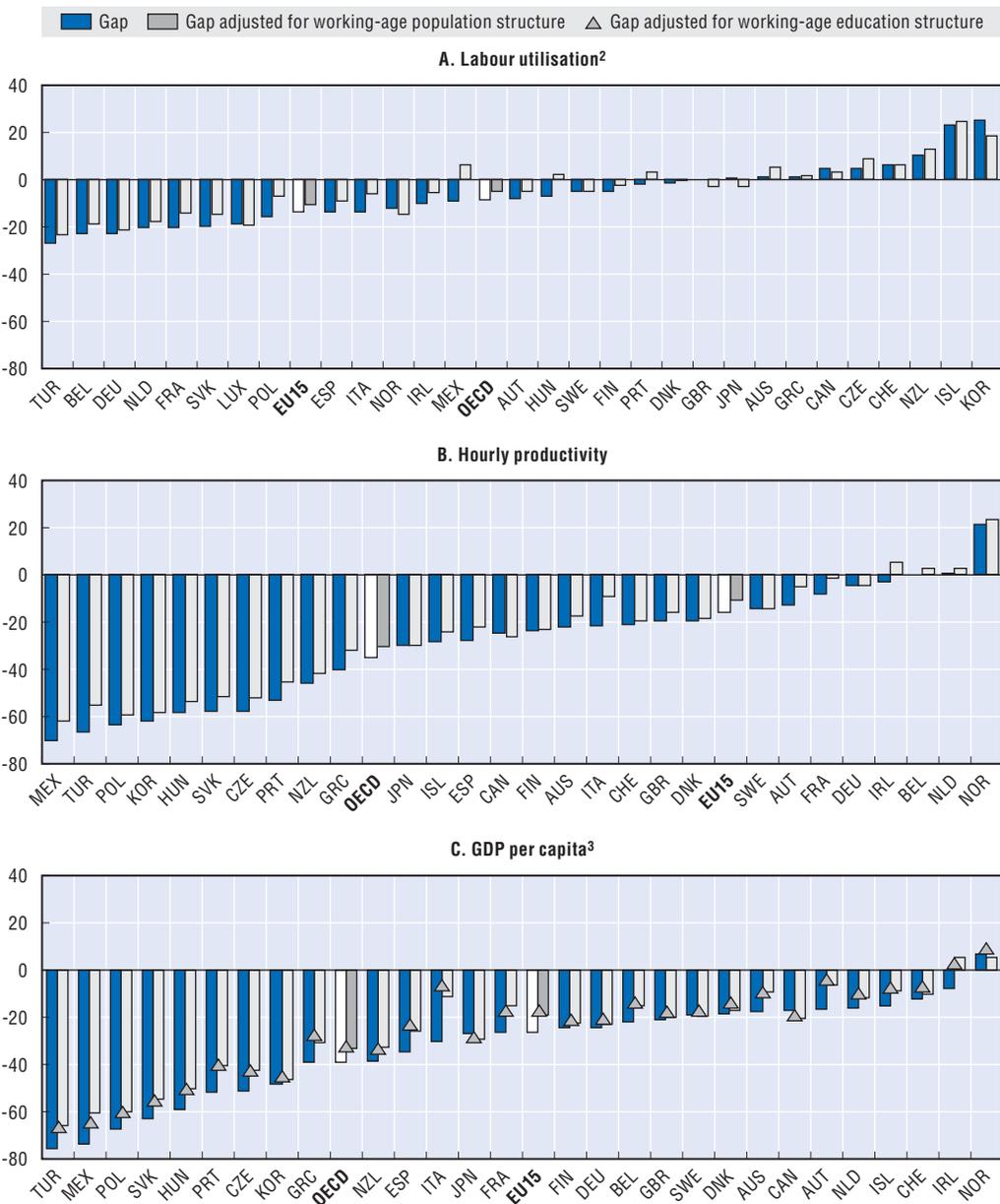


1. Labour utilisation is defined as the total hours worked divided by the working-age population. The effect on labour utilisation includes the impact on aggregate employment plus the compositional effect on aggregate average working hours, holding group-specific average working hours constant.
2. Data for EU15 and OECD (minus the United States) are weighted averages.

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Figure 8.6. **Structure-adjusted labour utilisation, labour productivity and GDP per capita differences, 2004**

Gap vis-à-vis the United States (USA = 100, current PPPs), percentage points¹



1. Data for EU15 and OECD (minus the United States) are weighted averages.
2. Labour utilisation is defined as the total hours worked divided by the working-age population. Adjusted labour utilisation takes into account the effect of the working-age population structure on employment plus the composition effect on aggregate average working hours, holding group-specific average working hours constant.
3. For Belgium as an example, the GDP-per-capita gap is 21.7 percentage points, falling to 14.9 when adjusting for the working-age population structure. Education contributes 13.6 of these 14.9 percentage points.

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The effect of the working-age population structure is dominated by differences in the education composition of the population. In fact, the impact of replicating the US education structure for each country-specific gender-age group suggests that education explains about 85% of the overall working-age population structure effect (Figure 8.6, Panel C).

Although education is primarily thought of as affecting productivity, the effect of differences in population structure on labour utilisation is on average almost as large as that on productivity. The education structure of the working-age population is strongly influenced by education policies over previous decades, and the large population-structure effects reported in this chapter are suggestive of the potential for education reforms to improve future employment and productivity performance.

Even though the computed effects of working-age population structure are large in many cases, they only modestly alter the qualitative assessment of countries' performance in terms of labour utilisation and productivity.¹⁶ The main differences from taking into account the effect of working-age population structure are the following:

- Labour utilisation: the “underlying” performance of Mexico, Hungary, Italy, Poland, France and the Slovak Republic is significantly better than unadjusted measures indicate, whereas the converse is true for Korea, Japan and Norway.
- Labour productivity: adjusting for working-age population structure leads to a higher output per hour worked, especially for Italy, Austria, France and Ireland, and also for Turkey, Portugal and Greece.
- GDP per capita: adjusted measures are higher than unadjusted ones in Italy, Mexico, France, Iceland, Greece and Portugal, and lower in Canada, Japan and Switzerland.

Overall, as differences in the structure of the working-age population tend to affect labour utilisation and productivity in the same direction, the adjustments do not affect the relative weakness in performance between productivity and labour utilisation: countries with a relative weakness on the productivity side are mostly the same on the adjusted and unadjusted basis. As a result, the diagnosis of weaknesses underlying the selection of priorities in Going for Growth is not seriously affected by adjusting for differences in the structure of population across countries.

Notes

1. This chapter is based on analyses reported in Boulhol (2009) and Boulhol and Turner (2009).
2. In doing this, group-specific employment rates are assumed to remain at their current levels in each country. This implies that the complex implications for group-specific labour utilisation performance of such population shifts are ignored. In addition, the results are subject to the chosen population breakdown. If data would have permitted, a finer decomposition could have been implemented, potentially leading to somewhat different findings.
3. The age structure of the population is influenced by life expectancy, which varies widely across countries. Using the same age limit (64) for working age population across countries is therefore an arbitrary assumption.
4. This share (the so-called dependency ratio) is kept constant throughout the analysis reported in this chapter.
5. The working-age population is almost equally split between males and females in almost all countries. Only Iceland and Mexico present an unusual gender distribution for the *working-age* population. This is due to working-age male migration, inward and outward respectively.
6. The analysis reported in this chapter relies heavily on the comparability of education levels across countries using International Standard Classification of Education (ISCED). In some countries (*e.g.* Poland and the United Kingdom), the appropriate classification of some large education programmes is subject to some doubt.
7. Empirical studies have found that educational attainment, gender and age influence labour supply and demand. For example, changes in the age composition of the population are estimated to have increased the natural rate of unemployment (NAIRU) in the United States by 0.7 percentage point

between 1960 and 1979 and reduced it by the same amount between 1979 and 1998 (Katz and Krueger, 1999). Moreover, works at the OECD and European Commission have also investigated the effect of population structure: Burniaux *et al.* (2004) and Carone (2005) conduct a shift-share analysis to make projections about labour force participation, while Mourre (2009) studies the impact of demographics and education on GDP per capita.

8. This standard shift-share analysis is based on the total population being broken down into 30 groups: 5 age classes, 3 education levels and gender. Ideally, other dimensions, such as immigration, should also be taken into account, but this is not possible because of the lack of data.
9. This calculation extends the Perry-weighting procedure to education on top of demographics. Following Perry (1970), this procedure captures the direct effects of demographic changes, assuming that these changes affect labour force shares but not the employment rates of individual groups. As highlighted by Ball and Mankiw (2002), this assumption has been questioned due to possible indirect effects, but with unresolved inferences. For example, Shimer (1999) argues that a younger labour force raises unemployment among the young, whereas Shimer (2001) argues that it reduces unemployment for both young and older workers.
10. This breakdown is likely to be influenced by the stance of policies because group-specific employment rates in different countries are partly a result of country-specific policies. However, if the structural component is computed using the US employment rates rather than the country ones, population structure accounts for half of the employment gap between Europe and the United States (see Bouhhol and Turner, 2009).
11. In the long run, the contribution of labour to output should be closely related to the cost of labour. That is, marginal labour productivity should be closely related to wages. If relative wages between two groups of workers differ too much from the relative productivity of the two groups, firms adjust their employment structure to restore the balance. The fact that relative wages can differ significantly from relative intrinsic productive capacities, as a result of *e.g.* rent-sharing or discrimination, does not imply that they are inconsistent with relative marginal productivity.
12. These estimates are based on the methodology developed by Jorgenson *et al.* (1987) to calculate labour quality growth, which has been extended to simulated states of an economy. The production function is supposed to have constant returns to scale and the labour aggregate is a translog function of labour inputs determined by the hours worked by each group of workers. Because the considered population shifts are sometimes huge, the underlying assumptions behind such estimates are on the edge of what the methodology can support. This exercise is simply meant to provide orders of magnitude and highlight the main mechanisms at work.
13. The employment structure combines the structure of the working-age population and that of the employment rates.
14. Even though group-specific average working hours are assumed to remain at their current level, changes in labour composition alter the aggregate average working-time. Therefore, the effect on labour composition includes this change on top of employment changes.
15. Taking into account also the population outside the traditional working age, the effect of the total population structure is somewhat lower due to an above-average dependency ratio in the United States.
16. One reason is that working-time differences across countries explain a large part of differences in GDP per capita, and that the analysis reported in this chapter has been carried out holding group-specific average working-time constant in each country.

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Economic Policy Reforms

Going for Growth

2009

Crisis management is now high on government agendas as policy makers look for ways to restore economies to health. At the same time, it remains necessary to undertake structural reforms that will strengthen economic growth over the longer term. Indeed, such reforms can also stimulate demand in the short run, which is of particular importance in the context of the current crisis.

Going for Growth 2009 highlights the most appropriate structural reforms to improve performance, takes stock of recent progress in implementing structural policy reforms and identifies five policy priorities for each OECD country that could lift economic growth in the long run. It calls for reforms in a number of areas in order to strengthen labour productivity and employment, including reforms to education systems, product market regulation, agricultural policies, tax and benefit systems, health care and labour market policies.

The set of internationally comparable indicators provided here enables countries to assess their economic performance and structural policies in a broad range of areas.

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- infrastructure investment, growth and public policy
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