

## Chapter 1

### Main policy challenges

*Spanish economic growth, sustained by sharply rising domestic demand and employment, has remained strong in recent times, and the differential in per capita GDP with the euro area average fell to an estimated 12% in 2005. Nevertheless, the imbalances that have been accompanying the expansion for some years now raise persistent questions as to whether the expansion can last: i) the still high inflation differential with the euro area average is eroding competitiveness and helping to widen the external deficit, which has now reached a historic high; ii) developments in the housing market, where real prices have doubled since 1998, and mounting household debt remain disturbing; and iii) productivity growth is still extremely low. Moreover, from a longer-term standpoint, the currently sound position of public finances could be threatened, given the expected consequences of population ageing. There is broad consensus on this assessment of the Spanish economy and the need to find remedies for these difficulties, prompting the authorities to continue to implement their 2005 National Reform Programme. However, in some cases there are questions about the pace and ambition of the measures introduced thus far for meeting these challenges.*

## The Spanish economy has continued to expand at a rapid pace...

Spain's macroeconomic performance has remained remarkable in recent years: by the end of 2006 the country had experienced a 13th consecutive year of strong growth, which constitutes one of the longest expansions in recent Spanish history. The average rise in production over the past ten years, 3.7% per year, was even more robust than in the United States and some 1½ percentage points above the euro area average (Figure 1.1, Panels A to D). This economic vitality, which underlay 1% annual reductions in the living-standards gap (measured in terms of *per capita* GDP) with the OECD average over the past decade, was accompanied by a marked consolidation of public finances, as shown by the rapid drop in the government debt. Employment has also made spectacular gains, with roughly 40% of the jobs created in the euro area between 1996 and 2006 being in Spain, although the Spanish population accounts for less than 15% of the area total. As a result, the unemployment rate has been cut by 11 percentage points since its peak in the mid-1990s, to 8.2% in the third quarter of 2006 – its lowest level since 1980.

These very good results are to a large extent the consequence of a virtuous circle set in place by two positive shocks affecting both demand – with a clear drop in real interest rates associated with Spain's entry into the euro area – and supply – with an enormous increase in immigration since the late 1990s (Malo de Molina, 2005). Total population growth has been greater than in the other EU countries, except Ireland, since 1998, and about 3 of the 4 million additional persons living in Spain since then are immigrants. Recent analyses indicate that more than half of GDP growth over the last five years can be ascribed to immigration, which has also had an important impact on the public finances and the external accounts (Box 1.1). This sets the Spanish economic situation apart from those of other similarly placed countries in the Economic and Monetary Union (EMU), such as Italy or Portugal, whose expansions have been less dynamic and/or less sustainable after the creation of the euro area. *First*, as in other southern European countries, the cut in interest rates has induced a rise in the permanent income and debt capacity of households, which has spurred private consumption and residential investment, while businesses have also been buoyed by lower interest costs. *And, second*, thanks to immigration Spain has recorded a significantly greater increase in the supply of available labour than the rest of Europe – a trend that has also been bolstered by the growing participation of women in the job market. This trend has tempered demand pressures on real wages in particular, which has sustained job creation, including jobs in the service and construction sectors that require abundant low-cost labour. These positive employment outcomes have also benefited from the labour market reform undertaken in the mid-1990s, which coincided with greater moderation in trade union demands.<sup>1</sup> In addition, fiscal consolidation along with tax cuts in 1998 and 2003 also helped to increase supply and household confidence.

### Box 1.1. What is the estimated impact of the large immigration inflows on the Spanish economy?

Immigration pressures, which have been particularly strong over the last five years, have had important consequences for the Spanish economy, notably on employment, output growth and living standards but also on public finances and the external accounts. A quantification of these effects has recently been provided in a report by the Economic Office of the Prime Minister (OEP, 2006), the main findings of which are summarised below:

- Half of GDP growth during the last five years can be ascribed *directly* to immigration (the contribution would amount to a third over the last decade), thanks to its positive impact on population, employment and *per capita* income (see Table 1.1):
  - ❖ About 3 of the 4 million additional people living in Spain since 2000 are immigrants and half of the 2.6 million jobs created between 2001 and 2005 have been filled by foreign workers.
  - ❖ Between 2001 and 2005, immigration has been responsible for a quarter of the recorded *per capita* income growth. The positive impact of the cohorts of young immigrants on the share of the working-age population in the total population and the employment rate (which is 6 percentage points higher for immigrants than for natives) has more than offset their negative effect on average productivity.
- Immigration has also *indirectly* boosted *per capita* income:
  - ❖ About 30% of the 12.5 percentage point increase in the female labour force participation rate between 1996 and 2006 is estimated to have resulted from immigration, thanks to the induced cost reduction for domestic services.
  - ❖ Immigration is believed to have reduced the NAIRU by 2 percentage points since 1994; this compares to the 10 percentage point fall estimated by the study over this period. Immigrants are indeed more mobile than natives geographically and more responsive to sectoral variations in demand, thereby helping to weaken real wage pressures. They also fill in gaps where the labour supply of natives is structurally low.
- The positive net effect of immigration on the public finances is estimated at about 0.5% of GDP, around half the budget surplus reached in 2005. This results from the substantial social contributions paid by immigrants to the public pension system, whereas they are still rarely eligible for such pensions.
- About 30% of the 2005 current account deficit (representing 2.1% of GDP) can be ascribed to immigration due to higher remittances and a positive effect on imports, particularly of consumer durables and investment goods (including housing).

### ... but it is important to correct the imbalances in order to ensure sustainability

However, the expansion is still being accompanied by imbalances affecting both the real estate sector and economic competitiveness. As regards housing market developments, property prices have doubled in real terms since 1998. To a large extent, the trend reflects structural factors, such as the drop in real interest rates, a rise in the number of households due *inter alia* to immigration<sup>2</sup> and strong demand for second homes, on the part of non-residents in particular. Nevertheless, empirical analysis has shown that property prices have been inflated to some 30% above their long-term equilibrium level, which is to some extent explained by the inherently less elastic supply that cannot balance the booming demand in the short term (Ayuso and Restoy, 2006). A market correction is therefore possible (Van den Noord, 2006), as housing prices are continuing to grow excessively,

although they have slowed down from annual increases of around 18% at the beginning of 2004 to below 10% in the third quarter of 2006. Along with these developments has come a sharp rise in mortgage debt since the late 1990s, making households more vulnerable to interest rate hikes (Figure 1.1, Panel H). The growth in housing loans, most of which are contracted at floating interest rates (but at rates that are still very low in real terms), is continuing at an exorbitant pace (22%, year-on-year, in September 2006). In these circumstances, although gradual property-market moderation is the most likely scenario, it is not impossible that a tightening of interest rates combined, with weakening demand for housing and a stiff correction in property prices could lead to a significant decline in activity. Indeed, residential construction accounts for a larger share of the economy in Spain than in almost all other OECD countries (Figure 1.2). Such a shock, which would be exacerbated by a negative wealth effect on consumption, given the high proportion of property assets in aggregate household wealth,<sup>3</sup> would weaken what have been the main engines of growth in recent years and would be difficult to correct rapidly for lack of an independent monetary policy.

Table 1.1. **Decomposition of Spanish GDP growth over the 1996-2005 period**

Annual average

GDP	Population growth			Per capita GDP								Total contribution from immigration		
	Total	Contribution from:		Total	Contribution from immigration <sup>1</sup>				Contribution from natives <sup>1</sup>					
		Immigration	Natives		Total	Demographic effect	Employment rate	Productivity	Total	Demographic effect	Employment rate		Productivity	
(1) + (2)	(1)	(5)	(6)	(2) = (3) + (4)	(3)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(3) + (5)
1996-2000	<b>4.1</b>	<b>0.4</b>	0.3	0.1	<b>3.7</b>	0.2	0.1	0.1	0.0	3.5	0.0	3.2	0.3	<b>0.5</b>
2001-2005	<b>3.1</b>	<b>1.5</b>	1.2	0.3	<b>1.6</b>	0.4	0.4	0.2	-0.2	1.3	-0.2	0.9	0.6	<b>1.6</b>
1996-2005	<b>3.6</b>	<b>0.9</b>	0.7	0.2	<b>2.7</b>	0.3	0.2	0.1	-0.1	2.4	-0.1	2.1	0.4	<b>1.0</b>

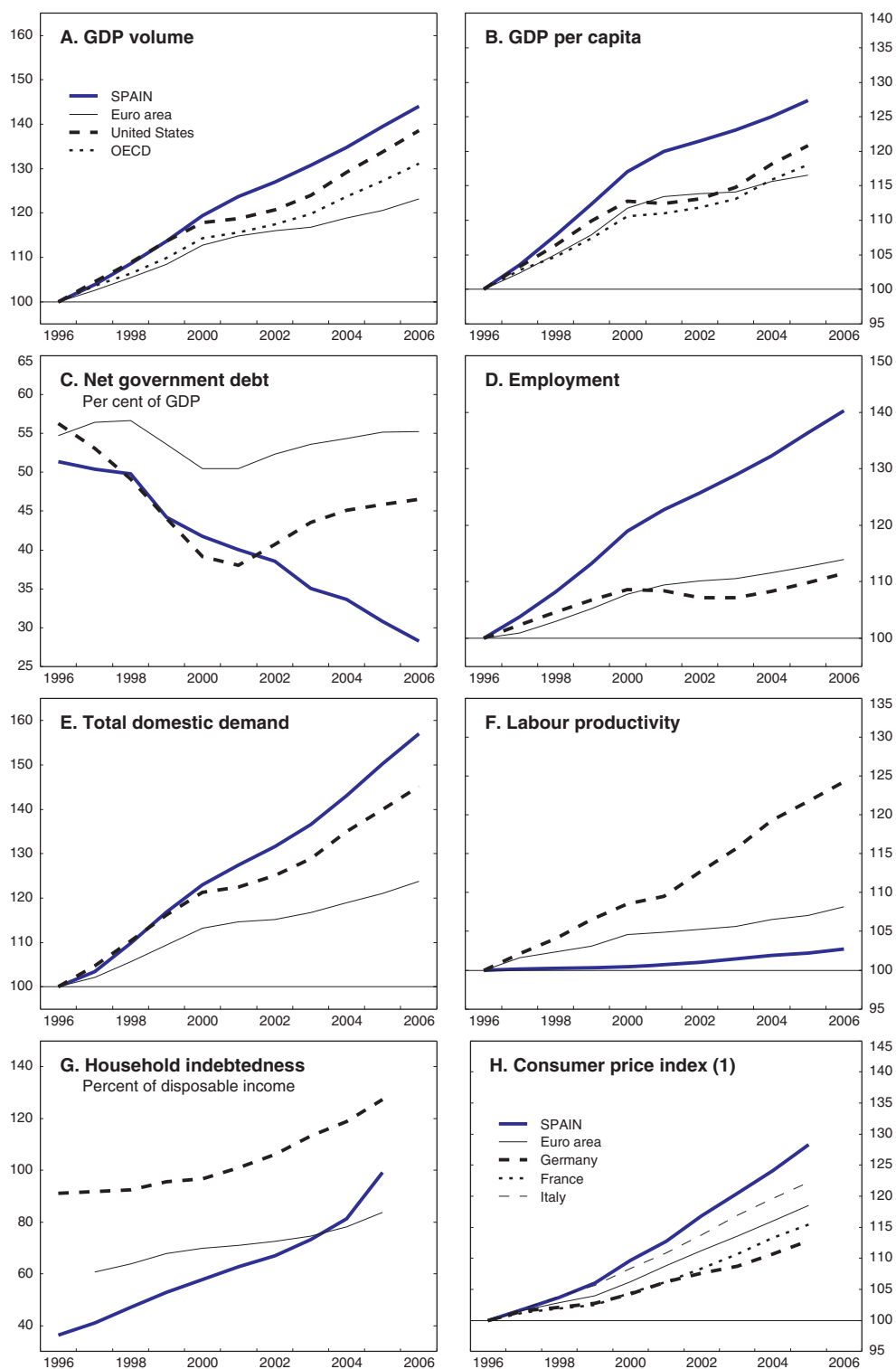
1. The demographic effect is calculated as the ratio of the working age population over total population. The employment rate is calculated as the ratio of employment over the working age population.

Source: Inmigración y economía española: 1996-2006, Oficina económica del Presidente.

Furthermore, the economy's international price competitiveness has been declining continuously for years now, due *inter alia* to the persistent inflation differential with the euro area and the significant increase in relative unit labour costs. The cumulative differential increase in the consumer price index since 1997, as compared with the euro area average, is 10 percentage points. Moreover, productivity gains have also remained very limited. This phenomenon, attributable only in part to the massive influx of relatively low-productivity workers (young people, most immigrants and the long-term unemployed) into sectors with low value added,<sup>4</sup> would seem to reflect the economy's insufficient capacity to integrate and exploit new technologies (see below). The problems of competitiveness resulting from these trends, combined with the boom in domestic demand, have helped widen the current account imbalance to almost 9% of GDP in 2006 – an all-time record. Clearly the freezing of exchange rates within the EMU makes it easy to finance the deficit, but it also precludes any rapid restoration of competitiveness. An improvement in this domain, which may prove necessary should domestic demand weaken, would require a downward adjustment in relative costs, which would probably lead to a protracted period of low growth, as experienced in some other countries in the euro area.

Figure 1.1. **Key indicators in international perspective**

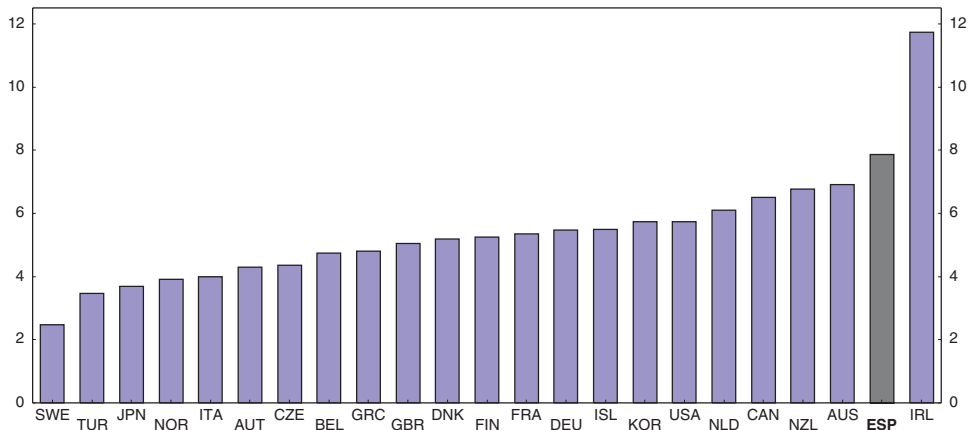
1996 = 100



1. In this panel, international comparisons focus on euro-area countries.

Source: OECD, Economic Outlook 79 database and Main Economic Indicators.

Figure 1.2. **Housing investment share**  
2004, per cent of GDP



Source: OECD, National Accounts and Economic Outlook 79 database.

To restore balanced growth and trim the inflation differential with the euro area that threatens the sustainability of the expansion, as a number of analysts have also stressed (Blanchard, 2006 and Le Bayon, 2006), the authorities have devised a strategy, certain elements of which have already been implemented. Chapter 2, which provides an analysis of recent trends and short-term projections, looks at whether the first signs of more balanced growth can be seen and also assesses the potential risks of an overheated economy over the next two years if the spillover effect triggered by euro area recovery is not offset by a sufficient cooling of domestic demand. In this context, the effectiveness of certain government measures, such as those aimed at improving the functioning of the housing market are investigated. Whether certain institutions, such as the wage formation system, need to do a better job of factoring in the new conditions created by participation in EMU and, more generally, the role of structural and fiscal policies to improve macroeconomic equilibria in the absence of independent monetary policy are also examined.

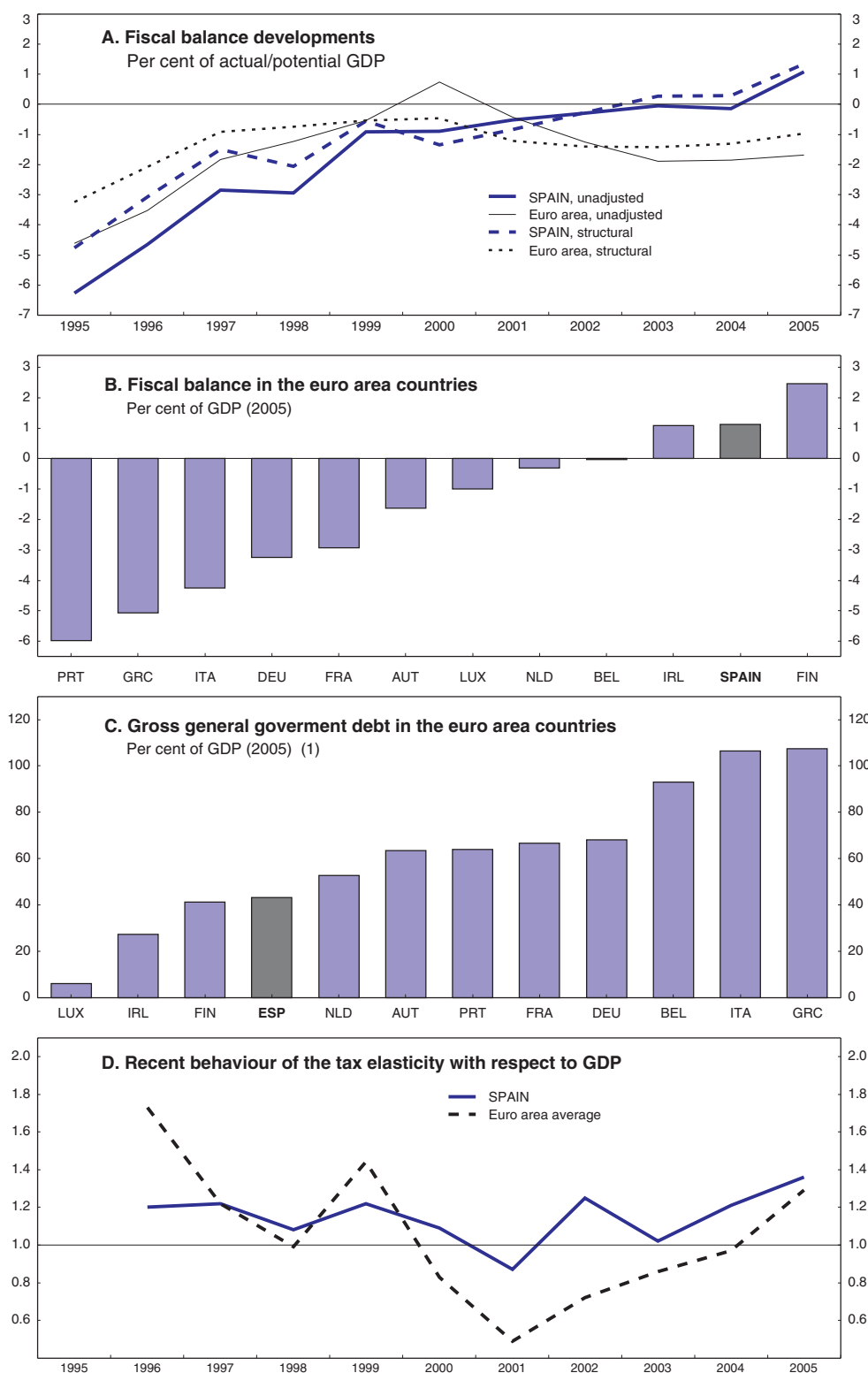
## Efforts are still required to maintain sound public finances in a medium- and long-term perspective

### ***Fiscal performance has been good compared with other countries***

Together with its remarkable growth performance, Spain has achieved a sharp improvement in its fiscal position over the last decade. The consolidation process begun in the mid-1990s has continued over the recent past, as the general government account moved from a deficit of around 6.5% of GDP in 1995 to a surplus of 1.1% in 2005 (Figure 1.3, Panel A). Public debt, which stood at 65% of GDP in 1996, has been steadily reduced to around 43% of GDP (based on the Maastricht definition), well below the euro-area average of some 70.8%. Overall, Spain's fiscal position looks solid in a European perspective, both in terms of the government balance and debt (Figure 1.3, Panels B and C).

Almost half of the improvement in the fiscal balance achieved between 1995 and 2005 (around 3½ percentage points of GDP) comes from lower interest payments following the adoption of the euro and the virtuous circle induced by the debt contraction. Furthermore, both increases in revenues and government primary expenditure cuts have also contributed

Figure 1.3. Spain's fiscal outcomes have improved



1. Maastricht definition.

Source: OECD National Accounts; Economic Outlook 80 database.

to the reduction of public deficit (by about 2 percentage points each between 1995 and 2005). On the expenditure side, the fall in social spending caused by the good performance of the labour market has driven the reduction of public spending, as (government) consumption and investment decreased only marginally in relation to GDP over the past decade. As far as revenue is concerned, the tax burden, which is lower in Spain than the OECD average, has been increasing despite tax cuts which have taken place on a regular basis (see Chapter 3). As a result, the implied elasticity of tax revenues has been consistently above 1 and higher than the euro-area average since 2000 (Figure 1.3, Panel D). This good performance in budget outcomes, which is mostly structural, has been achieved in the context of a substantial decentralisation process.

### ***The medium- and long-term fiscal challenges ahead***

In the medium term, a number of factors could endanger the recent good results. A tax reform, which includes estimated tax cuts of around 0.4% of GDP, is being implemented in 2007. EU funds will diminish by about 0.3 percentage point of GDP in the period 2007-13, and further cuts can be envisaged afterwards as Spain's convergence in income *per capita* with the rest of the EU continues. Moreover, there are several questions surrounding the high elasticity of tax revenues and whether the strong growth in taxes is likely to be sustained over the medium term. On the spending side, as part of its strategy to meet the goals of the Lisbon Agenda, the authorities have embarked on an ambitious programme to transform the economy and guide it towards a growth model based on productivity increases. The National Reform Programme calls for increasing public R&D spending by 0.4 percentage point of GDP by 2010. It contains an ambitious infrastructure programme with yearly investments of around 1¾ per cent of GDP (to be financed largely with public funds). In total, these measures add up to nearly 3 percentage points of GDP over the coming years.

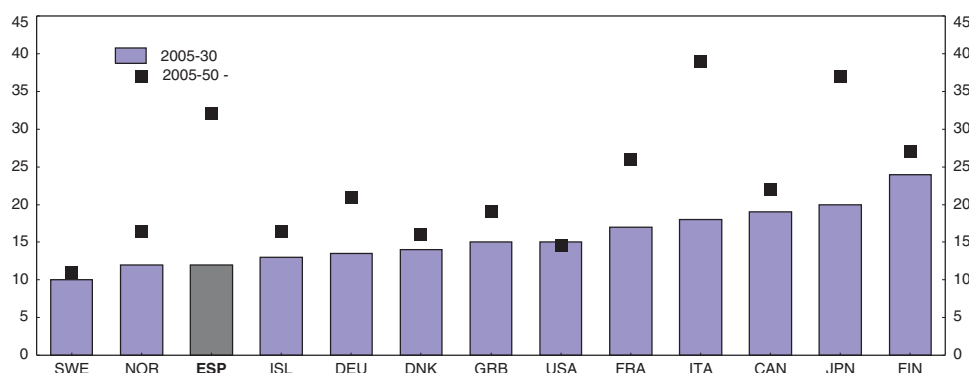
On the other hand, the authorities have signalled their commitment to maintain sound public finances both in their Stability Programme and as one of their priorities in the National Reform Programme. The government's good track record is also reassuring, as budget outcomes have exceeded projections in the past. The revised Stability Law, to take effect in 2007, aims at better taking into account the fiscal consequences of the cyclical developments. For this purpose, it provides more room for central and regional governments to incur deficits when activity weakens and also permits to exceptionally exclude increases in productive investments (up to a ceiling) from the allowed definition of the deficit. While these new provisions should not threaten the pursuit of a sound and prudent fiscal policy, some questions can be raised concerning the ability of this new rule to avoid the risks of a procyclical budgetary outcome.

As regional governments are responsible for a larger share of spending responsibilities, their behaviour will also become more important in achieving good fiscal results. There is an ongoing discussion to modify the regional financing mechanism and the recent reform of the Catalonia autonomy statute increases the region's taxing powers. In this context, it is important to ensure that the new regime of revenue allocation leads regions to manage responsibly their resources and avoids increasing transfers from the central government unless they are assigned new responsibilities.

In a longer-term perspective, Spain – like most other OECD countries – will also suffer from unfavourable demographic changes. However, population ageing will occur later and will be stronger than elsewhere because of the recent substantial rise in immigration and the very low fertility rate (Figure 1.4). The immigration boom has increased the workforce by



Figure 1.4. **Ageing**  
Increase in old-age dependency ratio<sup>1</sup>  
Percentage points of working-age population



1. Ratio of population aged 65 and over to population aged 15-64.

Source: OECD (2006) "Projecting OECD Health and Long-Term Care Expenditures: What are the Main Drivers?"; OECD Economics Department Working Papers, No. 477.

around 2 million people since 2000 (by around 10%), and it has boosted employment, which has contributed to an improvement in the financial position of the pension system. In this context, the need for reforms to face the budgetary consequences of ageing appears still weakly perceived by the social partners, even though the fiscal costs will be substantial not only on pensions but also with respect to health and long-term care. Recent estimates (OECD, 2006b) suggest that public spending on health and dependent care would increase by 4.1 and 2.4 percentage points of GDP by 2050, respectively, if, on top of demographic projections, the cost structure were to grow in line with observed trends over recent years. Regarding pensions, official estimates (using a relatively low immigration scenario) suggest that public spending could increase by about 7 percentage points of GDP, reaching 15.2% in 2050.

These different sources of pressure on public expenditure and taxes are analysed in detail in Chapter 3, along with recent government measures aimed at increasing public spending efficiency and reforming the pension system. Chapter 3 also offers guidance on how fiscal policy should be managed in the longer term to cope with the budgetary effects of the ageing process, in particular for increasing awareness of the problem and the need for reforms and instilling a stronger sense of urgency among the general public and the social partners.

## Bolstering productivity is needed to sustain robust long-term growth

The improvement in Spain's growth performance over the past decade has been predicated essentially on a more intensive use of labour, which began to help enhance the vigour of potential output growth in the late 1990s (Table 1.2). This trend, linked largely with immigration, also reflects a sharply higher employment rate induced by the increased participation of women in the labour force and a drop in structural unemployment. According to OECD estimates, which are confirmed by the recent analyses of the Bank of Spain (Izquierdo and Regil, 2006), structural unemployment has fallen by 5 to 6 percentage points since the mid-1990s, to roughly 9% in 2006, thanks to the reforms undertaken and the changes induced by the massive influx of foreign workers (OEP, 2006).<sup>5</sup> Further progress can still be made to bolster the use of available labour. Despite its rise, the employment rate

Table 1.2. **Potential output growth decomposition**

Average growth rates, in per cent

	Spain	United States	3 Major euro area countries <sup>1</sup>	Portugal	Ireland
<b>1990-1997</b>					
Potential output	2.9	3.2	1.7	2.9	6.6
Trend output growth based on an HP filter	2.8	3.1	1.6	2.8	6.1
<i>Contribution from:</i>					
Potential employment	1.4	1.8	0.4	1.0	3.2
<i>of which:</i>					
Working age population	0.7	1.0	0.1	0.5	1.6
Employment rate	0.7	0.8	0.3	0.5	1.6
Potential labour productivity	1.5	1.5	1.4	2.0	3.4
<i>of which:</i>					
Trend hours worked per worker	0.0	0.1	-0.3	..	-0.7
Capital deepening <sup>3</sup>	1.2	0.8	0.7	0.8	0.1
Trend multifactor productivity	0.3	0.5	0.9	1.1	4.0
<b>1998-2006</b>					
Potential output	3.5	2.9	1.6	2.2	6.5
Trend output growth based on an HP filter	3.3	3.1	1.5	1.8	6.4
<i>Contribution from:</i>					
Potential employment	3.0	0.9	0.6	0.8	3.4
<i>of which:</i>					
Working age population	1.4	1.3	0.1	0.5	2.1
Employment rate	1.6	-0.5	0.4	0.3	1.3
Potential labour productivity	0.5	2.0	1.0	1.4	3.1
<i>of which:</i>					
Trend hours worked per worker	-0.1	-0.1	-0.4	..	-0.6
Capital deepening <sup>3</sup>	0.8	1.1	0.8	0.9	1.1
Trend multifactor productivity	-0.2	1.0	0.6	0.5	2.6

1. France, Germany and Italy.

2. 1992-1997 for the 3 major European countries because of the break in German time series in 1991.

3. The estimated capital/labour ratio used to compute the capital deepening contribution is based on the national accounts measure of employment in the case of Spain. This contribution would have been significantly weaker if labour force statistics had been used as for the other countries.

Source: OECD Economic Outlook No. 80.

remains below the OECD average (Table 1.3). There is still substantial room for improvement in the case of women and older workers, but this would require continued reforms. Aware of this need, the authorities have undertaken, for example, to increase incentives for older workers to remain on the job, through changes in the pension system,

Table 1.3. **Employment rates in selected groups of OECD countries**

Per cent of the working age population, 2005

	Total				Male				Female			
	15-24	25-54	55-64	Total	15-24	25-54	55-64	Total	15-24	25-54	55-64	Total
Spain (1995)	26.1	59.4	32.4	48.1	30.3	78.4	48.4	63.4	21.8	40.3	17.5	32.9
<b>Spain</b>	<b>41.9</b>	<b>74.4</b>	<b>43.1</b>	<b>64.7</b>	<b>47.7</b>	<b>86.9</b>	<b>59.7</b>	<b>77.0</b>	<b>35.8</b>	<b>61.5</b>	<b>27.4</b>	<b>52.2</b>
Five best OECD performers <sup>1</sup>	55.1	83.4	63.8	76.4	56.3	88.2	70.5	81.3	53.8	78.7	57.1	71.4
EU15	39.8	77.7	44.5	66.1	42.8	86.4	53.4	74.1	36.7	69.1	35.8	58.2
OECD	42.9	75.8	52.0	67.7	46.6	87.0	62.5	77.9	39.1	64.8	42.0	57.8

1. Unweighted average of Denmark, Norway, Sweden, Switzerland and United Kingdom.

Source: OECD database on Labour Force Statistics.

and to make it easier for women to enter the job market by developing the infrastructure for relieving them of tasks involving the care of young children and the dependent elderly. Efforts are also underway to expand the rental housing market, which is very limited, impairing labour mobility and, through this, the reduction of unemployment. Chapters 2 and 3 will also analyse government initiatives in these areas.

The increase in labour input, which underlies this good growth performance, will diminish in the medium- and long-term, however, with the gradual return of full employment and the effect of population ageing. Moreover, continuation of the substantial immigration trend is subject to question, given the political and/or social tensions that would result if the economy were to slow down<sup>6</sup> (Box 1.2). OECD long-term growth scenarios based on

### Box 1.2. Towards a revision of immigration policy?

Having long been an emigration country, Spain has in recent years experienced an unprecedented increase in immigration. While there are no comprehensive and reliable data on this subject, the figures that are available point to the proportion of foreign residents having risen from 1½ per cent to approximately 8½ per cent of the population between 1998 and 2005, which represents more than 3 million additional people. This increase has resulted in the total population growing by 4 million (+10.7%) over the period in question (which in absolute terms is the biggest increase among all the EU countries) and has had a major and broadly positive impact on employment, activity and public finances.

Between 2000 and the third quarter of 2006, the share of foreign workers enrolled with the social security rose from 2¾ per cent of total employment to 10%, i.e. an increase of 1½ million people. Immigration has also encouraged a rise in female labour market participation thanks to the increased number of domestic service jobs, which have more than doubled since 2000. Also, it has improved economic flexibility by helping, to a large degree, to reduce structural unemployment, but it has also accentuated the duality of the labour market by increasing the share of temporary jobs. The positive impact on the growth of potential output generated by the increase in labour supply appears to have been offset in part by a decline in productivity growth due to a composition effect, immigration having encouraged the development of labour-intensive sectors such as construction and services. The composition effect associated with the occupation of unskilled posts by immigrants is slight, however, probably accounting for only 0.2 percentage point of the slowdown in productivity growth between 1995 and 2002 (OECD, 2005a). On the other hand, the increase in immigrant employment has strongly buoyed up consumption, in particular of durables, and also of household investment and hence imports, which has caused the current external deficit to widen, as has the increase in immigrants' private transfers to their countries of origin (from 0.3 to 0.5% of GDP between 2001 and 2005).

From a budgetary standpoint, the contribution made by regularised foreign residents is globally positive in the short term, even if access to the health and education systems by immigrants – illegal ones included – does exert pressure on expenditure in certain regions. According to the authorities, the net contribution that immigrants make to the pension system could well be much the same as the surplus posted by the system in recent years (i.e. approximately 1% of GDP). However, the said beneficial effect is only temporary, bearing in mind the current parameters governing the pension system and pension entitlements being accumulated by immigrants (OECD, 2003a). There are few studies quantifying the impact of immigration on the per capita incomes of the population. It seems likely, however, that the effect is positive, although of limited magnitude for natives, because of the resulting increase in the employment rate (of women in particular), while immigrants clearly enjoy an appreciable improvement in their situation (OEP, 2006).

### Box 1.2. **Towards a revision of immigration policy?** (cont.)

Despite the positive economic effects that have accompanied the arrival of numerous foreign workers in the past few years, continuing high immigration is causing growing concern at a time when Spain is still having to contend with strong pressures from illegal immigration, which in 2005 prompted a major regularisation process involving 550 000 people. A cyclical turnaround in the construction sector, where numerous immigrants work on temporary contracts, is giving rise to fears of a significant deterioration in employment. Also, the ease with which entrepreneurs can have access to unskilled, low-cost labour is seen as a potential obstacle to the modernisation of the economy and investment in new technologies, as is suggested by the relatively small increase in the capital/labour ratio compared with other countries over the past decade. Against this background, the social partners now seem anxious that more skilled workers be encouraged to enter the country as part of a policy aimed at more effective control over illegal immigration.

It is difficult, however, to find the right balance between the proper management of legal immigration flows which meet the needs of the labour market and the introduction of labour market spot checks and border controls that are a deterrent to unrecorded jobs. Selective immigration policies are awkward to manage, and the results do not always match expectations because of the scale of the resulting non-discretionary immigration flows (family reunion, for example). The experience gained in other countries suggests that the best way for the authorities to make a selective policy more effective would be to target immigrants' general skills labour market. This means not issuing work permits for a specific job or precise geographical area or putting any – sometimes unrealistic – numerical limits on the volume or composition of immigration (OECD, 2006c). Given the rising number of foreign students in Spain, granting them work permits, once they have completed their studies, might also help to reinforce skilled immigration. Another possibility would be to consider reinforcing labour inspectorates<sup>1</sup> and make visas more systematically compulsory for non-EU foreigners so as better to control illegal migration flows. These measures would be a useful addition to the ongoing efforts to encourage the integration of immigrants, for example by making access to schooling easier for children of immigrants (Chapter 4) and by increasing the supply of rental housing (Chapter 2).

1. Asymmetric penalties aimed solely at employers would no doubt make these inspections more effective.

continued increases in the employment rate, in line with the Lisbon objectives,<sup>7</sup> and the INE's latest demographic projections, based on a high immigration assumption,<sup>8</sup> point to a pronounced slowdown in potential growth in Spain in the years ahead, even if there were a moderate rebound in productivity gains (Table 1.4). While these estimates are subject to substantial uncertainties, the OECD outlook would therefore suggest that a risk of slowdown, or even of a slight reversal, of the convergence process, measured in terms of *per capita* GDP, as compared with euro area countries and/or the United States, could take place in the medium term unless a substantially stronger-than-assumed rebound in productivity growth can be achieved.

To maintain, if not accelerate, the pace of real convergence with the most highly advanced countries over the medium to longer term, the challenge lies to a dominant extent on the productivity side: since the late 1990s labour productivity gains have been slow both in relation to the earlier 1990s and to comparator country outcomes (Table 1.2). Indeed, given similar performance with respect to trend hours worked per worker and, apparently, capital deepening (see footnote 3 to Table 1.2), the disappointment lies squarely with trend growth in multifactor productivity. This actually had already been meagre but

**Table 1.4. Long-term prospects**  
Average annual growth rates, in percent

	1997-2006	2007-10	2011-20	2021-30
<b>Spain</b>				
A. Potential employment	2.9	1.7	0.7	0.1
Contribution from:				
A1. Working-age population	1.2	0.8	0.4	0.2
A2. Trend employment rate	1.7	0.9	0.3	-0.1
B. Potential labour productivity	0.6	1.0	1.3	1.3
C. Potential GDP	3.5	2.7	1.9	1.3
D. Population	1.1	1.0	0.7	0.4
E. Potential GDP per capita	2.4	1.7	1.2	0.9
<b>Euro area</b>				
A. Potential employment	1.0	0.5	0.2	-0.6
Contribution from:				
A1. Working-age population	0.3	0.2	-0.2	-0.5
A2. Trend employment rate	0.7	0.2	0.4	-0.1
B. Potential labour productivity	1.1	1.4	1.6	1.6
C. Potential GDP	2.1	1.9	1.9	1.0
D. Population	0.4	0.3	0.1	0.0
E. Potential GDP per capita	1.6	1.6	1.7	1.0
<b>United States</b>				
A. Potential employment	1.0	0.6	0.6	0.7
Contribution from:				
A1. Working-age population	1.3	1.2	0.9	0.8
A2. Trend employment rate	-0.4	-0.2	-0.4	-0.1
B. Potential labour productivity	2.1	2.2	2.3	2.3
C. Potential GDP	2.9	2.8	2.9	3.0
D. Population	1.1	0.9	0.8	0.6
E. Potential GDP per capita	1.9	1.9	2.0	2.3

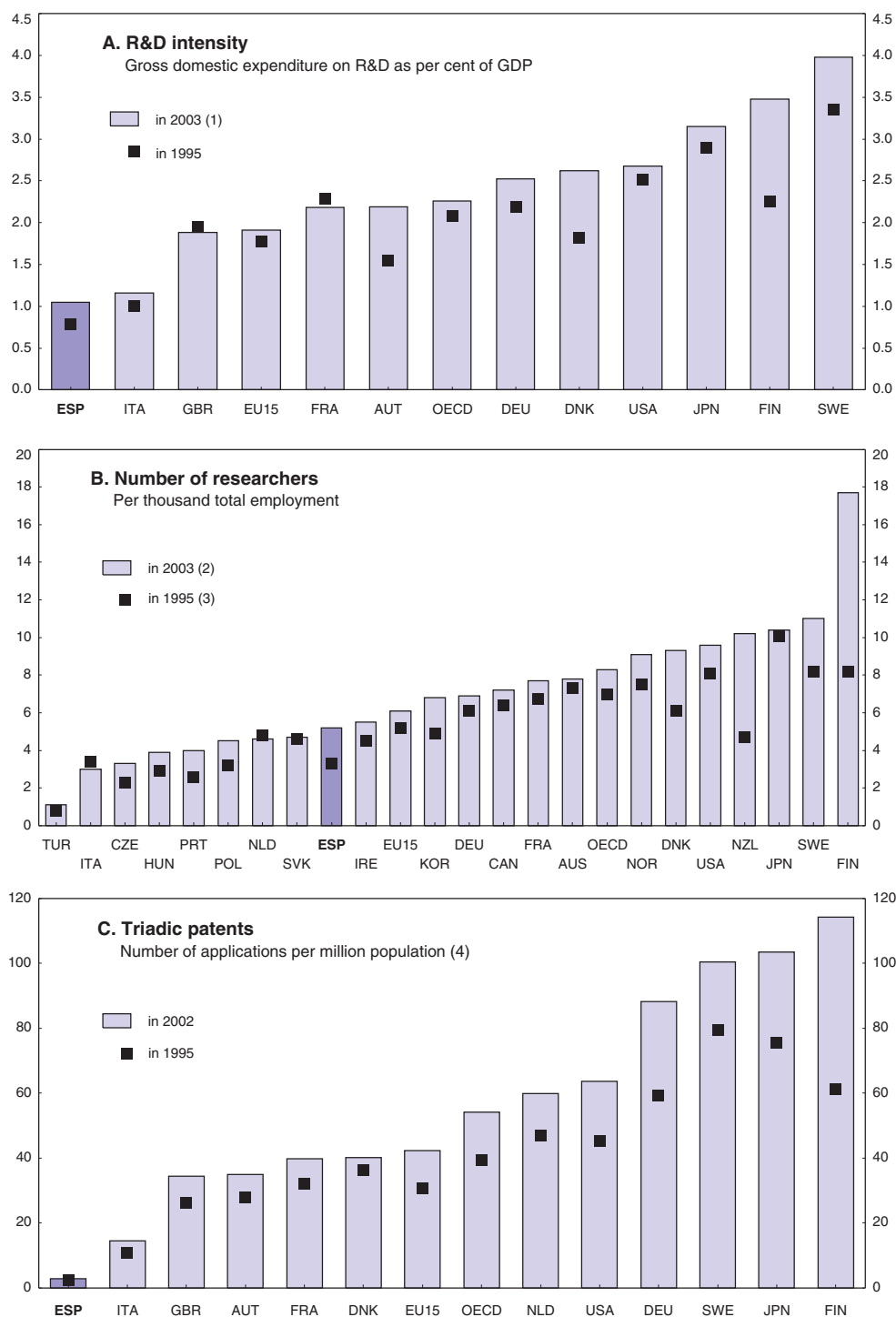
Source: OECD calculation based on the database of the Economic Outlook 80 and INE demographic projections.

has now fallen into negative territory, according to OECD estimates.<sup>9</sup> The goal must therefore be to raise productivity growth. In this area, there is substantial scope for narrowing the gap, since in 2004 the level of Spanish labour productivity was about 8% below the euro area average and 20% below that in the United States.<sup>10</sup> Moreover, speeding productivity growth is one of the authorities' foremost concerns, and it underpins a large part of the measures included in the National Reform Programme (NRP). These measures seek *inter alia* to spur entrepreneurship, enhance the working of the labour market and the market for goods and services and expand both the human and the technological capital of the economy. Improvements in all these areas, would also be beneficial in the realms of research and innovation, where Spain also lags behind, further stimulating growth in total factor productivity.

## Research and innovation performance needs to be strengthened

Admittedly, it is difficult to measure research and innovation performance directly and homogeneously across countries, but most of the available indicators point to Spain having a gap in this area, even though results have improved over the recent period. Domestic R&D expenditure amounted, for example, to only 1.1% of GDP in 2005, half the OECD average (Figure 1.5, Panel A). The share of researchers in total employment (5.2 per

Figure 1.5. Overall R&amp;D and innovation performance indicators



1. 2002 for Italy.

2. 2002 for Australia, Canada, Italy, Turkey, United States and OECD.

3. 1996 for Australia.

4. According to the residence of the inventors. Triadic patents are defined as patents filed at the European Patent Office (EPO), the US Patent and Trademark Office (USPTO) and the Japanese Patent Office (JPO).

Source: OECD Science, Technology and Industry Scoreboard, 2005.

thousand in 2003) is also appreciably lower than the average for the other OECD Member countries (8.3), while the very modest number of patents issued in proportion to the population reflects the serious difficulties the system has in harnessing research results for commercial purposes (Figure 1.5, Panel B). Significant progress has however been achieved in the last few years in this domain.<sup>11</sup> However, the composite index of the European Innovation Scoreboard (Trend Chart, 2005), shows relative weak Spanish results in most areas, whether these relate to knowledge development or the application thereof, and especially as to encouraging firms to innovate.

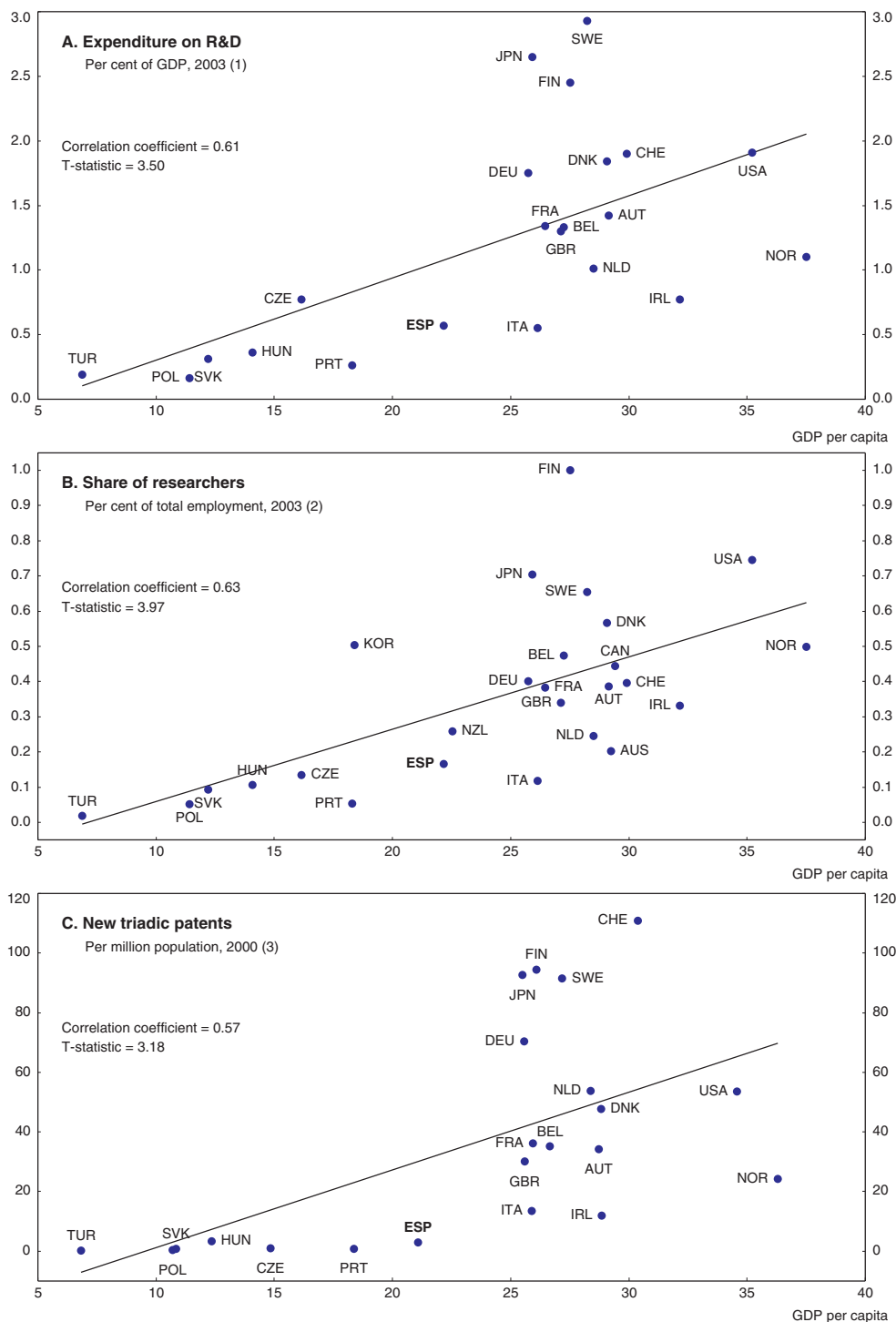
The research and innovation lag has been reduced in recent years, but the convergence process has been slow and uneven, depending on the areas concerned. Progress has been achieved in developing an educated labour force, which is crucial for improving the capacity to innovate. For example, there has been a steeper rise in the proportion of the population with tertiary-level education<sup>12</sup> and in the total number of researchers as a share of employment than the OECD average for several years. The share of Spanish scientific output in the world (as measured by the number of articles published) also grew from 1.3% in 1988 to 2.8% in 2003, which put Spain in 10th place in the world (King, 2004), i.e. at a level close to its economic weight. However, the results in the area of continuing education have fallen compared to the European average,<sup>13</sup> as has the average level of education among young people (OECD, 2005b). It is encouraging that R&D expenditure has risen faster than the OECD average since 1995, thanks in particular to the healthy economic results achieved, when neither firms nor the government had to contend with any limit on their financing capacity. Even so, if R&D expenditure continued to grow at the pace recorded between 1995 and 2003, it would not reach the current average EU level of 2% of GDP until 2025, whereas the Lisbon objective is to increase this rate to 2.6% of GDP by 2010, as well as to make efforts to raise the efficiency of this expenditure. In response, the authorities have approved a broad programme, *Ingenio 2010*, in order to boost Spain's innovation performance (see below).

The research and innovation gap is clearly noticeable in the business sector, even allowing for the development differential still separating Spain from the most advanced OECD countries (Figure 1.6). Within the OECD, there is in fact a collinearity between *per capita* income and innovation performance, which no doubt reflects both the favourable influence of research and innovation on economic growth and also the need for countries to step up their capacity to innovate so as to maintain their competitiveness as their standard of living increases. In Spain, however, firms are relatively little involved in financing and implementing research and innovation activities. Whereas public R&D expenditure measured in relation to GDP was 30% lower than in the EU25 in 2003, the gap was 55% in the case of private research. Also, less than 30% of all researchers worked in the business sector in 2003, whereas the OECD average was nearly 65% (Figure 1.7).

The private sector's poor performance with regard to technological innovation has a number of causes. It is partly attributable to the nation's industrial structure, which is heavily weighted towards low research-intensity sectors and has a smaller proportion of big firms than other countries (Table 1.5). Even so, the level of R&D expenditure would probably be only marginally higher if Spain had the same production structure as in the G7 countries on average (Figure 1.8),<sup>14</sup> as spending by firms is actually lower than the EU average in all sectors (Gordo, 2005).<sup>15</sup> Besides, while the very small percentage of researchers in the private sector appears to be clearly linked to the large share of micro-firms (i.e. those

Figure 1.6. **Selected innovation indicators in the business sector and GDP per capita**

Thousand US dollars at 2000 PPPs for GDP per capita

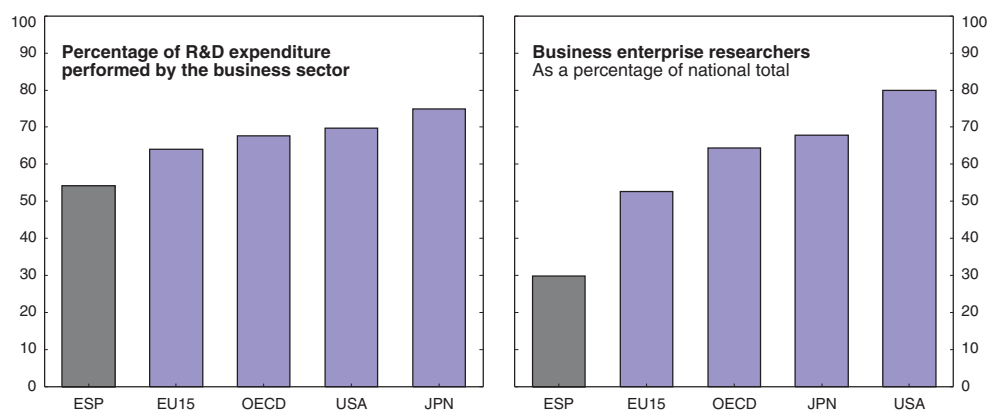


1. 2002 for Austria and Turkey; 2000 for Switzerland.
2. 2002 for Australia, Austria, Canada, Denmark, France, Italy, Netherlands, Turkey; 2001 for Portugal; 2000 for Switzerland and United States.
3. 1999 for Switzerland.

Source: OECD, National Accounts; Main Science and Technology indicators.



Figure 1.7. **Share of business sector in innovation efforts**  
2003<sup>1</sup>



1. 2002 for US and OECD.

Source: OECD, Main Science and Technology Indicators, 2005.

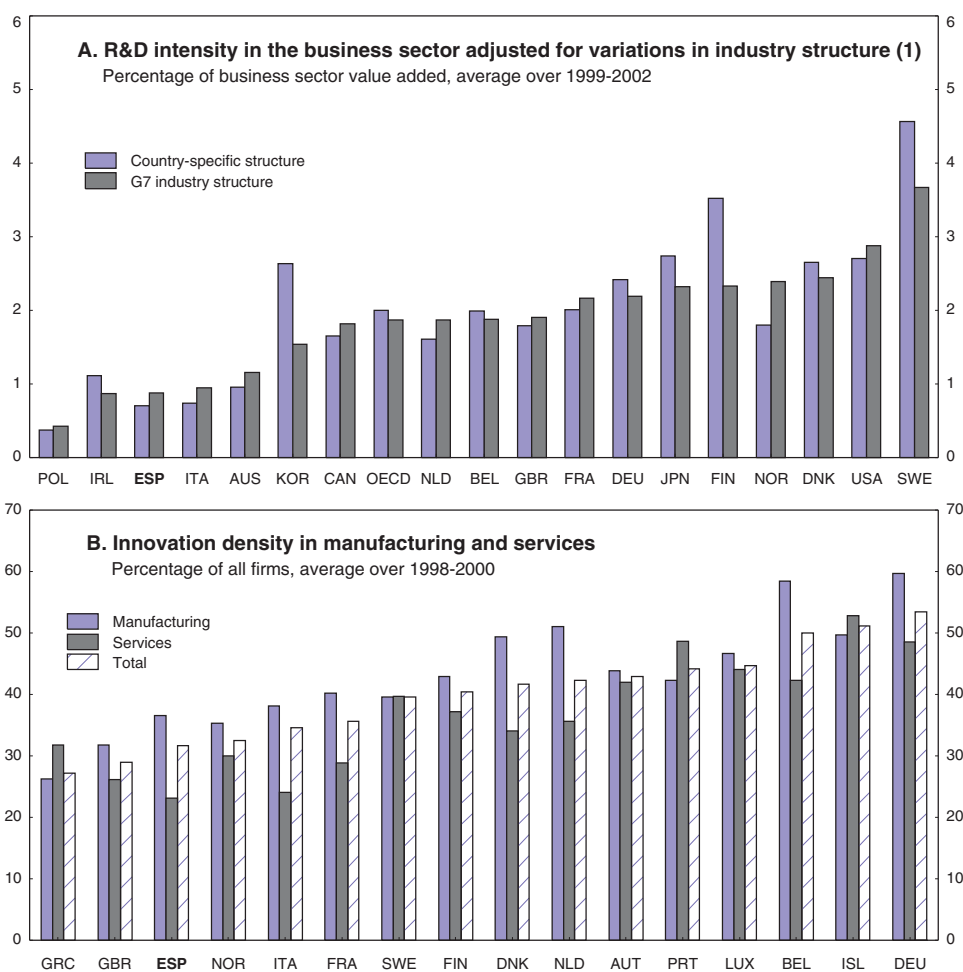
Table 1.5. **Distribution of enterprises by class size**

	Per cent of all enterprises			Per cent of persons employed in enterprises		
	Spain	EU	United States	Spain	EU	United States
Micro (less than 10 employees)	93.9	89.1	78.5	34.8	28.7	11.1
Small (10-49 employees)	5.2	9.1	19.8	34.4	21.3	25.1
Medium (50-249 employees)	0.8	1.5	1.5	12.8	16.1	14.1
Large (over 249 employees)	0.1	0.3	0.3	18.0	33.8	49.7

Source: INE, Directorio central de empresas (DIRCE), 2003; European Research Advisory Board (2004), "Report and Recommendations on SMEs and ERA", May, [http://ec.europa.eu/research/eurab/pdf/eurab\\_04\\_028\\_sme\\_era.pdf](http://ec.europa.eu/research/eurab/pdf/eurab_04_028_sme_era.pdf).

with less than 10 employees), the inadequacy of Spain's research efforts in both small and large firms seems to be borne out by European Commission surveys, despite some recent progress.<sup>16</sup>

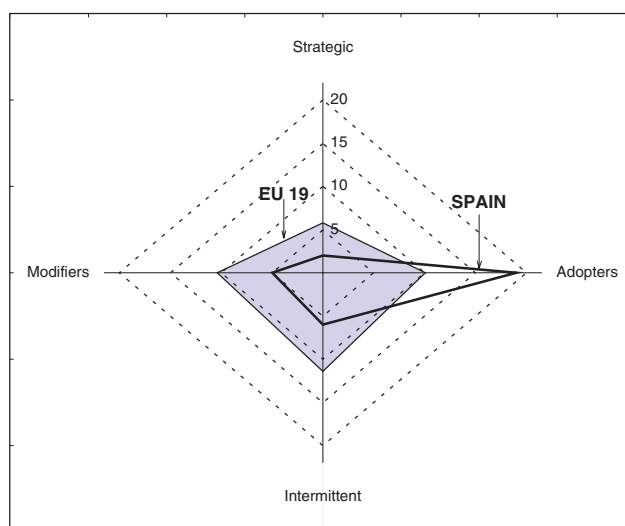
Spanish firms in general suffer from a serious lack of research and innovation culture. Private-sector innovation depends to a relatively large degree on subsidiaries of foreign firms, which account for more than 30% of private R&D.<sup>17</sup> This is because there was substantial foreign direct investment in technological development following Spain's entry into the EU in the mid-1980s. While this foreign investment has had a positive effect, it has no doubt also perpetuated a certain feeling of dependence regarding innovation *vis-à-vis* the most advanced countries. Foreign firms pursuing R&D activities in Spain are also not very integrated in the country's innovation system (they engage in little collaboration with domestic firms, universities and public research centres), which limits positive externalities. Only 7% of Spanish firms were systematically involved in research in 2002, and these innovative firms did not co-operate much with one another (in only 36% of cases) compared to the EU average (45%) (European Commission, 2002). To a very large extent, corporate strategy has rested until now on firms' capacity to produce technological products developed by other, usually foreign companies at a lower cost (Figure 1.9), which also explains the lack of patent applications, even if improvements are often made in the production process.<sup>18</sup>

Figure 1.8. **R&D intensity and innovation density**

1. All countries are assumed to have the same industry structure. Calculated on the basis of the R&D intensity per industry with the weights of each industry corresponding to their shares of total business sector value added on average across G7 countries.

Source: OECD, ANBERD, STAN databases and Main Science and Technology Indicators database; Eurostat Survey.

The economy also seems to have only a weak capacity to absorb new technologies, as shown by the indicators of the diffusion of information and telecommunications technologies (ICTs, Figure 1.10). The share of investment in ICTs is relatively low in international comparison, and, relative to the EU average, there has been no catch-up in either ICT-related employment or investment since 1995. The relatively slow development of the information society to a certain extent reflects an equipment lag. Despite the high proportion of individuals with university education, there are relatively few high-speed Internet connections, which probably partly reflects DSL access tariffs that were amongst the highest in the OECD area at end-2004 (Figure 1.10). Moreover, firms with 10 or more employees, which have a computer equipment rate comparable or even higher than the average for other countries,<sup>19</sup> do not fully exploit these technologies' potential. Only a small proportion of them have developed a website, sold or purchased on line (Figure 1.11) or encouraged teleworking. Compared to the European average, households too make little

Figure 1.9. **Main characteristics of private-sector innovation**Distribution of firms by innovation mode, in per cent<sup>1</sup>

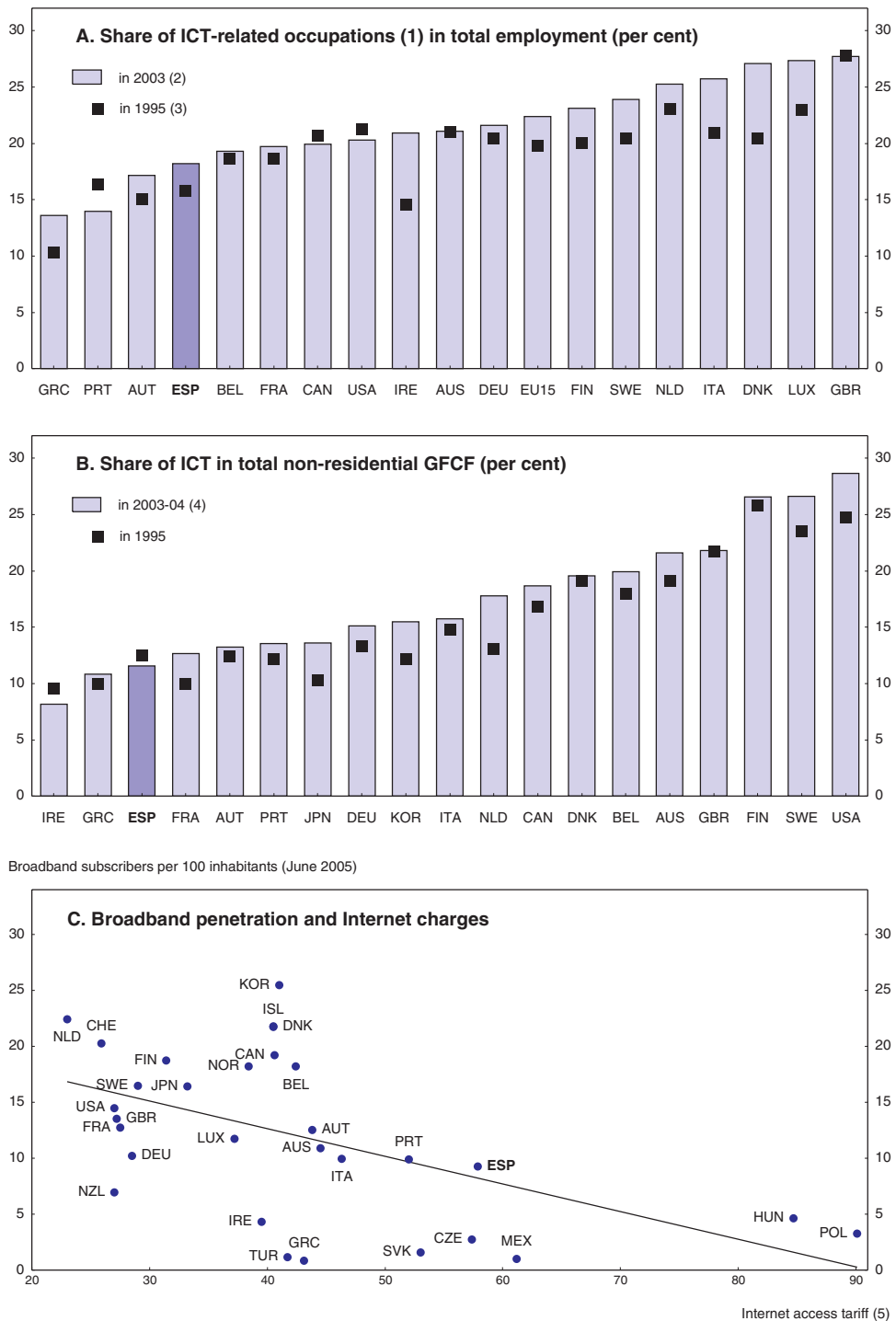
1. Strategic (innovators): innovation is a core component of firms' competitive strategy; Intermittent (innovators): innovation is not a core strategic activity, but firms develop innovations in-house when necessary; Modifiers (of technology): firms modify their existing products or processes through non-R&D based activities; Adopters (of technology): firms innovate primarily by adopting innovations developed by other firms or organisations.

Source: Arundel, A. and H. Hollanders (2005), "Innovation Strengths and Weaknesses", European Trend Chart on Innovation, European Commission.

use of computers to buy goods and services on the Internet, and the same applies to teachers in education (COTEC, 2005).

The economy shows weaknesses in terms of research and technological innovation and its relatively poor capacity to absorb new ICTs, despite the higher share of the population with a tertiary-level education. This results in an inadequate ability to adapt to changes in world demand, which is being increasingly driven by the development of the knowledge economy. The composition of Spanish exports is contrast with the trend observed in a number of small EU countries, including its new Member countries (Figure 1.12). The latter, which have benefited from substantial foreign investment during the recent past, are tending moreover to specialise in the same market segments as Spain, like the car industry, where price competition plays a key role in determining performance.<sup>20</sup> The country is therefore exposed to the risk of growing competition from these new rivals and, more generally, from the emerging market economies, particularly since its participation in EMU now prevents it from adjusting its exchange rate to offset excessive increases in prices and/or unit labour costs. Moreover, most of the empirical studies carried out for the OECD countries, and especially Spain, show that improved research and innovation performance would boost productivity growth,<sup>21</sup> even if there is still some uncertainty as to the time lag and strength of this relationship. Using a macroeconomic analysis, for example, Estrada (2006) recently demonstrated the positive impact of public, private and also foreign research on multifactor productivity growth in Spain. Microeconomic studies, such as the one by Griffith *et al.* (2006), also show that innovation results in Spain, as in the other major European countries, are closely linked to innovation activity as measured by R&D expenditure and that such activity has a measurable impact on productivity. Luintel and Khan (2005), who arrive at similar findings,

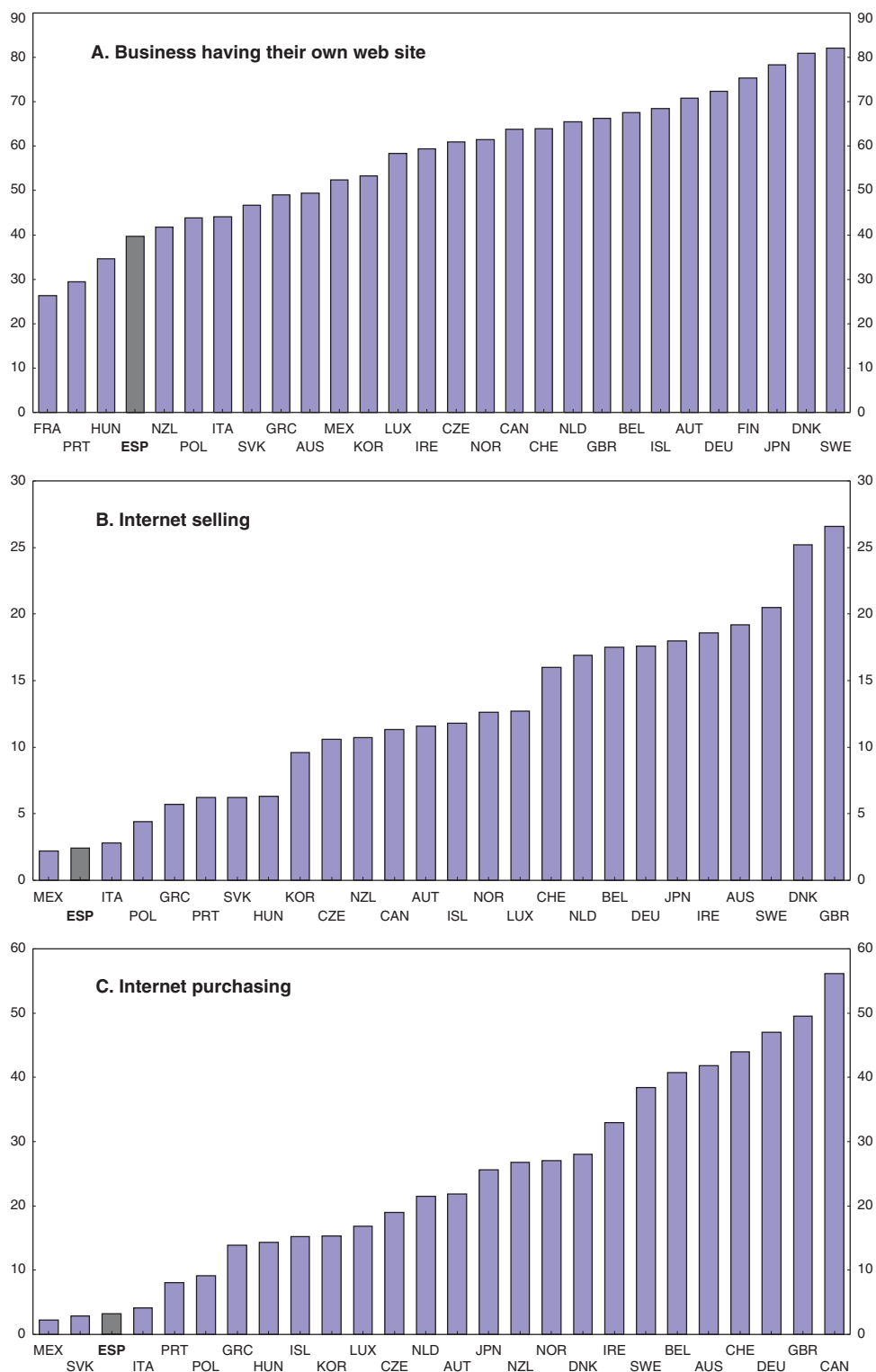
Figure 1.10. **Share of ICT in total economy**



1. Broad definition based on methodology developed in chapter 6 of the Information Technology Outlook 2004.
2. 2002 for Luxembourg and Netherlands.
3. 1997 for Australia, Finland and Sweden.
4. 2004 for Spain, Australia, Canada, Germany, Korea and United States; 2002 for Japan.
5. November 2004. Broadband with DSL technology.

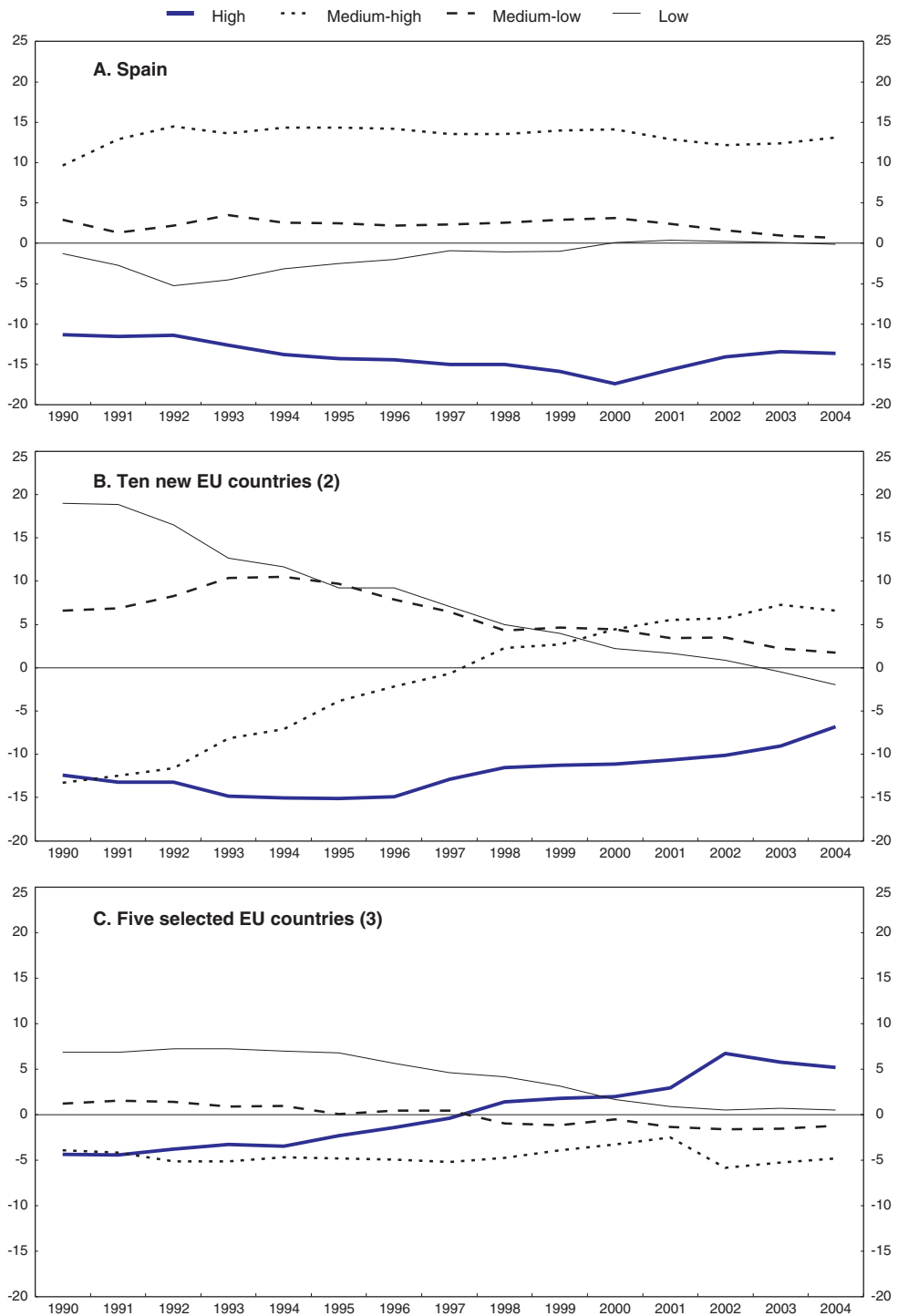
Source: OECD Science, Technology and Industry Scoreboard.

Figure 1.11. **Business use of the Internet**  
Percentage of businesses with 10 or more employees, 2004<sup>1</sup>



1. 2001 for New Zealand; 2002 for Switzerland; 2003 for France, Iceland, Japan, Luxembourg, Mexico and Spain.  
Source: OECD Science, Technology and Industry Scoreboard, 2005.

Figure 1.12. **Manufacturing sector specialisation**<sup>1</sup>  
By technology level, per cent



1. Product specialisation is defined as the gap between the share of the exports of the product category relative to total exports in a given country or group of countries and the share of this category's imports relative to total imports of the OECD.

2. Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovak Republic and Slovenia.

3. Denmark, Finland, Ireland, Netherlands and Sweden.

Source: OECD, Foreign Trade Statistics.

also demonstrate the usefulness of encouraging the accumulation of knowledge and human capital within the country in order to benefit from the positive spin-offs from other countries' research and innovation.

In order to make up for Spain's shortfall in this area, and to strengthen its capacity to absorb new technologies, the government has decided on a substantial rise in the research and innovation budget and has set ambitious targets. The authorities are aiming to increase R&D expenditure to 2% of GDP by 2010, to raise the private sector's contribution to this expenditure by 7 percentage points and to increase investment in ICTs from 4.8 % of GDP in 2004 to 7% in 2010, i.e. the EU average. To this end, an important set of measures has been introduced relating to specific innovation policies in the context of the *Ingenio 2010* programme. These measures will complement those planned for the education system, the strengthening of entrepreneurship and the improvement of market functioning. The reasons for Spain's weak research performance are analysed in greater detail in Chapter 4, which seeks to assess the recent reforms and their initial results, which look quite encouraging, with the objective of proposing additional ways of accelerating the catch-up process in this area. These suggestions will focus in particular on the need to improve both the university system and labour market institutions in order to improve firms' ability to create and absorb innovations.

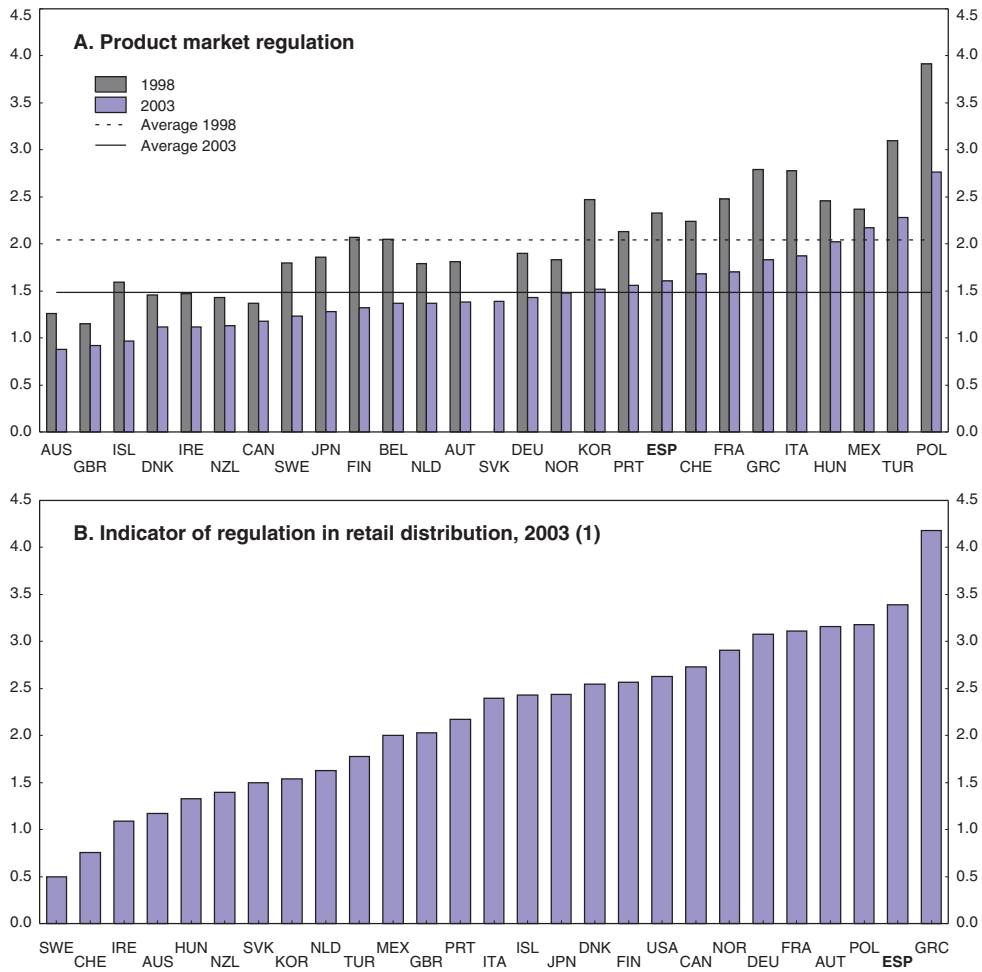
### **There is considerable room to further strengthen competition**

Spain also needs to improve the functioning of its product markets. While regulations are not much more restrictive than in other Continental European countries, according to the OECD's product market regulation indicators (PMR), that sort of performance is inadequate if the nation wishes to continue on the convergence path that it has followed for some time, a path that involves running the economy with far less slack and hence a greater premium on flexibility and resilience. Certainly, these indicators are not a perfect picture, since they suffer from some methodological weaknesses and do not take account of the most recent reforms. Still, the composite index of goods and services market regulation, which measures the intensity of restrictions to competition, shows that about two-thirds of OECD countries had a less restrictive stance than Spain in 2003 (Conway *et al.*, 2005). Many regulations have improved since 1998 as a result of reforms, but other countries have improved too, so Spain's relative position is nearly the same (Figure 1.13, Panel A). The legal framework for applying the general competition law is essentially unchanged since the early 1990s and needs to be updated, as recognised by the authorities who have submitted a draft reform to the Parliament. What is more, there are still big gaps regarding regulation, as in retail trade for example (Figure 1.13, Panel B). All in all, regulations potentially harmful for competition, which, as in the rest of the OECD, are concentrated mainly in the non-manufacturing sectors, place a heavier burden on the economy than in other countries on average. This is due to a dispersive effect caused by other sectors' use of non-manufacturing intermediate products, with a regulatory impact particularly damaging for branches which are significant users of ICTs (Figure 1.14, Panel A).

The negative impact of these regulations on the economy is felt in a number of ways. They weaken the moderating effects imposed on price and wage setting in product and labour markets, which hinders producer competitiveness on tradable goods markets. Incentives for firms to invest and adopt leading-edge technologies to defend their markets are also weakened, which slows the process of productivity catch up with respect to the best performing countries (Figure 1.14, Panel B). The insufficient competition, resulting in

Figure 1.13. **Selected OECD product market regulation indicators**

The scale of indicators is 0-6, from least to most restrictive



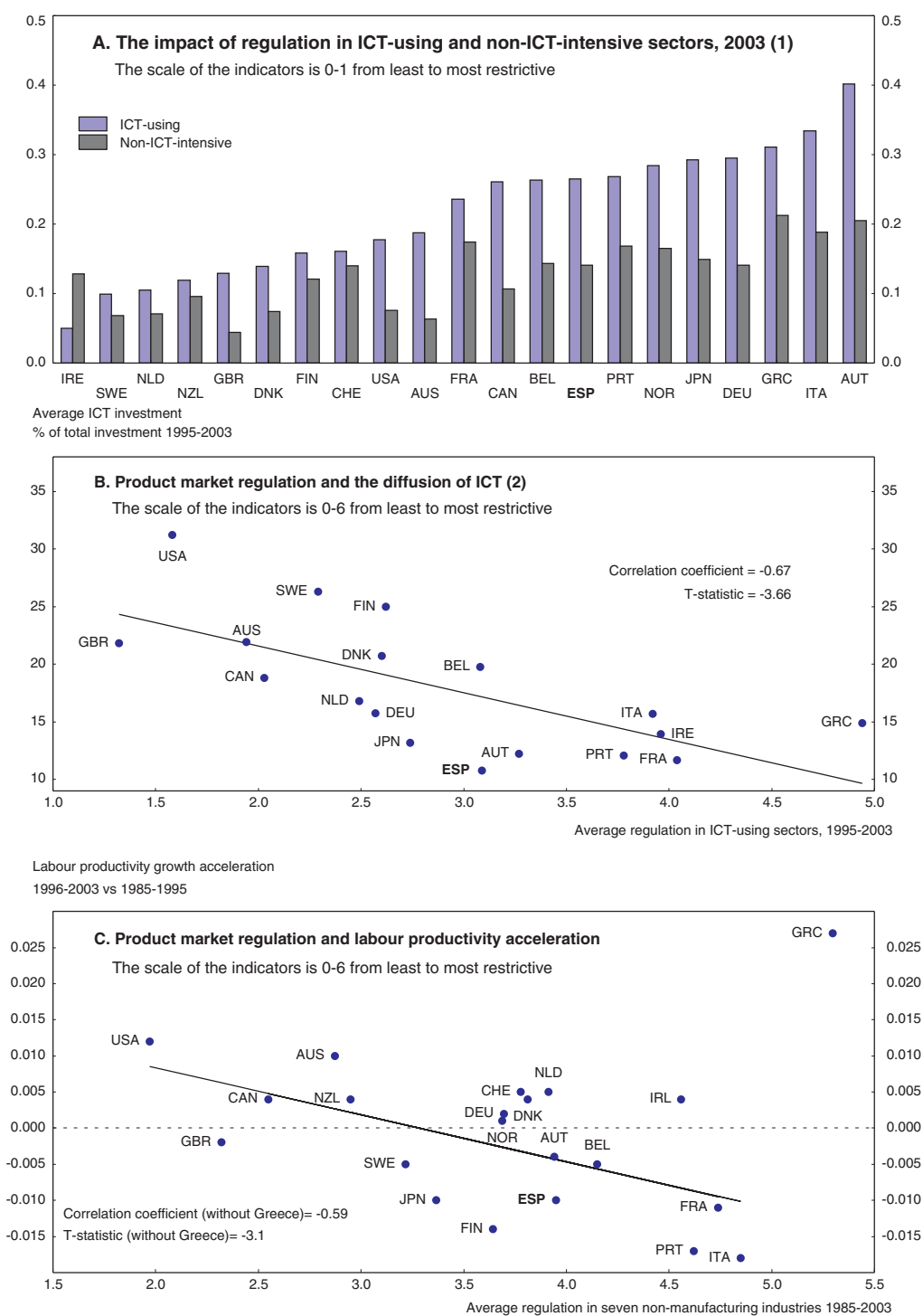
1. Covers barriers to entry, operational restrictions and price controls.

Source: Conway et al. (2005), "Product Market Regulation in OECD Countries: 1998 to 2003", Economics Department Working Paper No. 419.

regional segmentation in certain sectors, also prevents firms from reaching critical scale, undermines their efforts to innovate and slows the process whereby factors of production are reallocated within the economy. The lack of contestability of certain markets curbs productivity growth (Figure 1.14, Panel C), which stems to a large extent from the process of firm creation/destruction and/or from the setting up of foreign subsidiaries which makes for the emergence of more efficient firms.<sup>22</sup> Aligning Spanish product market regulations on those of the least restrictive countries would have greatly encouraged the arrival of new competitors and, according to recent OECD simulations (Conway et al., 2006), would have generated productivity gains of about 1 percentage point per year until 2003. Also a significant benefit would have been achieved owing to specific sectors, such as retail trade, functioning more efficiently. More flexible than average product markets are needed for Spain to be able to maintain a high and sustainable pace of growth in the future together with lower inflation.



Figure 1.14. The impact of product market regulation



1. These data are the simple averages of the “regulation impact” indicators for the individual industries included in ICT-using and non-ICT intensive sectors in 2003.
2. The indicator of regulation in ICT-using sectors is the simple average of the “regulation impact” indicators for the individual industries included in these sectors.

Source: OECD international regulation database.

Strengthening competition is one of the priorities in the National Reform Programme aimed at increasing resource allocation efficiency, reducing costs and stimulating innovation. In addition to updating the broad framework of competition policy, the authorities plan to increase consumer protection and improve the regulations governing sectors that are important to the economy, such as electricity. Chapter 5, which assesses the main failings in the way the goods and services markets work, discusses the government's reform plan with a view to proposing, where appropriate, certain changes and/or additional measures.

### Efforts to combat climate change must be continued

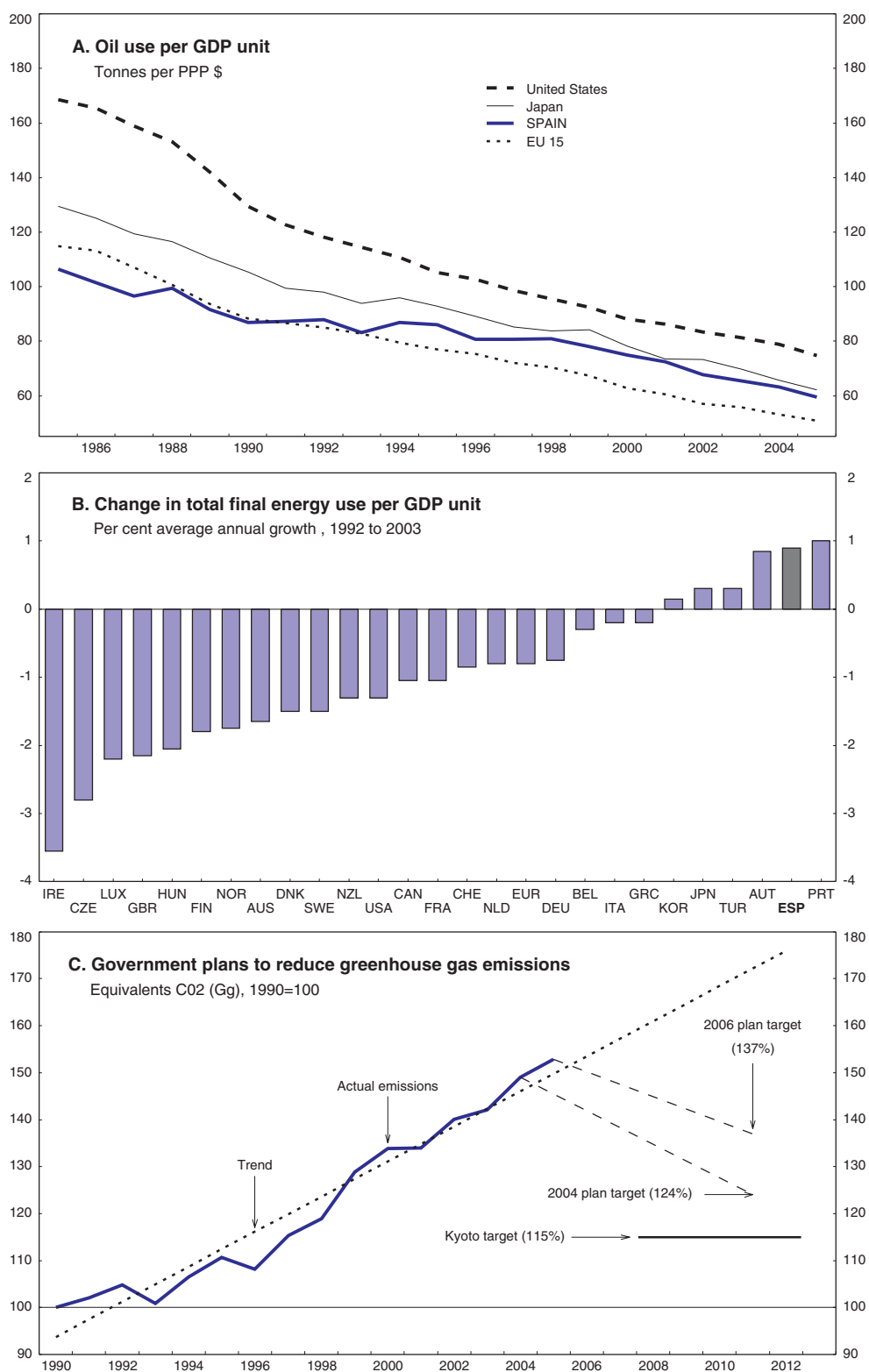
The government's commitment to reduce greenhouse gas emissions, as a signatory of the Kyoto Protocol, is not only a worthwhile way of combating climate change, the effects of which already seem apparent on the Iberian peninsula, but is also of benefit to the Spanish economy. International comparisons show that Spain suffers from high external energy dependency<sup>23</sup> and that the structure of its production is very energy-intensive, especially as regards fossil fuels (Figure 1.15, Panels A and B), with negative consequences for inflation and the trade balance (Chapter 2).

However it was only belatedly, in 2004, that a strategy was put in place to enable Spain to comply with the commitment not to exceed the 1990 level of greenhouse gas (GHG) emissions by more than 15% on average by 2008-12, as part of the EU Burden-Sharing Agreement. To achieve this commitment, a number of measures were implemented:

- A limit on emission levels was introduced in five industrial sectors and the electricity industry, which accounts for 45% of total emissions, in accordance with the EU Directive that also set up an emissions trading market in 2005.
- The development of renewable energy sources has continued, with the object of increasing their share in total energy supply from 7% in 2004 to 12% in 2010. Furthermore, renewable energies' share in the electricity generated in 2004 reached 22%. There is pressure at regional level to raise the target by increasing production capacity from wind turbines because of their positive impact on employment and tax revenues.
- Energy saving measures have been pursued with, for example, the new building code. Although taken belatedly, these measures should reduce new edifices' energy consumption by between 30 and 40%, thereby ensuring a quick return on the resulting additional 1% in the average cost of housing.
- As a complement to these domestic measures, the government has set up a Spanish carbon fund to buy emission credits abroad, for instance through participation in projects developed by multilateral institutions such as the World Bank.

In 2005, GHG emissions were more than 50% above their 1990 level, meaning that Spain remained one of the OECD countries furthest away from its Kyoto target, while *per capita* emissions still remain 37% below the OECD level. Implementation of the initial set of measures to combat global warming has not curbed the increase in emissions, which has continued at about 4.5% per year in the latest two years. There are a number of reasons for this performance. Growth has remained buoyant in recent years and has continued to be underpinned by the construction sector which is very energy-intensive. The increase in emissions in 2005 was also due to the severe drought which cut hydroelectric power generation by 40%, the latter having to be replaced by supplies from more emissions-intensive sources. Also, the measures taken to reduce emissions have had little time to

Figure 1.15. Energy use and emissions reduction plans



Source: IEA (2006), Oil Information; IEA (2005) Energy Policies of IEA Countries, 2005 Review; OECD, National Accounts.

take effect, although there has been a slight improvement in the energy efficiency of production for the first time in five years. Having said that, and bearing in mind the measures already taken, the latest projections up to 2008-2012 do point to emissions stabilising at around 50% above their 1990 level, with the increase in the sectors covered by the European Directive (+37%) being smaller than elsewhere (diffuse sectors), such as in transport (+65%).

In view of these prospects, changes are being made to the plan to combat climate change, with the target for the level of domestic GHG emissions to be achieved between 2008 and 2012 set to be raised. It is proposed to set the said target has been set at 37% above the 1990 level (instead of 24% previously and the 15% Kyoto target), with the result that there will have to be increased recourse to the flexible mechanisms provided for in the Kyoto Protocol, which, according to the authorities' plan, include the use of carbon sinks and the development of projects in Latin American countries for the equivalent of 22% of 1990 emissions (Figure 1.15, Panel C). The total cost of such purchases of emission credits is put at between € 2.2 and 3 billion for the whole of the period 2008-2012, including approximately € 1 billion from public finances. To comply with the domestic target set, it is proposed to reduce the number of emission allowances allocated under the European Directive by 16.2% for the period 2008-2012 compared with 2005-2007. The focus of this plan, which still needs to be approved by the European Commission, is on the electricity industry which is not yet heavily exposed to foreign competition and can relatively easily pass its cost increases on to final consumers. There is also considerable scope for reducing emissions by replacing the old coal-fired power stations with gas-fired plants, although, conversely, continuing with the moratorium on nuclear energy decreed in the mid-1980s will result in nuclear power stations gradually being replaced by gas-powered power stations emitting more CO<sub>2</sub>.<sup>24</sup>

Efforts to reduce emissions should have a positive impact over time and must be continued. However, it does seem important to step up the incentives to trim energy consumption in the diffuse sectors, which will no doubt mean raising taxes on petroleum products used in transport, which are low by comparison with other European countries. Measures of this sort, which ensure that emitters rather than taxpayers bear the cost of GHG emissions, would usefully supplement the efforts to develop the rail sector, which are included in the Transport and Infrastructure Plan as a way of promoting better utilisation of a means of transport that consumes less energy. In view of the gradual reduction in the use of nuclear energy to generate electricity, the possible backing of renewable energy sources by means of subsidies in order to limit emissions has to be as efficient as possible and not engender an excessive net cost compared with other alternatives.<sup>25</sup> To this end, thought could be given to setting up a green certificates market to ensure the most efficient possible use of these subsidies. Lastly, the pace of restructuring in the coal industry needs to be stepped up, since the level of subsidies offsetting operating losses is set to decline less sharply in the next five years than during the period 1998-2005.

### Looking ahead at the government's strategy

As mentioned earlier, in October 2005 the authorities adopted a National Reform Programme, which is in line with the EU's Lisbon Strategy for promoting growth and employment. The target is to reach the average level of *per capita* income in EU25 by the year 2010 and to overtake the employment rate in the area that same year. A supplementary objective is to increase energy efficiency and reduce greenhouse gas (GHG)

emissions. The Programme rests on seven main pillars (Table 1.6): i) enhancing macroeconomic and budgetary stability; ii) developing transport networks and infrastructure; iii) improving human capital; iv) strengthening performance in research, development and innovation; v) improving competition and regulation in the product markets and the efficiency of general government; vi) pursuing social dialogue with the object of ensuring that the labour market functions more efficiently; and vii) stimulating entrepreneurship. Machinery has been put in place to monitor the implementation of the Programme through a Progress Report that includes an appraisal of the degree of implementation of the Programme. This Progress Report that has been elaborated in the context of the European Agenda for Growth and Jobs, found that around 52% of the 310 measures contained in the NRP have already been approved. The quantitative evaluation shows a good degree of implementation in almost all of the pillars, with the notable exception of CO<sub>2</sub> emissions. Annex 1.A1 contains a summary of the progress made with structural reforms and compares it with the main recommendations in previous Surveys.

**Table 1.6. The National Reform Programme**

Objectives	Main measures
1. Reinforce macroeconomic and budgetary stability	<ol style="list-style-type: none"> <li>1. Improve the Fiscal Stability Law.</li> <li>2. Revise the regional financing mechanism.</li> <li>3. Redirect public spending towards more productive expenditures.</li> <li>4. Rationalise health-care spending.</li> <li>5. Reassess social security benefits, in particular, pensions.</li> <li>6. Reform the personal and corporate income taxes, and increase environmental taxation.</li> </ol>
2. Improve infrastructure	<ol style="list-style-type: none"> <li>1. Increase investments on roads, railways, ports, airports and metropolitan transport.</li> <li>2. Guarantee an adequate and safe supply of water.</li> </ol>
3. Increase and improve the stock of human capital	<ol style="list-style-type: none"> <li>1. Improve the education system, from early-childhood to higher education.</li> <li>2. Facilitate the integration of immigrant students.</li> <li>3. Guarantee the universal and permanent access to education.</li> <li>4. Improve life-long learning.</li> <li>5. Incorporate information technologies into education.</li> </ol>
4. Carry out an ambitious R&D and innovation strategy	<ol style="list-style-type: none"> <li>1. Increase funding to R&amp;D and innovation activities.</li> <li>2. Devote the incremental funds to strategic programmes.</li> <li>3. Improve the framework conditions for R&amp;D and innovation.</li> <li>4. Develop a new evaluation procedure for R&amp;D and innovation policies.</li> </ol>
5. Revise the competition and regulatory framework, and raise the efficiency of public management	<ol style="list-style-type: none"> <li>1. Overhaul the competition framework.</li> <li>2. Enhance the protection of consumers and users.</li> <li>3. Improve the regulatory framework of public entities.</li> <li>4. Revise the regulatory framework of, among others, the energy, telecom, financial and postal services, housing, tourism and retail distribution sectors.</li> </ol>
6. Improve the functioning of the labour market	<ol style="list-style-type: none"> <li>1. Increase youth and female employment.</li> <li>2. Reduce the use of temporary contracts in the economy.</li> <li>3. Improve the health and safety provisions in the workplace and the balance between work and personal life.</li> <li>4. Better manage immigration flows.</li> <li>5. Improve the care system for dependents and the integration of the disabled into the workforce.</li> </ol>
7. Foster entrepreneurship	<ol style="list-style-type: none"> <li>1. Reduce administrative barriers to new enterprise creation.</li> <li>2. Improve access to finance.</li> <li>3. Foster the creation of technology-intensive firms.</li> </ol>

## Notes

1. Wages as a proportion of value added declined by 2½ percentage points in Spain between 1998 and 2005, despite the sharp recorded rise in employment, whereas in Portugal and Italy they rose by 3 and 1 percentage points, respectively, over the same period.
2. Immigration has also helped moderate the rise in construction costs, even though these costs have increased sharply, due above all to higher land prices.
3. About 76% of total household assets consisted of real assets (mainly real estate) in the mid-2000s, versus an average of some 53% in the large OECD countries (OECD, 2006a).
4. Whereas the average growth in labour productivity was limited to 0.3% per year between 1996 and 2006, the annual impact of the massive influx of low-productivity workers into low value added sectors has been estimated at some 0.7 percentage point (OECD, 2005a). Even allowing for such a correction, productivity growth would still be lower than the EU average (1.3% per year).
5. Since the mid-1990s, a number of labour market reforms have been carried out, including one in 1997 to reduce structural unemployment. The reforms included financial incentives and a lessening of the cost of laying off certain groups of workers recruited on indefinite-term contracts. More recently, in 2002, unemployment insurance was reformed (OECD, 2003b). The most important development affecting the labour market in recent years has been the sharp growth in immigration. This has induced structural changes that have probably also been conducive to a drop in NAIRU. Immigrants, most of whom are on temporary contracts, are most likely to have a lower reservation wage than other workers, which has cut the average level of this wage in the economy. Their geographical mobility is also higher than that of native workers.
6. Nor can it be ruled out that the pull factor attracting immigrants would decline if growth and the labour market were to weaken.
7. In the case of Spain and the euro area, these scenarios are predicated on the assumption that the employment rate will rise to 70% around 2010, in line with the Lisbon objective. This assumes both continued reductions in structural unemployment and rises in the participation rate, despite the negative effects induced by cohort effects (Burniaux *et al.*, 2003).
8. The INE demographic scenario underlying these estimates of long-term growth potential assumes net immigration of some 290 000 persons per year between 2007 and 2030. Under these assumptions, the proportion of immigrants in the general population would increase by roughly seven percentage points between 2005 and 2030, to 15½ per cent. In a long-term perspective, immigration will probably become less work-related than in the past because of the likely rise in the number of family reunions, as suggested by international experience (OECD, 2006c).
9. The decomposition of trend productivity growth between capital deepening and multifactor productivity is surrounded by uncertainties. These relate for instance to the ICT investment price indices used, which might incorporate quality effects to a varying degree. Some estimates, based on harmonised price indices for ICT capital goods, indicate a small positive growth rate for multifactor productivity over the recent past (+¼ per cent per year between 1997 and 2004). However, such a pace of growth remains weaker than in the early 90s (+¾ per cent between 1990 and 1996, see OECD 2006d) and compared with the average of other OECD countries.
10. These productivity level differences are based on GDP per capita comparisons expressed in 2004 PPPs (OECD, 2006d).
11. The number of European Patent Office applications grew by 40% in 2004 and 2005, faster than in any EU15 country and well over EU15 average growth of 8%. Spanish applications in World Intellectual Patent Organisation (WIPO) grew also by 36% in 2005, the highest rate in the EU15 and the second in the OECD after Turkey.
12. In 2003, the proportion of the population with tertiary-level education was only 11% for the age bracket 55–64, while it reached 38% for those 25–34 years old. This gap was much larger than for the average OECD country, where the corresponding figures were 17% and 29%.
13. Participation in continuing education represented only 52% of the EU average in 2004, as against 63% in 1999 (Arundel and Hollanders, 2005).
14. The impact of these adjustments for heterogeneous production structures could be somewhat underestimated, as they were carried out at a relatively high level of sectoral aggregation (distinguishing only seven sectors), which, hence, does not take into account some potentially important differences (*e.g.* within the car or electronics industries).

15. The gap is bigger in the service sector than in manufacturing, but the same is true in the high- and medium/high-technology industries, including those that are important to the Spanish economy, like transport equipment, where there are numerous subsidiaries of foreign companies. According to the innovation indicators in the European Innovation Scoreboard 2004, Spain ranks 9th out of 13 countries in these sectors.
16. In services, Spanish firms' low propensity to innovate, compared to foreign firms, is unrelated to their size (Gordo *et al.*, 2006). Moreover, there were only 13 Spanish companies among the 700 European firms which invested the most in R&D in 2004, while their expenditure accounted for only 0.9% of the total R&D of the companies concerned, *i.e.* appreciably less than their share in turnover (2.6%) (European Commission, 2005). In 2006, 22 Spanish firms were among the 1 000 firms investing the most in R&D, and in 2005 their R&D investment increased by 11.5%, more than twice as fast as the average of these large European firms (5.3%) (European Commission, 2006).
17. Private-sector innovation also depends to a large degree on subsidiaries of foreign firms in some of the largest EU countries like the United Kingdom, as it accounts there for 40% of private R&D.
18. According to the 3rd Community Innovation Survey, 30.3% of innovative Spanish firms in 2000 were focusing solely on the production process, whereas the EU average was only 15.9%. On the other hand, non-technological innovation efforts, concerning product design or the supply of complementary services, for example, frequently seem to be performed by industrial firms. This could explain why the percentage of sales of products that are innovative either for business or the market is at the same level as the EU average (COTEC, 2005).
19. In Spain, 87% of firms with more than 10 employees have a broadband connection, the third highest percentage in the EU after Finland and Sweden and two positions up in the EU ranking since January 2005.
20. Specialisation in traditional industries has resulted in the own-price elasticity of Spanish exports being higher than in the majority of other OECD countries (Buisán and Caballero, 2003; Pain *et al.*, 2005).
21. According to Mas and Quesada (2005), the difficulties of harnessing new technologies, despite increased capital intensity and the greater use made of skilled labour, appear to be responsible for the weak growth of multifactor productivity in recent years.
22. It was estimated that the company entrance/exit process accounted for between 20 and 40% of overall productivity growth in OECD countries during the 1980s and 1990s (OECD, 2003b).
23. In 2005, the ratio of Spain's energy imports to its energy consumption was 85%, which was one of the highest among the European countries where the average was 56%. The imports in question cost € 32.1 billion in 2005 (3.5% of GDP), *i.e.* 66% more than in 2003.
24. In 2005, 20% of electricity was generated by nuclear power stations, 28% by coal fired power stations and 27% by gas fired power stations. The share generated by gas fired plants, which was only 19% in 2000, is increasing rapidly.
25. In 2005, subsidies to producers of wind power enabled them to benefit from very high regulated prices – € 86.6 per MW-h, compared to an average price on the wholesale electricity market of € 55.

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## ANNEX 1.A1

*Progress in structural reforms*

This Annex reviews action taken on recommendations from previous *Surveys*. Recommendations that are new in this *Survey* are listed at the end of the relevant chapter.

Recommendations in previous <i>Survey</i>	Action taken since March 2005
LABOUR MARKETS	
Reduce severance payments for permanent workers and impose a tighter control of renewals of temporary jobs so as to help reduce labour market duality.	The reform signed in May 2006 contains restrictions on the successive use of temporary contracts, increases in fiscal assistance for permanent job creation and transitory incentives for the conversion of temporary into permanent contracts. Also, before 2008, temporary contracts can be transformed into permanent contracts with lower severance payments. No changes were made to the severance payments of permanent contracts.
Improve active labour market policies (ALMPs) and the public employment services. Continuous evaluation of ALMPs should be independent and provide feedback for improving measures.	The government has undertaken to modernise the public employment services and increase the resources allocated to ALMPs in forthcoming budgets.
Eliminate ex post indexation clauses in the wage bargaining system. If this is not possible, they should be based on core rather than headline inflation.	No actions taken.
Obliging all firms to adhere to higher-level agreements should be replaced by an opt-in clause. If this is infeasible, at least opt-out clauses should be made more flexible and not be limited to wages but extended to other matters.	No actions taken.
Restrict eligibility conditions for subsidies for unemployed rural workers to enhance regional labour mobility.	No actions taken.
HUMAN CAPITAL AND R&D INVESTMENT	
Early education and care for children aged 0-3 should be promoted, possibly through tax credits.	The National Reform Programme includes the objective of increasing the share of children between 0 and 3 years in the education system by 2 percentage points every year until 2010. A plan is under way to increase the supply of public schooling for children in that age range.
Other than raising spending at primary and secondary level, provide more autonomy for schools, including incentives for teachers.	A new framework law on education, enacted in April 2006, gives schools greater autonomy in terms of curricula, organisation and management, increases financial resources and overhauls the curriculum.
The financing of universities should be linked to performance, using evaluations carried out by ANECA as guidance. Raise fees for students while implementing flexible payment mechanisms for low-income students.	A modification of the framework law on universities, which is under discussion in Parliament, gives universities greater autonomy, by extending their ability to choose rectors, to define teaching programmes and to recruit professors. This increased autonomy will be coupled with a strengthening of the monitoring and assessment of the quality of the university system through more transparent criteria jointly developed by ANECA and the regional quality agencies. Moreover, the Ministry of Education and Science has recently launched a proposal to establish a compulsory evaluation system, the results of which should also be disseminated. Similar efforts are being made in some regions. The government also plans to increase the funds available for grants and income-contingent loans.

Recommendations in previous Survey	Action taken since March 2005
The increases in public aid to R&D need to be accompanied by improving framework conditions that foster entrepreneurship, including the promotion of venture capital with some limited government equity programmes, promotion of clusters and expansion of programmes for the participation of researchers in businesses.	The regulatory framework for venture-capital companies was modified in 2005. In addition, a programme (NEOTEC) has been launched to support Spanish technology-based start-ups. New legislation has also been adopted in 2006 to support innovative clusters. The reform of the framework law on universities also seeks to remove obstacles that hinder the movement of teachers into the private sector and their participation in spin-offs.
<b>HOUSING MARKET</b>	
To implement tax neutrality between home ownership and rental housing, phase out the various forms of assistance to home ownership.	The tax subsidy to housing purchases has been curtailed, although only very marginally, by reducing the favourable treatment of housing purchases for the first two years.
Improve the legal certainty of landlord-tenant relations and reduce the minimum five-year duration of rental contracts allowing owners to sell to promote rental-housing supply.	The 2003 reform intended to speed up the resolution of conflicts between tenants and landlords, via the creation of swifter court procedures, has not been fully implemented.
Revise the cost-effectiveness of the present system of social housing, relying less on house sales and introducing a system of housing vouchers for disadvantaged groups to facilitate access to the private rental market.	A new Housing Plan contains measures to stimulate the rental market, including support for the construction, acquisition and renovation of dwellings destined for the rental market. Financial aid to renters is also available.
Make local-level planning regulations more flexible and abolish the compulsory transfer of 10% of developable land to the municipalities to raise land supply.	The new Land law (in the final stages of approval) raises the land cession rate to 15%, make it harder for municipalities to sell the land and mandate that 25% of new housing developments consist of controlled housing.
Simplify the criteria and reduce the waiting period for obtaining building permits.	Regional governments are updating their urbanisation laws, in part to tighten criteria to get building permits.
<b>GOODS AND SERVICES MARKETS</b>	
Merge the two general competition bodies and reinforce the new entity's advocacy role and independence. Adopt a leniency programme with strengthened. Ensure that regional competition tribunals do not add substantially to the costs of competition policy and that they do not favour local firms.	The new Commission, which results from the merger of the two previous bodies, will have its own budget and its members will have non-renewable, fixed-term appointments. A leniency programme will be adopted, and the maximum fines will be increased.
Retail regulations should be liberalised. Especially, barriers set up by regional governments for the establishment of new hypermarkets and shopping centres should be dismantled.	All but one region have dropped the moratorium on new hypermarkets. The government is relying on the coming EU services directive to increase competition in the sector.
In energy sectors, the market power of the large incumbent operators should be reduced and separation of production and distribution activities envisaged. Barriers to the establishment of new firms, including foreign companies, should be eliminated.	In electricity, efforts are underway to improve grid connection with France and Portugal, and wholesale price regulation is to be reformed. In gas, separating the network management and the distribution activities of the dominant firm is envisaged. In oil retailing, it is now easier for independent stations to change suppliers, and they may also offer lower prices than those suggested by their suppliers. A two-year freeze on the acquisition of such stations by the biggest firm was implemented.
Withdraw price controls for long-distance national and international telephone calls and ADSL connections from the price cap for Telefónica.	The price cap was removed but not for the fixed monthly charge. The regulator significantly lowered wholesale ADSL prices and will revise the way they are determined. It also forced Telefónica to allow its competitors to provide very high speed Internet service.
Further liberalise postal services.	A new law is under discussion to specify clearly which postal services are open to competition and set conditions for third party network access. A new regulator will be created in order to guaranty a level playing field.
Liberalise rail transport. Consider franchising in railways and urban transport.	The former public rail operator was split into a network manager and an operator, which will have to contend with competition. Applications for operating licences and route allocations have been submitted, though there remains a single passenger operator. A draft bill strengthens the independence and expands the powers of the regulator. Long-distance bus concessions are up for renewal in 2007.

Recommendations in previous Survey	Action taken since March 2005
<b>PENSIONS</b>	
<p>Make the public pension system actuarially fair, either by basing pensions on life-time earnings instead of the last 15 years or by cutting the accrual rate of pension rights.</p> <p>The pace of accrual rates should be reconsidered so as to improve incentives for older workers to remain in the labour market.</p>	<p>As part of pension-system reform, the minimum eligibility age is being raised to 61. The effective contribution period to acquire pension rights is being modestly increased.</p> <p>Incentives to extend work beyond 65 are being increased via higher accumulation rates, while subsidies are being provided to the employment of workers aged 55 and over.</p>
<p>Prevent collective agreements from imposing a compulsory retirement age.</p>	<p>While collective agreements can determine a compulsory retirement age, firms can agree with their employees to delay retirement.</p>
<p>Reform the sickness and invalidity benefit system by: <i>i</i>) possibly extending the employer-paid sickness period; <i>ii</i>) ensuring that State-financed non-contributory invalidity pensions managed by regional governments are not awarded too easily; <i>iii</i>) encouraging the disabled to return to work by transforming invalidity benefits into in-work payments.</p>	<p>Since 2006, social security administration personnel have had the sole authority to review periodically temporary disability cases and, when necessary, extend temporary invalidity benefits for additional six-month periods. Negotiations are underway in order to increase incentives for firms to contain spending on short-term sickness leave.</p>
<p>To enhance public pension system sustainability, increase day care facilities for young children and health and home care provision for dependent elderly to raise female employment.</p>	<p>A new dependency care system is being rolled out progressively and more places for children between 0 and 3 years are being provided in the public education system.</p>
<p>Use all social security surpluses to reduce government debt and leave a larger margin of manoeuvre for future spending.</p>	<p>The social security surpluses are being accumulated in a reserve fund.</p>
<p>Reconsider the generosity of tax incentives favouring private pensions.</p>	<p>The tax deduction for those withdrawing their capital instead of receiving an annuity has been eliminated. The maximum annual tax-free contribution to private retirement savings plans was increased.</p>
<b>PUBLIC SECTOR</b>	
<p>Improve transparency of sub-national government budgets and audit them by an independent body to avoid the expansion of off-budget operations through public enterprises.</p>	<p>During 2006 the reforms of Financial Laws of some regions have introduced specific sections on information and coordination requirements. Additionally, in the context of the Agreement on Improvements of Transparency (2005 and 2006) and the new Fiscal Stability Law, information requirements have been reinforced.</p>
<p>Develop benchmarking for services provided by sub-national governments and make results public. Promote the sharing of experience among these governments.</p>	<p>No actions taken.</p>
<p>Provide sufficient resources and ensure the independence of the National Agency for the Evaluation of Public Services Quality and Public Policies, soon to be created.</p>	<p>The new framework for public entities – agencies – to increase accountability and efficiency was adopted in July 2006. The new Agency is expected to be fully functional in 2007.</p>
<p>The new regional financing model should be robust to demographic developments, especially immigration and the prospects of population ageing by making regional transfers follow more closely their net budgetary effects.</p>	<p>The regional financing system is under review, with the stated objective of increasing regions' reliance on their own sources of revenue. The new autonomy statute for Catalonia contains an increase in the share of several taxes it receives, but it will not be fully implemented until the whole financing system is reformed in 2008.</p>
<p>Avoid using earmarked grants or at a minimum increase transparency on the overall amount and criteria used to allocate them across regions.</p>	<p>No actions taken.</p>
<p>Relax the obligation for regional governments to spend a minimum amount on health care. Reduce the bias in favour of less developed regions in allocating central government investment. Consider using more effective instruments in supporting poor regions' growth potential, such as education policies.</p>	<p>The new Fiscal Stability Law exceptionally allows productive investment to be left out of the required budget outcome. In the revision of the Catalonia autonomy statute, a principle was adopted whereby the national ranking of the region in <i>per capita</i> income would not be affected by inter-regional transfers.</p>
<p>Consider carefully the transfer of more responsibilities to local governments. Improve the financing of municipalities.</p>	<p>Negotiations are under way to reform the local government fiscal framework. Financing of municipalities is also being improved (a Special Fund in the 2007 Budget for small municipalities and compensation for the reform of the <i>Impuestos des Actividades Económicas</i>)</p>
<p>Speed up the implementation of hospital management reforms and adopt global budgets instead of line budgeting.</p>	<p>No actions taken.</p>
<p>Introduce means-tested co-payments on drugs for pensioners.</p>	<p>No actions taken.</p>

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*The economic situation and policies of Spain were reviewed by the Committee on 30 November 2006. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 13 December 2006. The cut-off date for information used in the preparation of this Survey is 21 December 2006.*

*The Secretariat's draft report was prepared for the Committee by Claude Giorno and Eduardo Camero under the supervision of Peter Jarrett.*

*The previous Survey of Spain was issued in April 2005.*



## BASIC STATISTICS OF SPAIN (2005)

### THE LAND

Area (1 000 km <sup>2</sup> )		Major cities (thousand inhabitants)	
Total	506.0	Madrid	3 155
Cultivated (1999)	183.0	Barcelona	1 593
		Valencia	796
		Seville	704

### THE PEOPLE

In thousands		Employment (thousands)	18 973
Population	43 398	Employment by sector (% of total)	
Net natural increase	79	Agriculture	5.3
Net migration (2002)	460	Industry	17.3
Number of inhabitants per km <sup>2</sup> )	85.8	Construction	12.4
		Services	65.0

### PRODUCTION

Gross domestic product (GDP)		Gross fixed capital investment	
Million €	905 455	% of GDP	29.3
Per head in \$	25 964	Per head in \$	7 610

### THE GOVERNMENT

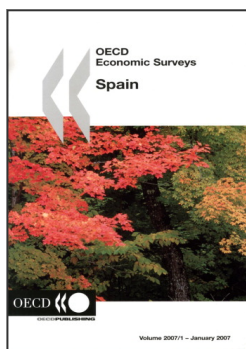
% of GDP		Composition of Parliament (seats in March 2004)	350
Consumption	18.0	Spanish Labour Socialist Party (PSOE)	164
Revenue	38.6	Popular Party (PP)	148
Surplus	1.1	Convergence and Union (CIU)	10
Fixed investment		Republican Left of Cataluña (ERC)	8
(% of gross fixed capital formation)	12.1	Basque Nationalist Party (PNV)	7
		United Left (IU)	5
		Other	8
		Next general elections: March 2008	

### FOREIGN TRADE

Exports of goods and services (% of GDP)	25.5	Imports of goods and services (% of GDP)	30.9
Exports as a % of total goods exports		Imports as a % of total goods imports	
Foodstuffs	12.1	Foodstuffs	6.1
Other consumer goods	26.8	Other consumer goods	23.0
Energy	3.4	Energy	14.1
Other intermediate goods	48.1	Other intermediate goods	45.4
Capital goods	9.6	Capital goods	11.5

### THE CURRENCY

Monetary unit: Euro		Currency units per \$, average of daily figures	
		Year 2006	0.797
		December 2006	0.758



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