OECD Economic Surveys

Spain

OECD

OECD PUBLISHING

Volume 2007/1 – January 2007

OECD Economic Surveys

Spain

2007

OECD

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The Commission of the European Communities takes part in the work of the OECD.

OECD Publishing disseminates widely the results of the Organisation's statistics gathering and research on economic, social and environmental issues, as well as the conventions, guidelines and standards agreed by its members.

This survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

Also available in French

Table of contents

Executive summary 8

Assessment and recommendations 11

Chapter 1. **Main policy challenges** 21
The Spanish economy has continued to expand at a rapid pace... 22
... but it is important to correct the imbalances in order to ensure sustainability . 23
Efforts are still required to maintain sound public finances in a medium- and long-term perspective 26
Bolstering productivity is needed to sustain robust long-term growth 29
Research and innovation performance needs to be strengthened 33
There is considerable room to further strengthen competition 43
Efforts to combat climate change must be continued 46
Looking ahead at the government's strategy 48
Notes 50
Bibliography 51
Annex 1.A1. Progress in structural reforms 54

Chapter 2. **Returning to more sustainable growth** 57
Recent trends 58
Short-term fiscal policy and the overall macroeconomic policy stance 62
Short-term prospects 67
Structural reforms are needed to reduce the inflation differential and boost the resilience of the economy 69
The housing market continues to surge 75
Notes 84
Bibliography 86
Annex 2.A1. The main characteristics of housing policy 88

Chapter 3. **Medium and long-term fiscal issues** 91
Forces acting on the revenue side 92
Forces acting on the expenditure side 97
How should fiscal policy be managed in a longer-term perspective? 106
Notes 109
Bibliography 111
Annex 3.A1. The main features of the 2007 tax reform 113

Chapter 4. **Strengthening innovation** 115
Strengthening the effectiveness of innovation policy 116
Improving the performance of the education system 125
Making the framework conditions more favourable for innovation 135

Improving the balance of the reform strategy so as to strengthen innovation performance 145
Notes 147
Bibliography 150
Annex 4.A1. The organisation and main instruments of innovation policy 153
Annex 4.A2. Evaluating aid for the recruitment of company researchers 155
Annex 4.A3. The role of technology centres 156

Chapter 5. **Improving the functioning of goods and service markets** 157
A reform of the general framework for competition policy is under way 158
Network industry regulation can be improved 160
The distributive trades sector has still to be liberalised 167
Reforms are probably needed in several other sectors 169
Welcome changes to corporate governance are underway 171
Notes 173
Bibliography 175

Boxes

1.1. What is the estimated impact of the large immigration inflows on the Spanish economy? 23
1.2. Towards a revision of immigration policy? 31
2.1. The external deficit in Spain 60
2.2. The behaviour of the tax elasticity in Spain 65
2.3. The collective wage bargaining system in Spain 73
2.4. The tax treatment of housing 78
2.5. Policy recommendations to return to more sustainable growth 84
3.1. Policy Recommendations for managing fiscal policy in the medium- and long-term 108
4.1. The value placed on university education 127
4.2. Recommendations for strengthening innovation performance 146
5.1. Main features of the electricity market 161
5.2. Recommendations for improving the functioning of product markets 172

Tables

1.1. Decomposition of Spanish GDP growth over the 1996-2005 period 24
1.2. Potential output growth decomposition 30
1.3. Employment rates in selected groups of OECD countries 30
1.4. Long-term prospects 33
1.5. Distribution of enterprises by class size 37
1.6. The National Reform Programme 49
2.1. Recent trends 58
2.2. Net financial transactions of the economic sectors 59
2.3. The fiscal consolidation process 64
2.4. General government accounts 65
2.5. Short-term prospects 67
2.6. Housing tenure in the early 2000s 81
3.1. Average tax wedge in Spain and other OECD countries 93
3.2. Transportation infrastructure density in Europe 98
3.3. Evolution of health expenditure 102
3.4. Total pension expenditure in per cent of GDP 105

4.1. Costs of business creation. 137
4.2. Overall EPL indicator and severance payments for workers with permanent contracts 141

Figures

1.1. Key indicators in international perspective 25
1.2. Housing investment share 26
1.3. Spain's fiscal outcomes have improved 27
1.4. Ageing 29
1.5. Overall R&D and innovation performance indicators. 34
1.6. Selected innovation indicators in the business sector and GDP per capita. 36
1.7. Share of business sector in innovation efforts 37
1.8. R&D intensity and innovation density 38
1.9. Main characteristics of private-sector innovation 39
1.10. Share of ICT in total economy 40
1.11. Business use of the Internet 41
1.12. Manufacturing sector specialisation 42
1.13. Selected OECD product market regulation indicators 44
1.14. The impact of product market regulation 45
1.15. Energy use and emissions reduction plans 47
2.1. Domestic demand and foreign demand developments 59
2.2. Competitiveness indicators and export performance 61
2.3. The macroeconomic policy stance 62
2.4. Budget balances 63
2.5. Average annual inflation differential between Spain and the euro area. 69
2.6. Output gap and domestic demand pressures in Spain and the euro area 70
2.7. Factors explaining the inflation differential with the euro area. 72
2.8. Wage growth differential with respect to the euro area 73
2.9. Energy prices have been the main driver of headline inflation 74
2.10. Housing prices and affordability indicators 75
2.11. Forces shaping housing demand 77
2.12. Internal migration rates 82
3.1. The tax burden 92
3.2. Employment by level of government 101
4.1. Indicators of public-sector research 118
4.2. EU Framework Programmes: Spanish contributions and returns. 119
4.3. University research spending by researcher 119
4.4. The state of tax and subsidisation policies 122
4.5. Student performance in science and mathematics 126
4.6. Education expenditure per student. 128
4.7. Participation in continuing education and training 134
4.8. Entrepreneurship indicators. 136
4.9. Venture capital investment flows 138
4.10. Product market regulation and R&D expenditure. 140
4.11. Temporary work and employment protection legislation (EPL) 142
5.1. Electricity prices for industry and households 160
5.2. Natural gas prices for industry and households 164
5.3. Telephone charges. 166
5.4. Productivity and profit margin in the distribution sector 169

This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

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^2)		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^2)	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

Executive summary

Spain's economy has managed a remarkable performance in terms of growth, employment and public finances over more than a decade. A combination of expansionary monetary conditions, fiscal prudence, beneficial structural reforms and the positive supply-side effects of the strong rise in immigration has contributed to these outcomes. But these favourable developments are tempered by deterioration in several areas: the still high inflation differential has harmed competitiveness, and the resulting low real interest rates entail excessive domestic demand, which has been supported, jointly with employment growth and immigration, by ongoing rapid increases in household indebtedness and house prices. Despite some improvement, growth has therefore remained unbalanced as manifest in the large external deficit. Looking ahead, productivity gains are still modest, risking a substantial weakening in output and per capita *income growth in the coming years.*

Taking advantage of a still favourable conjuncture, the authorities have rightly opted to tackle these medium-term problems in the context of their National Reform Programme. It sensibly aims at improving infrastructure, human and technological capital and the functioning of product and labour markets. If fully implemented, it should go a long way towards dealing with three major challenges over the longer run.

Narrowing the inflation differential and reinforcing the resilience of the economy. *It will be a difficult challenge to sustain high growth while reining in the inflation differential. With activity still expanding beyond potential rates according to OECD estimates, in the absence of an independent monetary policy a more restrictive fiscal stance would be desirable so as to moderate domestic demand. Phasing out the various forms of assistance to home ownership to balance the incentives between renting and purchasing, and enhancing legal security of relations between owners and tenants would also help to stabilise the housing market and dampen demand pressures. However, further efforts are also required to change the way the economy behaves: Spain's economy must have exemplary supply-side features not only to continue to grow faster than its euro-area partners with lower inflation but also to enhance its resilience in the event of a future weakening of domestic and overall demand requiring an adjustment in relative prices and labour costs. That should entail above all further strengthening product-market competition, notably in some sheltered sectors such as retail trade, in order to lower mark-ups, reduce costs and boost productivity. Labour market flexibility would be enhanced if the conditions for firms to opt out of collective wage agreements were eased.*

Strengthening productivity performance. *The authorities have adopted measures to make up for Spain's shortfall in innovation and the use of new technologies, strengthen entrepreneurship and bolster the education system. It is important to implement the ambitious draft reform of tertiary education, based on a greater independence of universities, more rigorous evaluation procedures and extensive diffusion of results. It should be complemented with additional measures to reduce labour market segmentation between temporary and permanent workers by moving towards a single* *contract with severance protection growing steadily with seniority in order to foster the emergence of innovative sectors and the creation of better quality and more productive jobs.*

Preparing more actively for the fiscal consequences of ageing. *Reforms are needed to maintain sound public finances in the long-term. Here, the solution probably rests both in a parametric reform of the pension system, for example increasing the contribution period to qualify for a full benefit, and in further reduction of public debt before the demographic shock occurs. Additional efforts are needed to raise the public awareness of the challenge posed by the ageing process and build a consensus around the preferred strategy to tackle it.*

Assessment and recommendations

Despite persistently favourable economic results in recent years, risks and important challenges remain

Spain's macroeconomic performance has remained remarkable: the country has experienced a 13th consecutive year of strong growth. This economic vitality has had the effect of narrowing the gap in *per capita* GDP with the euro area average from 20% to under 12% over the past decade and has also contributed to improved fiscal outturns. It has continued to be underpinned by buoyant domestic demand and spectacular employment growth based on substantial immigration, increased female labour force participation and a marked drop in unemployment. Taking advantage of still favourable cyclical trends, the authorities have rightly opted to tackle the economy's main medium-term issues:

- The stubborn inflation differential, which is continuing to erode competitiveness and helping to widen the trade deficit, highlights the need to improve the functioning of the labour and product markets so as to reduce the economy's nominal rigidities and thereby strengthen its resilience to shocks.
- The very rapid rise in household debt and property market prices, which could jeopardise macroeconomic stability, underline the need to stabilise the housing sector and correct its dysfunctional aspects.
- From a long-term perspective, reforms are still needed to ensure that the public finances remain sound, given the expected consequences of population ageing.
- Maintaining the process of income convergence with the most affluent countries will require a pick-up in productivity growth; this will involve improving the education system, catching up in terms of innovation and the use of new technologies and also eliminating the market distortions hindering the development of higher value added activities.

The National Reform Programme drawn up in 2005 by the authorities identifies these challenges and outlines a package of measures to meet them. However, in some cases the pace and ambitions of the measures introduced thus far do not appear commensurate with the problems to be overcome.

Growth has remained robust but unbalanced, despite some improvement

Economic growth has continued to edge up and is likely to have reached 3¾ per cent in 2006, over a percentage point more than in the euro area. As in previous years, the buoyancy of activity was based on very strong domestic demand underpinned by relaxed monetary conditions. The resulting substantial job creation has also been supported by real wage moderation. These trends helped not only to absorb the large numbers of immigrant workers and women entering the labour market, but also to reduce the unemployment rate to 8¼ per cent (from 19% in 1994). However, despite some progress, growth has remained unbalanced. First, although the upturn in the European countries has stimulated exports, the gradual tightening by the European Central Bank (ECB) since end-2005 has only slightly trimmed Spanish domestic demand. In particular, despite some signs of a property market slowdown, residential investment has reached 9.2% of GDP, real estate prices are still rising about 10% per year and household mortgage borrowing is growing excessively. Annual productivity gains remain modest, at no more than about 0.5%, and the inflation differential with the euro area has stayed at 1 to 1.5 percentage points, thus continuing to weaken competitiveness. While there is no problem financing the current account deficit, which may have reached about 9% of GDP in 2006, it is indicative of the scale of the strains in the economy.

Fiscal consolidation is proceeding at a good pace, although more ambitious budget targets would be desirable

For a number of years the authorities have been pursuing a fiscal consolidation policy that is more aggressive than those conducted by most other EU countries. This has partly counterbalanced the expansionary effect of the prevailing easy monetary conditions. Fiscal results have improved markedly, and in 2005, for the first time in 30 years, the public accounts showed a surplus of 1.1% of GDP, which was well above the target set. This performance will no doubt be bettered in 2006, with a projected surplus of 1.4% of GDP – again substantially above the official forecasts, largely for cyclical reasons. The more restrictive stance of macroeconomic policy in 2005-06 has, however, scarcely curbed domestic demand. Although the impact of the higher ECB interest rates could make itself felt more in 2007, such restraint will be partially offset by tax reductions of 0.4% of GDP for households and firms. Against this background, growth of activity could reach 3% or more both in 2007 and 2008, rates still in excess of the OECD estimate of potential growth. Without any residual spare capacity from the earlier slowdown, continuing demand pressures are likely to result in a slightly positive output gap, hindering any narrowing of the inflation differential. *It would therefore be appropriate to ensure that the fiscal stance remains as restrictive as it has turned out in recent years so as to alleviate domestic demand pressures and also meet longer-term imperatives. In this light, more ambitious budget targets are called for.*

More balanced growth requires measures to stabilise the housing market

Stabilisation of the property market, the prices of which have doubled in real terms since 1998, would also reduce macroeconomic and financial risks. This would be assisted by a decline in the inflation differential, which would allow for a rise in the currently very low level of real interest rates. It is also important, however, to correct the property market distortions that spur demand and make it more difficult for less well-off and younger households to enter the housing market. Many dwellings remain vacant and the rental sector is very limited, which also works against regional labour mobility, thereby hindering further falls in unemployment. These problems appear to have prompted the measures adopted recently to develop the rental housing market. However, until such time as the main property market dysfunctions have been overcome, these measures are likely to have only a limited effect. From this point of view, *it would no doubt be more effective and less costly to gradually do away with the various forms of assistance to home ownership that are still available so as to balance the incentives between renting and purchasing and moderate demand pressures*. On the supply side, *improved legal security of relations between owners and tenants would help to ensure that more effective use is made of the housing stock*.

But it also involves improving the functioning of product markets

Reducing the consumer price inflation differential with the euro area, which has reached a cumulative 10 percentage points since 1997, is a priority objective. The erosion of competitiveness that is implicit in this trend is worrying in that, *vis-à-vis* the countries of the Economic and Monetary Union (EMU), any depreciation in the real exchange rate that might be needed in order to make good this imbalance in the future risks a prolonged period of slow growth. While some part of the inflation differential can be associated with benign price-convergence mechanisms, the evidence is that these mechanisms account for only a small part of the total. More buoyant activity relative to potential than in the euro area is undoubtedly a significant part of the story. But just running a weaker economy is not a desirable solution. Rather, if Spain is to achieve continuing high resource utilisation with lower inflation, it must enhance the flexibility of product markets. The interaction between insufficient competition and the strong pressure exerted by domestic demand has in recent years prompted excessive increases in profits in the sheltered sector. Similarly, because of the relatively higher energy intensity of Spanish production and lower taxation of oil products, recent energy price rises have had a larger impact on underlying (and overall) inflation than in the euro area. *Tackling remaining market dysfunctions would reduce prices in the long run, as improved supply conditions lead to lower costs and mark-ups and higher productivity gains*.

The wage formation process needs to be reformed

The price increases generated at the sectoral level have been passed on and propagated by the wage formation system, even if the latter has not been the fundamental source of inflation. Real wages have fallen over the past few years, partly as a result of the strong rise in immigration, which has enhanced labour market flexibility. However, nominal wage growth has been systematically higher than in the euro area, even though wages have been initially negotiated on the basis of the 2% European Central Bank inflation reference rate. The reason is that an increasing number of collective agreements include inflation catch-up clauses. Moreover, these agreements, which are negotiated at intermediate (provincial or sectoral) levels, contain very broad administrative extension clauses that firms can evade only with great difficulty. On the one hand, such practices are unsuited to EMU membership, since they do not guarantee increases in unit labour costs similar to those in the rest of the zone. On the other, they restrict wage differentiation between firms with different productivity levels and reinforce nominal wage inertia. In a context of eventually weaker domestic and overall demand, such a wage determination process would hamper the resilience of the economy and its capacity to adjust by improving its competitiveness through a fall in relative unit labour cost. The social partners had earlier agreed to discuss wage bargaining reforms, but the prospects are poor. *Given the current framework, the best approach would seem to be to move the system towards greater decentralisation and flexibility. In particular, the conditions for firms to opt out of collective agreements should be relaxed.*

Fiscal policy still has medium-term challenges to face

The fiscal consolidation achieved over the past decade in a context of strong growth and substantial decentralisation has been remarkable, and the authorities have clearly indicated their intention to continue to pursue a prudent fiscal policy in the medium term. Reforms have been introduced with the object of improving the efficiency of budgetary management in terms of both resources and expenditure. In this regard, the spending caps, which in practice have consisted in limiting the growth of central government expenditure to below the projected rise in nominal GDP, have been an effective way to pursue a counter-cyclical fiscal policy and to use buoyant tax revenues to reduce indebtedness. However, further efforts are necessary, bearing in mind the pressures that will weigh on the public accounts in the medium term as a result, for example, of the gradual decrease in EU transfers and the ambitious public investment programme.

Budget efficiency can still be improved

Recent measures to simplify and reduce tax rates on households and businesses and bolster efforts to combat tax evasion will improve the effectiveness, equity and neutrality of the tax system. Furthermore, by increasing the regions' control over the taxes levied on their territory and limiting their dependence on central government transfers, the ongoing revision of fiscal federalism will better align their revenue-raising powers with their spending responsibilities, thereby enhancing accountability. *However, unless the regions are allocated more expenditure responsibilities, this revision of fiscal federalism must not entail any further reduction in central government resources.* With decentralisation leading to fragmentation and loss of information, setting up an agency to evaluate the quality of public policies is a promising idea for comparing the management methods of the various government agencies and boosting efficiency. *For this reform to succeed, however, the agency in question must be sufficiently independent and make its assessments widely available to the public so as to promote best practices. Publication of the results of comparative analyses, in particular, must not be hindered by opposition from the regions,* as happened in the case of hospital waiting lists.

A stabilising fiscal role with prudent economic assumptions is key

To ensure continuing sound fiscal management in a decentralised framework, while maintaining the stabilising role of public finance, the government has reformed the 2003 Fiscal Stability Law, which obliged each level of government to keep its accounts permanently in balance. The new rule retains its predecessor's simplicity and has fairly broad support from the regions because of its increased flexibility. More significantly, the law has improved fiscal policy's stabilising function by evaluating the cyclical position of the economy and taking into account its expected growth rate relative to potential. *However, care should be taken when implementing this new budgetary rule to avoid a procyclical budgetary outcome*. Equally important, *the authorities' use of prudent macroeconomic assumptions should continue and incorporate the risks of a slowdown in potential growth in the medium term,* given the persisting sluggishness of productivity growth and the uncertain trend in immigration. In this respect, according to OECD estimates, an assumption for potential growth averaging above 3% for the next few years may be optimistic. While the new law takes account of the economic cycle, it may exceptionally exclude increases in public investment (including for R&D and innovation) up to 0.5% of GDP. That said, *an unjustified bias in favour of tangible over other forms of investment resulting from this exclusion should be avoided*. *Moreover, any exclusion should be treated very cautiously so as not to weaken the rule itself. Hence, they should be granted only exceptionally — as foreseen by the law — and kept strictly under the ceiling, which should not be raised in the future*.

It is time to confront the budgetary implications of ageing

The time has come to develop a more far-sighted long-term strategy to deal with fiscal management in the context of population ageing. The social partners now broadly recognize the scale of the financial problems resulting from ageing: something on the order of 7% of GDP by 2050 merely for public pension spending, which is more than in most other EU members because of the larger, albeit later, demographic shock and the insufficient actuarial fairness of the old-age pension system. Indeed, its parameters provide pensions whose discounted value on average exceeds the sum of corresponding contributions. Also, according to OECD estimates, the rise in health spending by mid-century could exceed an additional 4 percentage points of GDP, while the average annual budgetary cost of the infrastructure needed to provide long-term care for the elderly – to be gradually developed between 2007 and 2015 – may ultimately reach as much as 1% of GDP. Confronting these cost increases will be difficult. Although the massive recent increase in immigration has improved short-term pension finances, it has reduced the public's awareness of how urgent it is to deal with the problem so as to minimise adjustment costs. As the present average level of pensions is low and is expected to rise only slowly, reducing the replacement rate may not be the right approach. Rather, the appropriate strategy might be to gradually extend the contribution period required to qualify for a full pension. Incentives to take early retirement should also be removed and working lives prolonged. Relying heavily on increased contributions to contend with growing expenditure would mean shifting more of the adjustment burden onto younger generations and would have negative effects on employment. Substantial debt reduction and building up the reserve pension fund before the demographic shock occurs is an appropriate part of the Spanish authorities' answer to the budgetary problems flowing from ageing; indeed, public debt has been reduced by about 20 percentage points of GDP since 2000. It should, however, be linked to the implementation of an ambitious reform of the parameters of the pension system. Some modest reforms have been recently undertaken but further progress is necessary. It follows that drawing up alternative, model-based scenarios, for example in the framework of the Toledo Pact monitoring commission, would have a useful educational role to play as regards building a consensus on the socially preferred strategy.

Increasing the economy's capacity to innovate will enhance productivity

The persistent weakness of productivity growth for over a decade is, quite rightly, one of the authorities' main concerns. Admittedly, it has not stopped the buoyancy of the economy or prevented it narrowing the gap with the most affluent countries, but the underlying increase in available labour is inevitably going to tail off in future with the achievement of full employment, the slowdown of immigration and the impact of population ageing. Accordingly, OECD long-term scenarios point to a marked diminution in potential growth over the coming years if there is no appreciable improvement in productivity trends, risking an interruption, or even a slight reversal, in the process of convergence with the euro area average in the course of the next decade. In response, the government is trying to ensure that the country catches up in terms of innovation, especially in the private sector, and enhances its capacity to absorb new technologies.

The reform of R&D and innovation policy appears well thought out

To develop the economy's research and innovation capacity the authorities have devised a comprehensive, three-part reform strategy whose aim is to step up the effectiveness of R&D and innovation policy proper, as well as its framework conditions, and to upgrade the quality of education. This multidimensional approach is welcome. The *Ingenio 2010* plan, which is the first part of this strategy, is particularly detailed and generously funded, with the civilian research budget set to double during the present parliamentary term. It proposes a number of instruments to increase the focus and funding of government research, stimulate technology transfers by encouraging public/private partnerships and enhance the incentives for private-sector research and the diffusion of new technologies. Because of the multiplicity of existing obstacles and the varying forms of innovation activity, this approach seems appropriate and it is already producing positive preliminary results. *Careful evaluation of the effectiveness of the different types of financial incentives employed is called for however. Promoting technology centres, which rely on demand by end users, is a useful way of encouraging a culture of innovation while simultaneously limiting the risks of wastage. Improved transparency and co-ordination of the programmes devised by central and regional governments would avoid duplication, make it easier for SMEs to access information and reduce the danger of these measures becoming nothing more than industrial policies favouring local firms.*

Efforts to improve the quality of education are timely

The reforms under way in education, which make up the second pillar of the strategy, involve improving schooling from early childhood right up to the tertiary level, not forgetting adult training. Generally speaking, these reforms go in the right direction. The recent revision of the compulsory school system increases schools' independence, so that they can adjust more easily to growing student diversity, and backs this up with significantly increased budgetary resources. This should lead to better results and to lower failure rates. The authorities also acknowledge the need to further develop the continuous training system and the skills in the use of new technologies among a substantial portion of the population. Recent changes have sought to strengthen the management of the relevant oversight bodies and to facilitate SME access to the funds set aside for this purpose. That said, the programmes offered are often too long and unsuited to firms' needs. *Joint employer/government financing of specific continuous training projects would no doubt help to ensure the efficiency of such spending. More generally, greater efforts are needed to improve the functioning of training markets by improving the system of recognition of skills and easier access to training leaves.*

An ambitious reform of the university system has been proposed

Measures reforming university education were also recently launched to boost Spain's relatively poor performance as exemplified by international rankings or, less directly, the lower-than-average private returns to higher education. *What is needed is to move from a system based on input regulation to one based on better output appraisal linked to funding mechanisms.* The government proposal rightly increases university independence, notably as regards staffing and curriculum planning, and aims at strengthening performance appraisal. For this purpose, the statistical information on the functioning and performance of universities is being reviewed in order to ease the evaluation process, while an extensive dissemination of this information is also planned. The research assessment system will also be improved, with a view to fostering applied research and transfers of knowledge and technology to firms through financial incentives. These proposals, which are awaiting examination by Parliament, are laudable. Evaluation is vital to encourage benchmarking, increasing the possibility of discriminating among university degrees and stimulating competition and student mobility. In this connection, the projected increase in grants and loans repayable on the basis of income is also welcome, but *it should be complemented by a rise of university fees, which would be a useful addition to the tertiary sector's rather limited resources.*

It will be necessary to overcome resistance to reform

This reform is likely to meet with opposition resulting first, from some insiders reluctant to the spread of a culture of appraisal. *Yet the universities have to look beyond the particular interests of the academic community and their own sphere and seek better to meet the needs of society, especially firms.* Second, it must be ensured that the decentralised framework of the Spanish system, with the regions controlling and funding universities, will not stand in the way of the development of a culture of nation-wide evaluation and competition. *Encouraging healthy emulation is however necessary for obtaining more from the investment in human capital and creating attractive centres – for foreign researchers and students too – as has happened in the case of business schools.* Finally, the widely held view that university is a public service to which everyone is entitled could also be an obstacle to higher tuition fees. *Yet increased charges can be justified on both equity and efficiency grounds.* Despite the aforementioned shortfall, tertiary education nevertheless yields significant private and social returns, and, as in other countries, few of those attending university come from underprivileged households. Moreover, higher fees should also prompt students to make the most of their studies and finish them sooner.

A more fluid labour market is needed for permanent workers

There has recently been progress in making the framework conditions for innovation – the third pillar of the strategy – more favourable. For example, measures have been adopted to stimulate business creation and facilitate initial funding, and efforts are ongoing to reduce those labour-market rigidities that hinder the business reorganisations often needed when adopting new technologies. The May 2006 plan to reduce the market segmentation between permanent workers – heavily protected against redundancy – and those with temporary contracts did so by limiting recourse to the latter and improving incentives for permanent contracts, mainly through higher budgetary support. Additionally, the access of a wider group of workers with temporary contracts to permanent jobs was made easier. However, these reforms in fact only slightly reduce the cost differential with temporary contracts and may therefore not do enough to make the market much more fluid for permanent workers, even if the share of temporary jobs does diminish. Yet greater flexibility with regard to permanent contracts is essential if such workers are to lose their reluctance to change employers, firms to become more open to technological change, innovative industries to emerge and better quality jobs to be created. *A single employment contract that gradually increases severance payments based on length of service would achieve this essential flexibility. In addition, as is done in Austria, employees could be provided with individual severance insurance accounts into which are paid contributions that the employee can use in case of dismissal*. This would remove the present uncertainty surrounding the application of employment protection legislation and increase the mobility of permanent workers. Performance would also be improved by effective activation measures to compensate for permanent workers' reduced protection. *In some fashion, a better balance has to be found between employers' need for flexibility, employees' goal of security and adequate protection against unemployment.*

Reform of the general competition framework is welcome

Strengthening product-market competition, which is another official priority, is crucial to achieving both static and dynamic efficiency gains. More vigorous competition increases price-setting discipline in the goods market, especially in the sheltered sector, stimulates innovation, new technology adoption and, ultimately, productivity growth. While regulation has become more pro-competitive since 1998, according to the OECD Product Market Regulation Indicators, the progress made has not been any more rapid than elsewhere, and hence there is still plenty of leeway for unleashing market forces. A commendable draft overhaul of the general competition-policy framework is before Parliament. The adoption of a leniency programme will have a useful deterrent effect. The new Commission will also be more independent *vis-à-vis* the political authorities, especially where mergers are concerned, and more accountable for its actions. *It should also achieve efficiency gains from synergies between investigations and enforcement actions. Enhanced independence would also be valuable for other sectoral regulatory bodies.*

 OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

But competitive forces ought to be freed up in some sectors

While these general measures will be beneficial, more should be done to increase competitive pressures in various individual sectors. Large-scale supermarkets suffer, for example, from unjustified barriers to entry imposed by the regions. *The authorities could make use of the future European directive on services to do away with these obstacles. In any event, despite the minor initiatives already undertaken in the retail sector, they should take more resolute action to reduce the plethora of regional regulations tending to fragment the Spanish market.* The electricity market is also hampered by major defects which the government is endeavouring to correct. *This means, inter alia, adjusting regulated electricity tariffs more rapidly and transparently on the basis of changes in input costs, thereby avoiding the distortions resulting from too low prices, which have increased the energy intensity of production with harmful consequences for the environment. Efforts to agree an inter-connection with the French grid should be redoubled so as to integrate Spain into the single European electricity market and to increase international competition in the Spanish market, which has been characterised by considerable market power wielded by dominant local firms. Recent improvements in telecommunications regulations should further strengthen competition in mobile telephony and broadband Internet services, which still suffer from comparatively high prices. Regulatory changes are also needed to remove obstacles to competition in many other sectors, such as heavy road haulage and cement. Finally, both legislation and conduct in sectors, for which not enough information is available but which appear to be suffering from a lack of competition, such as procurement contracts and certain professional services, need to be more closely scrutinised.*

ISBN 92-64-02920-6
OECD Economic Surveys: Spain

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.[1] 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[2] 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,[3] 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[1]				Contribution from natives[1]				
			Immigration	Natives		Total	Demographic effect	Employment rate	Productivity	Total	Demographic effect	Employment rate	Productivity	
	(1) + (2)	**(1)**	(5)		**(2) = (3) + (4)**	(3)				(4)				**(3) + (5)**
1996-2000	**4.1**	**0.4**	0.3	0.1	**3.7**	0.2	0.1	0.1	0.0	3.5	0.0	3.2	0.3	**0.5**
2001-2005	**3.1**	**1.5**	1.2	0.3	**1.6**	0.4	0.4	0.2	–0.2	1.3	–0.2	0.9	0.6	**1.6**
1996-2005	**3.6**	**0.9**	0.7	0.2	**2.7**	0.3	0.2	0.1	–0.1	2.4	–0.1	2.1	0.4	**1.0**

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.

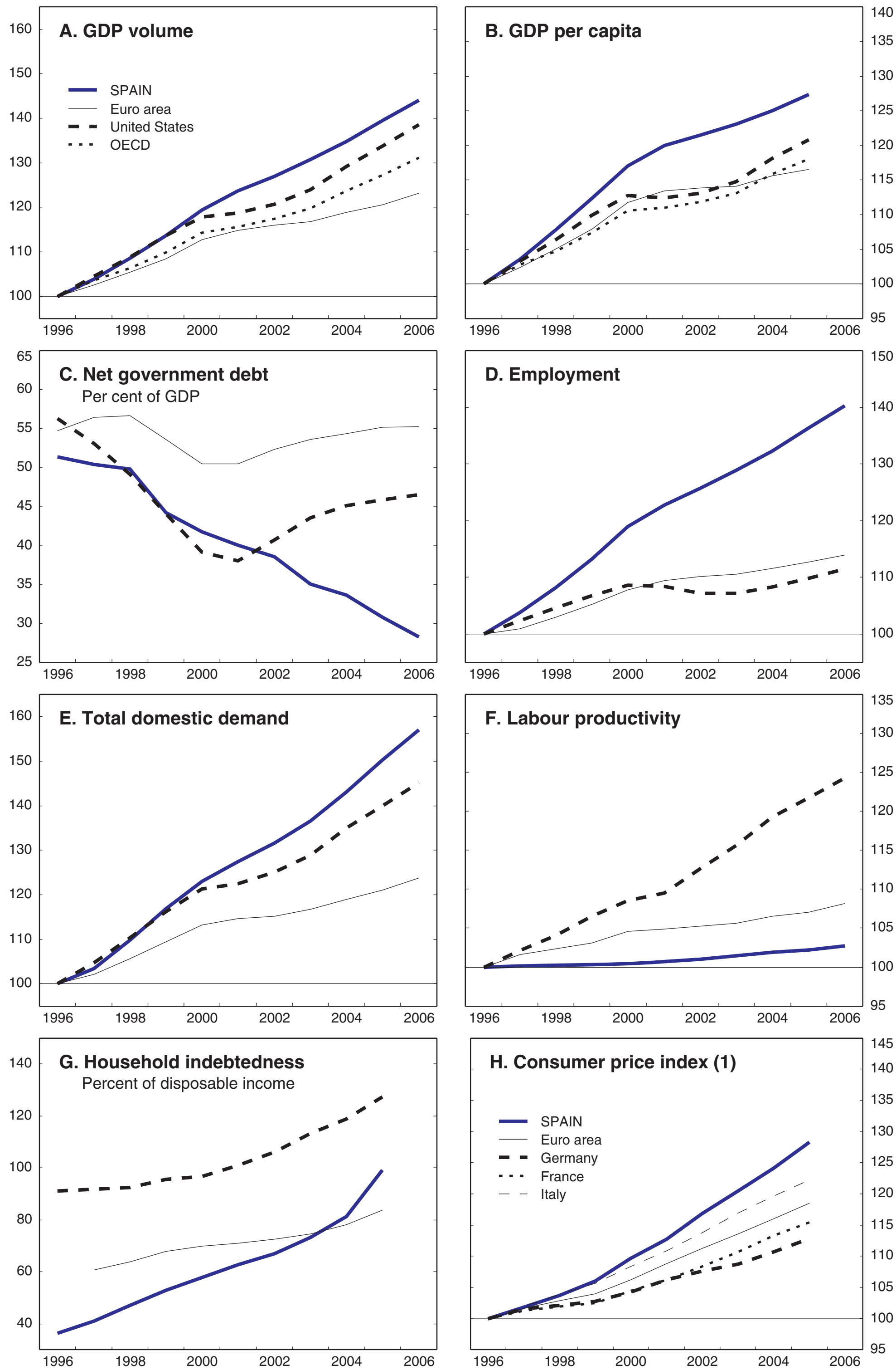
Source: Inmigración y economía española: 1996-2006, Oficina económica del Presidente.

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,[4] 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.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

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

1996 = 100

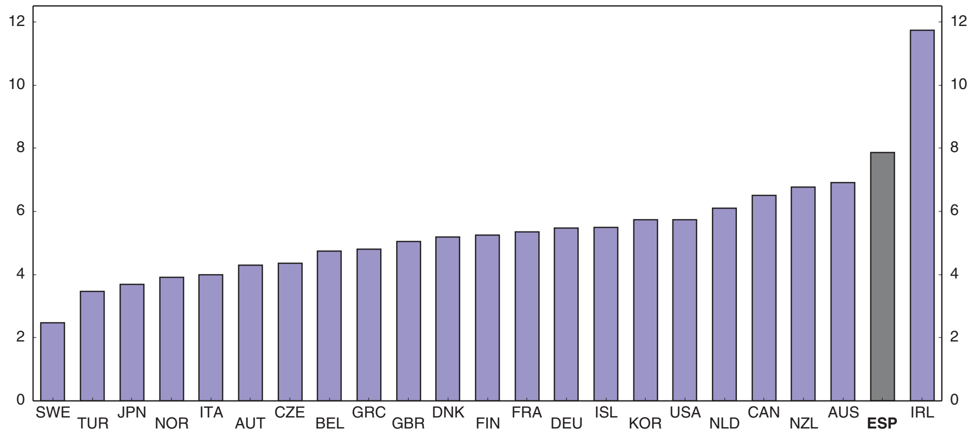


1. In this panel, international comparisons focus on euro-area countries.

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.

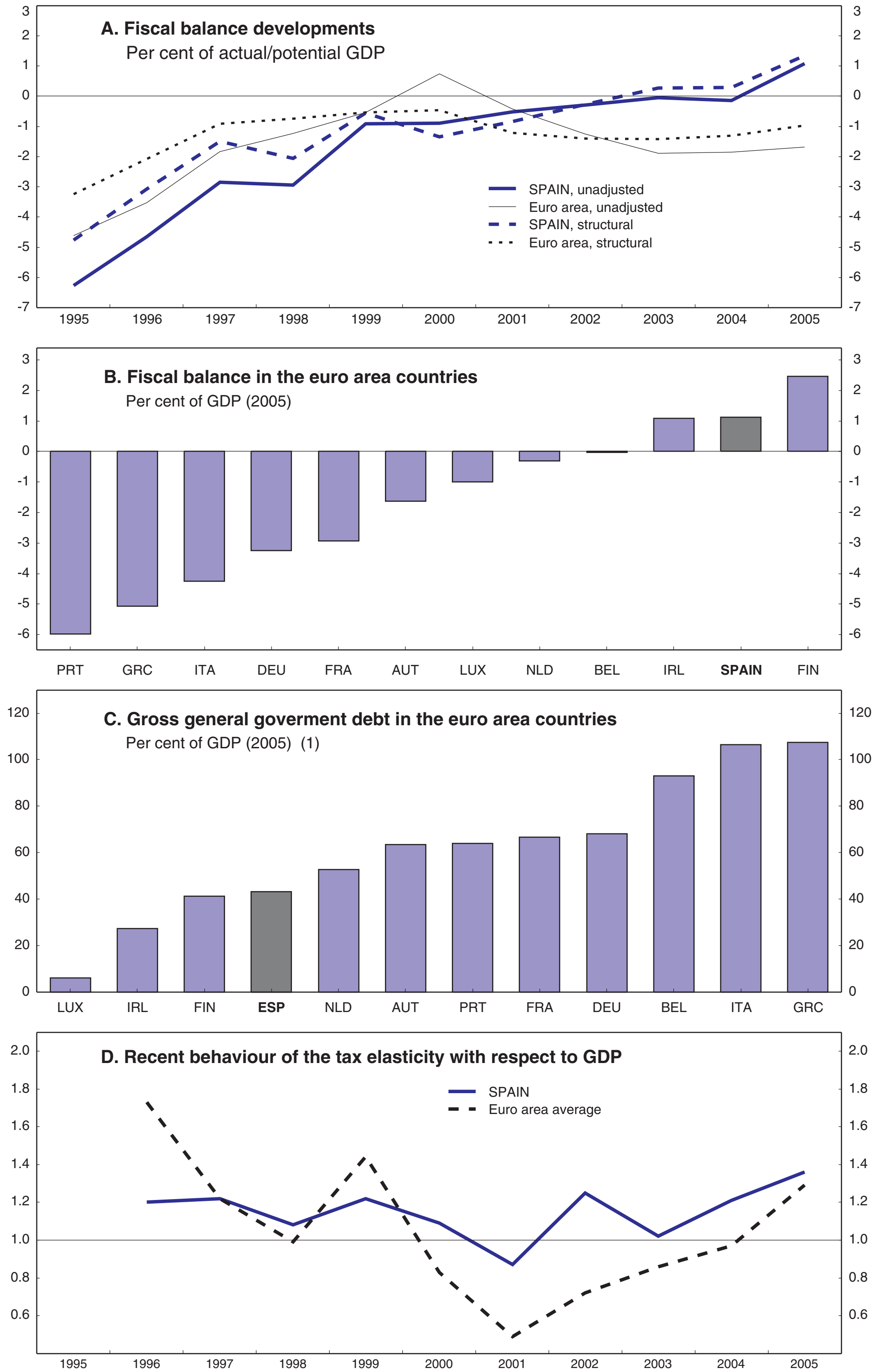
Efforts are still required to maintain sound public finances in a medium- and long-term perspective

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.

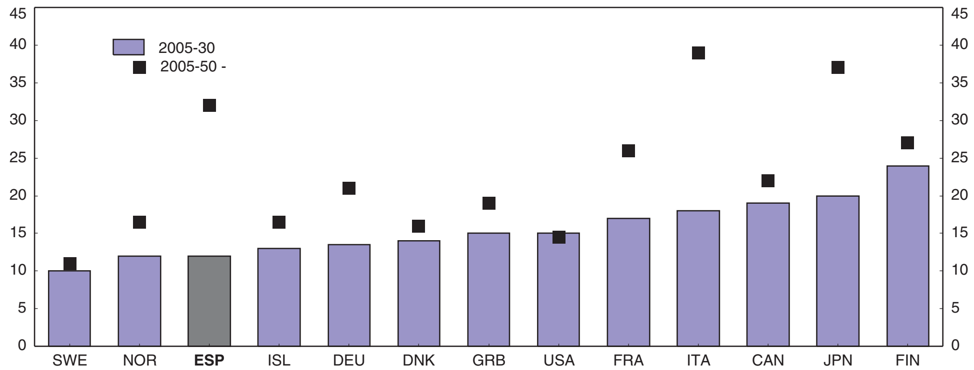
As regional governments are responsible for a larger share of spending responsibilities, their behaviour will also become more important in achieving good fiscal results. There is an ongoing discussion to modify the regional financing mechanism and the recent reform of the Catalonia autonomy statute 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[1]

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).[5] 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[1]	Portugal	Ireland
1990-1997					
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
Contribution from:					
Potential employment	1.4	1.8	0.4	1.0	3.2
of which:					
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
of which:					
Trend hours worked per worker	0.0	0.1	–0.3	..	–0.7
Capital deepening[3]	1.2	0.8	0.7	0.8	0.1
Trend multifactor productivity	0.3	0.5	0.9	1.1	4.0
1998-2006					
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
Contribution from:					
Potential employment	3.0	0.9	0.6	0.8	3.4
of which:					
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
of which:					
Trend hours worked per worker	–0.1	–0.1	–0.4	..	–0.6
Capital deepening[3]	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
Spain	**41.9**	**74.4**	**43.1**	**64.7**	**47.7**	**86.9**	**59.7**	**77.0**	**35.8**	**61.5**	**27.4**	**52.2**
Five best OECD performers[1]	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.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

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[6] (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[1] 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,[7] and the INE's latest demographic projections, based on a high immigration assumption,[8] 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
Spain				
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
Euro area				
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
United States				
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

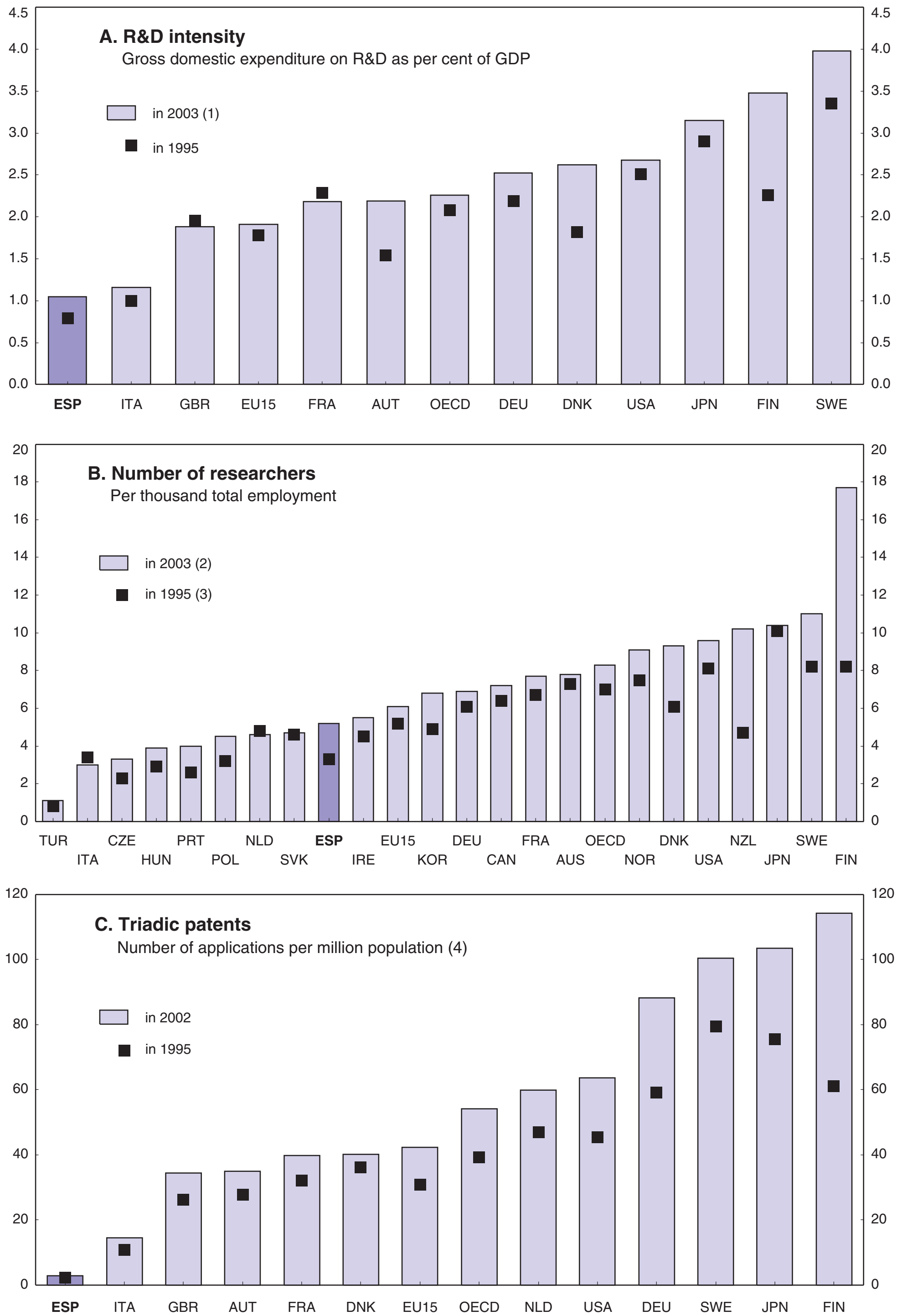
Source: OECD calculation based on the database of the Economic Outlook 80 and INE demographic projections.

has now fallen into negative territory, according to OECD estimates.[9] 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.[10] 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&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.[11] 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.

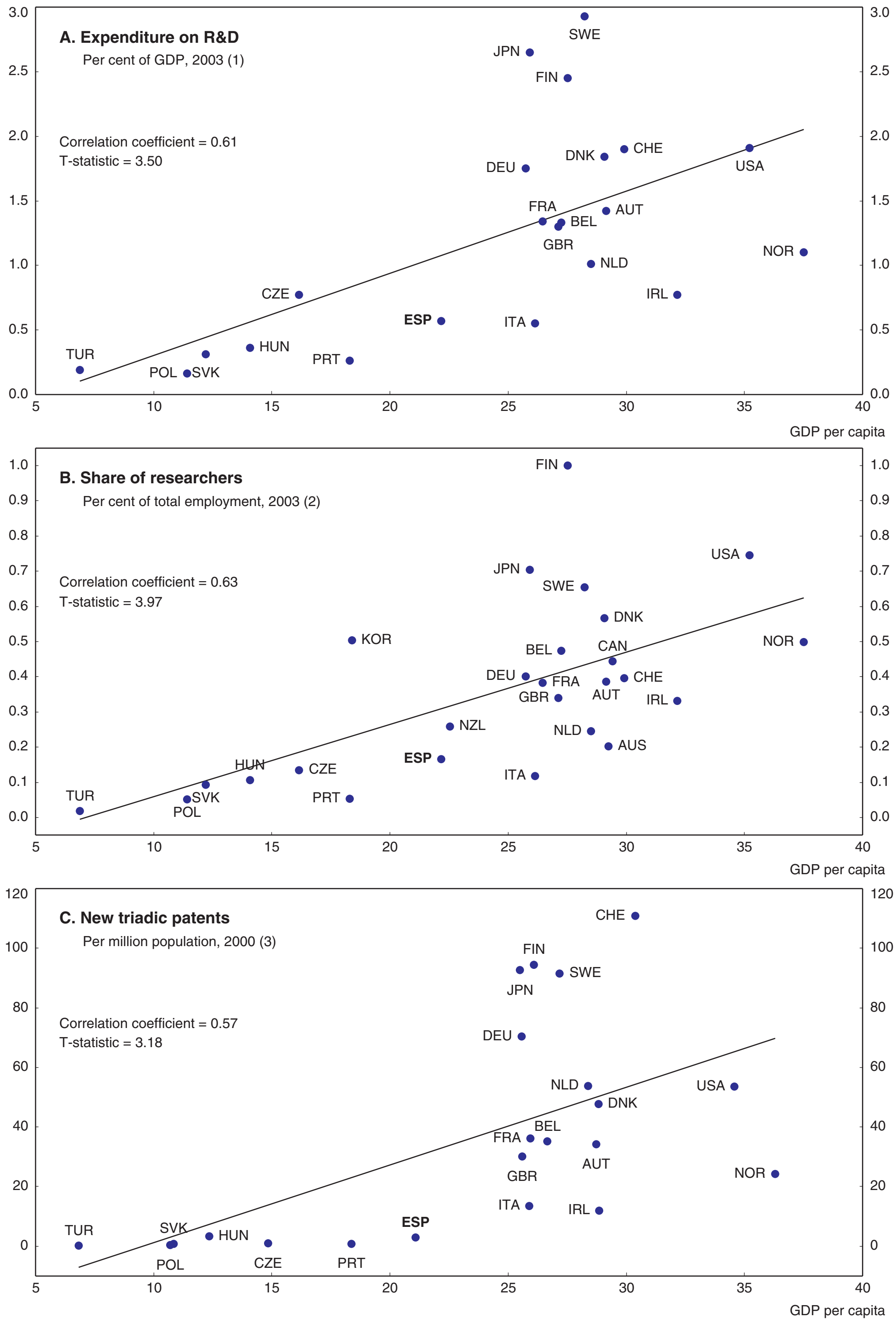
The research and innovation lag has been reduced in recent years, but the convergence process has been slow and uneven, depending on the areas concerned. Progress has been achieved in developing an educated labour force, which is crucial for improving the capacity to innovate. For example, there has been a steeper rise in the proportion of the population with tertiary-level education[12] 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,[13] 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),[14] as spending by firms is actually lower than the EU average in all sectors (Gordo, 2005).[15] 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

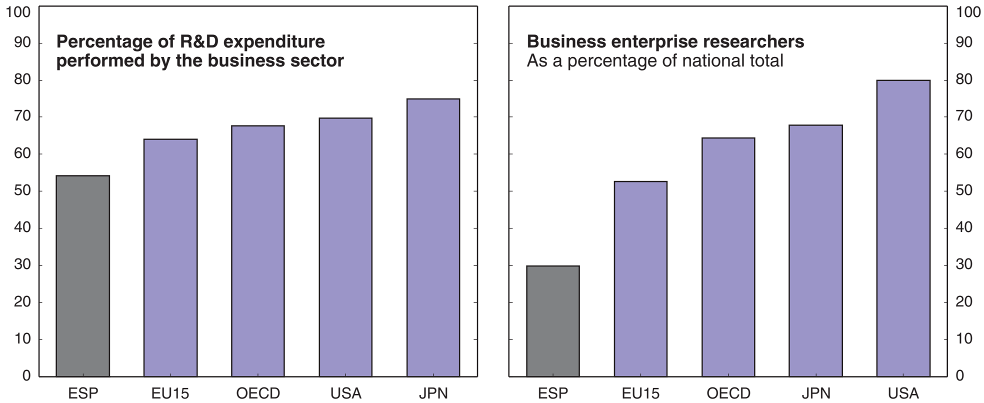


1. 2002 for Austria and Turkey; 2000 for Switzerland.
2. 2002 for Australia, Austria, Canada, Denmark, France, Italy, Netherlands, Turkey; 2001 for Portugal; 2000 for Switzerland and United States.
3. 1999 for Switzerland.

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

Figure 1.7. **Share of business sector in innovation efforts**

2003[1]



1. 2002 for US and OECD.

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

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

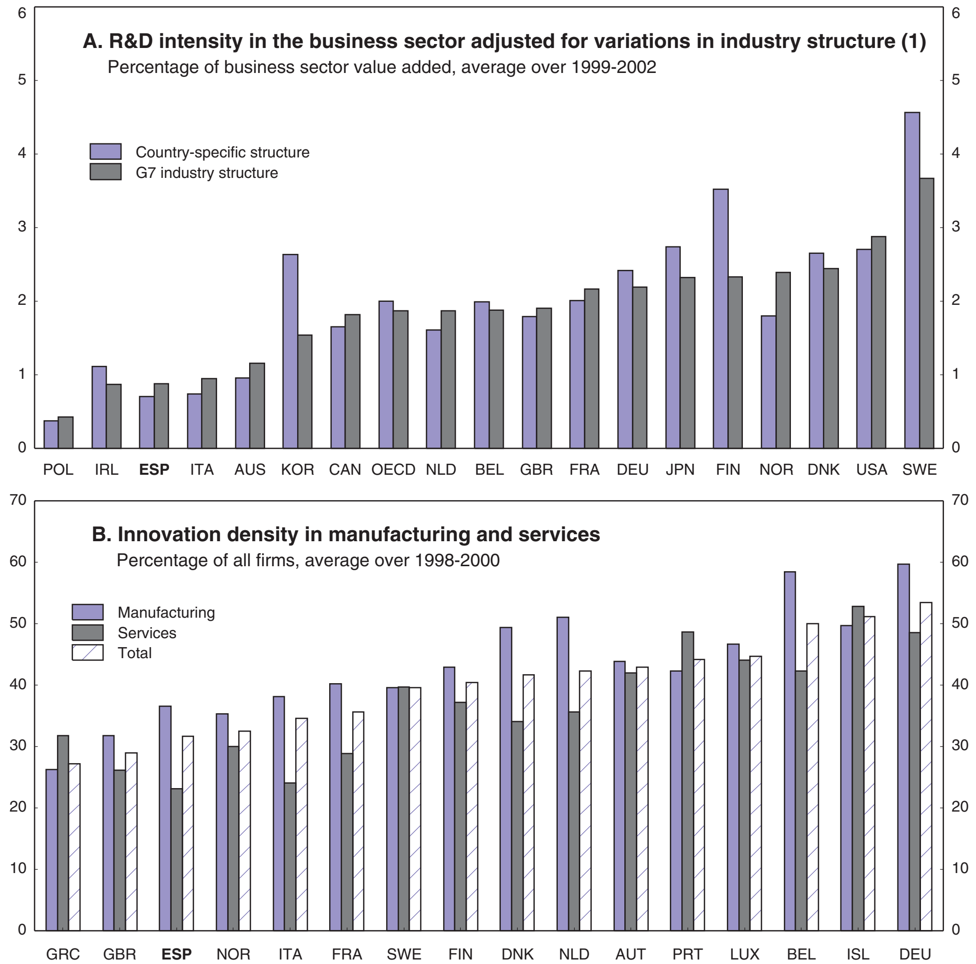
	Per cent of all enterprises			Per cent of persons employed in enterprises		
	Spain	EU	United States	Spain	EU	United States
Micro (less than 10 employees)	93.9	89.1	78.5	34.8	28.7	11.1
Small (10-49 employees)	5.2	9.1	19.8	34.4	21.3	25.1
Medium (50-249 employees)	0.8	1.5	1.5	12.8	16.1	14.1
Large (over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

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.[16]

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.[17] 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.[18]

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



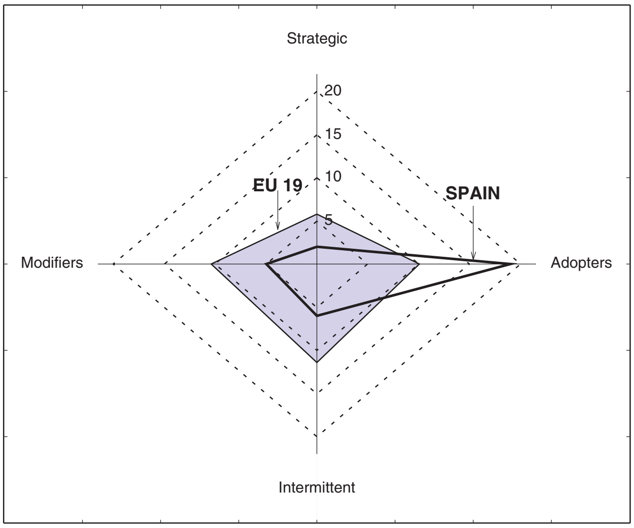
1. All countries are assumed to have the same industry structure. Calculated on the basis of the R&D intensity per industry with the weights of each industry corresponding to their shares of total business sector value added on average across G7 countries.

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,[19] 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[1]



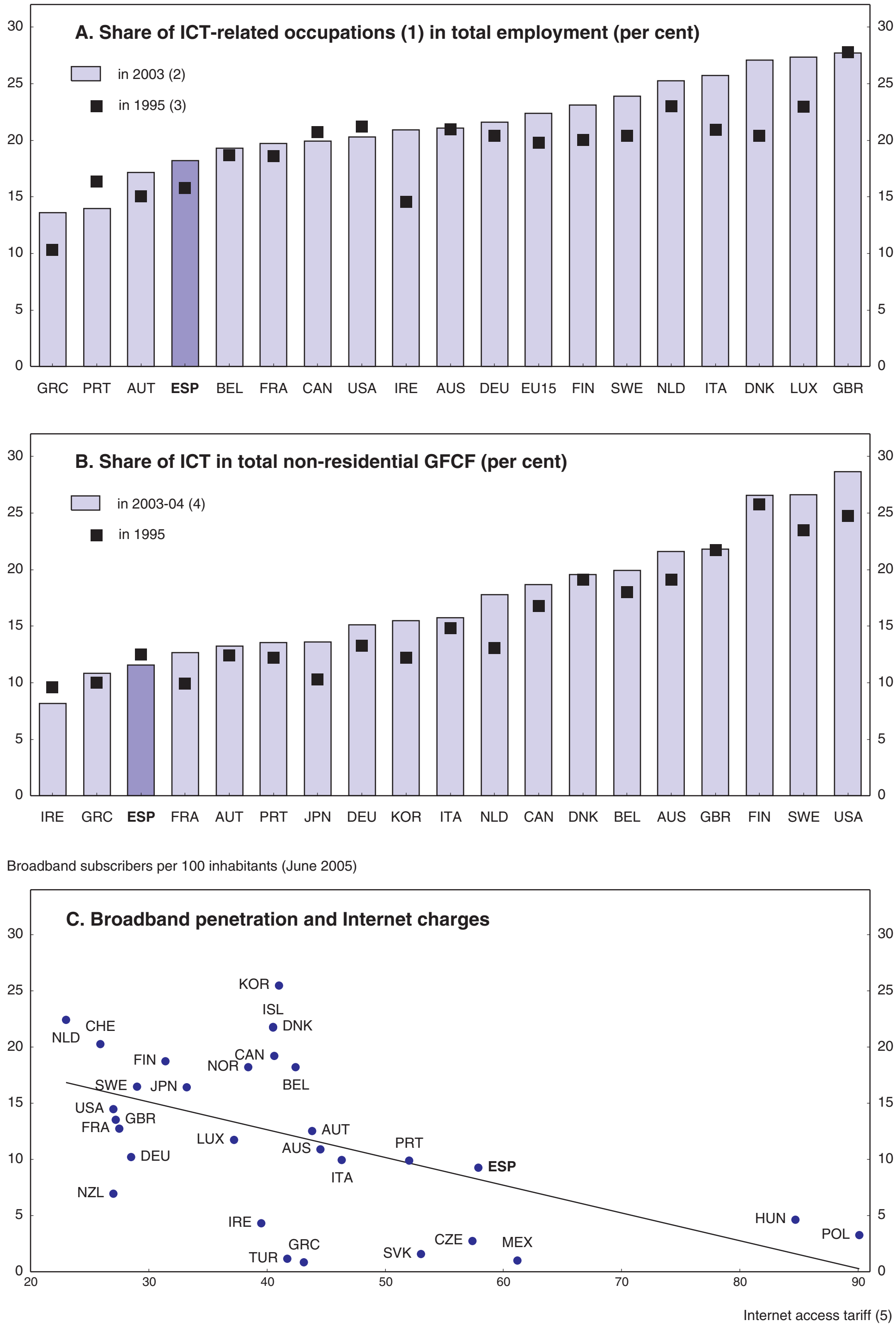
1. Strategic (innovators): innovation is a core component of firms' competitive strategy; Intermittent (innovators): innovation is not a core strategic activity, but firms develop innovations in-house when necessary; Modifiers (of technology): firms modify their existing products or processes through 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.[20] 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,[21] 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**

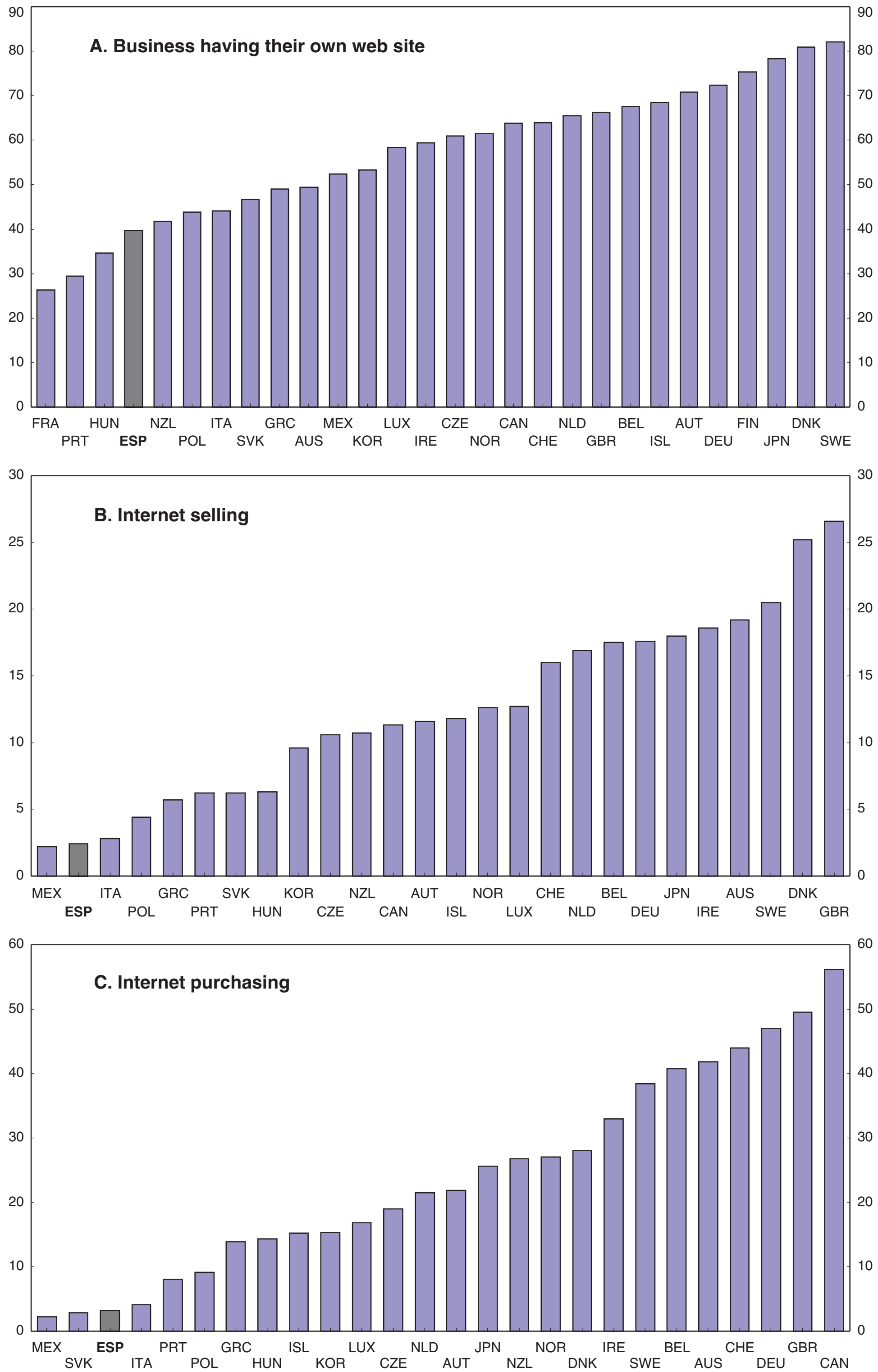


1. Broad definition based on methodology developed in chapter 6 of the Information Technology Outlook 2004.
2. 2002 for Luxembourg and Netherlands.
3. 1997 for Australia, Finland and Sweden.
4. 2004 for Spain, Australia, Canada, Germany, Korea and United States; 2002 for Japan.
5. November 2004. Broadband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

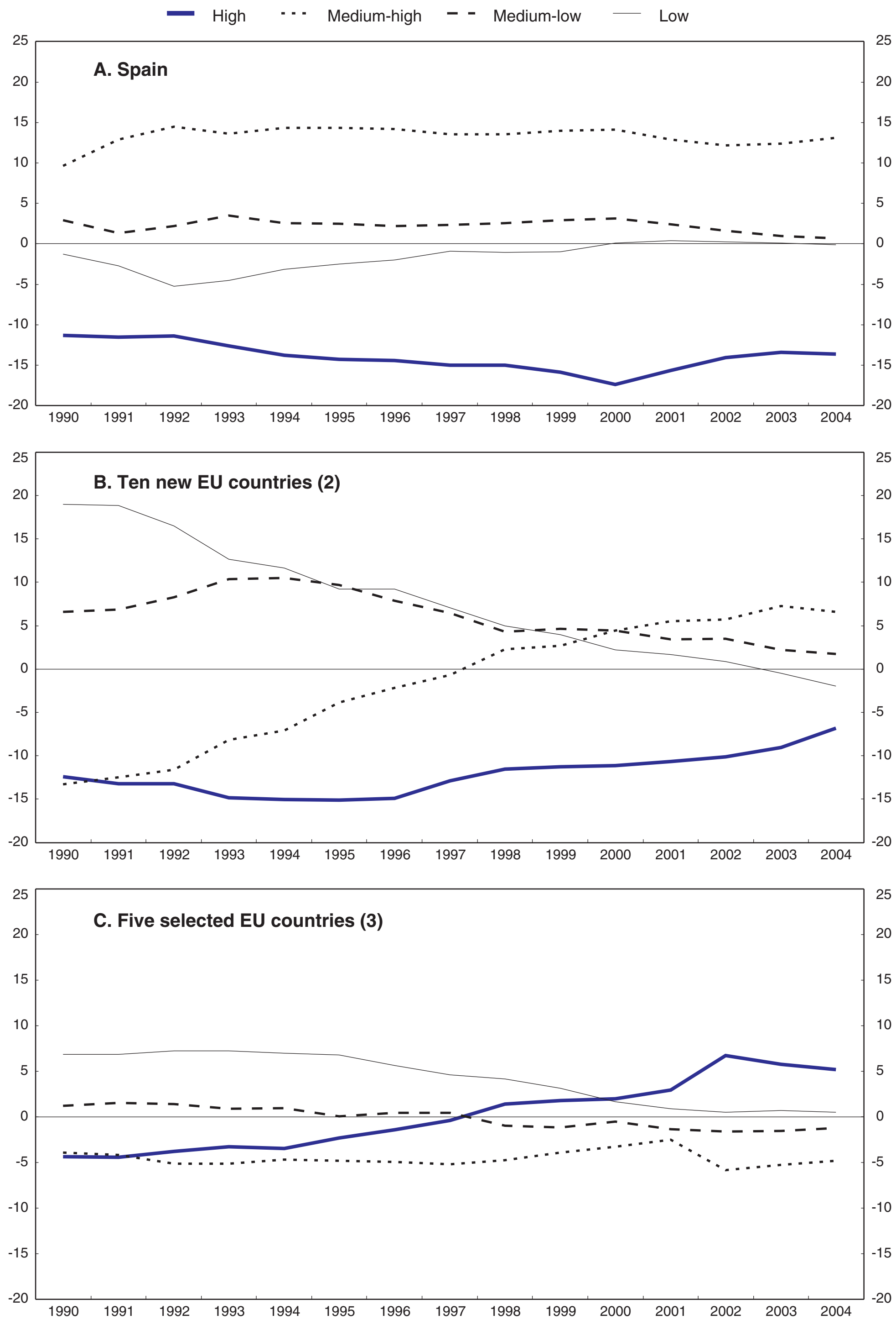


1. 2001 for New Zealand; 2002 for Switzerland; 2003 for France, Iceland, Japan, Luxembourg, Mexico and Spain.

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

Figure 1.12. **Manufacturing sector specialisation**[1]

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.

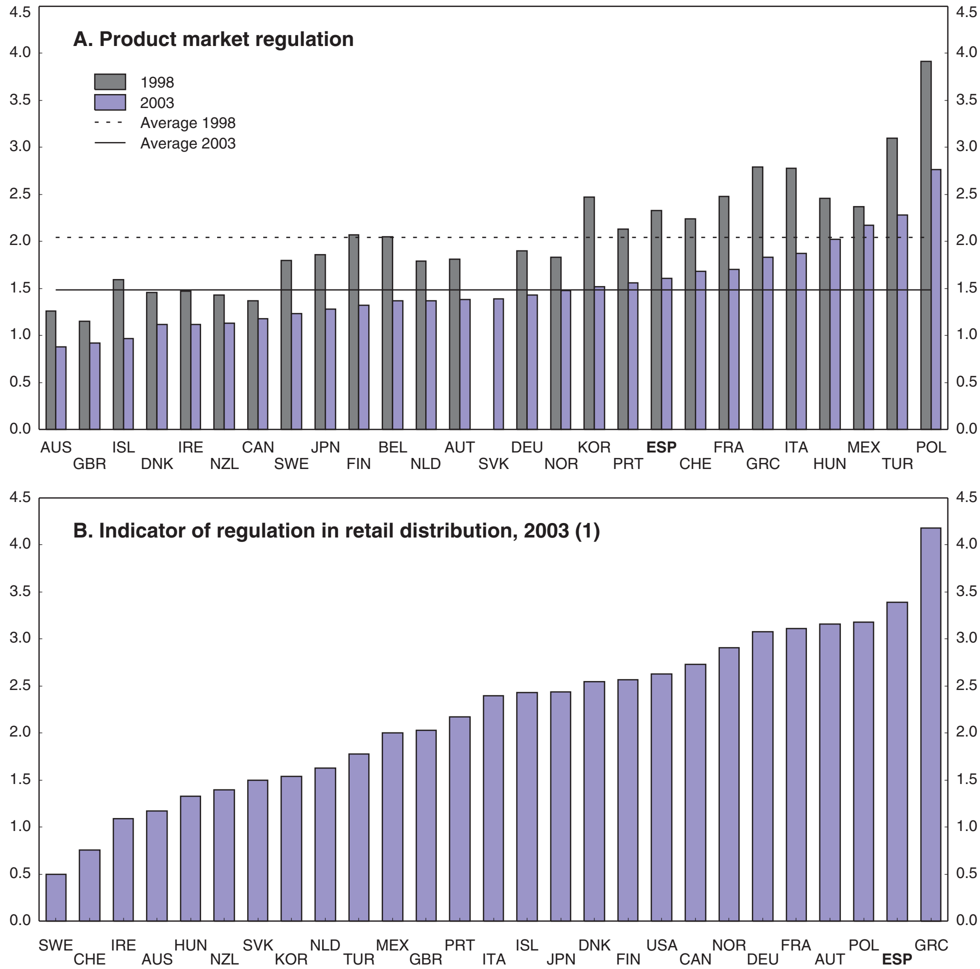
There is considerable room to further strengthen competition

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

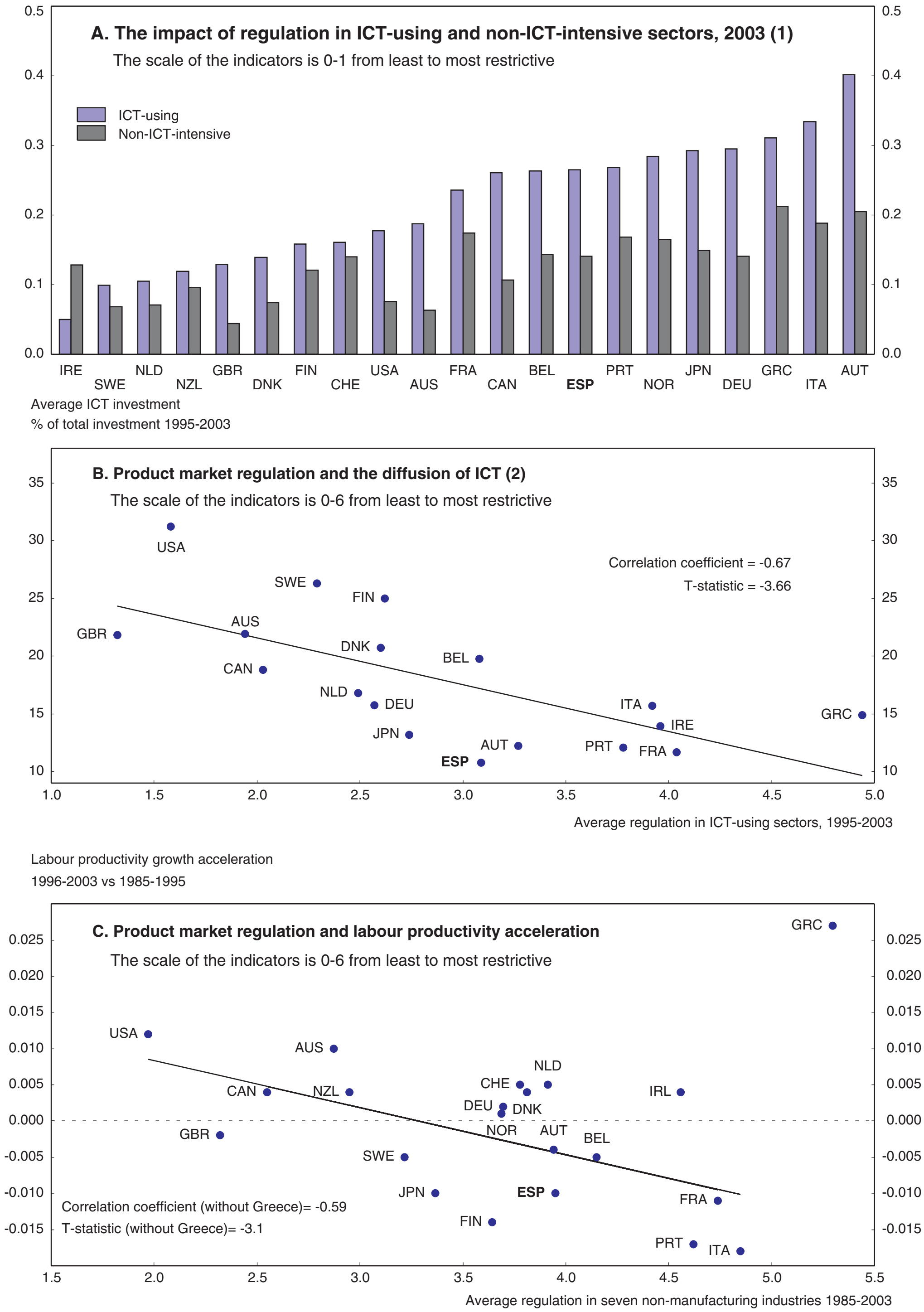


1. Covers barriers to entry, operational restrictions and price controls.

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.[22] 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

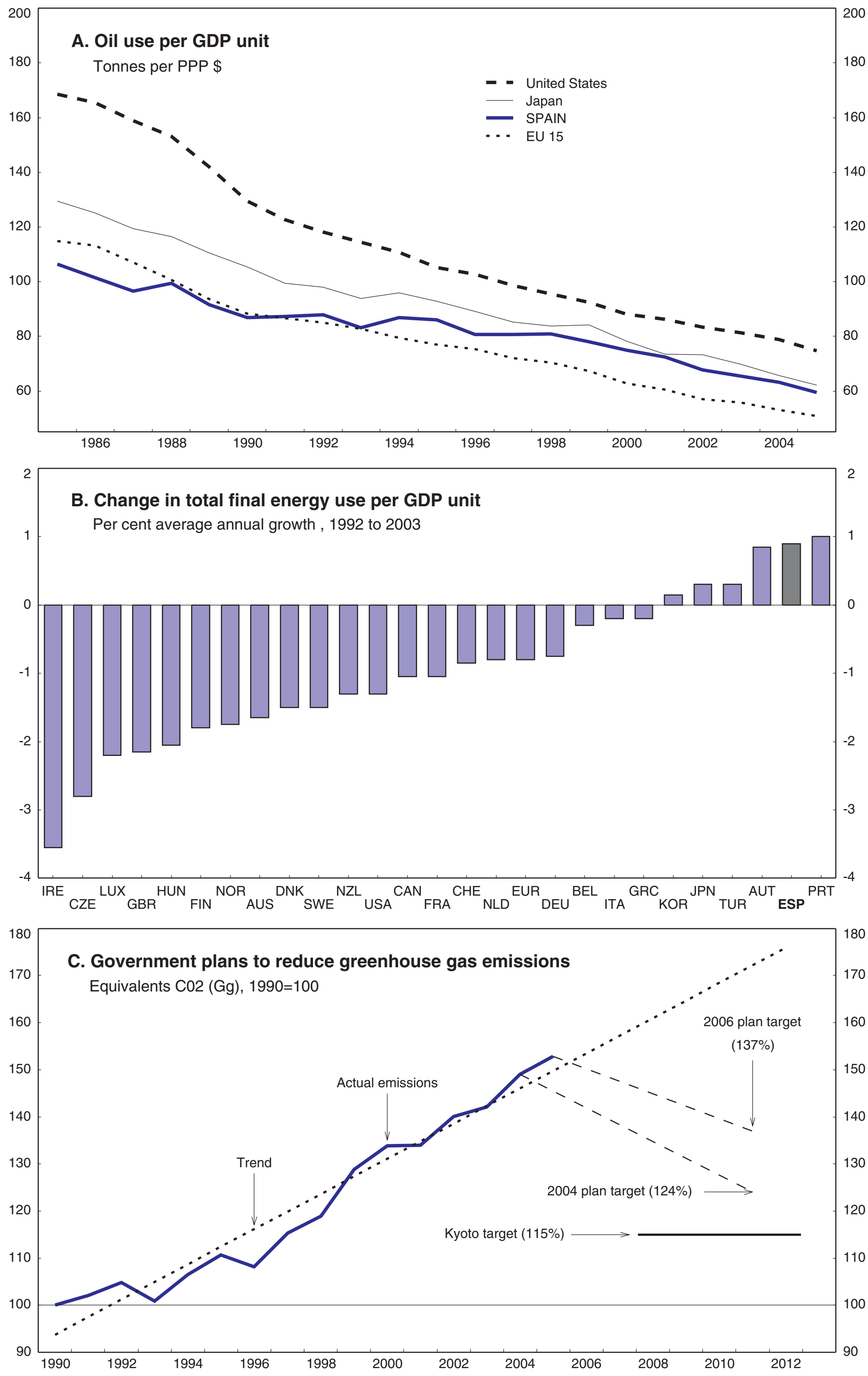
The government's commitment to reduce greenhouse gas emissions, as a signatory of the Kyoto Protocol, is not only a worthwhile way of combating climate change, the effects of which already seem apparent on the Iberian peninsula, but is also of benefit to the Spanish economy. International comparisons show that Spain suffers from high external energy dependency[23] 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_2.[24]

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.[25] 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_2 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	1. Improve the Fiscal Stability Law. 2. Revise the regional financing mechanism. 3. Redirect public spending towards more productive expenditures. 4. Rationalise health-care spending. 5. Reassess social security benefits, in particular, pensions. 6. Reform the personal and corporate income taxes, and increase environmental taxation.
2. Improve infrastructure	1. Increase investments on roads, railways, ports, airports and metropolitan transport. 2. Guarantee an adequate and safe supply of water.
3. Increase and improve the stock of human capital	1. Improve the education system, from early-childhood to higher education. 2. Facilitate the integration of immigrant students. 3. Guarantee the universal and permanent access to education. 4. Improve life-long learning. 5. Incorporate information technologies into education.
4. Carry out an ambitious R&D and innovation strategy	1. Increase funding to R&D and innovation activities. 2. Devote the incremental funds to strategic programmes. 3. Improve the framework conditions for R&D and innovation. 4. Develop a new evaluation procedure for R&D and innovation policies.
5. Revise the competition and regulatory framework, and raise the efficiency of public management	1. Overhaul the competition framework. 2. Enhance the protection of consumers and users. 3. Improve the regulatory framework of public entities. 4. Revise the regulatory framework of, among others, the energy, telecom, financial and postal services, housing, tourism and retail distribution sectors.
6. Improve the functioning of the labour market	1. Increase youth and female employment. 2. Reduce the use of temporary contracts in the economy. 3. Improve the health and safety provisions in the workplace and the balance between work and personal life. 4. Better manage immigration flows. 5. Improve the care system for dependents and the integration of the disabled into the workforce.
7. Foster entrepreneurship	1. Reduce administrative barriers to new enterprise creation. 2. Improve access to finance. 3. Foster the creation of technology-intensive firms.

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.

Bibliography

Arundel, A. and H. Hollanders (2005), "Innovation Strengths and Weaknesses", European Trend Chart on Innovation, European Commission, Enterprise Directorate, December.

Ayuso, J. and F. Restoy (2006), "El precio de la vivienda en España: Es robusta la evidencia de sobrevalroración?", Banco de España, *Boletín económico*, junio.

Blanchard, O. (2006), "Portugal, Italy, Spain and Germany. The implications of a suboptimal currency area", presentation at WEL-MIT, *http://econ-www.mit.edu/faculty/download_pdf.php?id=1344*.

Buisán, A. and J.C. Caballero (2003), "Un análisis comparado de la demanda de exportación de manufacturas en los países de la UEM", Banco de España, *Boletín económico*, mayo.

Burniaux, J.M., R. Duval and F. Jaumotte (2003), "Coping with Ageing: A Dynamic Approach to Quantify the Impact of Alternative Policy Options on Future Labour Supply in OECD countries", *OECD Economics Department Working Paper*, No. 371.

Conway, P., V. Janod and G. Nicoletti (2005). "Product Market Regulation in OECD countries: 1998 to 2003", *OECD Economics Department Working Paper,* No. 419.

Conway, P., D. de Rosa, G. Nicoletti and F. Steiner (2006), "Regulation, Competition and Productivity Convergence", *OECD Economics Department Working Paper* No. 509.

COTEC (2005), "Informe COTEC 2005, Tecnología e Innovación en España. Fundación COTEC para la innovación tecnológica", Madrid, *www.cotec.es*.

El País (2006), "El cambio climático adelanta dos semanas la primaveras en España", 26 octubre, p. 33.

El País (2006a), "El Gobierno asume que España sólo cumplirá Kioto si paga 3 000 millones en "multas"", 13 julio, p. 41.

Estrada, A. (2006), "Los efectos sobre la actividad de la inversion en I+D: nueva evidencia para España", Oficina Económica del Presidente del Gobierno, mimeo, mayo.

European Commission (2002), "Innobarometer 2002", *Innovation paper No. 33, Flash eurobarometer 129*, Entreprise Directorate-General, EUR 17057 EN.

European Commission (2005), "Monitoring Industrial Research: the 2005 EU Industrial R&D Investment Scoreboard", Vol. 1, Directorate General Research.

European Commission (2006), "Monitoring Industrial Research: the 2006 EU Industrial R&D Investment Scoreboard", Directorate General Research.

Gordo, E. (2005), "Características de la innovación tecnológica en las empresas españolas", Banco de España, *Boletín económico*, junio.

Gordo, E., J. Jareño and A. Urtasun (2006), "Algunos rasgos estructurales del sector de servicios en España", Banco de España, *Boletín económico*, julio.

Griffith, R., E. Huergo, J. Mairesse and B. Peters (2006), "Innovation and Productivity across four European Countries", *Oxford Review of Economic Policy*, Vol. 22, Winter.

Instituto Nacional de Estadística (2004), "Encuesta sobre la innovación tecnológica en las empresas 2003", *Notas de prensa*, 20 diciembre.

Izquierdo, M. and A. Regil (2006), "Actualización de las estimaciones de la tasa de desempleo structural de la economía española", Banco de España, *Boletín económico*, septiembre.

King, D.A. (2004), "The Scientific Impact of Nations", *Nature*, Vol. 430, 15 July, *www.nature.com/nature*.

Le Bayon, S., (2006), "La croissance espagnole est-elle soutenable?", Observatoire français des conjonctures économiques, No. 97, avril.

Luintel, K. B. and M. Khan (2005), "An Empirical Contribution to Knowledge Production and Economic Growth", *OECD STI Working Paper*, 2005/10, December.

Malo de Molina, J. L. (2005), "Una larga fase de expansión de la economía española", *Documentos ocasionales* No. 0605, Banco de España.

Mas, M. and J. Quesada (2005), "ICT and Economic Growth: a Quantification of Productivity Growth in Spain 1985-2002", *OECD Statistics Working Paper*, STD/DOC(2005)4, August.

Menzel, A. *et al.* (2006), "European phenological response to climate change matches the warming pattern", *Global Change Biology*, 12, pp. 1969-1976.

OECD (2003a), *OECD Economic Surveys: Spain*, Paris.

OECD (2003b), *The Source of Economic Growth in OECD Countries*, Paris.

OECD (2005a), *OECD Economic Surveys: Spain*, Paris.

OECD (2005b), *Education at a Glance*, OECD Indicators – 2005 Edition, Paris.

OECD (2006a), *OECD Economic Outlook No. 79*, May, Paris.

OECD (2006b), "Projecting OECD Health and Long-term Care Expenditures: What are the Main Drivers", *OECD Economics Department Working Paper*, No. 477.

OECD (2006c), "Migration in OECD countries: Labour Market Impact and Integration Issues", ECO/CPE/WP1 (2006)13.

OECD (2006d), OECD productivity database, *www.oecd.org/statistics/productivity*.

OEP (2006), "*Immigración y economía Española*, 1996-2006", paper presented by Miguel Sebastian of the *Oficina económica del Presidente,* 15 November.

Pain, N., *et al.* (2005), "The New OECD International Trade Model", *OECD Economics Department Working Paper*, No. 440.

TrendChart (2005), "2005 European Innovation Scoreboard. Comparative Analysis of Innovation Performance", European Trendchart on Innovation.

Van den Noord, P. (2006), "Are House Prices Nearing a Peak? A Probit Analysis for 17 OECD Countries", *OECD Economics Department Working Paper*, No. 488.

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 *Survey*	**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.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

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.
HOUSING MARKET	
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.
GOODS AND SERVICES MARKETS	
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
PENSIONS	
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.	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.
The pace of accrual rates should be reconsidered so as to improve incentives for older workers to remain in the labour market.	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.
Prevent collective agreements from imposing a compulsory retirement age.	While collective agreements can determine a compulsory retirement age, firms can agree with their employees to delay retirement.
Reform the sickness and invalidity benefit system by: *i)* possibly extending the employer-paid sickness period; *ii)* ensuring that State-financed non-contributory invalidity pensions managed by regional governments are not awarded too easily; *iii)* encouraging the disabled to return to work by transforming invalidity benefits into in-work payments.	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.
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.	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.
Use all social security surpluses to reduce government debt and leave a larger margin of manoeuvre for future spending.	The social security surpluses are being accumulated in a reserve fund.
Reconsider the generosity of tax incentives favouring private pensions.	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.
PUBLIC SECTOR	
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.	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.
Develop benchmarking for services provided by sub-national governments and make results public. Promote the sharing of experience among these governments.	No actions taken.
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.	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.
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.	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.
Avoid using earmarked grants or at a minimum increase transparency on the overall amount and criteria used to allocate them across regions.	No actions taken.
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.	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 *per capita* income would not be affected by inter-regional transfers.
Consider carefully the transfer of more responsibilities to local governments. Improve the financing of municipalities.	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 *Impuestos des Actividades Económicas*)
Speed up the implementation of hospital management reforms and adopt global budgets instead of line budgeting.	No actions taken.
Introduce means-tested co-payments on drugs for pensioners.	No actions taken.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

ISBN 92-64-02920-6
OECD Economic Surveys: Spain

Chapter 2

Returning to more sustainable growth

Spain's recent economic performance has been remarkable, with 2006 marking its 13th consecutive year of growth, one of the longest periods of sustained growth in its recent history. However, there are persistent signs of imbalances that threaten to derail the strong performance, although recent data suggest some improvement. The inflation differential with the rest of the euro zone remains significant, undermining international competitiveness. Driven by vigorous growth of private consumption and residential construction, domestic demand pressures have intensified, contributing to the worsening current account deficit. Addressing these imbalances is crucial in order to maintain the good recent performance. This section examines the recent behaviour of the economy, provides a short-term projection and identifies the main risks surrounding it. It analyzes in more detail the possible overvaluation of the housing market and the behaviour of the inflation differential and ends by providing a set of policy recommendations to help tackle these problems.

Recent trends

Growth remains robust

Economic activity has maintained its buoyancy, with GDP growth reaching 3.8% (year on year) in the third quarter of 2006 after accelerating slightly but steadily since 2003 (Table 2.1). Although growth remains well above the euro area average, the differential has most recently narrowed to 1.1 percentage points with the pickup in the rest of the zone (Figure 2.1). Domestic demand, still the main driver of growth, continues to grow healthily, although a slight moderation has been observed since early 2005. The overall level of indebtedness continues to increase, as the rise in public savings has not been enough to offset the upsurge in household and non-financial corporate debt (Table 2.2), which, coupled with the increase in real interest rates (which until recently remained in negative territory), has helped moderate private consumption and business investment. Recent activity indicators show a decrease in car sales and signs of improvement in industrial production, while the increase in exports from big firms and the good summer results in the tourism sector suggest a stronger pull from the external market. Thus, there is some

Table 2.1. **Recent trends**

Year-on-year percentage changes

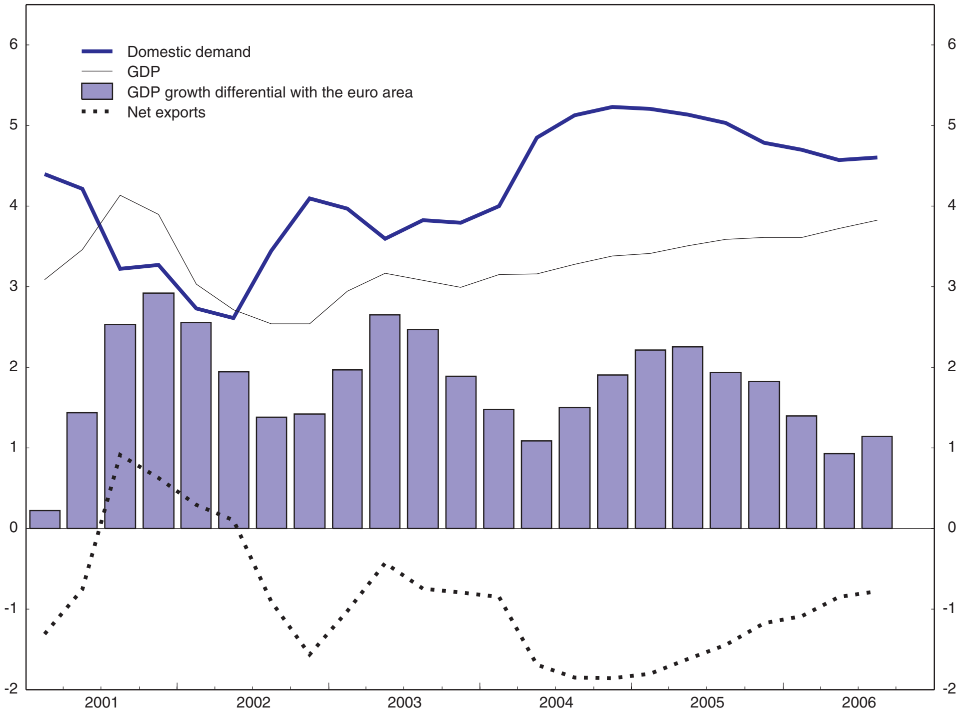
	Average 1991-2001	2002	2003	2004	2005	2005	2006		
						Q4	Q1	Q2	Q3
Private consumption	2.7	2.8	2.8	4.2	4.2	3.8	3.8	3.6	3.6
Government consumption	3.2	4.5	4.8	6.3	4.8	4.9	4.3	4.2	4.2
Gross fixed investment	3.5	3.4	5.9	5.0	7.0	6.6	6.3	6.2	6.3
Construction	2.9	6.3	6.2	5.5	6.0	5.6	5.8	5.8	6.1
Machinery and equipment	..	0.1	5.4	4.5	8.4	8.1	7.0	6.6	6.7
Final domestic demand	3.0	3.2	3.9	4.8	5.1	4.8	4.6	4.5	4.5
Total domestic demand	3.0	3.2	3.8	4.8	5.0	4.8	4.7	4.6	4.6
Exports of goods and services	9.5	2.0	3.7	4.1	1.5	2.3	9.5	4.9	3.2
Imports of goods and services	9.1	3.7	6.2	9.6	7.0	6.6	12.4	7.6	6.0
Foreign balance[1]	–0.1	–0.5	–0.7	–1.6	–1.5	–1.2	–1.1	–0.8	–0.8
Gross domestic product	**2.9**	**2.7**	**3.0**	**3.2**	**3.5**	**3.6**	**3.6**	**3.7**	**3.8**
Output gap (level)	–1.0	–0.2	–0.7	–1.0	–0.8	..	..	..	..
Unemployment rate (level)	14.8	11.5	11.5	11.0	9.2	8.7	8.8	8.6	8.3
GDP price deflator	4.1	4.3	4.1	4.0	4.1	4.1	4.1	4.0	3.8
Consumer price index (HICP)	3.8	3.6	3.1	3.1	3.4	3.5	4.1	4.0	2.6
Core consumer price index (HICP)	4.0	3.9	3.0	2.8	2.7	2.8	3.1	3.2	2.7
Current account balance (% of GDP)	–2.0	–3.8	–4.2	–5.9	–7.5	–7.0	–10.6	–8.1	..
Total employment	1.9	2.3	2.4	2.6	3.1	3.2	3.2	3.1	3.0
Productivity	1.0	0.4	0.6	0.6	0.4	0.4	0.4	0.6	0.8
Wage rate	4.4	2.0	1.6	1.7	0.8	0.7	0.9	0.8	0.8
Household saving ratio (%)	13.5	11.4	11.9	11.4	10.6	..	..	..	..

1. Contributions to GDP growth, at annual rate.

Source: *OECD National Accounts*; OECD (2006), *Economic Outlook 80*; and INE.

Figure 2.1. **Domestic demand and foreign demand developments**

Year-on-year percentage changes



Source: INE; OECD, National Accounts.

Table 2.2. **Net financial transactions of the economic sectors**[1]

Per cent of GDP

	1999	2000	2001	2002	2003	2004	2005	2006 Q1	2006 Q2
Total economy	–1.6	–3.2	–3.4	–2.6	–3.0	–4.8	–6.5	–7.1	–7.4
Financial corporations	0.5	0.8	1.4	1.4	1.3	0.7	0.9	0.6	0.7
General government	–1.3	–0.9	–0.5	–0.3	0.0	–0.2	1.1	1.8	2.3
Non-financial firms	–3.2	–4.5	–5.4	–4.4	–4.4	–4.7	–7.1	–8.0	–8.8
Households and non-profit institutions	2.4	1.4	1.1	0.7	0.1	–0.6	–1.3	–1.5	–1.7

1. The concepts of net financial transactions (computed from financial accounts) and net lending (computed from national accounts) are equivalent. However, in the case of Non-financial firms and Households and Non-profit institutions, small discrepancies between the two may arise.

Source: Bank of Spain (2006), *Financial Accounts of the Spanish Economy*, October (Table 3.3, page 37).

recent evidence that growth has been somewhat more balanced than in the past. The residential construction industry remains strong: although housing starts have decelerated and the time spent on the market of houses on sale has increased, building permit issuance continues to increase rapidly.[1] As well, housing prices continue to rise at significant rates, although some deceleration is apparent. Inflation, which hovered around 4% until August 2006, fell to 2.7% in December. The inflation differential *vis-à-vis* the euro has moved in line with world energy prices, falling most recently to 0.8 percentage point, below the trough it reached in mid-2005.

The labour market has maintained its dynamism

The labour market continues to show great dynamism, with unemployment edging down almost to 8% by the third quarter of 2006. It has successfully absorbed the increase in labour supply caused by the large inflows of immigrants and the rising participation of women. Job creation rates remain strong at above to 3%. Net employment gains have been concentrated in the construction and services sectors, with their job growth accounting for nearly 98% of the almost 1.25 million jobs created since the beginning of 2005. Likely reflecting the inclusion of immigrants in the labour market, the containment of real wages has been crucial to the robust employment expansion, as real wages have continued to fall, held down by meagre labour productivity gains of around ½ per cent per year, well below both the level observed in the 1990s and the current euro-area average.

The external sector continues to be a significant drag on growth

The negative contribution of the external balance to growth has abated somewhat, as exports have been gathering steam since the beginning of 2006, propelled by the recovery of Spain's main trading partners. However, the strength of the euro and the persistently positive inflation differential continue to undermine international competitiveness. As a result, the growth of imports, also reflecting the strength of domestic demand and higher investment needs (see Box 2.1), steadily outpaces the rise in exports. The current account deficit has been widening persistently, growing by around 30% in the first three quarters of 2006, reaching almost € 90 billion at an annual rate (9.1% of GDP). A strong showing of

Box 2.1. **The external deficit in Spain**

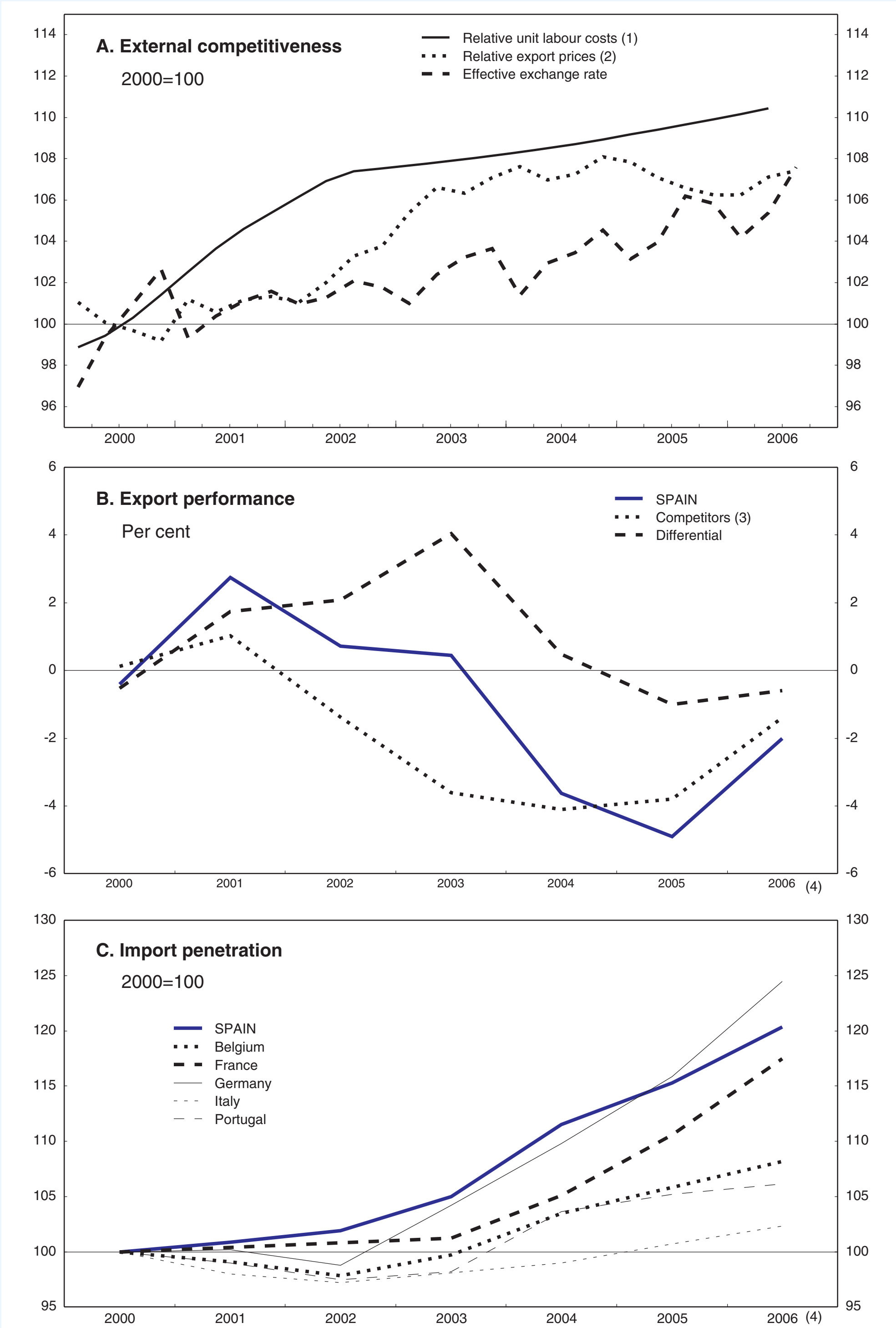
The current account deficit is among the largest in the OECD…

While the existence of current external deficits has been a regular feature of the Spanish economy since the 1970s (L'Hotellerie-Fallois and Peñalosa, 2006), the shortfall is at its highest level in 30 years after reaching around 9% of GDP in 2006. Since 1998, it has grown more than five times and is more than 3½ times its long-term average. In an international perspective, in the euro area only Greece (10.8%) has a bigger deficit in terms of GDP; in absolute terms, only the United States (around $870 billion) exceeds Spain's deficit. The contribution of the goods and services balance to growth has been negative since 1998, reaching around –1.5% of GDP in 2004 and 2005, though shrinking during 2006.

… driven in part by competitiveness losses, strong domestic demand pressures and oil price increases

Several factors have contributed to the widening of the external deficit, including the oil price increase, the rise in immigrants' remittances and the weakening of the tourism surplus due to the higher number of Spaniards travelling abroad. About 55% of the rise in the current account deficit between 1998 and 2005 results from a worsening of the trade deficit excluding energy, which can be ascribed mostly to two factors. *First*, the inflation differential and the higher growth in unit labour costs relative to its main trading partners have eroded international price competitiveness: both relative unit labour costs and relative consumer prices with respect to the euro area have increased since 2000 by almost 12 and 7%, respectively (Figure 2.2, Panel A). Spain's export performance has suffered, especially when compared with its main competitors in the euro area since 2004 (Figure 2.2, Panel B). *Second*, domestic demand pressures have been strong, particularly in relation to its main trading partners. Import penetration has risen more rapidly in Spain than in most of the euro area countries, reflecting both the impact of higher domestic demand pressures and the negative impact of higher inflation on domestic producers' selling prices (Figure 2.2, Panel C).

Figure 2.2. **Competitiveness indicators and export performance**



1. In manufacturing.
2. Exports of goods and services, relative to the euro area.
3. Represented by Belgium, France, Germany, Italy and Portugal. The weights are computed using the share of trade of each country with Spain.
4. Preliminary.

Source: OECD, Economic Outlook 80 database, Main Economic Indicators.

Box 2.1. **The external deficit in Spain** *(cont.)*

Adjustment, if necessary, could be painful, absent the possibility of a correction in the exchange rate

In order to restore the competitiveness of the economy, barring a sharp acceleration in cost-reducing productivity growth or an improvement in the terms of trade, a real depreciation would be called for. In the absence of a correction in the nominal exchange rate (at least among the euro area members), the only possibility would be through relative deflation, which could make the adjustment more difficult and prolonged, as witnessed, for example, by the German experience in recent years. As part of the adjustment process, the share of the tradables sector in production would have to increase (Jarrett, 2005). A depreciation of the real exchange rate would bring about a change in relative prices that would make tradables production more attractive. Increasing competition in the sheltered sectors would allow the economy to respond more nimbly to the required adjustment.

both hotel occupancy and spending per tourist in the second-quarter, after a weak first quarter, suggests that the tourism sector might be recovering from its sluggish performance in 2005. However, increasing outflows associated with Spaniards travelling abroad has reduced the surplus on the tourism account.[2]

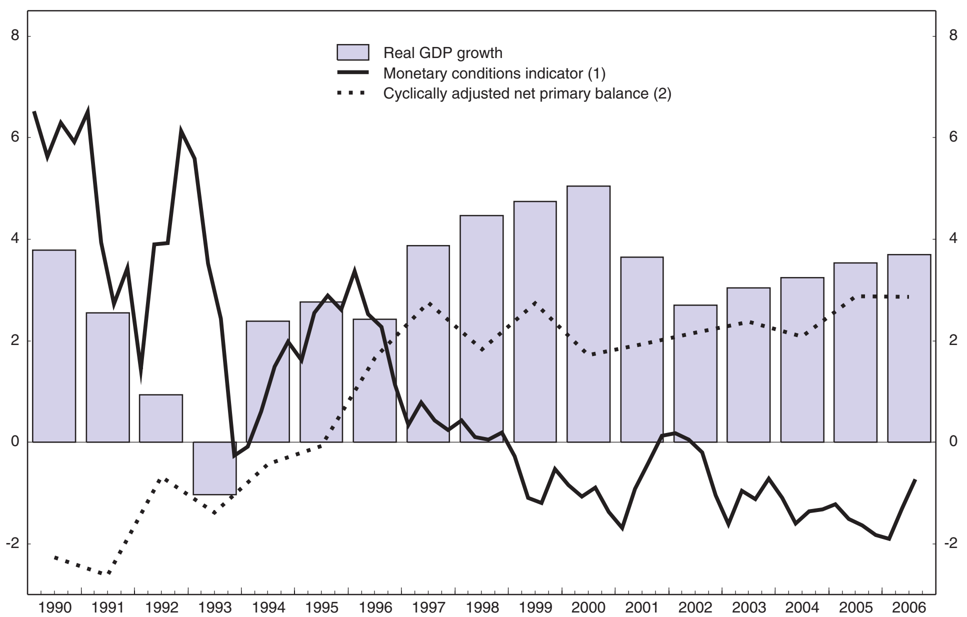
Short-term fiscal policy and the overall macroeconomic policy stance

The tighter fiscal policy has not been enough to offset still loose monetary conditions

Reflecting the recent recovery of economic activity in the euro area, monetary conditions have tightened slightly since early 2006 (Figure 2.3). Nominal and real interest

Figure 2.3. **The macroeconomic policy stance**

Per cent



1. The indicator is computed as the weighted average of the real short-term and long-term interest rates and the real effective exchange rate (based on unit labour costs in manufacturing). The interest rate variable has a unitary coefficient while the exchange rate coefficient is the ratio of exports to GDP. An increase in the indicator is associated with more restrictive financial conditions.
2. As a per cent of potential output.

Source: OECD (2006), *Economic Outlook 80*.

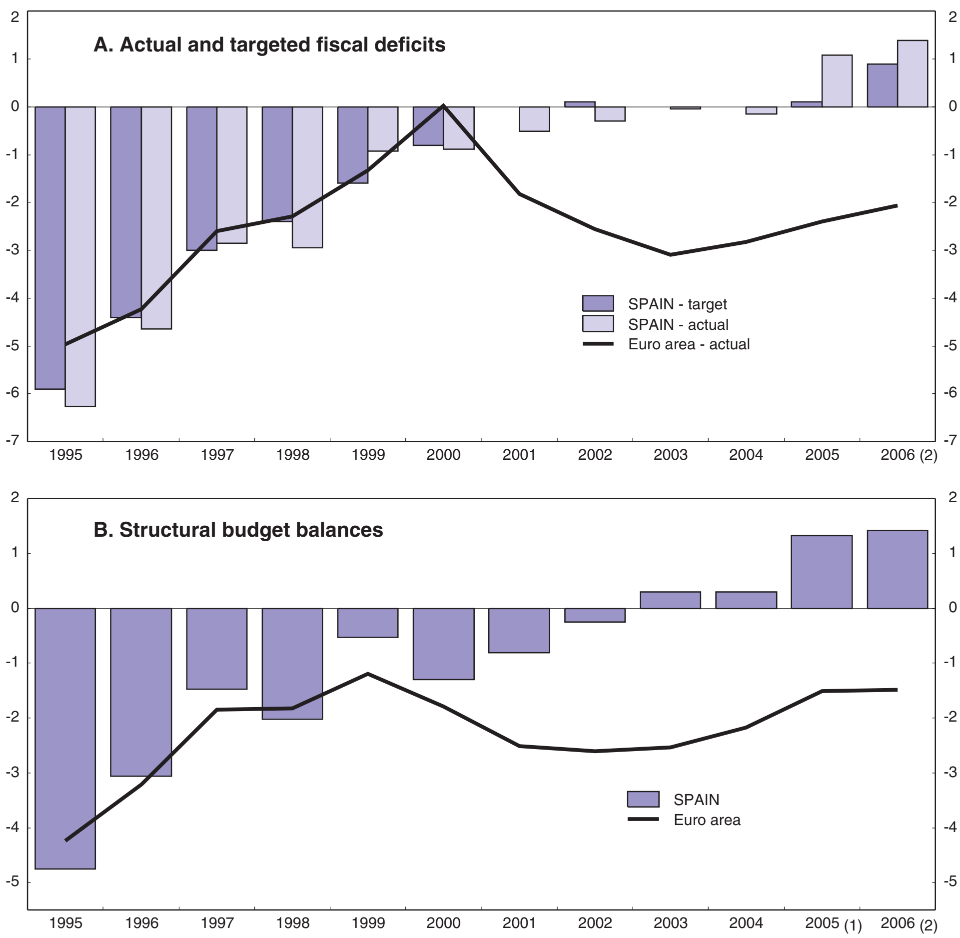
rates have increased, while the real effective exchange rate has appreciated, as the euro has generally risen in value and Spain's inflation has remained higher than in its trading partners (Moral and del Río, 2006). However, monetary conditions remain loose, with short-term real interest rates just recently moving into positive territory.[3] Fiscal policy was also tighter in 2005-06, as a general government surplus of 1.1% of GDP was achieved in 2005, the first surplus since the mid-70s, and the structural surplus (of 1.3% of potential GDP) was larger than the one registered in 2004 (which would have been close to 1% before including the absorption of the public rail operator's debt by the central government).[4] The persistently high level of inflation and the evidence of strong domestic demand pressures suggest that, while the overall macroeconomic policy stance was slightly tighter in 2005-06, an even tighter policy stance might have been helpful.

The fiscal consolidation process has been structural

In contrast to many other euro area countries, the government has maintained the fiscal consolidation process begun in the wake of joining the EMU and taken advantage of the favourable conjuncture of the Spanish economy (Figure 2.4). The structural improvement

Figure 2.4. **Budget balances**

Per cent of actual GDP (panel A)/potential GDP (panel B)



1. Preliminary.
2. OECD estimates.

Source: OECD (2006), *Economic Outlook 80*.

of the general government balance since 2000 reached some 2.7 percentage points of (potential) GDP by 2005. This reflected the robust growth of revenues, a large reduction in interest payments (about half of the improvement), both as a result of lower interest rates and the reduction in the stock of government debt, and some moderation in primary spending (Table 2.3). The increase in revenues was driven by the rapid growth of nominal GDP that resulted both from the strong real growth and the high level of inflation. Moreover, the implied tax elasticity has been above 1 and has risen in recent years (Box 2.2). However, the GDP share of government expenditures excluding interest payments has increased as higher consumption and investment outlays have been only partially offset by lower social security spending and, to a modest extent, subsidies (Table 2.4). Around ½ million government jobs have been created since 2000, mostly by regional and local authorities, as central government employment has fallen marginally. The economy-wide moderation of real wages has helped to contain what would otherwise have been a much bigger increase in public consumption, but the big employment increases could become a source of pressure in the medium run if real wages increase.

Table 2.3. **The fiscal consolidation process**

	1995	2000	2005[1]	Change over period	
				1995-2000	2000-05
Per cent of GDP					
Net lending	–6.3	–0.9	1.1	5.4	2.0
Cyclical effects	–1.5	0.5	–0.3	2.0	–0.7
Per cent of potential GDP					
Structural balance	–4.8	–1.3	1.3	3.4	2.7
Interest payments	4.7	3.0	1.6	–1.7	–1.5
Structural primary balance	–0.1	1.7	2.9	1.8	1.2
Structural revenues	36.5	37.7	38.7	1.2	1.0
Direct taxes	10.2	10.3	11.1	0.1	0.8
Indirect taxes	10.0	11.4	12.1	1.4	0.8
Social security contributions	12.6	12.9	12.9	0.3	0.0
Other revenues	3.8	3.2	2.6	–0.6	–0.6
Structural current expenditure	38.4	36.4	34.8	–2.1	–1.6
Structural total expenditure	41.3	39.0	37.4	–2.3	–1.7
Net capital outlays	2.9	2.7	2.6	–0.2	–0.1
of which:					
Investment	3.7	3.2	3.6	–0.5	0.4
Other	–0.8	–0.5	–1.0	0.3	–0.5

1. Preliminary estimates.
Source: OECD (2006), *Economic Outlook 80*.

Tax receipts have continued growing in 2006

Several factors came together in 2005 to explain the general government surplus of 1.1% of GDP, which dwarfs the initial target of 0.1% (Figure 2.4). The aforementioned strong revenue growth, which reached 12.2% in 2005, and the spending cap on expenditures[5] (equal to expected nominal GDP growth) were reflected in the central government's surplus of 0.4% of GDP, while the strong job creation allowed the Social Security system to post a surplus of 1.1% of GDP. Both the regional and local governments posted small deficits, moving away from the balance they had jointly achieved in 2004. Overall, fiscal policy in 2005 was restrictive. Preliminary information suggests that tax revenues have continued

Box 2.2. **The behaviour of the tax elasticity in Spain**

The implied elasticity of tax revenues has been consistently above 1 and higher than the euro-area average (see Chapter 1) since the end of the 1990s. There are several questions surrounding the high elasticity of tax revenues and whether the strong growth in taxes is likely to continue over the medium term. While it is difficult to quantify exactly the causes of this outcome, four factors are at least partly responsible. *First*, actual growth might have been underestimated in recent years. However, after the upward revision of national accounts figures in 2006, the elasticity still remains at a relatively high level. *Second*, previous reforms to the personal income tax, in 1999 and 2003, have included both tax cuts and measures to simplify the tax code. This might have resulted in initial revenue losses that were later offset by increasing compliance. *Third*, tax brackets are still not fully indexed for inflation (they are indexed only for the official inflation objective, which has consistently underestimated actual inflation), so bracket creep has increased tax revenues. *Fourth*, the still buoyant housing market might also have had a positive impact on transactions, value added taxes, and property and inheritance taxes as has happened in other countries, even if these imposts represent a small fraction of total revenues (OECD, 2004). Relying on stable and dependable sources of income should be a central element of the authorities' efforts to maintain a prudent fiscal policy, so that making an assessment of the sustainability of tax revenues should be a priority.

Table 2.4. **General government accounts**

As a percentage of GDP

	2000	2003	2004	2005	2006
Current receipts	37.6	37.6	37.9	38.7	38.8
Direct Taxes	10.2	10.1	10.2	10.9	11.2
Household	7.0	6.9	7.2	7.4	7.5
Business	3.2	3.2	3.0	3.6	3.7
Indirect taxes	11.4	11.5	11.9	12.1	12.3
Social security contributions	12.9	13.0	13.0	13.0	12.9
Other	3.2	2.9	2.7	2.6	2.5
Current expenditure	36.1	35.2	35.2	34.9	34.6
Government consumption	17.2	17.4	17.8	18.0	17.6
Subsidies	1.1	1.0	1.0	1.0	1.0
Social security outlays	12.0	11.7	11.7	11.6	11.5
Property income paid	3.2	2.4	2.1	1.8	1.7
Other	2.6	2.7	2.7	2.8	2.7
Gross savings	1.4	2.3	2.6	3.7	4.3
Capital outlays	2.3	2.4	2.7	2.6	2.8
Net lending	–0.9	–0.0	–0.2	1.1	1.5
Memorandum items:					
Net primary balance	2.1	2.1	1.7	2.6	2.9
Net lending of:					
Central government	–0.9	–0.3	–1.1	0.4	..
Social security	0.5	1.0	1.0	1.1	..
Local and regional government	–0.4	–0.7	–0.1	–0.4	..

Source: OECD National Accounts; OECD (2006), *Economic Outlook 80*; and Bank of Spain (2006), Boletín Estadístico, August (Tables 12.1, 12.11, 13.1 and 14.1).

to grow robustly in 2006: by the third quarter, total tax receipts grew by around 10% (year on year), compared with a growth in nominal incomes of almost 8 per cent. Were revenues to continue growing at this pace in the second half of 2006, the surplus could be around 1.4% of GDP, exceeding both the 0.9% target for 2006 and last year's level, although by an amount sufficient to imply little change in the already restrictive fiscal stance. The likely better-than-expected outcome is largely driven by cyclical factors, as economic slack diminished in 2006.

Meeting the fiscal objectives for 2007 and 2008 is likely…

In compliance with the requirements of the revised Fiscal Stability Law (see Chapter 3), the authorities have announced an objective for the 2007 surplus of 0.7% of GDP,[6] based on estimated GDP growth of 3.2%. This would imply a significant reduction in the fiscal balance when compared to the expected outcome in 2006, although previous experience suggests that this objective might be easily surpassed. Government spending increases will be capped at 6.7%, roughly the level of projected nominal GDP growth, while revenues are expected to grow at a slower pace as a result of the cuts in the personal income and corporate taxes amounting to around 0.4% of GDP that will be in place in 2007. According to the 2005-2008 Stability Programme Update, the objective for 2008 is a similar surplus of 0.6% of GDP. This was based on a projected growth of 3.2%, close to the official estimated trend growth of around 3¼ per cent (computed using a Hodrick-Prescott filter), implying a broadly neutral fiscal policy objective.[7] However, this official estimate is higher than the OECD's estimate of potential growth of around 2¾ per cent.

… but spending pressures will need to be contained

Spending pressures are expected to intensify in 2007 and 2008. The margin for reducing interest payments, which has been an important element behind the fiscal consolidation process, is likely to be nearly exhausted as interest rates have risen recently, and further increases are probable, even if the stock of public debt can be expected to continue falling and some debt may still be rolled over at lower rates than previously. The authorities are pursuing an ambitious spending plan to increase productivity in the medium term and, to a lesser extent, to prepare for the long-term fiscal costs of the ageing process (see Chapter 3). Among the spending commitments already announced for the next few years are an ambitious transportation infrastructure programme, further increases in R&D spending and a new coverage system for dependents. The spending cap should prevent overruns from the central government, but it would be desirable to base the cap on potential output, so as to increase the stabilising role of fiscal policy. This would also make it easy to use a multi-year ceiling, which would aid in reducing uncertainty about future fiscal policy. In the short run, controlling local and regional government expenditure will be crucial as it is at this government level that the highest risk of fiscal slippage lies. As these administrations do not currently face a spending cap, it remains to be seen whether the new Fiscal Stability Law and the regional financing mechanism are successful in controlling outlays at these levels, especially as they have taken on increasing responsibilities, including health care and education, where additional pressures might be created as a result of further immigrant flows. Therefore, it would be desirable for regional governments to also be subject to spending caps. According to OECD projections, the surplus in 2007 is likely to be yet again larger than the objective, but fiscal policy may be slightly expansionary, as the actual and structural surpluses are expected to fall by around

½ percentage point to around 1.2 and 1.1% of GDP, respectively. As for 2008, with GDP growth expected to be close to potential, the surplus could once more be above the objective of 0.6% of GDP, and, given the announced objective of a neutral fiscal policy, the actual and structural surpluses will probably remain stable at 1.3 and 1.1% of GDP, respectively.

Short-term prospects

Activity is likely to remain strong, even if the pace of expansion eases somewhat in 2007 and 2008, and should again be above the euro area average, although the differential may narrow (Table 2.5).[8] Private consumption may slow down slightly, as the ongoing deceleration in housing prices moderates increases in household wealth, and the surging level of household indebtedness and the higher interest rates combine to limit spending, particularly on durables. However, the restraint in consumption will be modest, as disposable income is likely to be bolstered by still robust employment creation, the income tax cuts and positive wealth effects. Construction investment should continue to grow briskly in 2006 but a bit less in 2007 and 2008, as the housing market cools off. This is likely to be partly offset by investment in machinery and equipment, which will remain vigorous, supported by good business financial results and the corporate tax cuts. The foreign balance will no doubt maintain its negative contribution to growth, as competitiveness losses dilute the positive effect of stronger foreign demand. Overall, after

Table 2.5. **Short-term prospects**

Percentage changes from previous period, except where noted

	Current prices, billion €, 2003	2004	2005	2006	2007	2008
Private consumption	450.7	4.2	4.2	3.4	3.3	3.1
Government consumption	135.9	6.3	4.8	4.0	4.0	3.6
Gross fixed investment	212.8	5.0	7.0	6.0	4.9	4.5
Construction	121.5	5.5	6.0	6.0	4.2	3.9
Machinery and equipment	91.3	4.5	8.4	6.0	5.8	5.5
Stockbuilding[1]	1.8	0.0	–0.0	0.1	0.0	0.0
Total domestic demand	799.4	4.8	5.0	4.3	3.9	3.6
Exports of goods and services	206.1	4.1	1.5	6.5	5.2	5.2
Imports of goods and services	224.7	9.6	7.0	8.3	6.6	6.6
Foreign balance[1]	–17.4	–1.7	–1.7	–0.9	–0.8	–0.8
Gross domestic product	**782.5**	**3.2**	**3.5**	**3.7**	**3.3**	**3.1**
Per memo: euro area GDP	7 460.9	1.9	1.4	2.6	2.2	2.3
Household saving ratio (%)	..	11.4	10.6	10.0	10.1	10.0
Private consumption deflator	..	3.5	3.4	3.6	2.8	3.1
GDP price deflator	..	4.0	4.1	3.7	3.5	3.7
Unit labour costs	..	2.6	2.5	2.5	3.1	3.2
Productivity	..	0.6	0.4	0.7	0.7	0.7
Total employment	..	2.6	3.1	3.0	2.7	2.3
Unemployment rate	..	10.5	9.2	8.4	7.8	7.6
Output gap (level)	..	–1.1	–0.7	–0.3	0.2	0.6
As % of GDP						
Current account balance	..	–5.9	–7.5	–8.8	–9.2	–9.6
Net government lending	..	–0.2	1.1	1.4	1.2	1.4
Structural fiscal balance	..	0.3	1.3	1.4	1.1	1.1

1. Contribution to changes in real GDP.

Source: OECD (2006), *Economic Outlook 80*.

GDP growth of around 3.7%, slightly higher than in 2005, the economy should then decelerate, with the rate of expansion falling to around 3.3% in 2007 and 3.1% in 2008. This would be enough to open a small output gap, according to OECD estimates, given slowing potential growth as available labour input decelerates.[9]

The labour market is expected to remain dynamic, with employment creation remaining high and unemployment edging down to slightly below 8% by 2008. The increasing tightness of the labour market will probably translate into higher real wage gains that progressively move back into positive territory in line with the projected modest productivity improvements. Headline inflation could drop below 3% in 2007 and rebound in 2008, as lower oil prices initially offset increasing but modest pressures on product and labour markets. The inflation differential with the euro area, however, is unlikely to fall below the 1 percentage point level.

The main risk to this scenario relates to future developments in the housing market. Although at present the most likely scenario is a soft landing in housing prices and there is some evidence that gradual adjustment is underway, a more abrupt adjustment cannot be ruled out. Given the strength of the financial system, it appears likely to be able to withstand such a shock, so most of the adjustment would be felt in private consumption through negative wealth effects, the government balance and the construction sector. As the construction sector has been one of the main drivers of economic growth over the recent past, this sector could be forced to adapt painfully both in terms of employment losses and a slowdown in growth. Government finances, especially at the local authority level, could be hurt by a deceleration of housing prices, as they derive a significant share of their revenues from real estate and property taxes (García-Cervero, 2006). In addition, eliminating the inflation differential remains one of the main medium-term challenges to maintaining a high level of growth. The losses in competitiveness induced by this inflation problem would be particularly damaging in case of a weakening of domestic demand and if the recovery in the euro area proves to be weaker than expected.

A more prudent fiscal policy would help ease domestic demand pressures but is not a substitute for structural reforms

Growth is projected to continue at a healthy pace, and, with it, according to OECD estimates, the positive output gap will increase slightly. Although interest rates are likely to increase further in light of the recovery in the euro area,[10] there is still ample room for fiscal policy to help cool off domestic demand (de Castro and Hernández, 2006). The strong decentralisation of public spending (see Chapter 3) in recent years has meant that spending by the central government is only around 8% of GDP, so regional and local governments also have an important role to play. Further increasing public savings might prove to be politically difficult, given the significant surplus reached in 2005 and 2006, so pedagogical efforts about the benefits of doing so should be an important part of the fiscal strategy. A more prudent fiscal policy would not only have a positive effect in reducing inflationary pressures in the short run but would also conform to the long-term need to increase public savings as part of a comprehensive strategy to face the fiscal consequences of ageing (see Chapter 3). However, structural reforms will be needed to curb the inflation differential and increase the probability of a soft landing in the housing market, thus steering the economy onto a more sustainable growth path.

 OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

Structural reforms are needed to reduce the inflation differential and boost the resilience of the economy

The inflation differential vis-à-vis the euro area has shown remarkable persistence

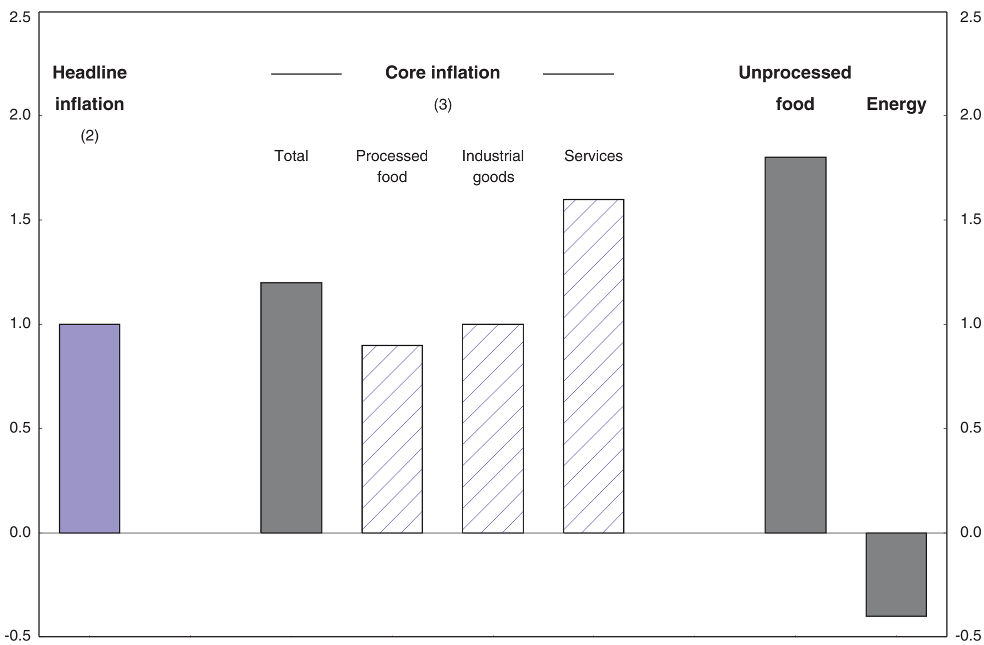
Reducing the inflation differential with the rest of the euro area is a difficult challenge for economic policy. Inflation in Spain has been on average 1 percentage point higher than in the euro area since 1997 (the average core-inflation gap has been slightly higher at 1.2 percentage points), implying an accumulated differential of around 10%. The inflation differential has been larger among non-traded goods, in particular in services (OECD, 2005), and has been positive among all product groups (Figure 2.5). Energy prices are the sole exception, as the direct effect of oil price increases has been subdued due to the particular pricing regime in electricity markets, which has smoothed price increases over a very long time instead of allowing an instantaneous adjustment (see Chapter 5). The persistent inflation differential has hurt the international competitiveness of Spanish firms, reducing net exports and increasing the current account deficit. It has thus contributed to the increased reliance on domestic demand as the main driver of growth and increased the disparity in the performance of the exposed and sheltered sectors, even though outcomes in the industrial sector have improved somewhat in recent months.

It cannot be fully explained by the price-convergence process with the rest of the euro area

Developing sound policy measures requires a good understanding of the sources of the persistence of the inflation differential. While several explanations have been offered, the debate is ongoing as to their relative importance (Benigno and López-Salido, 2003; Laborda,

Figure 2.5. **Average annual inflation differential between Spain and the euro area**

1997-2006,[1] percentage points



1. Last observation is September 2006.
2. Harmonised consumer price indices (HICPs), year-on-year percentage change.
3. HICPs excluding unprocessed food and energy.

Source: Eurostat and INE.

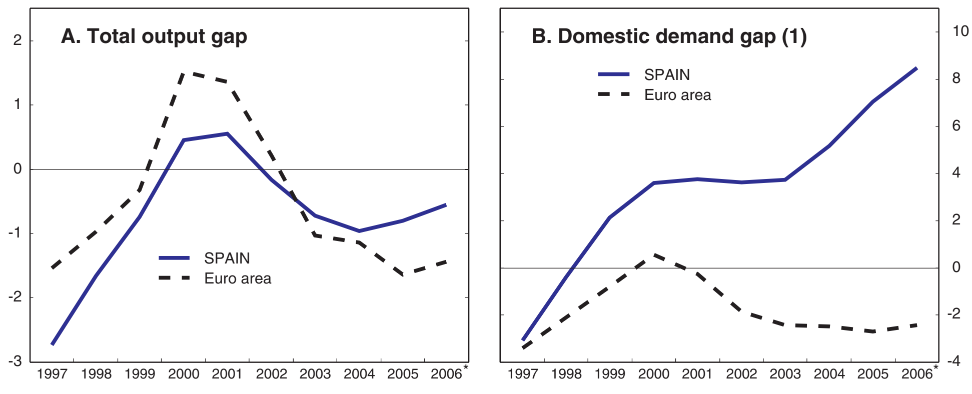
2006). The hypothesis that the differential inflation derives from a price-convergence process related to the Balassa-Samuelson effect can be reasonably rejected as there has been no convergence of productivity *vis-à-vis* the euro area (Estrada, Galí and López-Salido, 2004). In fact, Spain's productivity growth has been among the lowest in the entire zone. A different price-convergence mechanism cannot be ruled out, however: the progressive adoption of consumption norms and habits that are closer to the euro area's consumers as income has also approached the area average could have had an effect on prices, as price indexes do not fully account for these changes in quality. Nevertheless, such a process would likely be only temporary and apply just to certain categories of goods. Another explanation often mentioned by analysts is related to a price adjustment linked to the exchange rate being initially undervalued at the time of the adoption of the euro (Cubero and Félix, 2006). If accurate, this would have created a finite period of faster price increases in the tradables sector, as firms would have been able to raise prices without losing market shares. Looking at the recent evolution of market shares, this does not seem to be the case.

Demand pressures have been stronger and more concentrated on the sheltered sectors in Spain

A more likely explanation of the inflation differential relates to stronger demand pressures, more concentrated on sheltered sectors, in Spain than in the rest of the euro area.[11] Stronger spending increases in the last decade have been at least partly met by higher potential growth due to, among other factors, improved labour market performance and the successful absorption of large inflows of immigrants. Nevertheless, since 2003 spare capacity has been somewhat smaller in Spain, though the difference has been relatively modest (Figure 2.6, Panel A). The difference in domestic demand pressures is more striking, as domestic demand as a share of potential GDP has grown considerably faster in Spain than in the rest of the euro area (Figure 2.6, Panel B).[12] Furthermore, demand pressures have varied widely across sectors, focussing on those that are sheltered from foreign competition and, in particular, construction and services (López-Salido, 2005). These heterogeneous demand pressures have probably contributed to the inflation differential because firms in the sheltered sectors have been able to increase prices in

Figure 2.6. **Output gap and domestic demand pressures in Spain and the euro area**

Per cent of potential GDP



* Preliminary.

1. Note that scale is different from panel A. The demand gap is computed as the percentage change in total domestic demand over potential GDP.

Source: OECD, National Accounts and *Economic Outlook 80*.

response, resulting in an increase in sectoral profit margins (López-Salido and Restoy, 2005). While there is little doubt that this rise in profit margins is partly cyclical, its persistence may also reflect insufficient competition in a range of sub-sectors.[13] Decomposing the inflation differential into unit margins and unit labour costs, it can be seen that around 60% of the increase is explained by the rise in profit margins (Figure 2.7, Panel A), and that since 2001 profit margins in the construction and services sectors have had a stronger role in explaining the differential than those in the industrial sector (Figure 2.7, Panel D).

Nominal wages have increased faster than the average for the euro area

Increases in unit labour costs are responsible for the remaining 40% of the inflation differential. This partly reflects the low productivity growth, especially in the construction sector (Figure 2.7, Panel F), but also the robust growth in nominal compensation compared with the euro area, even as real compensation growth has remained moderate (Figure 2.8). The subdued behaviour of real compensation has probably contributed to maintaining the good performance of the labour market in recent years, although this might prove to be more difficult in the future, as labour markets in several regions are close to full employment.[14] Had immigration flows not been so significant, increases in nominal wages would surely have been even higher.

Deficiencies in the collective bargaining system have helped propagate regional and sectoral shocks

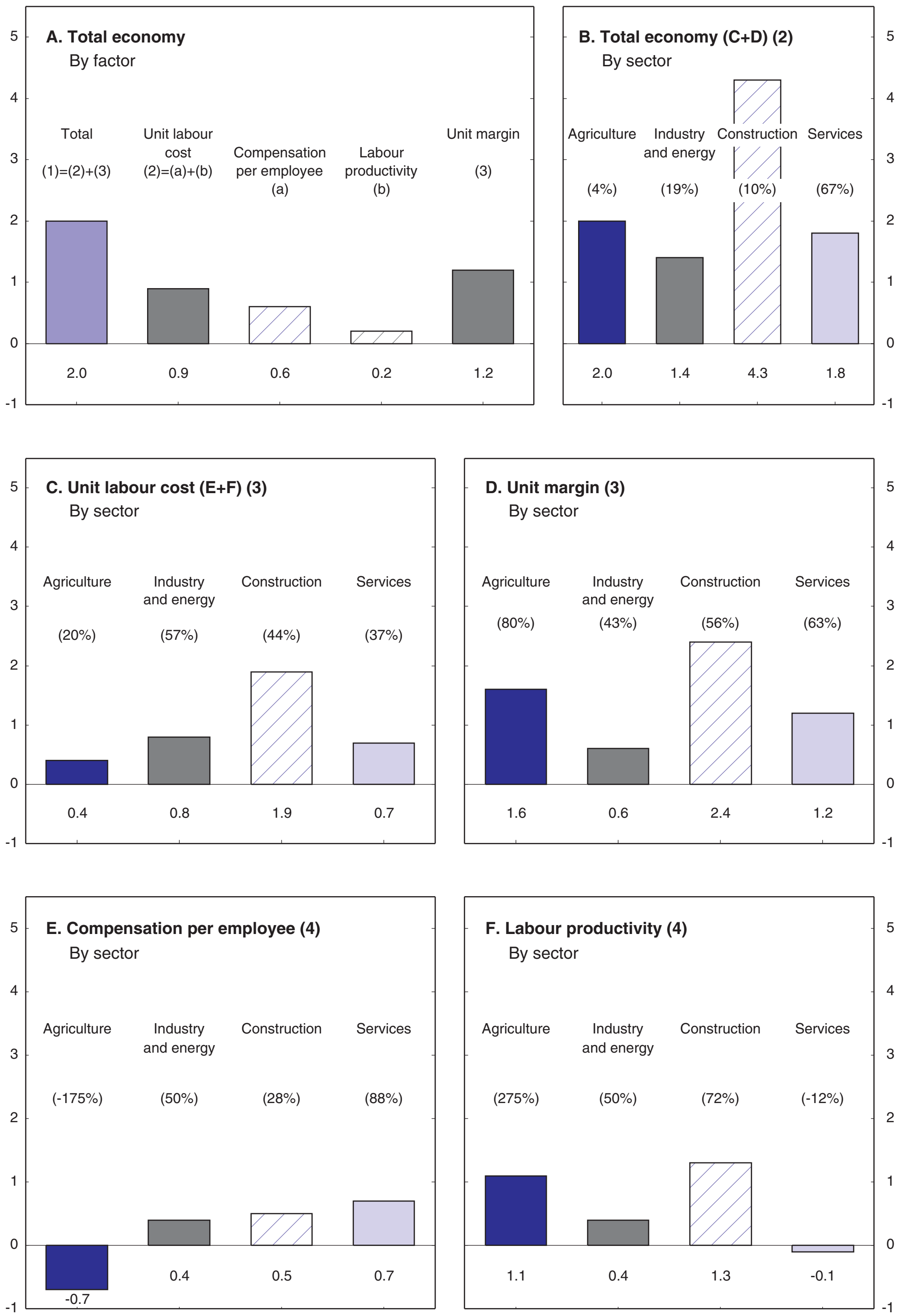
Deficiencies in the collective wage bargaining system in place are likely to lie behind the large increases in nominal wages (see Box 2.3). Wage negotiations are carried on mainly at the industry level, but extension clauses in many agreements allow them to be applied to other firms and regions, even if these firms did not take part in the negotiations. The use of catch-up clauses that protect workers in case of inflation surprises is also widespread, and there is evidence that, since actual inflation has been consistently above the official reference rate of 2%, contracts with such clauses have higher wage increases, *ex post*, than contracts without them (OECD, 2005). In this manner, wage inflation pressures in certain sectors and regions can be propagated to the rest of the economy, and nominal wage inertia is created. The use of indexation clauses is also problematic in the case of adverse shocks such as oil price hikes. The Spanish economy has a more intensive use of energy and oil in its production processes than the rest of the euro area (see Chapter 1), in turn partly due to the pricing policy in the electricity market which prevents current retail prices from reflecting the actual cost of production (see Chapter 5). As a result, oil price increases have fed into generalized price increases to a larger degree than in the rest of the euro area, pushing up the inflation differential in recent years (Figure 2.9).[15]

Assessment and policy recommendations

The authorities have followed a longer-term strategy to correct the inflation problem that focuses on maintaining macroeconomic stability. Complementing this strategy, a series of measures intended to increase competition in goods and services markets has been adopted that, while going in the right direction, are too modest in some cases, as in the retail distribution sector (see Chapter 5). In order to continue to grow faster than its euro-area partners with lower inflation, Spain's economy must have exemplary supply-side features. That implies further strengthening competition in some sheltered sectors in

Figure 2.7. **Factors explaining the inflation differential with the euro area**

Contributions to the inflation differential,[1] 2001-2005

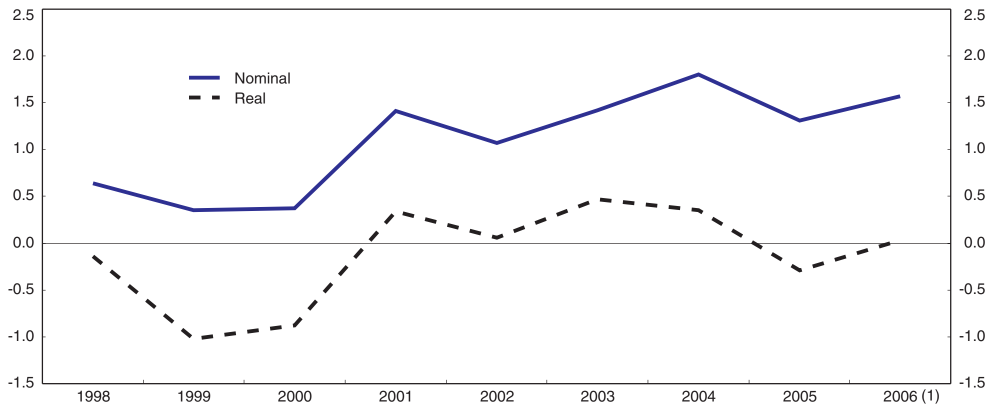


1. Computed using the GDP deflator.
2. The number in parentheses gives the (weighted) contribution of each sector to the total inflation differential.
3. In parentheses, the relative contribution of the unit labour cost and the unit margin to the overall contribution of the sector to the inflation differential. The unit margin is defined as the gross operating surplus per unit of production.
4. In parentheses, the relative contribution of compensation per employee and labour productivity to the contribution of the unit labour cost of the sector to the inflation differential. In the case of labour productivity its evolution is negatively related to the inflation differential.

Source: Banco de España, 2005 Annual Report.

Figure 2.8. **Wage growth differential with respect to the euro area**

Per cent, per year



1. Preliminary.

Source: OECD, National Accounts.

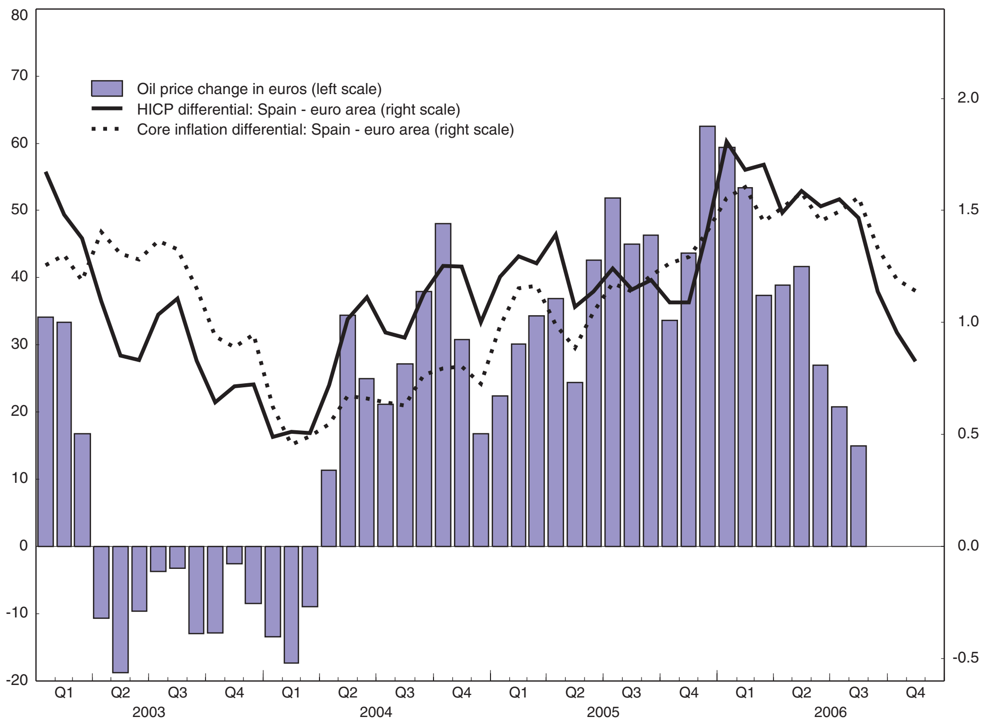
Box 2.3. **The collective wage bargaining system in Spain**

Collective wage bargaining in Spain is a complex process and can be conducted at the company, regional and national levels. Negotiations at the company level are rare (affecting between 10 and 15% of workers). They take place mainly at large firms in specific sectors, like energy and mining. Industry-level agreements are much more prevalent and affect mainly small and medium-sized firms. National-level bargaining is also rare and restricted to some sectors, such as financial services (OECD, 2005). Multiple levels of bargaining can co-exist, as outcomes of higher-level agreements can be complemented with lower-level agreements. By extension clauses, wage agreements cover all firms in an area and sector, even if the firms did not take part in the negotiation. Despite a relatively low rate of union membership (less than 15% in 2005), collective bargaining coverage is very high at more than 80% in 2005 (Card and de la Rica, 2005). Since 2000, the social partners have agreed to negotiate wage agreements on the basis of the official inflation reference rate of 2%, in exchange for the inclusion of catch-up clauses that protect workers against inflation rates above that figure. In 2003, around 75% of collective agreements were covered by such clauses as opposed to about 50% in 1998 (Izquierdo *et al.*, 2003), and this number is likely to have risen further since then.

The collective bargaining system has been successful in achieving real wage moderation and has thus helped to maintain the good performance of the labour market in recent years, but it has also had several negative side-effects. *First*, in terms of labour market outcomes, productivity and wage increases are not matched at the firm level, distorting the allocation of labour within and among firms. While the national unemployment rate remains at a relatively high level, rates in some regions are much lower and should be close to, possibly even below, their natural levels, driving up wage pressures in those regions. *Second*, in terms of inflation outcomes, social partners feel less responsible for inflation levels, as the costs of inflation are not completely borne by them, at least in the short term. Workers covered by catch-up clauses are sheltered from falls in real wages, and firms in sheltered sectors can increase prices to cover the wage increases. Firms in the traded-goods sectors, however, cannot easily raise prices to cover the extra costs of their inputs of both labour and non-tradable intermediates and thus become progressively less competitive.

Figure 2.9. **Energy prices have been the main driver of headline inflation**

Year-on-year percentage changes



Source: INE; OECD, Main Economic Indicators.

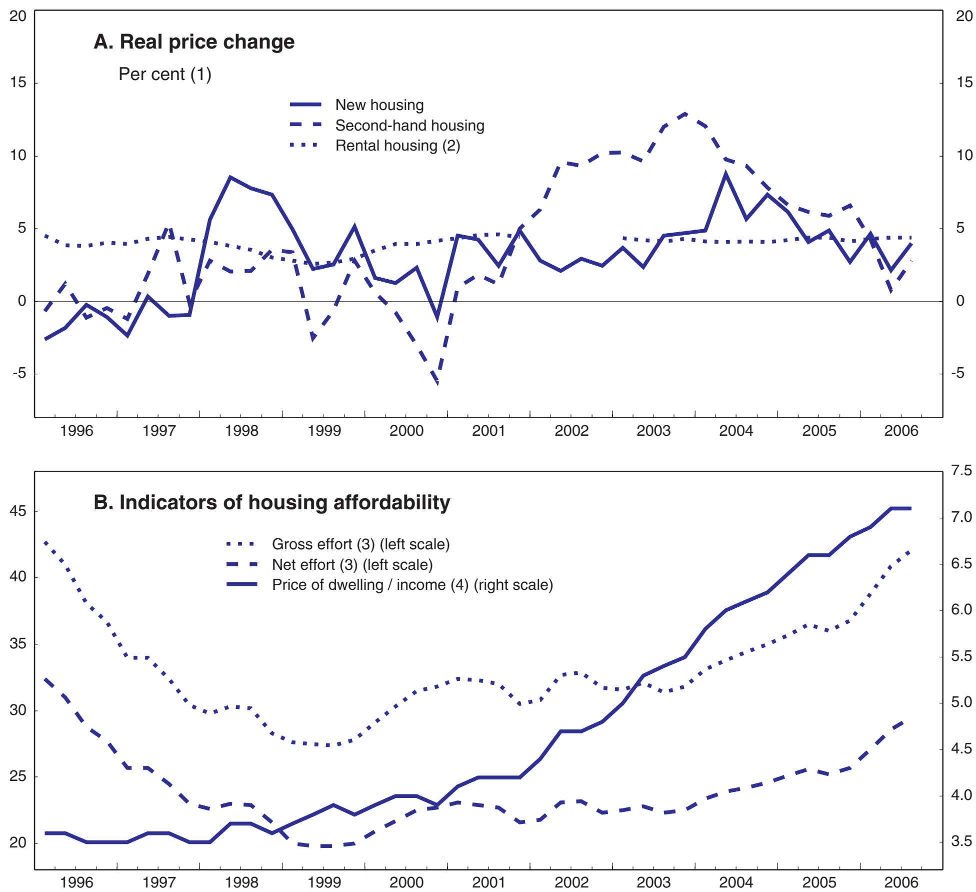
order to lower mark-ups, reduce costs and boost productivity. Efforts to reduce the energy intensity of production should also be redoubled, even though it may entail negative short-term consequences for inflation. The pricing rules applied to electricity suppliers should indeed be modified so as to allow power prices to reflect its cost of production in a more transparent manner. As a general rule, more flexible product markets would increase the resilience of the economy in the event of a future cyclical downturn requiring an adjustment in relative prices *vis-à-vis* the other euro area countries.

Enhanced capacity of the economy to adjust in the context of eventually weaker domestic and overall demand would also require a revision of the wage bargaining system. Although the government does not take part in the negotiations themselves, it is responsible for setting the general guidelines that govern such discussions and the sectoral and geographical coverage of the agreements (Bentolila and Jimeno, 2002). Currently, the widespread use of catch-up clauses and administrative extension of collective agreements is unsuited to EMU membership, since they do not guarantee increases in unit labour costs similar to those in the rest of the zone. These deficiencies might be partly reduced if wages were set taking into account wage behaviour in the country's main trading partners, as is currently done in Belgium. However, given the current framework, the best approach would seem to be to move the system towards greater decentralisation and flexibility. A feasible option for reform is to make the existing opt-out clauses that allow companies to break away from higher-level agreements less restrictive. This would allow agreements to better reflect firm and local conditions when setting wage levels and their composition while national and regional agreements should settle general working conditions like health and safety provisions. When the latter agreements deal with wage negotiations, their adoption at the firm level should be voluntary, allowing smaller firms to economise on bargaining costs, although the social partners do not seem eager to reform the bargaining system in any significant way. Structural reforms along these lines should be complemented with a prudent fiscal policy, as discussed above, as well as a better functioning housing market.

The housing market continues to surge

The still ongoing housing boom in Spain has been extremely impressive both in a historical and an international perspective. The current upswing has lasted, as of the end of 2006, for a full decade (Figure 2.10, Panel A), the longest upturn in more than 35 years (Girouard *et al.*, 2006). Compared with other countries, the real appreciation of almost 130% since 1996 is the third largest in the same period in the OECD area, behind only Ireland and the United Kingdom (Rae and van den Noord, 2006). Measures of the effort needed to purchase a home have also risen, but the burden remains at a comfortable level. For

Figure 2.10. **Housing prices and affordability indicators**



1. Change in the real price per square meter, using the housing investment deflator.
2. Data for 2002 is not available because of a break in the CPI series.
3. These indicators show the efforts (relative to annual income, gross and net of tax) required for the reimbursement of a 15-year mortgage, to finance 80% of the acquisition cost of a 93.5 sq.m. dwelling.
4. Number of annual incomes to afford a house.

Source: Banco de España, Summary Economic Indicators: 1.5 Housing Market Indicators.

instance, while over the last decade the number of annual incomes needed to afford a house has almost doubled to seven, thanks to the low after-tax interest rates an average household spends, on average, around 30% of its annual income on housing (Figure 2.10, Panel B). The home ownership rate continues to be the highest in the OECD area, at close to 82%, to the detriment of the private rental market, which accounts for barely 12% of total dwellings (see below). Residential construction, which has been healthy in recent years, with more than 4 million new buildings constructed in the last decade, has nonetheless not been robust enough to prevent prices from bounding ahead. As the number of housing units has increased, so have environmental concerns, as the consumption of water has increased dramatically in some regions such as coastal areas, straining Spain's available water resources.

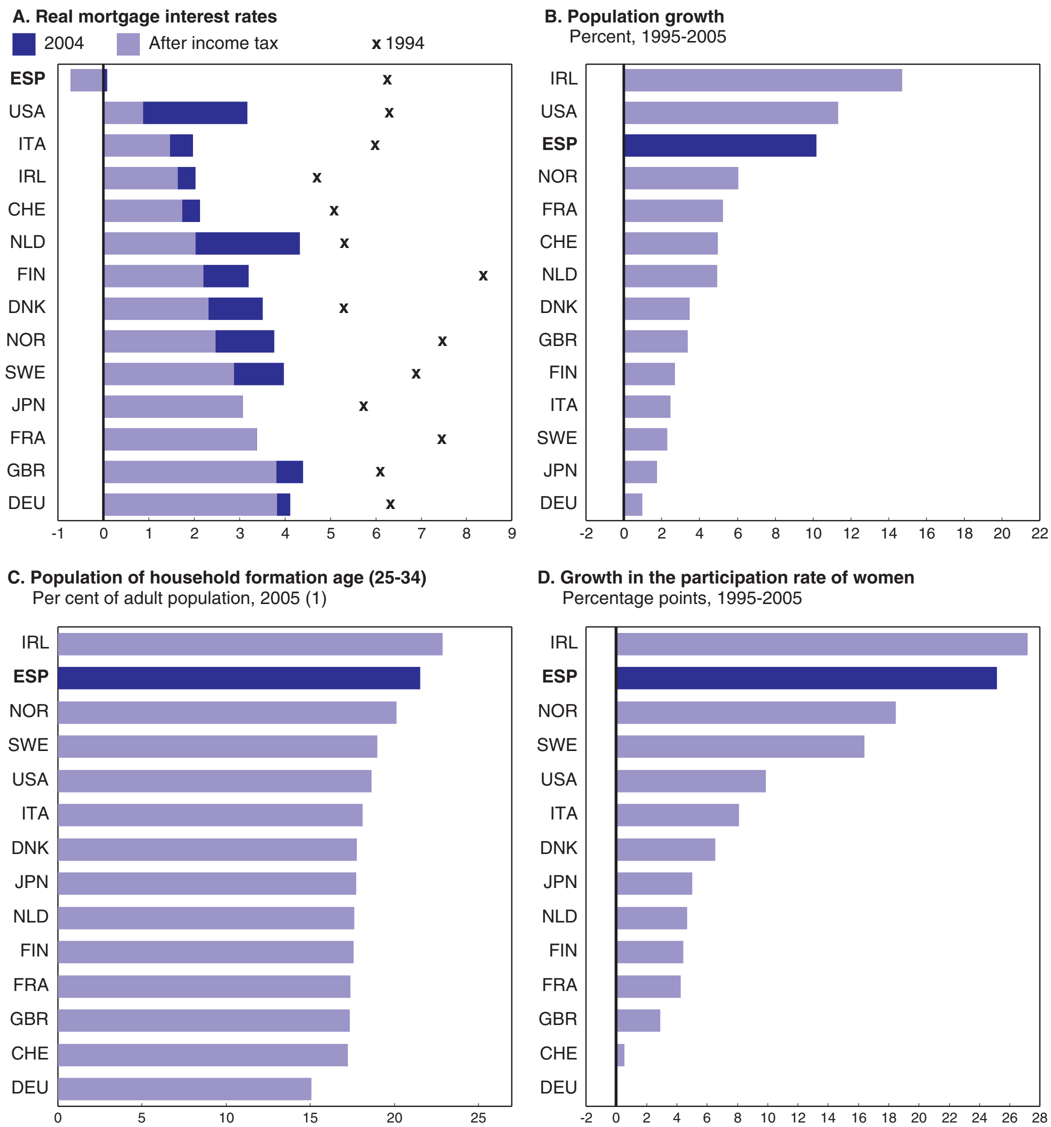
Housing demand has been stimulated both by fundamentals…

Several factors have boosted the demand for housing in recent years. *First*, the adoption of the euro lowered nominal interest rates, which, coupled with the country's relatively high inflation rate, has resulted in very low, and sometimes even negative, real interest rates. Tax incentives make the effective cost of funds even lower (Figure 2.11, Panel A); *Second,* immigration flows have swelled, raising population by more than 4 million in the last decade and driving population growth to one of the strongest rates in the OECD area, just below the increase in the United States, also a high immigration country (Figure 2.11, Panel B). *Third*, the baby boom came later in Spain than in most countries, so that the share of the population of household formation age is also among the highest in Europe (Figure 2.11, Panel C). *Fourth*, the steady increase in the participation rate of women in the labour market (Figure 2.11, Panel D) has raised the number of two-income households, boosting affordability. *Fifth*, the long period of economic growth has raised disposable income and allowed more households access to the housing market. *Sixth*, the downturn in the stock market between 2001 and 2002 might also have led to higher investment in alternative assets such as housing, although this effect is likely to have been less important in recent years. *Last*, demand from foreigners looking for a second home in a warmer climate has been strong, especially in coastal areas, although it has recently shown signs of slowing due to the dissuasive effects of cumulative price appreciation.

… and by a generous tax treatment of housing purchases

Demand is also underpinned by tax-induced distortions. Income tax relief is provided on the purchase of a principal residence, through the deduction of 15% of mortgage expenses (see Box 2.4) at a high budgetary cost that reached € 5 billion in 2003, close to 0.65% of GDP, and most regional governments also offer additional deductibility (Durán-Cabré and Esteller-Moré, 2006). The mortgage deduction has been effective in raising the home ownership rate, which, as already mentioned, is the highest in the OECD area. But tax incentives to housing purchases affect not only the decision to become an owner-occupier (versus renting) but also the quantity of housing households demand. There is evidence (Dominguez Martinez, 2004 and Figure 2.11, Panel D) that tax incentives have reduced the effective (after-tax) interest rates households face, while increasing the amount households can borrow (and hence the price they can afford). To the extent that supply has been relatively rigid, at least in the short term (see below), it is likely that the tax incentives have raised housing prices, distorting the share of overall investment taking the form of residential construction. The resulting wealth increase could also encourage

Figure 2.11. **Forces shaping housing demand**



1. The adult population comprises those aged 20 and over.

Source: OECD (2006), Labour Force Statistics and Girouard, Kennedy, van den Nord and André (2006), for Panel A.

households to spend more and reduce savings, helping to drive the current account balance into greater deficit. Public support of course could be justified by the positive spin-offs of higher home ownership.[16] However, no studies that quantify such externalities have been carried out for Spain, although studies for other countries have found that they are small or non-existent (Glaeser and Shapiro, 2002). Another justification could be that tax relief could promote greater equity if it were ultimately progressive in nature. But the redistributive effect is also questionable (OECD, 2005), in view of the fact that owners are generally more affluent than renters and that the tax deductibility of mortgage payments, while capped, is not means-tested.

Box 2.4. **The tax treatment of housing***

A number of taxes, deductions and subsidies affect both the demand for and the supply of housing in Spain. Overall, they have a relatively high budgetary cost, estimated to be close to 1% of GDP in 2004 (OECD, 2005). The main elements of the fiscal treatment of housing can be summarised in the following points:

- Income tax relief is offered on the purchase, building, rehabilitation or extension of a primary residence. Both principal and interest payments on a mortgage can be deducted, as can other items as well such as taxes, and other permit and licensing costs. In addition, the deduction can also be applied to deposits made into a dedicated savings account earmarked for housing purchases or to finance physical improvements to existing dwellings in order to make them accessible to handicapped people. The maximum amount that can be applied annually to the deduction is set at around € 9 000 (in the case of investments to accommodate handicapped people, this is raised to around € 12 000, and the deduction can be claimed only once). The general deduction rate is 15%, (10.05% is deducted from the central government share of the income tax and the remaining 4.95% is deducted from the regional government share; while regional governments can increase or reduce by up to half their deduction and introduce additional relieves, they have made little use of these possibilities so far). Thus, in practice, the maximum tax savings is slightly less than € 1 400 per year.
- In contrast, rent payments cannot be deducted from the personal income tax. Previously available, the deduction was eliminated in 1999 and currently only some regional communities offer a limited deduction under restrictive conditions (de los Llanos, 2006). The imputed rents of owner-occupiers from the primary residence are no longer taxed, while imputed rents from other real estate that is not offered for rent are taxed. This was removed from the base in 1999 for the sake of simplicity, since such income was difficult to estimate.
- The capital gains accruing from the sale of one's primary residence are exempted from the personal income tax if the total proceeds from the sale are reinvested in the acquisition of another primary residence or in the rehabilitation of a dwelling that will become the primary residence.
- Owners who offer residential dwellings for rent can exclude from taxable income 50 per cent of net rental income (100% if the tenant is younger than 35 years), which, coupled with the ability to also deduct a number of different expenses, in practice implies a tax rate close to zero for rental income. In the case of the corporate tax, the exclusion can be of up to 85%, provided the firm offers at least 10 dwellings for rent.
- As regards Corporate Tax, incomes of the Property Investment Funds are taxed at a reduced rate of 1%, provided that their sole object is the investment in urban real estate offered for rent. In addition, at least 50% of their assets must take the form of dwellings, halls of residence and homes for senior citizens.
- Owners of houses and land must also pay a wealth tax on their property, if its total amount, net of liabilities, exceeds an exemption threshold. This threshold is currently fixed at € 108 182 but can be modified by regional governments. Dwellings used as the principal residence of the taxpayer have a specific exemption threshold of € 150 253, so they are included in the tax base only if their value exceeds that amount. The wealth tax is progressive, with a rate rising from 0.2 to 2.5 % for assets with a net value above € 10.7 million, although regional governments can modify this rate.
- The purchase of a new residence faces a preferential value-added tax (VAT) rate of 7% (4% in the case of subsidized houses), as opposed to the general 16% general rate. It is important to note that this preferential rate is applied even if the buyer does not use the dwelling as a residence. In the case of the purchase of existing housing, a different tax, the Impuesto sobre transmisiones patrimoniales onerosas, is levied. Regional governments can decide the tax rate, and all of them have set it at 7% in order to put it at the same level as the VAT rate for new houses.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

Box 2.4. **The tax treatment of housing*** *(cont.)*

- Additional taxes accrued during the construction and sale process include the VAT on land and building material purchases, the tax on construction and taxes on the increases in the price of land. Other taxes levied on the buyer include the stamp tax (Impuesto sobre actos jurídicos documentados), whose rate is set by regional governments, almost all of them applying a rate of 1%; the tax on real estate holdings and the estate tax, in the case where a dwelling is inherited (though many regional governments are in practice exempting transfers between close relatives from this tax). Finally, the Housing Plan 2005-2008 includes assistance directed at increasing the availability of subsidised houses and incorporating unoccupied dwellings into the rental market, mainly through subsidies and financing at preferential rates, as well as subsidies to help disadvantaged groups (like the young and the less well off) access the housing market (see Annex 1.A1).

* Although they are not strictly considered taxes, under the current Land Law, which is undergoing a substantial revision, municipalities receive a maximum 10% of the land reclassified as developable, when it is subject to urban actions. The draft reform of the Land Law increases the range of this compulsory cession to a range between 5% and 15%, and in specific cases, to as much as 20%. It also sets aside 25% of the reclassified land that is subject to urban actions to be devoted to subsidised houses.

Restrictions have prevented housing supply from being more responsive

While the strong increase in demand has triggered a firm response in the supply of housing, it has not been enough to contain prices. In 2005, around 18 houses per 1 000 inhabitants were built, while the European average was less than six, and residential construction reached about 9% of GDP, the second highest in the EU, behind only Ireland. Both real construction costs and the price of building plots have increased considerably, especially in urban and coastal areas.[17] Local governments control the supply of building land and are currently entitled to receive 10% of the land that is rezoned for building purposes. This regulation, which is similar to a tax, is earmarked for the construction of subsidised housing, public spaces and other infrastructure. As municipalities can sell some of the land received, they have incentives to keep land prices high. On the other hand, as municipalities benefit directly from the rezoning of available land, they are more likely to approve new developments and resist the pressure from current owners to inhibit new construction (see Glaeser, Gyourko and Saks, 2005), in effect increasing the elasticity of housing supply. While the overall effect of these restrictions is uncertain, it is likely that they have increased the price of land. This has likely been reinforced by the length and complexity of local planning procedures necessary to build the required infrastructure (OECD, 2005).

It is increasingly unclear how long the housing boom can last…

It is becoming increasingly uncertain whether this upswing in prices can be sustained for much longer. Household indebtedness has continued growing, reaching more than 115% of disposable income in the second quarter of 2006, up from around 45% in 1996, increasing the vulnerability of households to further increases in interest rates. By November 2006, as the interest rate used as reference in almost all variable-rate mortgages rose for the fourteenth consecutive month, annual payments on an average mortgage had increased by slightly more than € 1 080 over that period. There is ample evidence to suggest that prices are overvalued, although it should be interpreted with the *caveat* that the estimations are fraught with uncertainties and qualifications. A review of econometric studies (Girouard *et al.*, 2006) suggests that Spain is one of the few countries (along with the

United Kingdom and Ireland) in which the evidence overwhelmingly points to overvaluation, which Ayuso and Restoy (2006) narrow down to between 24 and 32%. If prices were to reflect only fundamentals, they would have to fall from current levels, but, although the last year has seen some moderation in the rate of price appreciation, it is still running at slightly below 10% in annual terms. A recent study, van den Noord (2006), suggests that the longer prices increase, the greater the likelihood of a downward level correction.[18] Such an adjustment could occur in an orderly manner, during which price increases would gradually moderate and stabilise at a more prudent level. However, a more abrupt adjustment in which prices would plunge cannot be ruled out, and, compounding matters, it is possible that housing prices could remain undervalued for some years following the adjustment (Girouard *et al.*, 2006; Rae and van den Noord, 2006). However, this is not the most likely scenario at this time, which remains a soft landing of the housing market.

… and even a smooth adjustment could have significant costs

Even an orderly adjustment in prices could feed into the rest of the economy via four channels. *First*, it could affect the stability of the financial system. However, recent stress tests and scenario analysis performed by the IMF suggest that the banking system should be able to sustain the losses associated by a decrease in housing prices without systemic distress (IMF, 2006a and 2006b).[19] *Second*, the reduction in prices could produce household wealth effects, as households adjust their consumption and savings behaviour in response to the change in perceived wealth. Catte *et al., (*2004) found that such an effect would be relatively small for Spain, as opposed to other European countries with more developed financial markets which offer easier access to financial products that facilitate housing equity withdrawal. Bover (2005) estimates the elasticity of consumption to changes in housing wealth, which constitutes a larger share of total wealth than in other countries, to be around 0.02, a relatively low value in international comparison. Research by the Bank of Spain also suggests that households could cope with a rise in interest rates and a decrease in housing prices.[20] *Third*, as the profitability of residential investment decreases, the residential construction industry could suffer a downturn (Girouard *et al*., 2006). The adjustment could be substantial, as recent cases where housing bubbles have burst suggest that residential investment could decrease by between 2 and 3 percentage points of GDP;[21] were investment to return to its long-term average, it would decrease by almost 3 percentage points of GDP. Even a more moderate adjustment could be painful, as the sector has been one of the main drivers of the recent economic upsurge: the construction sector (including the non-residential sector) accounted for almost 14% of total employment and was responsible for around 44% of job creation in 2005. A reduction in the current high level of profits of construction companies, which has contributed to the strong performance of the stock market, could also feed back to private consumption via wealth effects. *Last*, government finances could suffer. As mentioned above, local and regional government are in charge of zoning regulation and derive a significant share of their revenues from real estate and building activities. A cooling in the construction sector could also affect the social security balance, as lower job creation would decrease contributions while increasing unemployment benefits (García-Cervero, 2006).

The rental market remains the thinnest in the EU

The downside to the high rate of home ownership has been a rental market (including both the private and social rental sectors) that remains the thinnest in the OECD area at

Table 2.6. **Housing tenure in the early 2000s**
Shares in per cent

	Owner-occupied	Private rented	Social rented	Others
Spain (2001 census)	**81**	**11**	**0**	**8**
Spain (2005)	**82**	**12**	**0**	**6**
Ireland	79	7	9	6
Italy	77	12	5	7
Portugal	76	15	7	2
United Kingdom	69	10	21	0
Belgium	68	23	7	2
United States	68	30	2	0
France	56	21	17	6
Sweden	46	21	18	15
Germany	41	44	6	5
Average	66	19	9	5
EU average	65	19	12	4

Source: OECD (2006), *OECD Employment Outlook* and Ministerio de Vivienda.

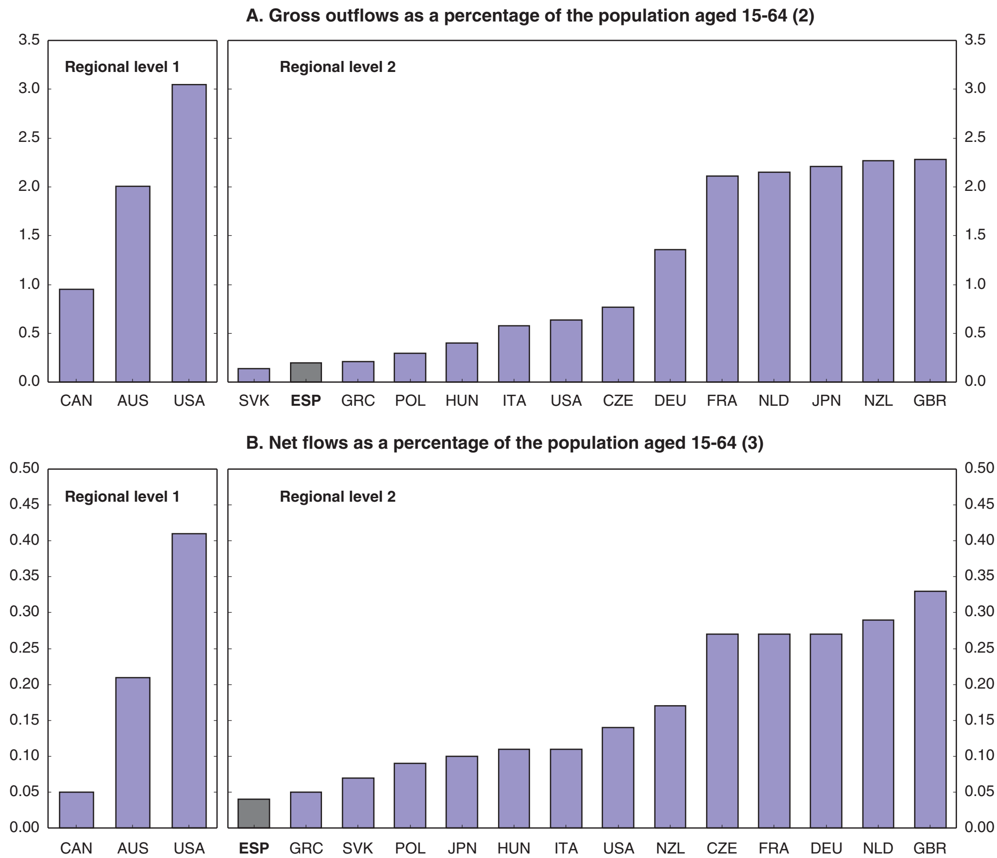
less than 12% of all dwellings in 2005, almost unchanged from the level in 2001, when it was about a third of the EU average (Table 2.6). Demand has been weak, mainly due to the fact that the favourable tax treatment and the low real interest rates have resulted in a low user cost of housing, making owning a favourable alternative to renting. Previous OECD surveys have shown that, as a (risk-neutral) investment strategy, house ownership dominates renting and investing the savings in the financial markets, mainly because of the effect of tax incentives. Thus, households favour house purchase instead of renting. The number of unoccupied houses, which the last census placed at more than 3.4 million in 2001 (around 16% of the housing stock), is extremely high and is likely to reflect both the low returns to renting and the expectations of continuing price increases (Artola and Montesinos, 2006). While some improvements have been made,[22] the lack of legal security for landlords remains one of the biggest handicaps to increasing the supply of rental accommodation, as the low levels of rent are perceived to barely offset the risks of damage to the premises by tenants and the high eviction costs. Spanish leases have a long duration, as they can be extended every year on the same terms (updating the rent only by the official inflation figure) up to a maximum duration of five years, when it is open for renegotiation. In a context of rapidly rising housing prices, this makes renting an even worse investment. Eviction appears to be difficult and costly, and the functioning of the courts in resolving flagrant abuses by tenants is regrettably slow (de los Llanos, 2006). The thinness of the rental market has also hindered regional mobility of workers, who find it more costly to move to take advantage of more attractive job opportunities in other parts of the country (Barcelo, 2006). Indeed, regional mobility is one of the lowest among OECD countries (Figure 2.12).

Policy has focused on increasing access by the young and the poor and promoting the rental market

Rising housing prices and the shallowness of the rental market have made it more difficult for the poor and the young to access the housing market. In response to this, housing policy has focused on addressing these sources of social tensions, while tackling the environmental issues created by the dramatic increase in the number of dwellings. Most of these measures are included in the Housing Plan for 2005-2008 (see Annex 2.A1).

Figure 2.12. **Internal migration rates**

2003[1]



1. 1999 for Netherlands; 2001 for Greece, Japan, New Zealand; 2002 for Austria, France and Italy.
2. Except for Australia and Italy for which the population of reference is the total population and for Japan for which the population of reference is the population aged more than five years.
3. Total net migration rate is calculated as the ratio of the sum of the absolute values of regional net flows divided by two, to the total population aged 15-64.

Source: OECD (2006), *Employment Outlook*.

On the supply side, subsidies and financing at preferential rates are available to build and renovate dwellings destined for the subsidised market. The new Land law, which is in the final stages of approval, will modify the compulsory land grant that municipalities receive when land is re-zoned for building purposes to a range between 5% and 15%, while making it more difficult for municipalities to sell the land. It also mandates that 25% of new housing developments must consist of subsidized houses. On the demand side, measures include providing assistance to the poor to facilitate the purchase of a house and a very slight scaling down of the mortgage deduction as part of the recent tax reform (see Chapter 3). Several measures have also been taken to foster the use of new types of mortgages, especially for elderly home owners, and the adoption of fixed-rate mortgages by reducing the fees and commissions households face when renegotiating their current mortgages. Around one-quarter of the total budget of the Housing Plan is devoted to stimulating the rental market. A public rental agency (*Sociedad Pública de Alquiler*) was created to act as an intermediary between tenants and landlords, with the goal of incorporating the large stock of unoccupied dwellings into the rental market. It has launched a new insurance policy that covers the risks to the landlord, and private institutions are following suit by offering similar products. The Housing Plan, which includes subsidies to help cover the cost of such insurance, supports this strategy. In the same direction, various types of subsidies are now available to the construction, acquisition and remodelling of buildings destined for the rental market. Assistance is also available for the young and less well-off to help them cover rent payments for eligible housing.

Structural reforms are needed to remove distortions in both the property and rental markets

Housing policy should focus on removing the obstacles to the efficient functioning of the rental and property markets. While some of the measures taken are moves in the right direction, there is ample room for improvement, as they are not likely to help steer the housing market towards a soft landing. Indeed, several of the measures are likely to increase prices and hinder the ability of supply to respond in a more nimble way to demand pressures. Assistance should be more concentrated on stimulating the provision of rental housing, as this would allow the authorities to provide temporary support to people who need it, reducing the overall cost of assistance. Phasing out the favourable tax treatment of housing purchases is likely to make renting a more favourable alternative, as distortions to the decision of renting versus owning would be eliminated. The overall effect of the compulsory grant of re-zoned land, soon to be raised to 15%, is unlikely to moderate housing price pressures, as it implicitly increases the tax on land. Restricting the municipalities' ability to sell part of the land should also reduce their incentives to facilitate new developments, in effect limiting the supply of building land. The resulting falloff in revenues to local governments should be compensated by increasing other sources of revenues that are likely to create fewer distortions (see Chapter 3). The requirement to devote 25% of new dwellings to subsidised housing is also likely to have mixed results. The supply of free-market housing is likely to decrease, raising prices in this segment of the market and pushing more people into the subsidised housing sector. Although there might be positive effects from having a more diverse composition in terms of income distribution, questions of equity might arise from the way that the subsidised dwellings are assigned. Finally, 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. In fact, the special offices that would pre-process the claims and hand them to a judge only for the final verdict, were not created, and the eviction process still take an average of a year.

The new rental agency aims at jump-starting the rental market by showing that renting is a viable alternative. However, it is not clear in a longer-term perspective what advantage a public entity has over a private one in carrying out this task. Indeed, there are already several local and regional private institutions that cater to this market and that have proven to be successful intermediaries without official intervention. The financial system should be able to provide the kind of insurance against damage by the tenants that the public rental agency offers. The functioning, and the goals, of the rental agency should therefore be evaluated in the medium term as the private rental market develops. Besides, in order to increase the depth of the rental market, public measures need to be more focused on increasing the total demand for rentals, in order to avoid the risk of generating deadweight losses. Otherwise, assistance is likely to translate into higher rental prices, rather than an increase in the number of rented dwellings. Enhancing the rental market would also help to increase mobility across regions, invigorating the labour market by broadening its scope. This would be especially useful in the current context of heavy immigration flows.

Box 2.5. **Policy recommendations to return to more sustainable growth**

Policies to narrow the inflation differential and facilitate more balanced growth

Tighten short-term fiscal policy

- In the absence of monetary settings appropriate for Spain's economy, ensure that fiscal policy remains as restrictive as it has turned out in recent years. In light of the good budgetary performance likely to be observed in 2006 and the continued strong growth of the economy, the authorities should aim to surpass the official targets for the surplus in 2007 and 2008. It would be desirable to base the spending cap on estimated potential GDP (adjusted for expected inflation). Regional governments should also adopt strict spending caps.
- When designing the fiscal strategy, keep using a prudent assessment of future macroeconomic conditions and incorporate the risks of a slowdown in potential growth in the medium term.
- Further investigate the reasons behind the large tax elasticity observed in recent years.

Improve the functioning of the housing market

- Phase out the deductibility of mortgage payments. in order to decrease its budgetary cost and allow better targeting.
- Improve the legal security in the landlord-tenant relationship.
- In the medium- and long-term, evaluate the need for the public rental agency, in light of the evolution of the private rental market. Reassess the existing rent assistance programmes and concentrate them on increasing the total demand for rentals.

Remove barriers to competition in some sheltered sectors (see Chapter 5)

Policies to increase the resilience of the economy

- In addition to further strengthening competition in some sheltered sectors, reform the collective bargaining system so as to allow wages to better reflect conditions at the firm level. This could be achieved by allowing firms to opt out of regional and/or sectoral wage-bargaining outcomes.
- Increase incentives to reduce the energy content of production so as to decrease the vulnerability to further oil price increases, in particular through a revision in electricity-sector regulation (see Chapters 1 and 5).

Notes

1. This might, however, reflect only a temporary increase in permits as builders anticipate the tighter restrictions in the new building code, which will come into effect in 2007.
2. The increase in the number of foreigners who own a summer house in Spain might create distortions in the tourism balance, as consumption by these households is recorded as domestic spending, although it should in fact be measured as exports.
3. One way to illustrate the monetary policy stance is to compare actual interest rates in the euro area to the interest rate that would be consistent with a neutral stance, estimated through a Taylor

rule. Such a rule relates the deviations of the interest rate from its equilibrium value to deviations in inflation rate and output from their equilibrium values. Using the Taylor rule estimated for the euro area by Hoeller *et al*. (2004), short-term interest rates in Spain should be around 350 basis points higher than the average level of actual interest rates in the third quarter of 2006.

4. After accounting for the additional extraordinary spending, the structural surplus was only around 0.3% of GDP (OECD, 2005).

5. The government has successfully used a two-step budgeting process. Early in the year, it announces the ceiling for central government expenditures, based on macroeconomic figures. Once this is announced, the budget is then allocated to the different spending categories, allowing the government to better contain spending pressures.

6. The breakdown of the overall surplus by level of administration for 2007 is as follows. The objective for social security is a surplus of 0.7% of GDP, while the central government's surplus target of 0.2% will offset the allowed deficits of the regional and local communities of 0.1% of GDP each.

7. A new Stability Programme Update will be released in late December 2006, and it is likely that some of these figures will be updated. In particular, given that the surplus in 2006 will be around 1.4% of GDP, it is highly likely that the authorities revise upwards their objective for 2007 and 2008. The 2007 budget had already announced a slightly higher target of 0.8% of GDP.

8. This projection was estimated on the basis of an euro/dollar exchange rate of 1.27 and an oil price decreasing from $ 69.7 in 2006 Q3 to $ 60 in 2006 Q4, and staying at $ 60 through 2007 and 2008.

9. The projections are consistent with INE's own immigration and demographic projections.

10. The most recent OECD projections assumed that ECB interest rates would increase by around 30 basis points in the second half of 2006 and a further 50 basis points through 2007.

11. Estimates in Cubero and Félix (2006), for example, suggest that around 50% of the inflation differential can be explained by the stronger growth of domestic demand in Spain relative to the euro area.

12. Estimates of potential growth should be interpreted with caution, as there are a number of methodological issues raised. OECD estimates used here are, however, close to consensus figures. An additional caveat to have in mind when trying to measure demand pressures by the output gap is the fact that such pressures can be met with imports, as has been the case in Spain with the widening of the trade deficit in recent years.

13. Furthermore, Beck *et al*. (2006) find that euro area-wide factors (oil prices and interest and exchange rates) explain more of the variation in inflation in almost all regions in Spain than elsewhere in the euro area. This suggests that structural factors are the most important determinant of inflation pressures and not national or regional excess demand.

14. By the third quarter of 2006, the three regions with the lowest unemployment rates were Navarra (4.8%), Baleares (4.8%) and Aragón (5.2%), while the regions with the highest unemployment rates were Extremadura (11.3%), Canarias (11.8%) and Andalucía (12.5%). The national unemployment rate stood at 8¼ per cent. The high regional variance of unemployment is likely to be at least partly due to the thinness of the rental market (Barcelo, 2006).

15. Of course, the reverse is also true, as decreases in the price of oil translate into a lower inflation differential, as happened in September and October 2006, following the decrease in oil prices.

16. Among the positive externalities to housing ownership are aesthetic amenities that benefit both neighbours and passers-by and improvement in children's education and general well being (see Glaeser and Shapiro, 2002) as people invest more in the upkeep and maintenance of their dwellings.

17. In 2005, the average increase in the price of land was 8.1%. The highest increases were in the coastal regions of Valencia and Cantabria, while in one other coastal and two inland regions (Galicia, Asturias and La Rioja, respectively) prices decreased.

18. The estimates in van den Noord (2006) and updated in OECD (2006) suggest that an increase in the mortgage interest rate of 100 (200) basis points in Spain would raise the probability of housing having reached a peak to 5% (9%), up from 2%, the baseline figure as of the second quarter of 2006. If the same increase in interest rates was accompanied by an increase in prices at the same rate as in the four previous quarters, around 11%, the probability would rise to 8 and 13%.

19. The IMF simulations involved a cumulative decrease over a three-year window from 2004 levels of 30% in housing prices in real terms. Under this scenario, GDP growth would decrease by

0.8 percentage points relative to the baseline value, and the ratio of household debt to gross disposable income would decrease by 6.8 percentage points.

20. In the Bank of Spain simulations, a cumulative rise over three years in short- and long-term interest rates of 65 and 150 basis points, respectively, and with no correction in nominal prices would lead to a decrease of 1.1% of private consumption, a decrease in the debt-to-gross-disposable-income ratio of households of 4.7 percentage points and a decrease in GDP of 0.8% in the third year of adjustment. If the same rise in interest rates were accompanied by a decrease in prices of around 11.5% by the third year, the effect on private consumption, the debt burden of households and GDP would be –1.8%, –5.9 percentage points, and –1.2%, respectively.

21. For instance, in the case of Germany, residential investment dropped from 7.6% of GDP in 1994 to 5.4% in 2005, while in Japan it shrank from 6.3% of GDP in 1988 to 3.4% in 2005. These figures are only meant to be suggestive of the size of a hypothetical downturn in the sector.

22. The improvement came as a result of the recent adoption of the Programa de Alquiler Garantizado by the main sectorial associations. A new protection mechanism will be offered in cooperation with private insurance companies through which landlords are guaranteed to receive their rent payments. This has been promoted in the same spirit as the policy also offered by the Sociedad Públic de Alquiler,.

Bibliography

Artola, C. and A. Montesinos (2006), "Características de la reciente expansión inmobiliaria en una perspectiva de medio plazo", *Boletín Económico*, Banco de España, Madrid, julio-agosto.

Ayuso, J. and F. Restoy (2006), "House Prices and Rents in Spain: Does the Discount Factor Matter?", *Working Paper* No. 0609, Banco de España, Madrid.

Barcelo, C. (2006) "Housing tenure and labour mobility: A comparison across European countries", *Working Paper* No. 0603, Banco de España, Madrid.

Beck, G., K. Hubrich and M. Marcellino (2006), "Regional Inflation Dynamics Within and Across Euro Area Countries and a Comparison with the US", *ECB Working Paper Series* No. 681, Frankfurt, October.

Benigno, P. and D. López-Salido (2003), "Inflation Persistence and Optimal Monetary Policy in the Euro Area", *ECB Working Paper* No. 178, Frankfurt.

Bentolila, S. and J. Jimeno (2002), "La reforma de la negociación colectiva en España", *Documento de trabajo* No. 2002-03, Fundación de Estudios de Economía Aplicada, Madrid.

Bover, O. (2005), "Efectos de la riqueza inmobiliaria sobre el consume: resultados a partir de la Encuesta Financiera de las Familias", *Boletín Económico*, Banco de España, Madrid, mayo.

Card, D. and S. de la Rica (2005), "The effect of firm-level contracts on the structure of wages: Evidence from matched employer-employee data", *NBER Working Paper* No. 11829, December.

Catte, P., N. Girouard, R. Price and C. André (2004), "Housing markets, wealth and the business cycle", *OECD Economics Department Working Papers* No. 394, Paris, June.

Cubero, J. and J. Félix (2006), "España,diferencial de inflación y ciclo económico", *Economicwatch*, BBVA, Madrid, 21 August.

de Castro, F. and P. Hernández (2006), "Los efectos económicos de la política fiscal en España", *Boletín Económico*, Banco de España, Madrid, marzo.

de los Llanos, M. (2006), "Las Medidas de la Política de Vivienda en Materia de Alquiler y Vivienda Protegida", *Boletín Económico*, Banco de España, Madrid, julio-agosto.

Domínguez Martínez, J.M. (2004), "Fiscalidad y coste de endeudamiento de la inversión en vivienda en España", *Cuadernos de Información Económica*, No. 180, Fundación de las Cajas de Ahorros Confederadas, Madrid, mayo-junio.

Durán-Cabré, J. and A. Esteller-Moré (2006), "How Diverse is Personal Income Tax Policy Among Spanish Regions?", mimeo.

Estrada, A., J. Galí and D. López-Salido (2004), "Accounting for Euro-zone Inflation Differentials", mimeo.

Garcia-Cervero, S. (2006), "What if the Spanish housing market weakens?", *Global Markets Research*, Deutsche Bank, 25 September.

Girouard, N., M. Kennedy, P. van den Noord and C. André (2006), "Recent House Price Developments: The Role of Fundamentals", *OECD Economics Department Working Papers* No. 475, Paris, January.

Glaeser, E. and J. Shapiro (2002), "The benefits of the home mortgage interest deduction", *NBER Working Paper* No. 9284, October.

Glaeser, E., J. Gyourko and R. Saks (2005), "Why Have Housing Prices Gone Up?" *NBER Working Paper* No. 11129, February.

Hoeller, P., C. Giorno and C. de la Maisonneuve (2004), "One Money, One Cycle?: Making Monetary Union a Smoother Ride", *OECD Economics Department Working Papers* No. 401, Paris, September.

IMF (2006a), "Spain:Article IV Consultation – Staff Report; Staff Supplement; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for Spain", *IMF Country Report* No. 06/211.

IMF (2006b), "Spain: Financial Sector Assessment Program – Technical Note – Stress Testing Methodology and Results", *IMF Country Report* No. 06/216.

Izquierdo, M., E. Moral and A. Urtasun (2003), "El sistema de negociación colectiva en España: Un análisis con datos individuales de convenios", *Documento Ocasional* No. 0302, Banco de España, Madrid.

Jarrett, P. (2005), "Coping with the Inevitable Adjustment in the US Current Account", *OECD Economics Department Working Papers* No. 467, Paris, December.

Laborda, A. (2006) "La inflación diferencial española respecto al área euro", *Cuadernos de Información Económica* No. 192, Fundación de las Cajas de Ahorros Confederadas, Madrid, mayo-junio.

L'Hotellerie-Fallois, P. and J. Peñalosa (2006), "El diagnóstico del deficit exterior español dentro de la UEM", *Cuadernos de Información Económica* No. 192, Fundación de las Cajas de Ahorros Confederadas, Madrid, mayo-junio.

López-Salido, D. (2005), "Inflación, productividad y márgenes sectoriales", *Boletín Económico*, Banco de España, Madrid, abril.

López-Salido, D. and F. Restoy (2005), "Los diferenciales de inflación en la UEM: el caso de la economía española", *Boletín Económico*, Banco de España, Madrid, noviembre.

Maza, L. and A. del Río (2006), "La financiación del déficit exterior de la economía española", *Boletín Económico*, Banco de España, Madrid, marzo.

Moral, E. and A. del Río (2006), "Un índice de condiciones monetarias y presupuestarias", *Boletín Económico*, Banco de España, Madrid, julio-agosto.

OECD (2004), *OECD Economic Outlook* No. 75, OECD, Paris.

OECD (2005), *OECD Economic Surveys: Spain*, OECD, Paris.

Rae, D. and P. van den Noord (2006), "Ireland's Housing Boom: What has driven it and have prices overshot?" *OECD Economics Department Working Papers* No. 492, Paris, June.

van den Noord, P. (2006), "Are House Prices Nearing a Peak? A Probit Analysis for 17 OECD Countries", *OECD Economics Department Working Papers* No. 488, Paris, June.

ANNEX 2.A1

The main characteristics of housing policy

A new Housing Plan for the period 2005-08 was drawn up, which almost doubles the assistance budget to around € 7 billion over the period and aims to increase the number of subsidised houses by 83 000 each year. In order to increase the attractiveness of building subsidised housing, which has decreased as the free-market prices have soared, their prices were allowed to increase, albeit by a modest 3%, in July 2005. Subsidies and financing at subsidised rates are also available to build and renovate dwellings destined for the subsidised market. Measures affecting demand include providing subsidies to the poor to facilitate the purchase of a house and a very slight scaling down of the mortgage deduction as part of the recent tax reform (see Chapter 3). Loans for up to 80% of the total price are available at favourable rates, as subsidies range from € 40 to € 82 per € 10 000 loaned. Additionally, a subsidy of up to € 11 000 to cover the down payment is available. Several measures have also been taken to foster the use of new types of mortgages, especially for elderly home owners, and the adoption of fixed-rate mortgages by reducing the fees and commissions households face when renegotiating their current mortgages.

The new Land law, which is in the final stages of the legislative process, will modify the maximum compulsory land grant that municipalities receive when land is re-zoned for building purposes to a range between 5-15% and also mandates that 25% of new housing developments must consist of rent-controlled housing. Conditions to sell re-zoned land are now more restrictive, as municipalities will be able to sell land only to developers of subsidised housing. A new building code was also approved that updates safety, environmental and other regulations, which, according to official estimates, will translate into a relatively modest 1% increase in housing prices, starting in 2007 when it will take effect. Also, and as part of the authorities' strategy to reduce the economy-wide use of temporary workers and increase worker safety, the use of subcontractors will be regulated more closely, which could also affect construction companies' productivity and hence building prices.

As for the rental market, measures include the creation of a public rental agency at the end of 2005 to act as an intermediary between tenants and landlords and, above all, integrate the large stock of unoccupied dwellings into the rental market. The agency offers a stable stream of income, usually around 80% of market rent, to the landlord, absorbing the risk associated with both damage to the units by tenants and having the apartment unoccupied. It also maintains a central listing of available apartments which potential renters can access. With an initial capitalisation of € 20 million, by mid 2006 it managed

 OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

around 1 000 apartments, meeting the initial goal, with the aim of reaching 25 000 units in four years, or 1.5% of the current rental market.

In order to incorporate the large stock of unoccupied dwellings various types of subsidies are now available to the building, acquisition and/or remodelling of dwellings destined for the rental market. Developers can choose the time the units are to be maintained in the subsidised market, either 10 or 25 years, although they can be sold under special circumstances. Subsidies of up to € 6 000 are also available for the purchase of insurance against damages to the property and the risk of non-payment. Rents are calculated as a percentage of the maximum price of equivalent subsidised housing for sale. The demand for rental housing will be stimulated through subsidies provided to people below 35 and with annual earnings under € 16 000 to help cover rent payments for eligible housing up to a maximum of two years. Assistance is granted to cover 40% of annual rent payments, up to a maximum of € 2 800.

ISBN 92-64-02920-6
OECD Economic Surveys: Spain

Chapter 3

Medium and long-term fiscal issues

Budget outcomes have steadily improved in the last decade, as Spain has continued its fiscal consolidation process. Several forces could make it more difficult to maintain the current prudent medium-term fiscal policy, which is needed both to provide room to manoeuvre in case of an economic downturn and to prepare for the budgetary effects of the predictable sharp deterioration in the age structure of the population that will take place in the coming decades. Against this background, the authorities have signalled their commitment to maintain a sound fiscal policy. They have also adopted a series of reforms that aim to increase public-sector efficiency and prepare for the long-term fiscal effects of the ageing process and the resulting rise in demand for health and dependency care. This chapter aims to analyse the forces acting on both the revenue and expenditure sides of the budget in the longer term and the authorities' strategy to address them. It also provides some advice, in light of the previous analysis, to ensure that the medium- and longer-term fiscal objectives are jointly consistent.

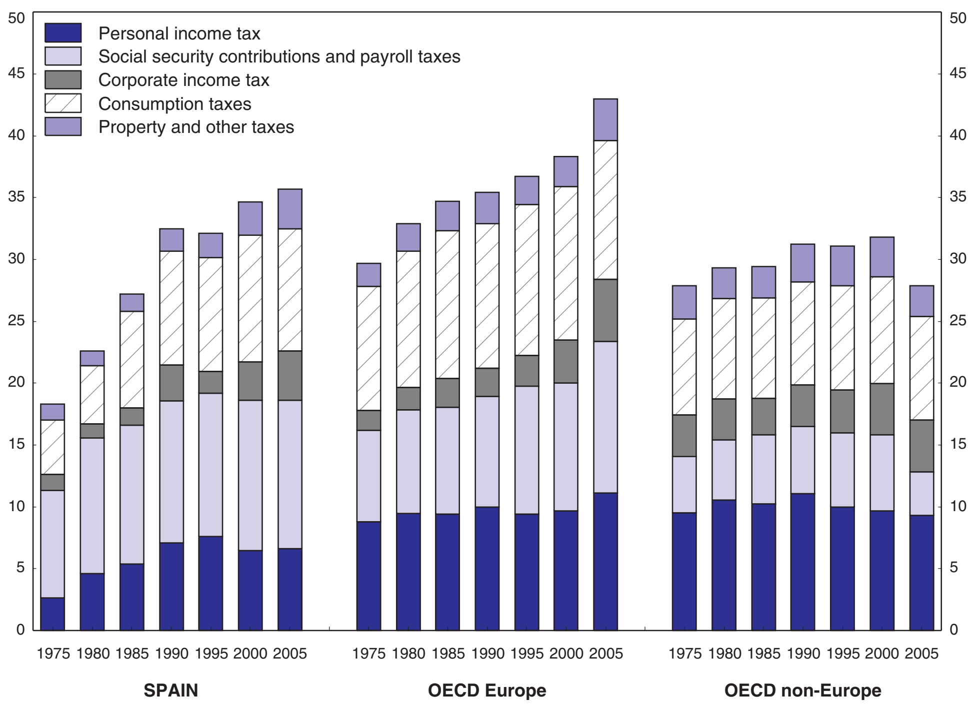
The authorities have achieved sound public finances over the last decade in a context of rapid economic growth. However, sound economic policy is as much about capitalising on good times as avoiding bad ones. The time is ripe for the authorities to develop a comprehensive strategy to deal with the most pressing issue affecting public finances in the long-term: the foreseeable increase in expenditures stemming from the ageing process. Before approaching the question of dealing with spending pressures, the revenue outlook will be discussed.

Forces acting on the revenue side

Since the mid 1970s and until the beginning of the 1990s, taxation in Spain rose sharply: the tax burden as a per cent of GDP rose from around 18% in 1975 to close to 33% in 1990 (Figure 3.1). Until then, tax reforms[1] were aimed at creating a modern tax system that would allow the authorities to finance an increasing demand for public services (OECD, 2000). Since the early 1990s taxation has increased only slowly (the tax burden has risen to close to 35% of GDP, not far off the European average), as second-generation tax reforms have aimed at simplification, promoting neutrality and enhancing incentives for

Figure 3.1. **The tax burden**

Per cent of GDP[1]



1. Data for 2005 are estimates.

Source: OECD, Revenue Statistics.

work, savings and investment. At the same time, additional pressures have been created in the tax system by a process of decentralisation of spending and taxing powers to regional communities (OECD, 2005a) and to some extent by foreign tax competition.

While recent reforms have been successful in simplifying the tax code, reducing compliance costs and rectifying previous distortions, the tax system still contains imbalances. These are reflected in the relatively high tax pressure on labour income (Table 3.1), insufficient neutrality in the taxation of savings and shortcomings in tax decentralisation which have allowed regional governments to rely – probably excessively – on transfers from the central government (Joumard and Giorno, 2005). In response to this, a new tax reform has been put in place for 2007, which includes changes to the personal income and corporate taxes, a uniform treatment of savings and additional incentives to work. The fight against tax fraud and money laundering has intensified. A new framework to coordinate the fiscal relations between the central and regional governments is under discussion, which will likely follow at least in part the path of the recently approved statute of autonomy for Catalonia. The new framework should have as its priority an increase in the accountability of regional governments by creating a stronger link between regional levels of spending and revenues. Citizens should be able to see clearly the link between the taxes they pay and the level of services they receive in exchange. Only by bearing the full marginal cost of increases in spending will regions decide efficiently on the optimal level of expenditures.

Table 3.1. **Average tax wedge in Spain and other OECD countries**

	2000	2001	2002	2003	2004	2005
Spain	**38.6**	**38.8**	**39.1**	**38.5**	**38.7**	**39.0**
OECD-Europe	41.2	40.7	40.4	40.2	40.5	40.2
OECD-Non Europe	21.4	21.2	22.6	22.1	22.0	22.6
OECD average	37.9	37.5	37.4	37.2	37.4	37.2

1. The tax wedge is calculated as the average personal income tax and social security contribution rates for a single person without dependents at 100% of the average wage.

Source: OECD Tax Database.

A new fiscal reform aims to reduce the tax burden and rationalise and simplify the tax code

In several respects, the new reform of the personal income tax goes in the same direction as the two previous overhauls (in 1999 and 2003; see Annex 3.A1). It simplifies the tax code by reducing the number of tax brackets to four,[2] and, in order to lower the tax burden, the top marginal rate[3] is cut from 45 to 43%. Neutrality is to be enhanced by a uniform tax treatment of savings, as the liability on income from all instruments will accrue at the same rate, 18%, rather than as a function of whether they are short- or long-term investments; the only exception will be the treatment of the income from dividends, as the first € 1 000 will be exempt. The favourable treatment of lump-sum withdrawals of private retirement savings is eliminated, although the maximum annual tax-free contribution is increased. The favourable treatment of housing purchases is curtailed, although only very marginally. The new reform places a stronger emphasis on increasing tax progressivity than its predecessors (Lagares, 2006). Personal and family allowances are increased, and are now included in the first income segment, which is taxed at a zero rate.[4] Concerning the taxation of labour income, allowances are being increased by between

8 and 14% (depending on the level of earnings). Official estimates suggest that personal tax payments will be reduced by 6% on average and 17% for the 60% in the lowest income brackets. Lower-income wage earners will benefit from the increases in work-related deductions, while tax savings will be modest for single and married people with no children; families with average incomes will be among the few negatively affected by the reform.

In addition to the revision of the personal income tax, the corporate tax is being reformed for the first time since 1995.[5] The new reform, also put in place in 2007, will focus on increasing firms' competitiveness by reducing their tax burden and simplifying the tax code. The rate is to be lowered from 30 to 25% in 2007 for small- and medium-sized enterprises, and from 35 to 30% over two years for larger firms. On the other hand, all the tax credits available to firms will be gradually phased out by 2011, with the exception of the deduction for research and development expenditures (which had an estimated budget cost of € 261 million in 2006) and the reinvestment of profits in productive investment (whose estimated budget cost was more than € 2 600 million in 2006). This will not only greatly simplify the tax code, eliminating distortions and the use of creative accounting to reduce tax liabilities, but it will also broaden the tax base.

The fiscal cost of the reforms to the personal income and corporate tax is estimated to be around € 2 billion and € 2.5 billion, respectively. However, efforts by the authorities to increase the use of permanent work contracts in the economy[6] will result in a further fall in revenues, estimated to be around € 425 million in 2006 and € 849 million in 2007. While the fiscal cost of the personal income tax reform is moderate when compared with previous changes,[7] the overall tax cut is projected to be of a similar order of magnitude as those in 1999 and 2003. This tax cut, amounting to around 0.4 percentage points of GDP, might however be partly offset by an increase in revenues brought about by the fight against tax fraud that the authorities are also intensifying (see below).

The reform will result in a more efficient tax system and is likely to decrease the tax burden, complementing other actions taken by the authorities to increase the economy's competitiveness. There are, however, several areas where it could have been more ambitious. *First*, tax brackets have been indexed since 2005 to the official inflation projections, which – being normative – have consistently underestimated actual inflation. The increases in the personal and family allowances and the tax brackets included in the reform do not even compensate for the past inflation effect.[8] Thus, it would be advisable, as has been suggested before (OECD, 2003) to incorporate a more systematic inflation adjustment of the tax brackets and allowances into the tax code to avoid both accumulating distortions until they are updated and relying on periodic fiscal reform to make the adjustment. This would also help to stop the slow up-creep in the tax burden observed in recent years. *Second*, although very slightly modified, housing purchases continue to receive a favourable tax treatment, which will continue to hinder the development of the rental market, thereby hindering labour market mobility in the event of regional shocks. *Third*, the large difference between the still relatively high top marginal personal rate (43%) and the low corporate tax rate on SMEs (25%) is likely to cause tax evasion to persist, as individuals in high tax brackets form small companies in order to lower their tax payments. Moreover, the persistently lower tax rate benefiting SMEs is a disincentive to the growth of firms near the threshold – as it is believed to be in Canada (OECD, 2006b). It is likely to continue favouring an industrial structure with a high proportion of small firms, whereas the development of bigger firms would be beneficial to the Spanish economy (see Chapter 4). *Finally*, while

 OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

some of the tax incentives for contributions to private retirement savings plans have been cut back, the increase in the maximum contribution could be costly, as the net revenue cost of contributions to the plans[9] is likely to be high (OECD, 2005a; Antolin *et al.*, 2004).

By its very nature, it is hard to quantify the extent of tax fraud and the size of the underground economy, and the authorities provide no official estimate of either. However, the abnormally high number of € 500 bills in the economy,[10] public opinion polls[11] and various studies on the size of the underground economy[12] all seem to confirm the suspicion that tax fraud is considerable. In 2005, the government adopted a comprehensive plan to fight tax fraud and money laundering, with a bigger emphasis on real estate transactions, VAT schemes and the use of fiscal havens. In addition, more investigative tactics are being used, and more resources are being allocated to identifying suspicious patterns, rather than to the more time- and resource-intensive audits of individual tax returns. While the plan resulted in considerable increases in the amounts recovered in 2005 (€ 4.6 billion; almost 13% more than in 2004, although total revenues increased by more than 14% that year), and the streamlining and simplification of the tax system will help to contain tax evasion as compliance is made easier and loopholes used to reduce tax liabilities are closed, there is room for further improvement. In particular, cooperation between fiscal and police authorities, through the appropriate channels, should be improved to avoid cases where the former harbour suspicions of illicit behaviour but lack the power to investigate them.

The fiscal framework between the central and regional administrations is being reformed

Since the creation of autonomous communities by the 1978 Constitution, Spain has become one of the most decentralised OECD countries. Regional governments have progressively taken on more spending responsibilities, so that, with the devolution of education and health care spending completed by 2002, regional governments are now responsible for about 42% of total public spending (excluding spending on pensions; one third when such outlays are included). However, regional and local governments have relied heavily on transfers from the central government to finance spending increases. Taxing powers have been progressively devolved to regional governments, but they have been reluctant to fully exploit them (see below). The recent increases in health care spending, due only in part to the immigration boom (see below), have not been financed by increases in regional taxes, but rather by larger central government transfers (of around 0.2 percentage points of GDP in 2006 and 2007). The equalisation and solidarity mechanisms among regions have not been successful in pooling resources across regions and redistributing them among poor regions, as in recent years, only two regions (Madrid and the Balearics) have been net contributors. Rather, they have been a source of transfers to even relatively rich regions. The existence of two distinct financing arrangements, the Foral (that includes only Pais Vasco and Navarra) and the Common regime (which includes the remaining regions) has increased demands to address the inequality in the fiscal treatment among regions in the two systems.

As a result, central and regional governments have agreed on the need to update the financial framework to better reflect the regions' increased taxing and spending powers and increase their fiscal responsibility, through a reform of the *Ley Orgánica de Financiación de las Comunidades Autónomas* (LOFCA). Negotiations are underway between the regions in the common regime and the central government, although an agreement before the end of the current legislature in 2008 does not seem likely. New autonomy statutes for several regions, some still in the approval process, contain provisions that significantly alter the fiscal framework for the regions involved, although they will not be applicable until the LOFCA is reformed. While the statute of each region will be negotiated separately, it is likely that the new regional financing model will incorporate some of the changes in the new Catalonia statute, so as to achieve a symmetric financial mechanism with all regions (except those in the Foral regime) as sought by the central government.

The Catalonia statute introduces several relevant changes in the fiscal area, although most of them won't be implemented until the new LOFCA is in place. A greater share of taxes is ceded to it: in the case of the value-added tax and the personal income tax the share will increase from 33 to 50% and in the case of excise taxes (tobacco, alcohol, beer, wine, mineral oil and intermediate products), to 58%. A new semi-autonomous office within the regional government, the Agencia Tributaria de Cataluña, will be created and will be responsible for the collection of both own and totally ceded taxes in Catalonia,[13] which is currently the responsibility of the regional office of the central tax authority (except for the tax on electricity). The management of the partially ceded taxes, on the other hand, will still be the responsibility of the central tax authority; however, powers can be shared with the regions, and this is expected to happen. It is important to point out that the creation of the new agency will not expand, by itself, the competencies of the region. The statute also contains two principles that the region's net contributions to the equalisation and solidarity funds must satisfy. *First*, transfers from Catalonia must not change its ranking in regional *per capita* GDP. *Second*, the fiscal effort of receiving regions is one of the factors to be considered in the equalisation system. These two principles will be interpreted in the LOFCA. However, care must be exercised to ensure that their interpretation and implementation are not unduly complicated and do not lead to disputes.[14] .

As taxing powers are further devolved, it is important to stress that the new financial framework should provide good incentives for regional communities to maintain sound finances and rely more extensively on their own sources of financing, exploiting the powers to determine tax rates they already enjoy. Under the current financial arrangements regional governments have had normative powers over partially ceded taxes, but only one region intends to modify the rate of the personal income tax. Although comparing the differences in effective tax rates between tax systems is difficult, a recent study (Durán-Cabré and Esteller-Moré, 2006) suggests that regions might have induced, using tax credits, some variation in their effective income tax rates.[15] The overall impact of the new financing mechanism on the central government's tax revenues is unclear, as increases in regional tax revenues will be at least partially offset by decreases in transfers from the equalisation schemes. However, it is unlikely that any region will accept a decrease in revenues in the new system. As no new competencies or spending powers are being devolved, care should be exercised not to go too far in granting regions further revenue concessions, thereby creating undue stress on the central government's finances. The creation of the tax office within the Catalonia regional government[16] may increase efficiency in tax collection, but attention should be paid to not duplicate tasks and resources.

Negotiations are under way to reform the local government fiscal framework

Negotiations between the central government and municipalities have started with the aim of reforming the financing arrangement for local governments. As has already been suggested in previous *Surveys*, the property values used to compute real estate taxes are well below market prices, as they are not re-evaluated frequently enough (OECD, 2005a). The significant housing price increases in recent years have probably increased this gap, also raising questions about the equitable tax treatment of older versus newer housing. Local governments in Spain appear to rely less on user fees or charges than in other countries (OECD, 2003) and the further diversification of sources of revenues would be desirable.

Forces acting on the expenditure side

In the medium- and long-term, public expenditures will be subject to significant upward pressures. These include the significant efforts under way by the authorities to steer the economy onto a more sustainable growth path based on productivity increases, as summarised in the National Reform Programme, through an ambitious infrastructure programme and considerable increases in R&D spending (the authorities' objective is raise public R&D spending from 0.5% to 0.9% of GDP by 2010 – see Chapter 4). Regional governments are also insisting on more investment from the central government to correct perceived historical imbalances. In the long-term, upward pressures will also come from the ageing process. This section reviews the different sources of stress on spending and assesses the main measures the government has adopted to maintain sound public finances and prepare for the long-term fiscal costs of the ageing process.

An ambitious plan to transform the economy is underway

Significant improvements in Spain's transportation infrastructure have been made since it joined the European Union. Helped by EU funds, infrastructure spending as a per cent of GDP has been consistently above the EU average, but a sizable deficit in physical infrastructure *vis-à-vis* other EU countries still remains, especially in terms of railway infrastructure (Table 3.2). High-capacity roads still exhibit a hub-and-spoke model, which limits accessibility across regions; quality and safety standards are uneven across the rail network; and the demand for transportation services is predicted to grow considerably in the future (Ministerio de Fomento, 2004). To address these challenges and as part of the government's overall plan to meet the Lisbon Agenda goals, an ambitious infrastructure plan was launched by the government in 2004. Called the Plan *Estrategio de Inversion y Transporte* (PEIT) it involves total spending of € 250 billion over 25 years, or roughly 1¾ per cent of GDP a year until 2020, to be financed 60% from the general budget and the rest from other public entities and public-private partnerships.[17] Around 50% of total investments will be spent on the railroad network, 25% on highways and the rest on air, sea and urban and metropolitan transport systems.

As part of the negotiation of the new autonomy statutes, several regions have asked for increased spending on infrastructure by the central government to correct a perceived underinvestment in the past. In the case of Catalonia, for example, the central government agreed to increase the share of total investment in the region to an amount equal to the share of the region's GDP in the national GDP for the next seven years. The Andalusia statute, on the other hand, contains a request to raise the share of investment to the share of the region's population in the national total, while in the Balearics statute, a fixed

Table 3.2. **Transportation infrastructure density in Europe**

2004[1]

	Total motorway length		Total railway tracks		Electric tracks		Non-electric tracks	
	Km per thousand km^2	Km per million people	Km per thousand km^2	Km per million people	Km per thousand km^2	Km per million people	Km per thousand km^2	Km per million people
Belgium	57.2	167.8	206.1	604.3	179.6	526.7	26.5	77.6
Netherlands	56.4	142.3	67.7	173.3	..	..	..	..
Germany	33.7	146.0	198.5	859.5	126.2	546.3	72.4	313.3
Denmark	23.4	187.9	..	..	14.5	116.9		
Spain	**20.3**	**240.9**	**25.4**	**300.7**	**14.9**	**176.2**	**10.5**	**124.5**
Austria	20.0	205.1	67.3	697.9	..	..	..	..
Portugal	19.9	176.8	30.4	269.9	11.4	100.9	19.0	169.0
France	19.1	172.5	90.2	810.7	56.3	505.8	33.9	304.8
United Kingdom	15.1	61.1	136.1	551.5	49.5	200.6	86.6	351.0
Czech Republic	6.6	50.8	206.6	1 596.7	82.1	634.5	124.5	962.3
Hungary	6.1	56.3	136.9	1 260.0	63.1	582.8	73.8	677.3
Sweden	3.5	177.6	34.1	1 714.6	23.7	1 191.3	10.4	523.2
Finland	1.9	124.9	25.4	1 644.2	12.1	783.3	13.3	860.9
Poland	1.8	14.5	124.0	1 015.7	80.6	660.3	43.4	355.4
Norway	0.6	42.0	13.4	943.8	8.5	600.0	4.9	343.9
Average	18.7	127.0	97.3	888.8	59.0	542.4	43.3	421.9

1. Data are for 2002 for Germany, Denmark and Portugal, and for 2003 for France, the Czech Republic and Sweden.
Source: Eurostat, Transport statistics.

amount of € 3 billion over seven years was asked for. While some regions might have suffered from underinvestment by the central government in the past (see Garcia-Milà and McGuire, 2002; de la Fuente, 2001), future negotiations should avoid spawning additional pressures on public spending for political reasons as regional governments compete for further spending commitments from the central government.

While investments in infrastructure can eliminate bottlenecks and increase competitiveness, the benefits of a programme of this magnitude should be clearly weighed against other possible uses so as to assess if they are the most efficient use of available resources. The central government has already announced spending on education to be one of its priorities in the National Reform Programme. Given the high rate of return to education in Spain, estimated at between 7.5 and 12.2% (de la Fuente and Jimeno, 2005), questions can be legitimately raised concerning the most profitable use of public spending. More intensive investment in education might improve the efficiency of government spending and allow a faster convergence in *per capita* income levels with the rest of the euro area. In this regard, a too narrow interpretation of the clause in the new Fiscal Stability Law described in this Chapter, allowing all levels of government jointly to exceptionally exclude increases in public investment (including for R&D and innovation) up to 0.5% of GDP, would create the risk of biasing spending away from education. To avoid this, when implementing the exclusion, human capital outlays should receive the same treatment as other productivity-enhancing measures.

Efforts to rationalise spending have increased

Having committed itself to maintaining a prudent fiscal policy, the government has also made efforts to rationalise public spending and raise its efficiency. As mentioned in the National Reform Programme, the efforts include a significant financial restructuring and reorganization of RTVE, the public radio and television entity, the creation of a public policy evaluation agency, the increased use of e-government and the creation of a statute governing public employees.

The rationalisation of spending includes decentralised entities like RTVE, which has been a big drag on public finances for a long time. It has incurred losses of at least € 500 million in each of the last five years and has accumulated debts of upwards of € 7.5 billion, equivalent to around 0.7% of GDP, which the government has recently assumed. The welcome reform includes a corporatisation and reduction in the number of employees, from more than 9 000 to around 6 200, although negotiations with the labour unions are still not complete. Even though it will still be possible to be partially funded by public transfers, the change in structure is likely to prevent a repeat of past underperformance.

To raise the efficiency of public spending, a new framework for public entities has been created to increase their accountability and foster a culture of results-based administration. A new legal form, the "agency", will provide an organisational modality that gives more flexibility and autonomy to public entities to pursue their previously determined objectives, while making it easier to be evaluated. In tandem, a public policy evaluation office, the *Agencia Estatal de Evaluación de las Políticas Públicas y la Calidad de los Servicios*, has been created and is expected to be operational by the end of 2006. Initially, one of its main roles will be the assessment of the National Reform Programme. The office will need to collaborate with other sectoral and regional agencies (as there will be no hierarchical relationship among them) that are also being created in order to agree on a set of indicators to follow, for example in education, employment policy and health care. This reform could potentially provide a useful evaluation of public policy and institutions that will aid in maintaining the objectives of budget stability as waste and duplication is reduced. The competitiveness of the whole economy can be increased if the office helps to optimise the use of public resources at all levels of administration. However, it could see its scope to engage in benchmarking and other comparative studies constrained by the resistance of other public entities, especially at the regional level. To ensure its effectiveness, the new institution must have a high degree of independence, and its findings should be readily and easily available to the general public so as to help promote reforms.

The government has also taken several steps to increase the use of e-government. A new, electronic form of universal ID is being introduced that can not only significantly cut red tape in official procedures but can also provide a boost in e-commerce and other Internet-related operations as the new card can be used to store and retrieve customers' information. Through the *Ley de acceso electrónico de los ciudadanos a la administración,* the government will try to streamline interactions with citizens and move to electronic rather than paper-based administration. In fact, citizens will now have the right to conduct all of their interactions with the central government via electronic format. Efforts in this direction will not only save on public administration but can also be a much needed boost for members of the public to get used to electronic operations.

Following the decentralisation process, public employment rose considerably, particularly at the regional and local levels, which by the first quarter of 2006 accounted for around 70% of total public employment, up from around 45% in 1987 (Figure 3.2). The need to provide a homogeneous framework for all public employees across regions and modernise the management of public employment, as the current framework dates from 1965, is being addressed through the creation of a public employee statute. It sets out the rights and responsibilities of all 2.3 million public employees across the three levels of government.[18] Basic compensation will be the same among all governments, while complementary remuneration will be determined by each administration taking into account a series of measurable criteria. Employees' performance will be subject to regular evaluations, which will be used to determine vertical mobility. They will have the right to engage in collective bargaining agreements with the government, and the high share of temporary workers[19] will be tackled by limiting the share of temporary contracts to 10% of total employment in any administration and the conversion of 650 000 of them into permanent positions. By tying more closely remuneration and vertical mobility to employee performance, the statute is a positive step to foster productivity in the public sector. There is a risk, however, that it could provide a relatively rigid framework for all public employment, making regional adjustments more difficult. The move towards a more results-based evaluation of public entities requires that they have the flexibility to adjust their labour costs to changing conditions in order to reach their goals at least cost. Other decentralised countries, like Switzerland, have moved in the opposite direction by eliminating public servants' status at the regional level, thereby giving them more freedom in managing their workforces (OECD, 2002).

The ageing process will add to spending pressures

While countries across Europe will also face an ageing process, it is expected that the effects will be felt later but be more pronounced in Spain. Coupled with relatively generous parameters underlying pension calculations – even though the average level of pensions is lower that the euro area average – spending on pensions (as a share of GDP) is expected to increase more than in other countries. Health and dependency care spending can also be expected to increase in the medium- and long-term.

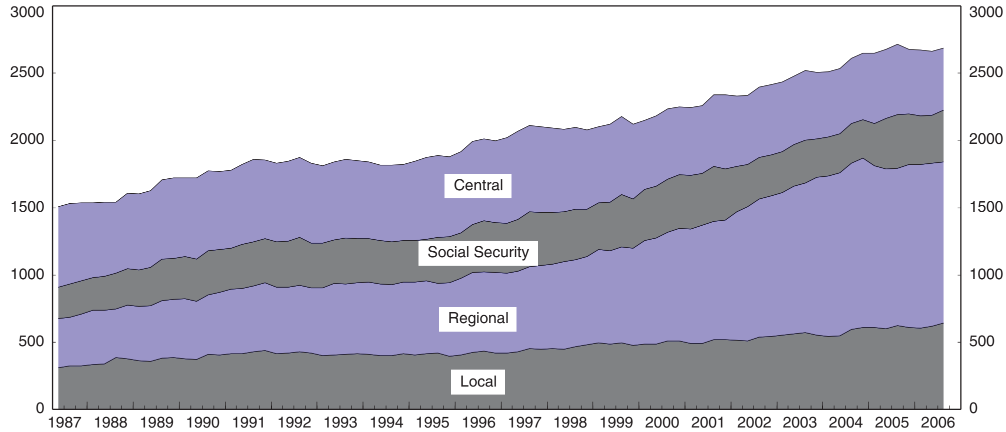
A new dependency law is to provide assistance to an estimated 1.1 million people by 2015

There is strong evidence that Spain lags substantially in expenditure on long-term care for the elderly (OECD, 2005a) and lacks sufficient facilities to provide care for elderly dependents, which is usually (in more than 70% of the cases) provided by unpaid female family members (Costa-Font and Paxtot, 2003). This has probably limited the female participation rate, even though it has increased rapidly in the current decade (from 41.4% in 2000 to 47.8% in the third quarter of 2006) and has been an important factor, along with immigration, in sustaining high GDP growth.[20] Currently, formal assistance falls well short of demand and is provided, on a decentralised basis, by regional and local governments through the health care system, resulting in sometimes inefficient use of acute care services when it would be both less expensive and preferred by patients for assistance to be provided, when possible, at home (OECD, 2005a). As the population ages, the demand for dependent care will increase, and the absence of a properly organised system of dependent care might make further increases in the female participation rate difficult and add further pressures to health care spending.

The Dependency law, which comes into force in 2007, will create the *Sistema de Dependencia*, which aims to progressively expand coverage, with the goal of reaching all the 1.1 million estimated dependents in 2015, when the system is expected to be fully operational. Coverage is beginning in 2007 for the 200 000 with the highest degree of dependency, according to an assessment made in 2006. The central government will

Figure 3.2. **Employment by level of government**

Thousand persons



Source: INE.

provide a basic package of benefits, so as to guarantee a minimum level of assistance across regions. Regional governments can then offer augmented packages, which they will need to co-finance (as is the case with the basic coverage) along with the central administration. Finally, beneficiaries will face a co-payment, which will be a function of their income. This setting can allow regions to offer coverage packages that are more closely tailored to their citizens' preferences, while providing a minimum level of care that is the same across all regions, ensuring both equity and flexibility. The total cost of the system is expected to be € 1.6 billion in 2007 (around 0.17% of GDP), rising as both coverage and demand are increased, to € 9.5 billion in 2015 (close to 1% of GDP).Regarding the financing of the costs, the draft bill that was approved by the government in April estimated that around 47% of the total cost will be financed in equal parts by the central and regional governments, 34% directly by beneficiaries through the co-payment and the remaining19% will be borne by reallocating current spending on dependents through the health care system. However, as the final version of the law, adopted in December, includes several modifications to the initial draft, new estimates of the total cost and its financing will be required.

The inclusion of a co-payment is a welcome feature that can effectively rationalise demand and help curb overall costs. However, there is still a high degree of uncertainty regarding the financing of the system. The central government has pledged a significant part of the financing, and the system is expected to provide clear guidelines as to how to determine the co-payment.[21] There are not yet any specific mechanisms through which regional communities can cover their projected part of the costs, which could lead to coordination problems. Some regional political parties opposed this reform, as they interpreted it as interference by the central government in regional competencies. Coming up with the promised funding might prove to be more difficult, especially in light of the problems that regional governments have faced in financing health care in recent times.

Spending on health care is likely to keep on rising

Total spending on health care continues to be below the OECD average, despite having grown by almost 1 percentage point of GDP to 8.1% from 2000 to 2004. Public spending, which is now the responsibility of regional governments, has been relatively well contained, as it has grown by only 0.5 percentage points of GDP, slightly less than the average across European countries (Table 3.3). However, public spending on pharmaceuticals[22] has grown steadily in recent years and is now almost 25% of public health spending, a significantly higher share than in most other OECD countries.[23] This increase appears to be caused more by the growth in the number of prescriptions than by any increase in spending per prescription. Also, spending pressure from in-patient care has been relatively strong of late, which might reflect to some extent a coordination problem between hospital and ambulatory care. Patients apparently prefer to go to a hospital in order to receive routine care, rather than to their primary care provider, as this allows them to choose when to receive treatment and avoid having to come back for more analyses (OECD, 2003). On the other hand, public spending on prevention and public health is well below the OECD average.

Table 3.3. **Evolution of health expenditure**

	Spain			OECD-Europe			Japan			United States		
	Change over period[1]		Level 2004	Change over period[1]		Level 2004	Change over period[1]		Level 2004	Change over period[1]		Level 2004
	1995-2000	2000-04		1995-2000	2000-04		1995-2000	2000-04		1995-2000	2000-04	
In % of GDP												
Total spending	–0.2	0.9	8.1	0.2	0.9	8.8	0.8	0.4	8.0	0.0	2.0	15.3
Private expenditure on health	–0.1	0.4	2.4	0.1	0.2	2.2	0.2	0.1	1.5	0.1	1.1	8.5
Public expenditure on health	–0.2	0.5	5.7	0.1	0.7	6.6	0.5	0.3	6.5	–0.2	1.1	6.8
of which:												
In % of public expenditure on health												
Investment	0.4	0.1	3.5	–0.9	–0.3	3.6	–3.1	–0.4	4.0	–0.2	–0.2	1.5
Current expenditure	–0.4	–0.1	96.5	0.9	0.3	96.4	3.1	0.4	96.0	0.2	0.2	98.5
of which:												
Pharmaceutical and other medical goods[2]	3.0	1.4	24.5	1.5	–1.9	15.5	–4.0	0.8	16.8	1.8	1.7	7.7
In-patient care[3]	–3.6	2.4	39.0	–1.6	–3.0	47.6	1.0	0.0	44.4	–5.1	–2.6	34.9
Out-patient care[4]	0.3	–6.1	29.8	0.2	5.1	30.2	2.3	–1.2	32.6	1.8	1.6	44.6
Prevention and public health	0.7	–0.2	1.5	0.4	–0.4	2.0	–0.4	–0.2	1.7	0.6	–0.7	7.7
Other	–0.8	2.4	1.7	0.5	0.4	1.1	4.2	1.0	0.5	1.1	0.2	3.6

1. Changes expressed in percentage points.
2. Including therapeutic appliances.
3. Including expenditures on ancillary services.
4. Including expenditure on health services.

Source: OECD Health Data 2006.

Even though cost pressures have not been stronger than in other OECD countries, recent developments have strained the model of health care financing that has been in place since 2002. Increases in immigration, benefits provided and prices of medical goods and services have resulted in higher expenditures for regional governments,[24] who have coped with these pressures not by raising their own sources of revenue, but rather by successfully lobbying for additional transfers from the central government (of around € 1.6 billion in 2006).[25] Regional governments have also increased the number of health-care facilities, especially in regions with previously low levels of sanitary infrastructure, although it is likely that there has been some degree of duplication. Pressures on public health-care spending are likely to continue in the medium- and long-term as demand increases both through the ageing process and as cost-increasing technologies develop. As mentioned in Chapter 1,OECD estimates show that public spending could increase from the current level of 5.7% of GDP in 2004 to between 9.6 and 12.1% of GDP in 2050 (OECD, 2006c).

The authorities have unveiled a plan aimed at increasing coordination among regions, promoting best practice in medical treatments and enhancing the transparency of the national health system. In response, the central and regional governments have agreed on a set of measures to rationalise and raise the efficiency of health-care spending. Purchasing systems will be updated, encouraging the centralisation (and homogenisation) within each region of purchasing decisions, including investments in medical equipment. Pharmacies will be able to sell over-the-counter drugs online, and more information will be made available on the proper and most efficient use of pharmaceuticals and on the use of generic drugs when available. Furthermore, restrictions are being placed on the pricing of approved drugs,[26] and the prices of older drugs will be reduced by up to 20%, with the objective of saving € 1 billion over five years. However, recent experience suggests that reductions in drug prices generate only temporary decreases in pharmaceutical expenditures. After price rebates in 2005 and 2006, expenditure decreased by 4.5% in April 2006 (month on month), only to rebound two months later (by June, expenditure had increased by almost 10%). Competition between drugstores is limited by restrictive licensing procedures (see Chapter 5), which are likely to drive up drug prices. While the need for greater use of benchmarking and coordination is recognised by the central government, regions have been reluctant to participate fully. For example, regional governments have been opposed to the publication of information across regions on waiting lists in hospitals.[27] Public access to such information would probably increase public pressure to improve service through clearer accountability.

As in other countries, spending on sickness leave and disability benefits has increased considerably in the last few years. While the population covered has increased by only about 4% from 2000 to 2005, benefit payments have increased by more than 40% over the same period. The cost to the social security system alone was around € 6.3 billion in 2005, while an additional € 3 billion was spent by firms. In general, good incentives to contain spending are created when the party that is responsible for providing the benefit is also the one determining the validity of the claims. The authorities are acting on two fronts in this direction. *First*, beginning in 2006 social security administration personnel have alone had the authority to periodically review sickness leave cases and, if needed, extend temporary invalidity benefits for additional six-month periods. Previously, doctors from the public health system in any region could rule on the matter, even though the benefit is provided by the central government via the social security system. The maximum period is reduced from 18 to 12 months (plus, in both cases, a six-month extension), and employers are now required to notify the social security administration of all cases of sickness. *Second*, negotiations are under way in order to increase incentives facing firms to contain spending on short-term sickness leave. Currently, benefits from the 4th to the 15th day of incapacity are authorised by the social security administration, but it is employers who are financially responsible.[28] After the 15th day, the benefit is again paid by the social security system. In this way, administrators do not have any incentives to control expenditures until the 15th day of incapacity, although the system of monitoring and reviewing sickness cases appears to be working effectively to reduce false claims. It is not clear what the best way is to provide the correct incentives to firms in order for them to invest in preventive measures (Rae, 2005). In some countries, social security provides the benefits from the first day of leave (*i.e.* France, Denmark, Iceland, Portugal, Ireland and Greece), while in others employers are responsible for a relatively long period (*i.e.* 12 weeks in Austria and Italy and 28 weeks in the United Kingdom).

The ageing process, along with generous system parameters, will significantly raise pension spending

The expected effects on pension spending caused by the ageing process have been increasingly recognised by the social partners as a serious issue. While the social partners and the authorities have met periodically under the *Pacto de Toledo* to discuss this issue, the reform process has been slow, and no sense of urgency about the need to embark on serious reform is yet apparent, especially after the recent sharp increase in immigration which has pushed back the onset of the ageing process (see below).

In 2005, immigrants represented around 9% of the total population as compared with around 2¼ per cent in 1999. The share of foreigners in total contributors to the social security system has similarly increased from 2.3% in 1999 to 9.3% (1.7 million people) in 2005. In 2005, more than 550 000 illegal immigrants were regularised in an exceptional process. There is of course great uncertainty about the level of future immigration flows, which seem more driven by "push" rather than "pull" factors (OECD, 2003). European Commission (EC) projections assume that net immigration inflows would stabilise from 2010 on at around 110 000 per year until 2050, while the authorities have developed an alternative scenario[29] under which annual net inflows would stabilise at around 275 000, more than twice the EC assumption. In the first scenario, the old-age dependency ratio[30] would increase from around 24% in 2006 to 66% in 2050, significantly higher than the 55% estimated for the whole euro area (Puente y Gil, 2006). Under the second, high immigration scenario, the dependency ratio would increase to around 57%, much closer to the euro-area estimate but still more than double its current level. It is also important to note that higher immigration will also mean higher pension claims in the future and higher spending on health care and education. Thus, immigration will not solve the long-term financial problems of social security; it merely delays them.

The ratio of contributions to the pension system to GDP in these scenarios is robust to different assumptions about macroeconomic variables and is also stable across time. For example, Alonso-Meseguer and Herce (2003) estimate it to hover around 10.5% of GDP over the projection period (ending in 2050) under even the most optimistic assumptions regarding immigration, the growth of productivity and the employment rate. In effect, this means that the balance on social security is almost completely determined by the evolution of spending. The parameters used to determine pension benefits are more generous in Spain than in other countries (OECD, 2001 and 2005a),[31] which has made the system actuarially unfair: the internal rate that equalises the discounted value of old-age pensions and the corresponding contributions is 4%.[32] This rate is considerably higher than estimates of the growth of potential output in the coming years (OECD, 2006a). The combination of the actuarial unfairness of the system and population ageing will result in a progressive increase in expenditures and thus in the social security deficit. What is more, the projected expenditure on pensions is also fairly robust to reasonable alternative scenarios (Table 3.4), so that even in the most optimistic scenario, expenditure will still increase to 14.3% of GDP by 2050, 6½ percentage points above recent levels. These estimates are confirmed by the more comprehensive exercise done by Jimeno *et al.* (2006), who model the increase in pension expenditures using the more optimistic demographic

Table 3.4. **Total pension expenditure in per cent of GDP**

	2005	2010	2020	2030	2040	2050
	Basic scenario					
Total Social Security	7.8	8.1	8.5	11.0	14.4	15.2
	Alternative hypotheses					
Low unemployment rate[1]	7.8	8.1	8.5	11.0	14.4	15.1
High life expectancy[2]	7.8	8.1	8.5	11.0	14.5	15.2
High productivity[3]	7.8	8.1	8.4	10.6	13.8	14.3
Low productivity[3]	7.8	8.1	8.7	11.4	15.1	16.1
High employment amongst older workers[4]	7.8	8.1	8.5	10.9	14.3	15.1

1. The employment rate increases by 1 percentage point over 2005-15 and remains thereafter 1 percentage point higher. The participation rate is unchanged over the period.
2. A linear decrease in age-specific mortalities is assumed so that by 2050 life expectancy at birth would increase by 1.6 years for males and 1.3 years for females and the dependency ratio would increase 2.8 points.
3. Labour productivity increases/decreases by 0.25 percentage points over the period 2010-2015 and remains 0.25 percentage points higher/lower thereafter.
4. The employment rate of older workers is assumed to increase by 5 percentage points over 2005-25 and remains 5 percentage points higher thereafter. The participation rate shifts in a parallel way.

Source: European Commission (2006), "Impact on Ageing Populations on Public Spending on Pensions. Health and Long-Term Care. Education and Unemployment Benefits for the Elderly", Summary Report, Economic Policy Committee.

scenario and a variety of different methodologies. Even under their most optimistic scenario regarding productivity growth and employment, they estimate the increase in expenditures to be around 7 percentage points of GDP by 2050.

The recently agreed reform, made by consensus among the social partners and the government, contains additional restrictions on partial retirement, as the minimum eligibility age is being pushed back to 61. The effective contribution period to acquire pension rights is being modestly increased, as overtime can no longer be counted towards the minimum 15-year period: in effect, heretofore a worker might have needed to work less than 13 years in order to acquire pension rights. Widows' pensions will now be recognised for survivors of unmarried couples and married ones without children who have cohabited for at least two years. In Spain, access to widows' pensions carries the easiest conditions of all EU countries, as a result of the historically low labour market participation rates of women, which made them highly dependent on their husbands' sources of income. As this trend has been reversed, the rationale for providing generous pensions to widows has decreased. Incentives to extend work beyond 65, the current age at which full pension rights can be acquired, are being increased via higher accumulation rates, while subsidies are being provided to the employment of workers aged 55 and over. However, pension rights continue to be accrued at a decreasing rate, as the first years of employees' careers give rise to disproportionately large pension rights, which might have a significant impact on retirement decisions (OECD, 2003). Overall, the reform is likely to have a limited effect, as the parameters of the system continue to be relatively generous. This shows that the sense of urgency for a more radical reform is lacking among the public, the politicians and the social partners. Regarding the civil servants' retirement scheme, previous OECD Surveys have already identified it as being overly generous as, among other things, the employee's age does not enter into the determination of the replacement ratio when early retirement is chosen. The new public employee statute could make early retirement even more attractive, as it allows ministries to establish special, and more generous, conditions.

The healthy financial situation of the social security system, resulting from the strong rise in employment due in large part to immigration growth, has allowed the authorities to accumulate surpluses since 2000 in the reserve fund in order to finance future pension spending; this might help explain the lack of a sense of urgency. The reserve fund was created with a contribution of € 601 million and, as of March 2006, it had a balance of € 42.1 billion, or 4% of GDP. According to official projections, the resources in the reserve fund will peak at around € 55 billion (in current prices) around 2015. However, it is expected to be completely exhausted around 2020. There are, however, due to its very nature heavy restrictions on the instruments the fund's resources may be invested,[33] which has resulted in a low rate of return on assets.[34] Negotiations are under way to provide more freedom in the management of the fund, and a reform that privatises the management of at least part of the fund and reduces the restrictions on investments is likely to be enacted.

As suggested in previous Surveys, a parametric reform of the pension system is the most obvious solution to the pension problem, since the system is not actuarially fair. Such a reform could however take various forms. The level of pensions is low in Spain: in 2003, pension expenditure per person aged 65 and older was € 10 200, around 54.4% of *per capita* GDP, a significantly lower level than the average across EU countries (€ 21 100 and 74.3%, respectively). Furthermore, it is expected to remain relatively low as a percentage of *per capita* GDP, which will greatly hinder agreeing on a parametric reform.[35] Options for reform focusing on increasing incentives for older employees to remain in the workplace could include basing pension benefits on lifetime earnings, rather than, as currently done, on the earnings of the last 15 years; modifying the benefit formulae which have higher pension accruals at younger ages; indexing the eligibility age to life expectancy; and, increasing the increments from deferring retirement (OECD, 2006d). However, other alternatives, which have already been discussed in previous surveys (OECD, 2003 and 2005a), could include measures that do not modify the pension level. Given the increase in life expectancy, one such viable alternative is to increase the contribution period needed to qualify for a full pension. This increase would need to be done in a gradual manner, so as to protect workers close to retirement. A reform along these lines could be complemented with the advanced financing of pensions via higher public savings, over and above the accumulation of the already foreseeable social security surpluses. Meanwhile, the government's strategy to increase productivity can also help to lessen the burden, especially since pensions are indexed to inflation, not to wages. While running large surpluses for a number of years could only be sustained with difficulty in the political arena, as calls for increasing spending or further tax cuts would be likely, trade unions appear to be aware of the problem and could be open to discussion. Also, the intergenerational equity considerations would need to be discussed.

How should fiscal policy be managed in a longer-term perspective?

The first version of the Fiscal Stability Law, which came into effect in 2003, aimed to maintain a balanced budget without regard to the position of the economy over the economic cycle. Since no penalties were imposed on non-complying governments, fiscal discipline hinged on peer pressure and monitoring. Individual regional governments were subject to a zero-deficit objective, but, even though the cyclical situation of the economy was not especially weak, some of them resorted to off-balance sheet operations. However, since the National Accounts system was used, in order to assess whether they were meeting the objectives, they were formally complying with the Law. The objective of maintaining a balanced budget, irrespective of the economic cycle, was perceived as too restrictive, and some local governments even sought legal recourse to avoid compliance. The authorities have updated the Fiscal Stability Law (the changes come into effect in 2007) to address these and other criticisms and improve the framework for fiscal stability.

The new Fiscal Stability Law aims for fiscal stability over the economic cycle…

The main objective of the updated law is to maintain fiscal balance over the business cycle. Every three years, the central government will publish two growth thresholds that will determine the required financial outcomes for central, regional and local governments. Growth above the higher threshold (initially set at 3%) will generate a requirement for surplus; growth between the thresholds will prompt balanced budget requirements; and, finally, growth beneath the lower level (initially set at 2%) will allow governments to incur deficits, which are bounded by a total deficit ceiling, allocated by level of administration. The maximum allowed deficit will be 1% of GDP, distributed as follows: central government, 0.2%, regional governments, 0.75% and local governments, 0.05%. However, a special allowance is made to exceptionally[36] exclude increases in investment in programmes for productive activities, R&D included, that are deemed to improve productivity from the deficit restrictions. This allowance can be up to a maximum of 0.5% of GDP, with the central, regional and local governments allowed 0.2, 0.25 and 0.05% of GDP, respectively. Individual regional deficits are to be negotiated on a case-by-case basis by the central government, so as to meet the total regional deficit. Overall, when growth falls below the 2% threshold, the total government (excluding social security) deficit can reach 1.5% of GDP. However, even if growth is above the 3% level, by excluding, on an exceptional basis, increases in productive investment programmes, a deficit of up to slightly less than 0.5% of GDP can be incurred. Although compliance will still hinge on monitoring and peer pressure, it will probably be enhanced by the obligation on non-complying authorities to negotiate three-year action plans to correct the situation and the more stringent restrictions set by the central government on raising additional debt. Other attractive features of the new law are that transparency requirements are made more explicit for all levels of government, and, perhaps even more importantly, the fact that required budget outcomes will be set individually for the central, regional and local levels of government as well as the social security administration. Previously, bad budgetary outcomes by the central government could be offset by good results in the social security administration, as they shared a common objective.

… but it can be improved upon

Although the new law improves upon several aspects of its predecessor, there are several areas where risks could materialise when the law is put into place. *First*, the growth thresholds should be based on potential growth in order to better reflect the position of the economy over the business cycle. Care should be exercised when the guidelines to compute the thresholds are specified so as to minimize the room for arbitrariness. A good idea would be to outsource the computation of the thresholds to a credible outside agency that has the required technical skills and is autonomous enough to avoid conflicts of interest. *Second*, as currently stated in the law, discontinuities in the stability objective are introduced when growth is close to the thresholds. For example, with the lower threshold currently set at 2%, a projected growth of 1.9% would allow a deficit of up to 1.5% of GDP (including the exceptional allowance for investments), while a projection of 2% would allow only a deficit of 0.5% of GDP. *Third*, even though the law has improved the stabilizing role of fiscal policy by taking account of the cyclical position of the economy and its expected growth rate, care should be exercised when applying this new budgetary rule so as to avoid a too mechanical implementation and a procyclical budgetary outcome.[37] These risks seem to be higher in the regional and local administrations, so good performance and monitoring early on will be important. In order to allow an appropriate functioning of the automatic stabilisers, the level of the objective balance should be linked to the level of the output gap. However, since the estimation of the output gap is difficult and could be a contentious issue, a simpler requirement would be to link the targeted *change* in the fiscal balance to the projected pace of growth.[38] *Fourth*, establishing the

Box 3.1. **Policy Recommendations for managing fiscal policy in the medium- and long-term**

Tax policy

- Incorporate a more systematic inflation adjustment of the tax brackets and allowances into the permanent income tax code.
- Reconsider the tax incentives for private retirement plans, as the net tax cost is likely to be high.
- Improve cooperation between fiscal and police authorities, through the appropriate channels, to increase the effectiveness of tax fraud investigations.

Decentralisation

- Ensure that the new regional financing mechanism does not unduly increase the central government's burden, and provide incentives for regional and local governments to rely increasingly on their own taxing powers.

Spending Commitments

- Grant the public policy evaluation agency a high degree of independence from the political process, and make sure its findings are easily available to the general public.
- Increase information sharing and the use of benchmarking among regional hospitals, so as to allow higher public pressure to increase spending efficiency.

Social Security

- Increase pedagogical efforts so the general public and the social partners become aware of the seriousness of the social security problem and the need to take action.
- Develop a comprehensive strategy to tackle the social security problem, which could include a combination of parametric reform (for example, increasing the contribution period needed to qualify for a full pension in a gradual manner) and increasing public savings.

Fiscal Stability Law

- Base thresholds on potential output, and have computations made by a reputable and impartial entity.
- Avoid creating an unjustified bias in favour of tangible over other forms of productivity-enhancing expenditure resulting from the exceptional exclusion of increases in public investment.
- .Avoid a too mechanical implementation of the law, which could result in a pro-cyclical budgetary outcome.

stability requirement for each autonomous region on a case-by-case basis can be inefficient, as the outcome will be decided through bilateral negotiations, with all the uncertainty that entails.

Medium term fiscal policy should be consistent with the authorities' strategy to face the fiscal costs of ageing

With a proper implementation of the updated Fiscal Stability Law, insufficiently ambitious targets in good times can be avoided, as a surplus is required when output growth is above the threshold. On the other hand, by exceptionally excluding spending on productive investment from the allowed budget outcome, the Law is actually softening the requirement of maintaining fiscal balance. Nevertheless, to the extent that these investments improve potential output, the sustainability of public finances might be improved. More importantly, the management of fiscal policy in the medium term should be more integrated with the long-term strategy of the government to face the fiscal problems of ageing. Unless an admittedly difficult pension reform that would fully address the financial imbalances of the social security system is implemented in the near future, given the insufficiency of the reserve fund to cover the expected shortfall, it will be necessary to accumulate public savings at a higher rate than at present in order to achieve long-term sustainability of the public finances. The authorities should work to increase public awareness of the problem and of the need to take action as soon as possible so as to minimise the costs of adjustment. They should present alternative scenarios with a more intensive use of statistical models that give an approximation to the effects of different policies. Developing and using such models should now be easier than previously, since the social security administration has recently made available large datasets to researchers.

Notes

1. Among the most important reforms are the 1978 personal and corporate tax reforms, the introduction of the VAT in 1986 and the 1991 personal income tax changes (OECD, 2000 and 2003).
2. The number of tax brackets was reduced from 10 to 6 in 1999 and to 5 in the 2003 reform.
3. The top marginal rate was lowered from 56 to 48% in the 1999 tax reform and by a further 3 percentage points to 45% in 2003. The lowest marginal rate was reduced from 20 to 18% and to 15% in 1999 and 2003, respectively.
4. Family allowances will therefore raise the level of income at which the first positive tax rate is applicable –the income levels at which higher rates apply are unaffected. This effectively limits the tax reduction that arises from these allowances to their amount multiplied by the lowest positive tax rate, even if households face a higher marginal tax rate (Lagares, 2006).
5. Reforms to the corporate tax have been less frequent than those to the personal income tax. In 1995, reform was directed towards increasing the neutrality of the tax system both with respect to different sources of income and different financing instruments (OECD, 2000).
6. The latest efforts include a reduction of 0.25 percentage points in contributions to the unemployment insurance scheme for permanent workers and a halving of contributions to the public entity that takes over private pension funds of bankrupt companies, from 0.4% of total wages to 0.2%.
7. The fiscal cost of the 1999 and 2003 reforms of the personal income tax were € 4.9 and € 4.0 billion, respectively.
8. For example, the floor of the highest tax bracket will increase by close to 12% (from € 46 818 to € 52 360) and the tax credit for labour income by between 9 and 12%, while the accumulated inflation rate from 2002 (when the last reform updated the income brackets and allowances) to 2007 is estimated to be around 13.6 per cent.

9. Since income from pensions is taxed like other household income, the net revenue cost is the difference between foregone revenues at the contribution phase and additional revenues created at withdrawal.
10. After the introduction of euro bills in January 2000, 13 million € 500 bills were introduced in Spain (3.5% of the total) and, by April 2006, the total number in Spain had grown to 101 million bills (26% of the total in circulation).
11. A survey by the Centro de Investigaciones Sociológicas in 2004 found that 87% of people polled thought that evasion in the personal income tax was significant. 60% thought that it had increased or was the same as five years earlier, with only 20% believing that it had diminished over the same period.
12. For example, Gómez and Añalón (2003), using the total quantity of money in circulation in the economy, estimate it to be between 23 and 24% of GDP in 2002. EU studies have estimated the underground economy to have been around 15% of the measured economy in 1998 and 22% in 2002, and around 10% of VAT revenues to be lost via tax fraud, which would amount to around € 4 billion per year in the case of Spain.
13. The wholly ceded taxes include the tax on wealth transfers, the inheritance, estate, wealth and gambling taxes and three excise taxes: on the retail sale of gasoline and diesel, on household electricity and on transportation. As regards the tax on retail sales of oil products and the tax of certain means of transport, the current financing arrangement stipulates that although they can be collected by the regional administrations, none has requested to do so until now.
14. . For instance, the Catalonia statute states that the transfers to the receiving regions must take into account its fiscal efforts. This text could lead to multiple interpretations.
15. The paper uses the "Taxing wages" methodology developed by the OECD. For example, the tax rate applicable to a single, 30 year-old taxpayer with a wage of 67% of the national average can vary from around 6% (in Andalucía) to almost 29% (in Madrid).
16. Several other regions have already stated that they are keen to create similar agencies.
17. The government expects that up to 20% of total investment will be done by the private sector.
18. If employees of the social security administration are included, total public employment is around 2.7 million.
19. The share of temporary workers is almost 30% in regional and local governments.
20. In addition, female participation in the labour market has also been made easier by the abundance of immigrants working in domestic services.
21. It will be important that the co-payment effectively reflects the beneficiaries' payment ability and is not easily circumvented: if wealth is not taken into account distributional concerns could arise if people with high wealth, but low income, receive benefits. For example, in the United States, Medicaid is supposed to provide health and long-term care to low-income segments of the population, but people have been successful in hiding their wealth (via trust funds or by gifts to family members) in order to become beneficiaries of the programme.
22. Total spending on pharmaceuticals as a per cent of GDP is also relatively high in Spain at 1.9% of GDP in 2004, higher than both the OECD-European and OECD-Non-European averages of 1.4 and 1.7% of GDP, respectively, and the same level as in the United States.
23. Only Greece spent more on pharmaceuticals in 2004 than Spain.
24. According to estimates by the Ministry of Health, in the period 1999 to 2003, the contribution of each of these factors to the total increase was 21, 46 and 33%, respectively.
25. Of the total, € 500 million was directed to compensate for population increases and € 500 million to compensate, as stated under the current financing mechanism, those regional governments whose resources grew in the last two years more slowly than nominal GDP. Additionally, this guarantee will be extended beyond its original timeframe of 2002-04 until the new financing model is in place. A series of measures to increase regions' powers over several taxes was adopted, which are expected to provide an additional € 227 million per year in financing, starting in 2006. The formula to calculate the advances in tax receipts was also updated to provide revenues to regional governments more quickly. Other measures include a € 55 million fund to compensate island regions, € 200 million to provide health care to immigrants and € 100 million to help cover work-related injuries and illnesses to professional workers covered only by Social Security.

26. For instance, for drugs whose patent has expired and for which there is a generic substitute, the price will be set at the average of the (up to) three least expensive substitutes. Patients wishing to consume a more expensive drug will bear the full price, while they are currently responsible only for the difference in the two prices.
27. Users rank reducing waiting times as the most pressing reform needed in health care provision.
28. Collective agreements can also increase the responsibilities of firms, so that, in practise, firms can cover 100% of wages and periods longer than 15 days.
29. The previous population projections were done by the statistical agency (INE) in 2001, and they implied an increase in the old-age dependency ratio to close to 53% by 2050, close to the level implied by the high-immigration scenario of the new projections.
30. The old-age dependency ratio is defined as the ratio of the number of people older than 65 to the number of people aged between 16 and 64.
31. For example, the rate of accumulation of pension rights is 2.5% per year for an average wage earner in Spain and less than 2% in Italy, the second highest in the OECD; pensions are computed in Spain on the basis of the last 15 working years, while in other countries it is usually on the basis of the whole career; the maximum replacement ratio is 100%, while in other countries it is 80%; and, after 15 years of contributions, people acquire rights to a pension based on 50% of the earnings base.
32. The internal rate for special schemes (farm workers', self-employed and domestic employees') is even higher, ranging from 5 to 6½ per cent per year (OECD, 2005a).
33. Funds can be invested in foreign-government bonds.
34. In fact, it decreased from 4.8% in 2000 to 3.4% in 2005. As a comparison, the New Zealand Superannuation Fund has averaged returns of over 14% p.a. in recent years.
35. Minimum pensions, however, have been increased and could help to reduce political resistance to such a reform. In 2007, expenditure on minimum pensions is expected to be around € 450 million, or close to 0.04% of GDP and the accumulated increase in pension expenditure would reach a not unreasonable 0.09% of GDP by 2050.
36. For regions, these exceptional increases in investments will need to be approved on a case-by-case basis by the Ministry of Economy and Finance, on the basis of criteria established by the Consejo de Política Fiscal y Financiera, the region´s debt level and the foreseen contribution of the programmes to productive improvements.
37. For instance, in 2007, with expected growth above potential (according to the OECD estimates), a reduction of the fiscal surplus is expected relative to the 2006 outcome. Such a policy complies with the new rule but is pro-cyclical.
38. More specifically, an improvement in the fiscal balance should be imposed if the projected growth is above potential, and a deterioration can be accepted when projected growth is below potential.

Bibliography

Alonso-Meseguer, J. and J.A. Herce (2003), "Balance del sistema de pensiones y boom migratorio en España, Proyecciones del modelo MODPENS de FEDEA a 2050", *Documento de trabajo* No. 2003-02, Fundación de Estudios de Economía Aplicada, July.

Antolín, P., A. de Serres and C. de la Maisonneuve (2004), "Long-term Budgetary Implications of Tax-Favoured Retirement Plans", *Economics Department Working Papers*, No. 393, OECD, Paris.

Costa-Font, J. and C. Patxot (2003), "Long-Term Care for Older People in Spain", in A. Comas-Herrara and R. Wittenberg (eds.), *European Study of Long-term Care Expenditure*, European Commission, Employment and Social Affairs DG.

De la Fuente, A. and J. Jimeno (2005), "The Private and Fiscal Returns to Schooling and the Effect of Public Policies on Private Incentives to Invest in Education: A General Framework and Some Results for the EU", *Working Paper* No. 0509, Banco de España.

De la Fuente, A. (2001), "Un Poco de Aritmética Territorial: Anatomía de una Balanza Fiscal para las Regiones Españolas", *FEDEA Estudios Sobre la Economía Española* No. 91.

Durán-Cabré, J. and A. Esteller-Moré (2006), "How Diverse is Personal Income Tax Policy Among Spanish Regions?", mimeo.

European Union (2006), “Impact on Ageing Populations on Public Spending on Pensions, Health and Long-Term Care, Education and Unemployment Benefits for the Elderly”, Summary Report, Economic Policy Committee.

Garcia-Milà, T. and T. McGuire (2002), “Fiscal Decentralization in Spain: An Asymmetric Transition to Democracy”, mimeo.

Jimeno, J., J. Rojas and S. Puente (2006), “Modelling the Impact of Aging on Social Security Expenditures”, *Occasional Paper* No. 0601, Banco de España.

Joumard, I. and C. Giorno (2005), “Getting the Most Out of Public Sector Decentralisation in Spain”, *OECD Economics Department Working Papers*, No. 436, OECD, Paris.

Lagares, M. (2006), “Una Nueva Reforma del IRPF”, *Cuadernos de Información Económica*, No. 106, Fundación de las Cajas de Ahorros Confederadas, Madrid, mayo-junio.

OECD (2000), *OECD Economic Surveys: Spain*, OECD, Paris.

OECD (2001), *OECD Economic Surveys: Spain*, OECD, Paris.

OECD (2002), *OECD Economic Surveys: Switzerland*, OECD, Paris.

OECD (2003), *OECD Economic Surveys: Spain*, OECD, Paris.

OECD (2005a), *OECD Economic Surveys: Spain*, OECD, Paris.

OECD (2005b), *Revenue Statistics*, OECD, Paris.

OECD (2006a), *OECD Economic Outlook*, No. 79, OECD, Paris.

OECD (2006b), *OECD Economic Surveys: Canada*, OECD, Paris.

OECD (2006c), “Projecting OECD Health and Long-Term Care Expenditures: What Are the Main Drivers?”, *OECD Economic Department Working Papers*, No. 477, OECD, Paris.

OECD (2006d), “Retirement incentives: Draft special issue of "Pensions at a Glance"”, DELSA/ELSA/WP1(2006)2, OECD, Paris.

Puente, S. and M. Gil (2006), “Una Comparación de las Proyecciones de Población para España, la Zona del Euro y Estados Unidos”, *Boletín Económico*, Banco de España, enero.

Rae, D. (2005), “How to Reduce Sickness Absences in Sweden: Lessons from International Experience”, *OECD Economics Department Working Papers*, No. 442, OECD, Paris.

ANNEX 3.A1

The main features of the 2007 tax reform

A. Personal income tax

- The number of income brackets is reduced from the current five to four. The top marginal rate is reduced to 43% (from 45%).
- Personal and family allowances are increased. Deductions for children range from € 1 800 per year for the first child (up from € 1 400, a 29% increase) to € 4 100 for the fourth (up from € 2 300, a 78% increase), while the additional deduction for children younger than three is increased by € 200 (a 17% increase). The deductions for elderly dependents is raised 12½ per cent (10%) to € 900 (€ 1 100) if they are older than 65 (75). Finally, deductions for the disabled are increased between 13½ and 38%, based on the degree of disability.
- Personal and family allowances are now included in the first income bracket, which is taxed at a zero rate. Before the reform, they were deducted from the tax base, which decreased the progressivity of the tax.
- The general tax allowance for net labour income, which is based on a non-linear formula, is increased 14.3% (to € 4 000) for those who earn less than € 9 000 and 8.3% (to € 2 600) for those earning more than € 13 000.
- Savings are taxed at a single rate of 18%. Previously, long-term savings (in instruments with a maturity of more than a year) faced a 15% rate, while short-term savings (in instruments with a maturity of less than a year) were considered as general income and thus faced the general tax rate (between 15 and 45%). The only exception provided is in the treatment of income from dividends, as the first € 1 000 will be exempt, while the rest will face the 18% rate.
- The maximum annual tax-free contributions to private retirement savings plans is raised to € 10 000, € 12 500 for people aged 50 and older. Additionally, they cannot be more than 30% of income (50% for those older than 50). Withdrawals from the savings plans can be made only at retirement, either through an annuity or in a lump-sum payment; if the latter is chosen, the previously available exemption (of 40%) from the proceeds is no longer available.
- The favourable treatment of housing purchases for the first two years is eliminated. Before the reform, in the first two years after purchasing a house, instead of the general deduction of 15% of payments (interest and capital) with a limit of € 9 015, 25 per cent of the first € 4 507 could be deducted and 20% of the rest up to the € 9 015 limit.

B. Corporate tax

- The tax rate is lowered, in 2007, for small- and medium-sized enterprises, from 30 to 25% and progressively over two years for larger firms, from 35 to 30%, with the rate falling 2.5 percentage points in both 2007 and 2008.
- On the other hand, all the tax credits available for firms, with the exception of the deduction for research and development expenditures and the reinvestment of profits in productive investment will be phased out by 20% a year until complete elimination in 2011.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

ISBN 92-64-02920-6
OECD Economic Surveys: Spain

Chapter 4

Strengthening innovation

Strengthening technological innovation and using new technologies are some of the key components of Spain's policy for stimulating productivity growth and guaranteeing the persistence of its medium-term economic convergence with the most advanced OECD countries. This chapter examines the different factors responsible for the economy's poor technological innovation performance. It looks in turn at the main features of innovation policy, the performance of the education system – especially at the university level – and the framework conditions for innovation – in particular the functioning of the labour market, competition policy and financing of start-ups, including venture capital – various areas in which the government has recently launched a set of reforms. The objective is to assess the main measures proposed and to suggest additional ways of strengthening the innovation performance of the country.

Improving the Spanish innovation performance, in particular in the private sector, is a serious challenge, because it requires a real change in culture on the part of business, which has hitherto been accustomed to building up a supply of standardised goods and services at competitive costs and prices, rather than relying on innovation and research to expand its markets. In order to make up for the shortfall in this area, the government has introduced a set of measures that are analysed in this chapter. They involve: *i)* the 2010 *Ingenio Plan*, which is designed to step up research and development, above all in the private sector, and to accelerate the expansion of the information society; *ii)* reforms of the education system, particularly at university level; and *iii)* the introduction of a plan to stimulate entrepreneurship and measures to improve the functioning of the labour and product markets. The main policy recommendations to be drawn from this analysis are provided at the end of the chapter.

Strengthening the effectiveness of innovation policy

The budgetary resources assigned to research are increasing sharply

The public funds allocated to spending on R&D (excluding tax reliefs), which reached 0.5% of GDP in 2003, were below the OECD area average (0.7% of GDP), even though they accounted for some 40% of total R&D expenditure, *i.e.* more than the average for the other countries (30%), because of the low level of private-sector effort. These public resources derive mainly from central government, which is responsible for drawing up the National Plan for R&D and innovation (Annex 4.A1). They are supplemented by regional funding and European structural funds available to the most disadvantaged autonomous communities.

In contrast with the stagnation observed as regards the OECD average, the research sector has enjoyed increasing government financing since the mid-1990s, which partly reflects the improved financial situation of general government since 1997. The increase in budget appropriations, which also reflects the growing priority attached to research, has accelerated since the start of the present administration. With central government having undertaken to double civilian research funding in four years, as part of the *Ingenio 2010* Plan, the relevant budget increased by some 27% in 2005 and 32% in 2006, and that pace is set to continue in 2007. Although the scale of these increases is moderated by the downturn in defence-related appropriations and the European structural funds awarded to the Spanish regions will gradually diminish between 2007 and 2013,[1] public resources for research should total 0.9% of GDP in 2010 according to government plans.

An ambitious reform of innovation policy has been launched

As in other countries, innovation policy has three main objectives: *i)* to strengthen the knowledge production system in the public sector; *ii)* to make better use of this scientific potential for the benefit of firms and ensure a large diffusion of technological innovations; and *iii)* to stimulate private research and innovation. To rectify the important shortcomings in these three domains, the authorities launched the *Ingenio 2010* Plan in mid-2005, the key measures of which are assessed in this section.

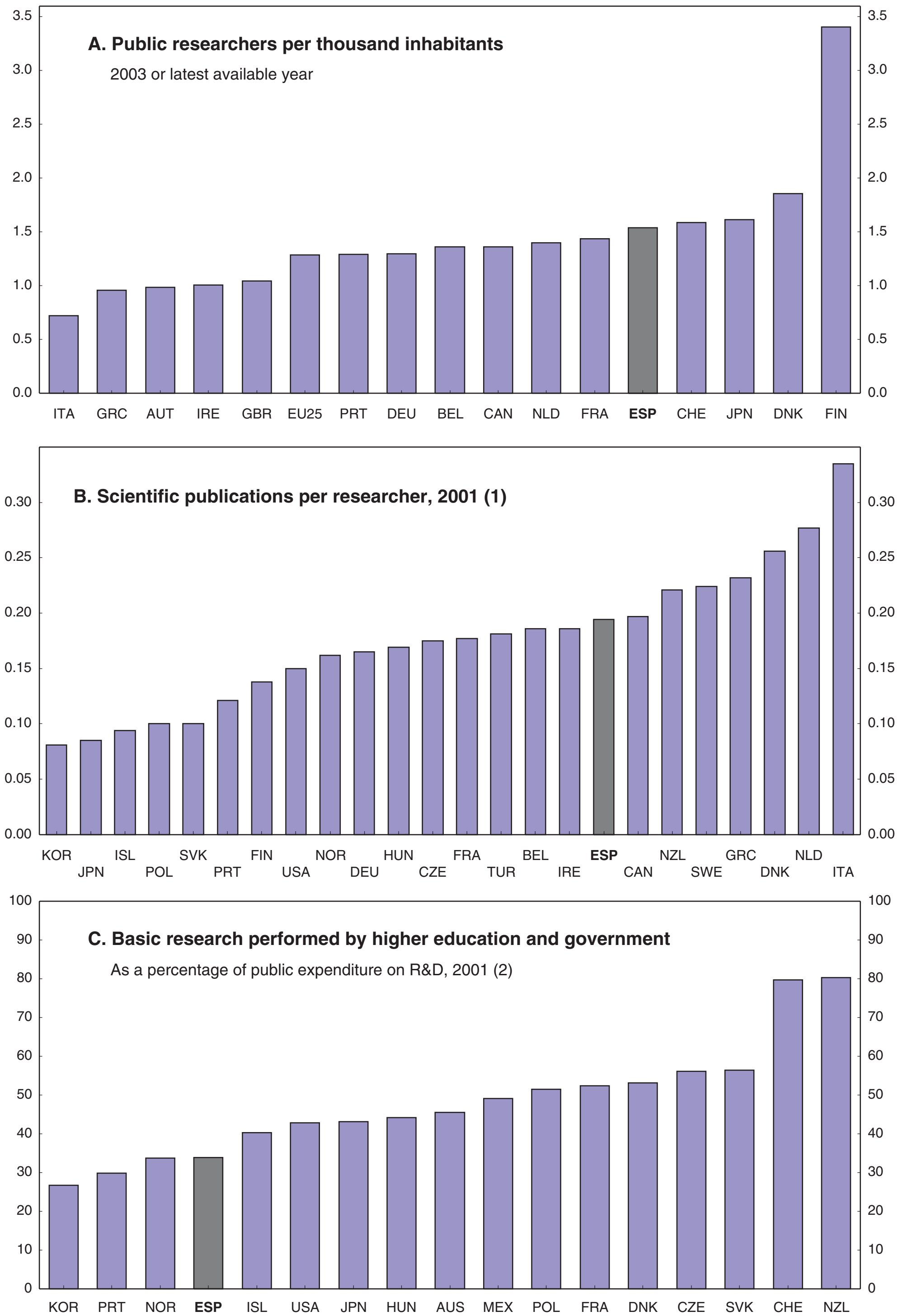
The quality of public research needs to be improved and its excessive fragmentation reduced…

Funds have been devoted in recent years to increasing the human resources employed in public research through the adoption of specific programmes (*Ramón Cajal* and *Juan de la Cierva*) including the awarding of grants and aid to researcher mobility and exchanges, especially with other countries. This has led to a rise both in the number of public-sector researchers, who are now more numerous than the OECD average as a proportion of the population, and in the number of publications per researcher, which is high in comparison with other countries, even though the percentage of public expenditure spent on basic research was lower than in most OECD countries in 2002 (Figure 4.1). Despite some improvement, the quality of scientific output, measured on the basis of an index of citations per published article, is however lower than the publications indicator (King, 2004). Besides, Spanish teams have difficulty winning projects totalling amounts equivalent to its contribution to the funding of the EU Framework Programmes,[2] and these difficulties appear to have grown since the mid-1990s, even though Spanish SMEs are very active in this Programme (Figure 4.2).

This situation, which doubtless reflects something of a split between the thrust of research in Spain, which is less of an applied nature, and that in the rest of Europe is also due to fact that Spanish teams are very fragmented and small in size.[3] They make little effort to work with one another to achieve a critical mass in their specialities, and multidisciplinary projects are even rarer (COTEC, 2004). Incentives in support of research tend to be very much based on individual characteristics, involving for example appraisals of researchers' careers (see below). Another factor that tends to reduce the size of research teams is the existence of restrictions allowing just one subsidised project per main researcher in the context of the competitive system used for granting aid (COSCE, 2005). Finally, the lack of organisational flexibility of research in universities and public centres also reduces the relevance and quality of scientific output.[4]

There is also a general problem of the social standing of research. Up until early 2006, for example, researchers still undergoing training were not registered with the social security system. Working conditions need to be improved: support staff in universities appear in short supply (fewer than 0.2 per researcher, compared to an EU average of 0.5 in 2001), probably obliging researchers to spend more time on menial tasks. Moreover, careers in research are less attractive because researchers, who are often men between 30 and 45, belong to the population group that is not eligible for subsidised permanent employment contracts in the private sector[5] and therefore more often remain on temporary contracts for extended periods with all the uncertainty and precariousness they entail (COSCE, 2005). Another disincentive is the reduced level of funding for the costs of research activity other than salaries (such as capital equipment and overhead) and the apparently low remuneration received by public-sector researchers in comparison with other countries, which poses problems from the point of view of the internationalisation of the profession. Average R&D expenditure per researcher in universities stood at 50% of the level in EU15 in 2001, which, in the absence of homogeneous wage figures, gives an idea of modest level of remuneration in this profession (Figure 4.3).[6] Yet universities account for some two-thirds of government R&D expenditure (or 0.34% of GDP) and over 60% of Spain's

Figure 4.1. **Indicators of public-sector research**

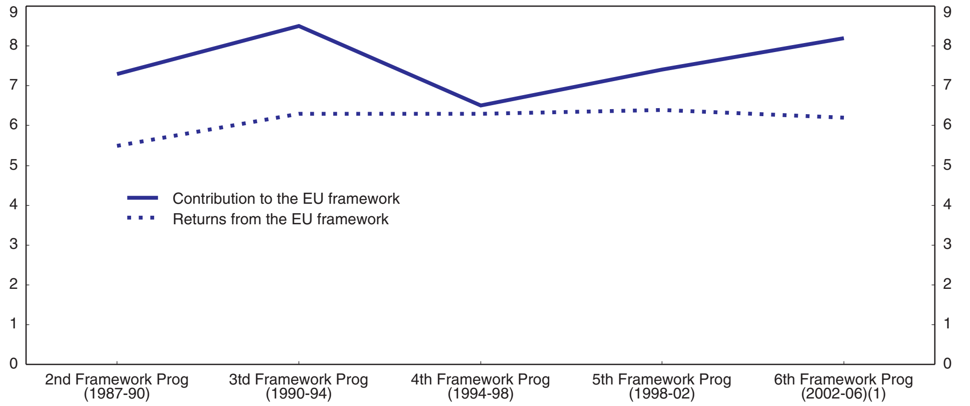


1. Number of researchers and R&D personnel in full-time equivalents.
2. 2000 for Australia and Switzerland; 2002 for France, Japan, Poland and Spain; 2003 for Czech Republic, Hungary, Korea, Slovak Republic and United States. These indicators take into account government institutes, which might be funded in some countries and to a variable extent by private finances via contract research.

Source: OECD, Main Science and Technology Indicators, 2005-2; US National Science Foundation, Science and Engineering Indicators 2004 and OECD, Research and Development Database.

Figure 4.2. **EU Framework Programmes: Spanish contributions and returns**

1987-2006, per cent of EU total

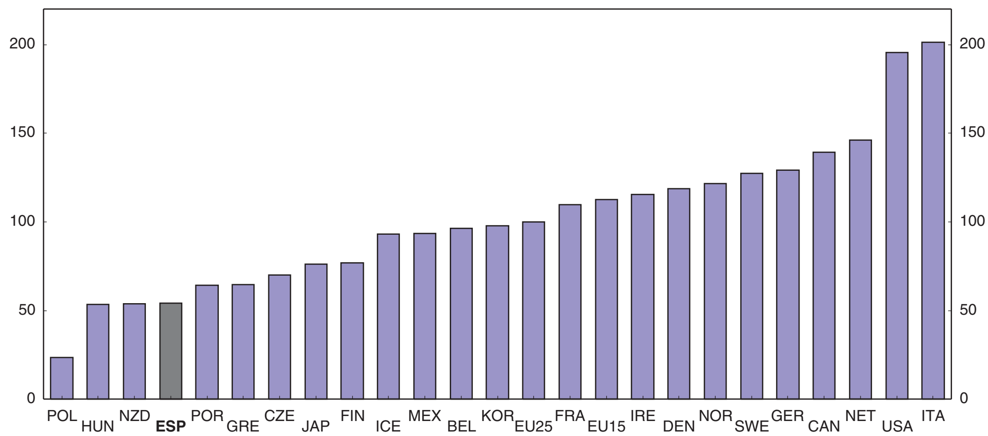


1. 2004 figures.

Source: Centre for the Development of Industrial Technology.

Figure 4.3. **University research spending by researcher**

In constant $PPP 95, EU25 = 100, 2001



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

overall scientific output. The same financial incentive problems also affect biomedical and health research activities, which are undertaken in large part in hospitals (COSCE, 2005).

In order to remedy these difficulties, the *Ingenio 2010* Plan includes three main types of measures aiming at enhancing the excellence and increasing the size of research teams. *In the first place*, it has been decided to set up public research funding on the basis of previously defined strategic guidelines (the *Consolider* and *Ciber* programmes) to favour large-scale teams, or those working in consortia, so as to improve the quality of scientific output and encourage Spain's participation in the Framework Programmes. In this context, an Activation Plan for the 7th Framework Programme (*EuroIngenio*) has been launched by the authorities. *Second*, contracts will be introduced that make it possible to recruit to a stable job confirmed Spanish or foreign researchers who are not civil servants (programme I^3) and to allow additional teachers to be taken on, thereby freeing the best researchers from their teaching responsibilities. *Finally*, a € 1 billion fund (0.1% of GDP) over four years has been created to ensure the availability and renewal of government scientific and technological equipment. These measures which seem to go in the right direction could be coupled with additional efforts to enhance the social standing of research in the public sector by favouring more attractive compensation for research personnel rather than a rise in their number. It would also be desirable to consider the abolition of the restriction whereby there can be only one government-backed project per principal researcher as there surely exist some researchers who are efficiently capable of directing multiple projects. More budgetary and administrative management autonomy could also be granted to the public research centres.

… making better use of the public sector's scientific potential for the benefit of firms…

In view of firms' often limited capacity to form their own research teams, because they are too small, working in collaboration with public research organisations, which are accessible at a relatively low cost, is a good way of boosting innovation. In fact, the share of university R&D financed by firms is relatively high by comparison with other countries. However, this co-operation has tended to decline in recent years in relative terms,[7] partly because of the stronger increase in public than private business funding of universities and probably also because universities are insufficiently business-oriented. Therefore, co-operation remains inadequate, with the result that the scientific and technological potential of the public system is under-utilised: more than 80% of firms have never contacted a university to work together on a research project, while between 2001 and 2004 only 4% of innovative firms co-operated with universities (CyD, 2005). Moreover, the quality of this co-operation has room for improvement, since its research and innovation content is weak (Alemy *et al*., 2006).

Efforts have been made in recent years to encourage the transfer and diffusion of science and technology from the public to the private sector. This has resulted in technology transfer offices (OTTs) being set up in all public research centres and universities. The use that these bodies make of intellectual property rights and the commercial development of their research has thus gained in importance. Also, backed by certain national programmes (PETRI and NEOTEC), the OTTs' efforts to encourage the creation of technology-based firms have yielded encouraging results in some regions (Catalonia and the Basque Provinces) (OECD, 2005). Nevertheless, these initiatives are insufficiently funded and are handicapped by regulatory obstacles. The OTTs are very small and are confined to performing administrative rather than commercial tasks[8] (Garcia and Sanz, 2003). Co-operation with firms is also hindered by the low mobility of researchers with civil servant status.[9] The opportunity for staff employed by public research bodies to work temporarily in firms is rarely taken up, because this sort of experience is not highly valued in employees' careers. There are also obstacles to professors participating in the equity and in the administrative bodies of spin-offs (COTEC, 2004). All told, the number of international patent applications stemming from public research is small and the use made of the results of this research in the form of licensing agreements or the creation of spin-offs and start-ups is very limited compared with other countries.[10]

Science parks, which can act as another way of stimulating research and innovation by harnessing the externalities deriving from the presence within the same physical area of technological firms and public research bodies, have proliferated in recent years, despite often being short of regular funding (COSCE, 2005). Between 1997 and 2003, the number of firms and workers in technology parks tripled, while their turnover increased fivefold. In Europe, only Finland and the United Kingdom had more such parks than Spain

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

(COTEC, 2005). However, this trend, which was partly attributable to inter-regional competition to do with image, has been detrimental to the quality and effectiveness of these projects. The criteria normally applied, which requires that only firms based on really advanced technologies are admitted to these parks, have been relaxed given their small number. Also, the steep increase in the number of universities in recent years, often with staff and equipment in short supply and not properly geared to firms' requirements, does not provide an adequate base to guarantee their effectiveness in many cases.

In view of these shortcomings, one of the main objectives of the *Ingenio 2010* programme is to encourage collaboration between private and public research groups. To this end a € 1 billion four-year programme has been set up to organise long-term co-operation agreements between firms and public bodies, focusing on a limited number of ambitious projects (16 projects under the first call for proposals CÉNIT, *Consorcios Estratégicos Nacionales en Investigación Técnica*) with predetermined strategic lines. The projects, financed by the private and public sectors on an equal basis (half of the public funding going to public research bodies), will last at least four years and will comprise at least four private companies, including two SMEs, and two public bodies.

Following their initial implementation, the CÉNIT projects have prompted a large number of companies to ask to participate. This may not be due solely to financial considerations, but also to these firms' goals of becoming leaders in their field with respect to innovation, which would seem to reflect an increased awareness that competing via costs is no longer enough. Such programmes, if they are carefully managed, could usefully bridge the gap between public research and the market, as shown by similar experiences implemented for instance in Switzerland. In addition, the authorities' plan to reduce the regulatory barriers to the mobility of public-sector researchers to the private sector (see below) is also a welcome step. In this context, it would also be useful to reinforce the OTTs' ability to act by grouping them together or organising them in networks. Finally, international experience shows that the increase in funding aimed at infrastructure development of science parks, already decided by the government, could also be efficient, provided that if it is used to reduce information barriers by financing viability studies for identifying projects likely to reach a critical mass, but does not lead the government to replace the private sector as the main architect of such centres (OECD, 2002).

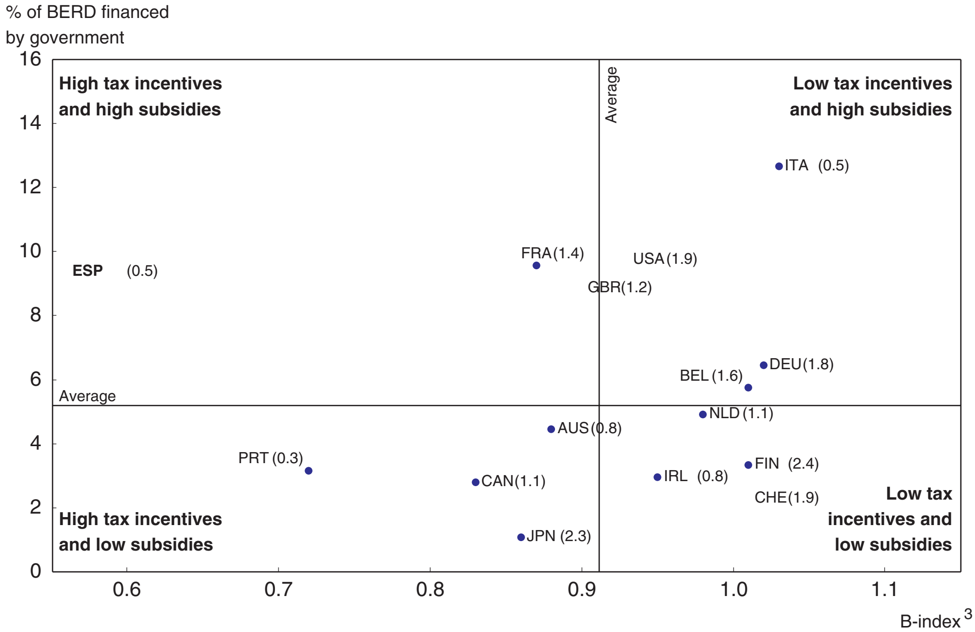
… and stimulating private research and innovation, as well as the use of ICTs

Strengthening private-sector research and innovation has been central to the authorities' concerns for several years and has prompted a number of initiatives which, as in many OECD countries, have resulted in a variety of forms of financial support. Three types of reasoning, often discussed in the economic literature, are put forward as justification for this aid: *i)* the existence of positive externalities deriving from these activities,[11] *ii)* the need to correct the credit market failure due to the asymmetry in information, which mainly penalises SMEs in their quest for funding from financial agents; and *iii)* the need to co-ordinate the efforts of SMEs, which are predominant in Spain, in what are often indivisible research projects. Such aid has played a greater role in the last few years.

Since 2000, Spain has had the most generous tax relief system in the OECD in respect of technology and R&D spending (Figure 4.4). Moreover, subsidies, which are mainly in the form of interest-free loans (the PROFIT programme, *Programa de Fomento de la Investigación Tecnológica*), have increased very sharply and have become the main tool for encouraging corporate research and innovation.[12] This system, which finances projects selected on a

Figure 4.4. **The state of tax and subsidisation policies**[1]

Average per annum, 2000-03[2]



1. The numbers in parentheses are the average business R&D intensities in 2000-03.
2. Or closest period for which data are available.
3. The B-index is defined as one minus the rate of tax subsidy for 1 USD of R&D by large firms in 2004.

Source: OECD, Main Science and Technology Indicators, May 2005 and Science, Technology and Industry Scoreboard.

competitive basis, has prompted a certain degree of emulation between research poles, and, according to the few microeconomic studies available, it has had some positive impact on firms' R&D expenditure. According to Busom (2000), the latter has been boosted in 70% of assisted projects. However, although the State finances a proportion of corporate R&D expenditure that is larger than the OECD average, the overall effectiveness of these programmes would seem to have been limited at the macroeconomic level. The share of the private sector in total research has remained meagre, and the very small share of researchers working in firms is no larger than in 1990, despite the increase posted in recent years.[13] Besides, the quantitative targets set by the National Plan (*Plan nacional*, PN) in the past, concerning for example the level of total R&D expenditure or the private sector's share in such spending, have rarely been achieved (COTEC, 2004).

Several reasons have been given for these mixed results. *First*, the incentives used so far have encouraged projects on a modest average scale. *Second*, the legislation on subsidies has excessively restricted the flexible use of the funds by the recipient, and the loans do not appear to be an effective way of stimulating co-operation between firms because of their reluctance to contract debt jointly (Modrego *et al.*, 2004). *Last*, the stringent guarantees required to qualify for subsidised credits have tended to reduce firms' creditworthiness in other areas or to increase the cost of borrowing, which has no doubt curbed the linkage effect on additional private research expenditure.

Moreover, few firms have used the tax deductions, despite their generosity.[14] The heavy administrative burden and repeated controls that these deductions involve have in fact deterred firms, especially SMEs, from using them. With the aim to increase legal security for firms and encourage them to use R&D and innovation more broadly, the authorities in 2003 enabled the Ministry of Industry, Tourism and Trade to issue "certificates" for R&D and innovation activities for firms willing to benefit from the corresponding tax incentives. The number of firms making use of these certificates has increased recently (from 300 to 900 between 2004 and 2006). Besides, since 2001, a programme subsidising the recruitment of researchers (*Torres Quevedo*) by firms has been launched. This has had a positive impact on the employment of researchers and firms' innovation activities, and has strengthened collaboration with public-sector research. That said, it also seems to have generated non-negligible deadweight losses (Annex 4.A2).

Another characteristic of the Spanish innovation system has been the development of technology centres, which respond, above all, to the technology requirements of SMEs. These private, non-profit entities, which originate from moves made by final users with initially little central government assistance, have expanded rapidly in Spain, with regional government support. They usually act on a one-off basis in order to solve specific technical difficulties, but some have built up more lasting relationships with companies and are involved in their innovation strategies or even help to create start-ups. They are very unevenly spread across the regions, and, mostly because they are small, their activities tend to be local. These centres can play a useful role in helping an innovation culture to emerge (Annex 4.A3) and avoid the risk of waste related to the deadweight losses often associated with public subsidies. However, they do not co-operate with one another very much, so that their work is quite often duplicated. Some regions – such as the Basque Provinces – have encouraged associations or created networks in order to achieve efficiency gains. In addition, the national authorities are designing a new instrument directed at creating new technology centres and promoting the conversion of private entities into technology centres, which will be able to respond to the technological demand from industry not currently covered by the existing centres.

To bolster private-sector research, the government's new plan contains various measures going in several different directions:

- The focus of the instruments designed to stimulate private research and innovation is being shifted to subsidies rather than subsidised loans. Also, a 40% reduction in social insurance contributions for research workers, designed to encourage the recruitment of research staff, is currently being discussed in Parliament and the number of researchers recruited by firms with the *Torrès Quevedo* programme will be increased from 780 in 2004-05 to 1 300 per year as from 2010.
- The financial guarantees demanded of SMEs before they can have access to subsidised loans have been made more flexible and the time needed to secure such assistance shortened. The plan is also to amend the general law on subsidies and the one applying to government procurement so as to ease the constraints weighing on the management of such subsidies and the administrative obstacles involved when public research centres purchase equipment.
- The authorities are also promoting – financially in particular – the more uniform emergence of technology centres in the country, to extend their activities beyond their local sphere and to stimulate co-operation on shared projects, including with universities, so as to benefit from economies of scale. At the national level, a new programme for funding projects developed by alliances or consortiums of centres, from at least three different regions, is going to be launched in 2007. The aim of this program is promoting the cooperation among centres in order to generate projects with higher impact on industry.

Also, a programme (*Avanz@*) has been launched to encourage the diffusion of ICTs in businesses, government and households. The plan provides for subsidised credits to be made available to private individuals to encourage Internet access, and also to SMEs so that they can finance investment in information technologies and schemes to train employees in these new technologies. Unlike previous plans in this area (*Info XXI* and *España.es*), which had only mixed results, this one has funding of € 5.7 billion over five years, with co-financing from the regions ranging between 40 and 60%. The *Avanz@* plan, which sets itself ambitious targets in terms of ICT distribution,[15] also contains non-budgetary measures, with plans to ease the use of tele-working, for example. Work is being done to introduce a national electronic identity card (DNI) with a homogeneous framework for its use and acceptance. The use and supply of public services *via* the Internet are also to be stepped up, and the government will be obliged to acquire more equipment with Internet access and the ability to read electronic signatures. These efforts would be usefully complemented by a strengthening of the degree of competition in the telecommunication sector so as to reduce the access prices to high speed Internet connection (see Chapter 5).

Strengthening appraisal mechanisms and co-ordination of programmes also matters

Past experience in Spain and international empirical studies show that these policies can involve heavy deadweight losses and their effectiveness is highly dependant on the quality of implementation.[16] This means that stepping up evaluation is crucial if waste is to be avoided. In this regard it could for example, be worthwhile checking how effective lower social insurance contributions for recruiting additional researchers or increased subsidies (with the introduction of the CÉNIT projects) are from the point of view of stimulating private research, as compared to the tax deductions which might be phased down in the future.[17] In principle, direct aids, which are often used to achieve public policy objectives in sectors such as defence or health through the financing of private firms' efforts, can better target specific research projects than tax deductions. However, it is not clear that governments are systematically better placed than the markets to identify the most promising projects,[18] and empirical analyses assessing the efficiency of the various types of public interventions provide conflicting views. According for instance to Jaumotte and Pain (2005a), doubts remain as to how effective direct subsidies are for stimulating private R&D, except perhaps for SMEs, whereas their analysis points to tax deductions having a positive, but limited impact. Work has been done in the past on evaluating aid programmes by the CDTI, the main body responsible for managing the Ministry of Industry's aid programmes, although such evaluations have not been systematic.

The response to these problems adopted by the *Ingenio 2010* Plan is to improve the management and evaluation of the projects receiving assistance.[19] In future, they will be reviewed on an *ex ante*, intermediate and *ex post* basis as part of a clearly defined system (SISE, *Sistema Integral de Seguimiento y Evaluación,* adopted jointly with the *Plan Nacional de I+D+innovación*). In the case of the CÉNIT programme, for example, the projects were selected following a two-step technical and financial evaluation by the CDTI and a scientific assessment by the ANEP. The CDTI has also set up its own small, five-person team to monitor these evaluations project by project, drawing on global best practices, which include sending questionnaires to firms in order to collect the data needed for such analysis. These evaluations are then summarized in an annual report setting out a series of recommendations that are examined by the CICYT so that it can propose changes in the public programmes. This more broad-ranging evaluation will also be facilitated by the existence of clearly established quantitative objectives (see Chapter 1) to which the authorities are definitely committed. Such efforts are steps in the right direction. In this context, it would be worth analysing the causes of the aid allocation bias in favour of industry and at the expense of the service sector, despite the latter's preponderant share in the economy.[20] The low level of participation of service enterprises may reflect a mismatch between the instruments used and the specific requirements of this sector, which needs to be remedied. This could require a more extensive use of cost-benefit analysis. Also required is a careful evaluation of the *Avanz@* programme, aimed at increasing the use of ICTs, so as to ensure that it properly targets the needs of firms, which are in most cases lagging behind in terms of software more than hardware. More generally, it would also be desirable to give more prominence to the role of the technology centres and enhance their coordination in order to channel and respond to firms' technology requirements.

As recognised by the government, a better co-ordination between innovation policy and the regions is also necessary, given the multiplicity of players and programmes devised by the authorities as a result, in particular, of the decentralised policy context. Many autonomous communities tend to want to do everything in the framework of their regional innovation plans, which gives rise to duplication and waste. Some observers maintain that one of the major failings of the innovation system, which is responsible for its activities being highly dispersed and not very effective, is that many decisions are based on a partial view of what is at stake, without any coherent strategic thread (Merino, 2005). The co-ordination problem, which also affects central government ministries, creates confusion. It also increases the cost of access to information, given the multiplicity of available programmes with similar objectives. This is damaging, especially for SMEs with a weak innovation culture (TrendChart, 2004). To remedy these shortcomings, the central government has drawn up certain parts of the *Ingenio 2010* programme, such as the Avanz@ plan, in collaboration with the regions. Moreover, the autonomous communities have been involved in agreements on the joint financing of the main pillars of the *Ingenio 2010* plan inasmuch as they benefit from these measures. This welcome development should also be coupled with actions aimed at facilitating access to information by firms on the innovation-oriented programmes. More transparency on regional programmes would also reduce the risks that they could become mere industrial policy interventions to favour local firms using public money.

Improving the performance of the education system

Considerable progress has been made in education

Solid educational foundations are needed if performance in innovation is to be improved. From this standpoint Spain has made considerable progress in recent decades. As new generations become better educated, the proportion of the population without any qualification has fallen sharply, though it remains higher than in the other major European countries.[21] Since the 1970s the percentage of the population with a university degree has also increased at a faster rate than seen in any other OECD country, with the exception of Korea, and is higher for women than for men. It is now above the OECD average for the population aged 25-34, while the number of specialist engineers trained between 1995 and 2000, expressed as a proportion of the population (1 for 1 044), also exceeded the OECD average (1 for 1 242) (COTEC, 2005). Despite this progress, however, serious shortcomings in the secondary, tertiary and continuous training systems still need to be addressed. This section gives an overview of the current situation, focusing in particular on issues relating to higher education, and assesses the main reforms introduced by the government to improve the education system.

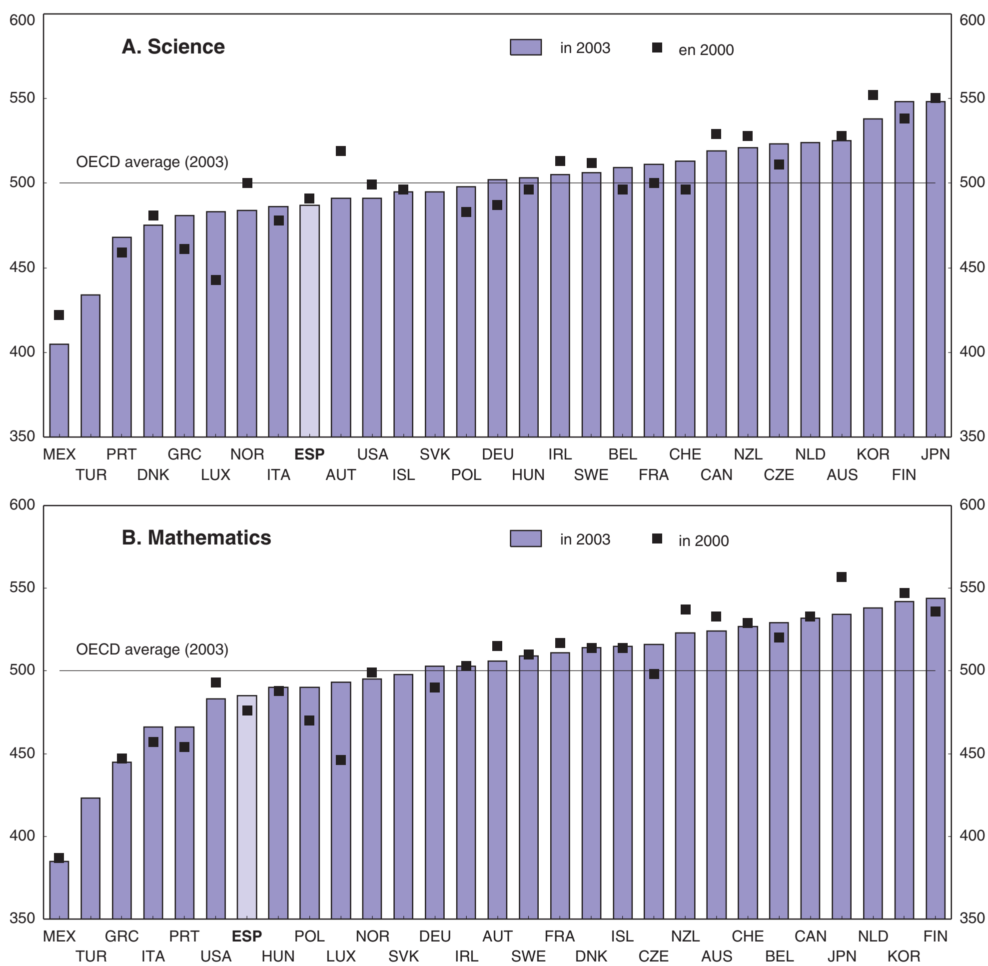
A quality problem exists in the education system, especially in higher education

Several indicators show that the quality of education needs to be improved, especially at university level, as the authorities admit:

- Even among younger cohorts (25-34) the proportion of people completing upper secondary education (60%) is lower than the OECD average (75%), although the vast majority of those students go on to university, partly because vocational training is underdeveloped. In science and mathematics the average knowledge level of schoolchildren aged 15 is low in international comparisons, since Spain ranks between 21st and 23rd out of 29 countries in PISA 2003 (Figure 4.5). Fewer than 8% of Spanish schoolchildren had excellent or very good scores in maths, compared with an OECD average of 14.5% (OECD, 2005a).

Figure 4.5. **Student performance in science and mathematics**

At age 15



Source: OECD, Literacy Skills for the World of Tomorrow: Further results from PISA 2000; Learning for Tomorrow's world: First results from PISA 2003.

- There is no Spanish university among the top 100 in the international rankings produced by Shanghai Jiao Tong University and the Times Higher Education Supplement, and the quality of universities is confirmed to be only average by recent alternative research based on more transparent criteria.[22] This weakness seems to be indirectly confirmed by the relatively low value that the market places on university education, even though that outcome doubtless has many causes (Box 4.1). The average wage premium for employees with a degree in relation to those who have only a secondary qualification, estimated at 29% in 2001, was about half the level in the OECD zone as a whole. Furthermore, Spain is one of only four in a sample of 22 OECD countries where the premium has fallen in recent years, since it amounted to 49% in 1997 (OECD, 2005a).

Box 4.1. **The value placed on university education**

Spanish university graduates gain access to the labour market more easily and are less exposed to the risk of unemployment than less skilled workers. However, recent research has highlighted a significant decline in the average return on investment in higher education, combined with greater uncertainty about the value placed on such investment. Wage premiums for university graduates have fallen since the mid-1990s, and wage differentials among workers with degrees have increased (Burdría and Egido, 2005).

Initial analysis of this trend, which emerged at the same time as a sharp rise in the number of university graduates, has suggested that there might be a problem of over-education, *i.e.* under-utilisation by the market of investment in education (Dolado *et al.*, 2000). The problem has worsened in recent years, though, according to more recent analyses, it does not seem to be more marked than in other European countries* and over-education has had only a small impact on the decline in wage premiums for the best-educated (Izquierdo and Lacuesta, 2006). Although the origin of the uncertain value (generally low and falling) placed on higher education has not yet been clearly identified, it has at least two likely causes. First, there is a problem of educational quality, which may be partly related to the rapid expansion of the population educated to tertiary level; second, insufficient value is placed on skills and qualifications because the wage bargaining system does not function properly (see below).

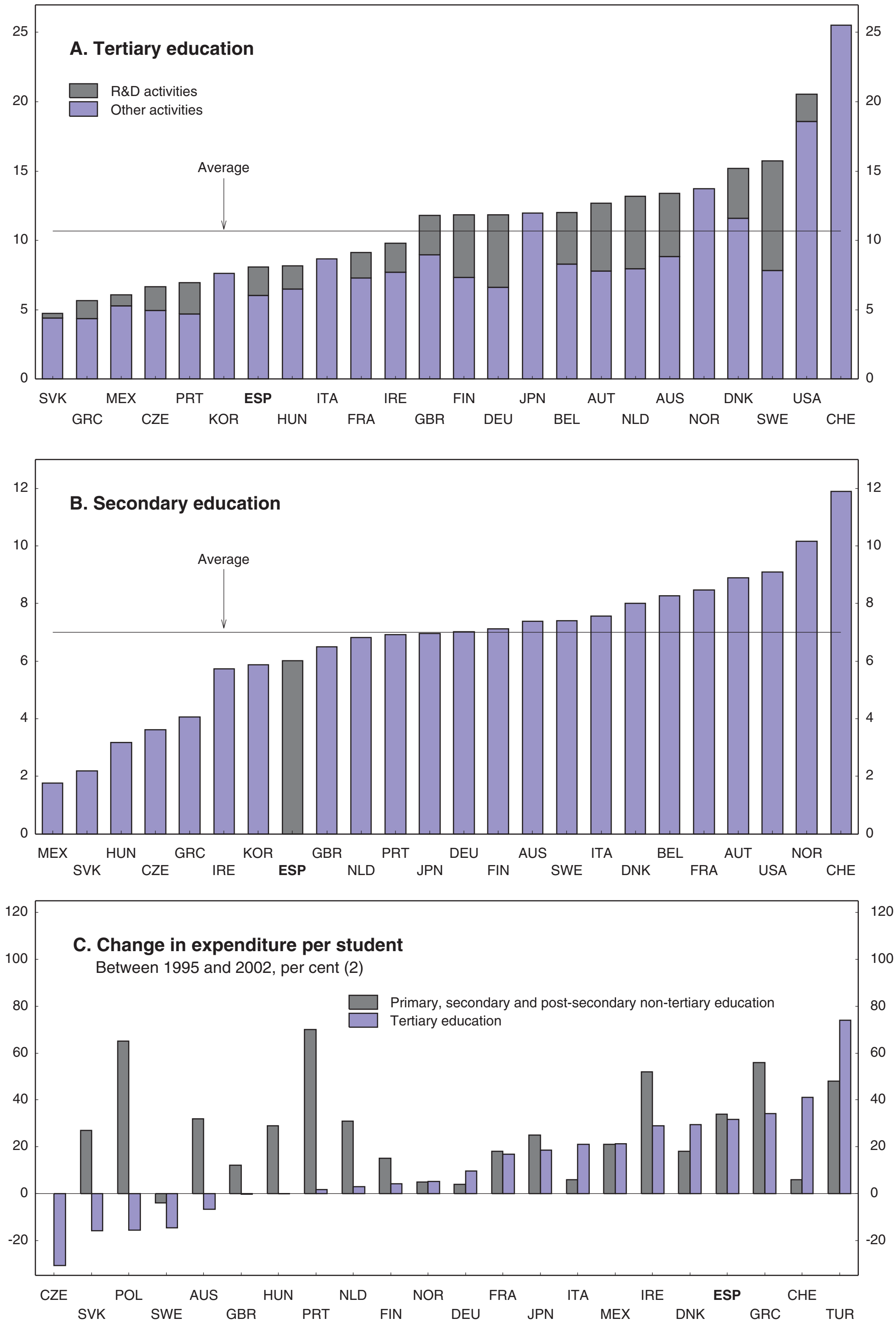
* The proportion of highly qualified jobs offered in public employment services (8.8% in 2004) was lower than the demand for them (13.6%) (CyD, 2005). However, the problem of matching qualifications to needs, which affects some 30% of workers with university degrees, does not appear more marked than in other European countries (Eurostat, 2003).

Resources for education are limited, especially at university level

Growing public resources have been devoted to education over the last ten years or so. However, spending per student is still lower than the OECD average at all levels of education, and the differential is particularly marked in higher education (Figure 4.6). This spending was 25% lower than that of the EU15 in 2002, which in turn was only half that of the United States. As in several other countries of continental Europe, higher education is funded from the public purse, which is by nature limited, with no significant support from the private sector. Students pay the same very low fees wherever they go to public university. They cover only about 10% of costs, which increases demand for higher education but also encourages waste. The average share of graduates in all disciplines completing their studies within the normal time is low, entailing a significant budgetary cost.[23] In addition, although a high percentage of students register for doctorates (15%),

Figure 4.6. **Education expenditure per student**

By level of education, in thousand $, 2002[1]



1. For Hungary, Italy, Portugal, Switzerland and Turkey, public institutions only.
2. Based on expenditure expressed in US dollars. For Greece, Italy, New Zealand, Poland, Portugal, Spain, Switzerland, Turkey and United States, public expenditure only.

Source: OECD, *Education at a Glance*, 2005.

which is essential for research, a very small proportion of them ever complete their studies. These poorly focused incentives and the relative lack of resources doubtless affect the quality of education, but many shortcomings in the management of financial and human resources also need to be addressed.

Many obstacles stand in the way of improvements to university performance

The university system is highly fragmented, and its operation lacks transparency. Many universities were created in the wake of devolution between the early 1980s and the first years of this century, often for political or prestige reasons. Their number, which rose from 26 in 1976 to 73 in 2006, has allowed local access to low-cost university education in almost all the provinces. However, this development has taken place to the detriment of specialisation and has resulted in duplication of the courses on offer, often for small groups of students[24] who do not always get high-quality teaching. Demand for staff grew substantially with the increase in the number of universities, but the supply of qualified candidates remained limited. Moreover, the fact that universities are very different in terms of size, orientation, form of management (public or private) and involvement in research makes it difficult to obtain the homogeneous and comparable data needed to devise policies to improve efficiency and assess their results. Statistics relating to human resources and budget management (both income and expenditure) are patchy, as are indicators of activity and results relating, for example, to technology transfers to firms or graduate employment (CyD, 2005).

Public universities are not sufficiently business-oriented, while businesses do not help to define course content. Employers frequently mention that recent graduates lack practical training, language ability and computer skills (CyD, 2005). Doctoral research subjects, over-influenced by academic demand, are equally ill-suited to business needs, and researchers concentrate mainly on publication; it is seen as the culmination of their work, which rarely leads to patents. University education also fails to develop the spirit of enterprise and an interest in applied research, while entrepreneurs maintain that too many disparities exist between academic and engineering careers. This puts some students off research, because career prospects are less attractive and it can be more difficult to move into managerial positions later.

Private universities have been able to take advantage of the weakness of the link between public universities and business. Although the private university sector is still small and has very little involvement in research, it is growing in a context where student numbers in tertiary education have been falling since the late 1990s for demographic reasons.[25] Due to its own nature, the private sector is more responsive to demand than the public sector, even if the average quality is lower, also because in some cases the students who have not reached a sufficient level to enter in public universities attend private ones. Some private universities have concluded agreements with firms guaranteeing their graduates jobs. Private universities are spreading in fields such as journalism, tourism and management; in this last discipline, some private business schools (Esade and IESE) are among the best in the world.

Generally speaking, the higher education system lacks incentives for striving for excellence and improving its own workings because of obstacles that affect recruitment, teachers' salaries and funding. The situation is likely to encourage corporatist behaviour and the protection of special interests among members of staff who are often discouraged by a lack of professional consideration affecting teaching and research tasks.[26] The most typical feature of this situation is the inward-looking, self-perpetuating culture (*endogamia*) that permeates the recruitment system, favouring the appointment of teachers to universities where they have studied.[27] This reflects the universities' deficiency in terms of clear goals and the absence of healthy competition within the system. Most teachers, being employed by the state, are also shielded from outside competition, because of their civil servant status.

Because these factors have increased the risk of a brain drain, efforts have been made to retain the most effective researchers and teachers. Since 2001, specific programmes (like *Ramón y Cajal*) have offered public-sector positions with five-year contracts to the best candidates wishing to go into research. These programmes, which have benefited from a certain level of international prestige, have helped to attract high-level researchers, since 22% of those given the contracts were Spanish academics living abroad and 18% were foreign. More recently, steps have been taken (with the I^3 programme) to enable these researchers to find more stable positions.[28]

The present university funding system, often defined in a rather opaque way at regional level, does little to foster competition among institutions, though broadly speaking it depends on the number of registered students and research grants obtained on a competitive basis. Despite local imbalances between the supply of and demand for university places, there is little student mobility among universities and autonomous regions: only 8.3% of students attend university in a region other than that of their family home (CyD, 2005). This is due to the number of universities and a deficiency of student grants, even though the number of grants is rising.[29] Lack of mobility also reflects a serious dearth of information about the quality of the courses on offer. There is no regular ranking of universities carried out by journalists, as in many other countries (Canada and France, for example), and no public assessment of universities is published. This shortcoming seriously undermines the capacity for both students and prospective employers to discriminate among university degrees.

To improve the quality of higher education, both regionally and nationally, the authorities are seeking to promote an assessment culture. Nationally, a new accreditation agency (ANECA) was created in 2002 to guarantee minimum and homogeneous competence criteria for university teachers. A supplementary salary scheme (*sexenio*) has also been in place since the late 1980s to reward researchers according to their results; they are assessed every six years by a panel of experts on the basis of their publications. The scheme, which operates on a voluntary basis, enables researchers to increase their salaries by up to a maximum of 50% at the end of their career.[30] The *sexenio* seems to have played a key role in increasing the number of Spanish publications in recent years (OECD, 2003a), and recent foreign studies confirm the positive effects of merit-based remuneration systems on university performance (Chant, 2005).

However, there are shortcomings in the current university assessment system. Under the ANECA accreditation process the proportion of positions for contracted teachers in relation to state-employed teachers is limited to 49%, which seems hard to justify. The *sexenio* system is for those who have long-term positions, and it is based on an overly narrow approach, taking into account publications but not applied research, patents or licences. Most importantly, if such an assessment policy is to be effective, the results must be circulated widely in order to foster student mobility and encourage universities to strive for excellence and attract students. Under the current assessment system, the public cannot even find out which universities have the highest proportion of teachers with a positive assessment in the *sexenio* system. It would hence be desirable to improve the assessment system and to guaranty a broad diffusion of its outcomes.

The lack of benchmarking for university performance is a fundamental flaw, which acts as a disincentive for attracting high-quality teachers. In addition, universities have little scope for using pay to attract the best teachers. As most teachers are state-employed or treated as such, pay differentials are slight, and there is considerable union resistance to greater differentiation. Under such circumstances it is difficult to attract foreign researchers, for example, because salaries are low, to say nothing of the bureaucratic obstacles of recognition of equivalent qualifications. Universities also have little incentive to attract high-quality researchers by offering them working conditions that would enable them to increase their income through contracts: universities gain little benefit from public resources allocated to fund the overheads of research projects because their amounts are so small.

Education reforms have been introduced to improve the system's performance

Reforms affecting the entire education system have been introduced in order to remedy these difficulties. A modification of the framework law on universities, which is currently being discussed in Parliament, deals with three main issues.

- *First*, it gives universities greater autonomy, which implies extending their ability to choose their rectors, to define teaching programmes and to recruit professors. The current selection mode of teachers working through a competitive examination, which has been strongly criticised because of its excessive rigidity and cost, will be replaced by an accreditation system not related with the number of posts to fill and depending on an assessment of the candidate curricula by a jury. 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. In addition, professors and research personnel will benefit from more clearly defined careers thanks to the adoption of a statute giving more weight to performance both in teaching and research domains.
- *Second*, it seeks to remove obstacles that hinder the movement of teachers into the private sector and their participation in spin-offs. Professors will be allowed to take a voluntary leave of absence for a five-year period maximum period in order to develop more applied projects in firms. Universities and public research centres will also be able to create joint research institutes with businesses in order to forge closer links and facilitate personnel exchanges. Also, it encourages the central and regional governments to set up remuneration schemes to spur the transfer of technology and knowledge.
- *Third*, it improves the governance of the system with the creation of a sectoral commission including both representatives of the Ministry of Education and of the autonomous communities in order to better co-ordinate university management. Students will also participate more formally in the university organisation.

Together with this reform, the government has started addressing the need to harmonise the structure of university courses at European level, in accordance with the Bologna agreement, introducing a separation between first degree and masters programmes. The government will set up five broad areas of study and establish the main framework and guidelines that universities have to follow to set criteria for degrees, leaving to universities the task to develop their own programmes and *cursus*, which will be subsequently validated at national level. This adjustment, due to be completed in 2010, offers an opportunity for improving the workings of the system. A modular system should make courses more flexible and foster mobility among students. This mobility will also be fostered by a programme (*José Castillejo*) allowing 5 000 young PhD graduates to enrich their education abroad, while a financing system for post-graduates through income-contingent loans will be introduced.

This draft reform is heading in the right direction to improve the way the system performs. Where higher education is concerned, it is important to shift from a system based on input regulation to one relying on enhanced output evaluation and linked to the funding system. *De facto*, the countries with the best universities usually allow them considerable independence but also make them accountable for their results, which are made widely available to both teachers and students (Schleicher, 2006). The current draft rightly reinforces university autonomy. Moreover, the Ministry of Education and Science has recently launched a proposal to establish a compulsory evaluation system, which should also be disseminated. Similar efforts are being made in some regions, like Andalusia, where measures are in preparation in order to link universities' financing to the quality of their teaching and research outcomes. To move in this direction, the statistical information on the functioning of universities and their results is being reviewed. In this context, the authorities could envisage introducing a cost accounting system in universities, as was done recently in Switzerland. It is indeed necessary to have information on a homogenous and comparable basis at the regional level in order to diffuse it nation-wide and encourage benchmarking, even though it is likely to meet with opposition from teachers and/or some regions. The research evaluation system will also be improved so as to better take account of and foster applied research work and transfers of knowledge and technology to firms through financial incentives. Moreover, the publication of these evaluations by national quality agencies is vital as a way of increasing the capacity to discriminate among university diplomas and stimulating student regional mobility.

In the same context, government plans to increase the resources earmarked for grants and for income-contingent loans are to be welcomed. Generally, the universities need to extend their influence beyond the local sphere and the strict interests of the academic community and endeavour to respond more fully to the needs of society and particularly of firms, which could, for example, play a part in drawing up some university courses. Greater independence from regional governments, which are responsible for tertiary education, would also help to improve the efficiency of university management. Over and above the measures envisaged with regard to recruitment, universities ought also to have more leeway when establishing work contracts when recruiting and setting both salaries and, within certain limits, tuition fees, which should be raised. Fees-setting powers would usefully increase university resources and encourage students to make the most of their studies and complete them on schedule. Moreover, private work contracts could be preferable to civil servant statute when hiring university teachers. The protection that this status affords, in exchange for a salary that is relatively modest for persons with appreciable human capital, is probably not the right way to prompt them to make maximum efforts.

The development of an effective university system can only benefit from better secondary education. In this context, a reform of the education system from pre-school to the end of secondary education was adopted in April 2006. The changes, which will be introduced in stages until 2010, are primarily intended to improve the quality of education and reduce the failure rate. In order to do so, the law aims *first,* to give schools greater autonomy in terms of curricula, organisation and management,[31] with a view to promoting better adaptation to the growing diversity of pupils due in particular to the rising number of immigrant children.[32] *Second*, to extend the opportunities for pupils in difficulty to acquire a recognised qualification and increase the possibilities for them to move back onto the standard track. *Third*, to increase financial resources to support these measures. An overall budget of € 7 billion (an average of 0.16% of GDP per year) has been earmarked until 2010 with the aim of bringing the level of spending per pupil up to the EU average.

The reform also includes an overhaul of the curriculum; for example, children will start learning a foreign language at the age of five.[33] However, no provision has been made for improving the teaching of maths and science, even though several observers agree on the need to reform current teaching methods, which make excessive use of learning by rote and encourage a passive attitude rather than creativity and critical thought (COSCE, 2005). Laboratory experiments are important factors in encouraging scientific education and a taste for research. Recent OECD studies suggest that greater use of computers would help to promote a more dynamic approach and better learning in these subjects (OECD, 2006b) and hence to rectify the shortcomings highlighted by the PISA survey – and confirmed by national studies (MEC, 2005). According to some Spanish research, the use of ICT significantly improves the performance of secondary pupils in mathematics (IUCE, 2006).

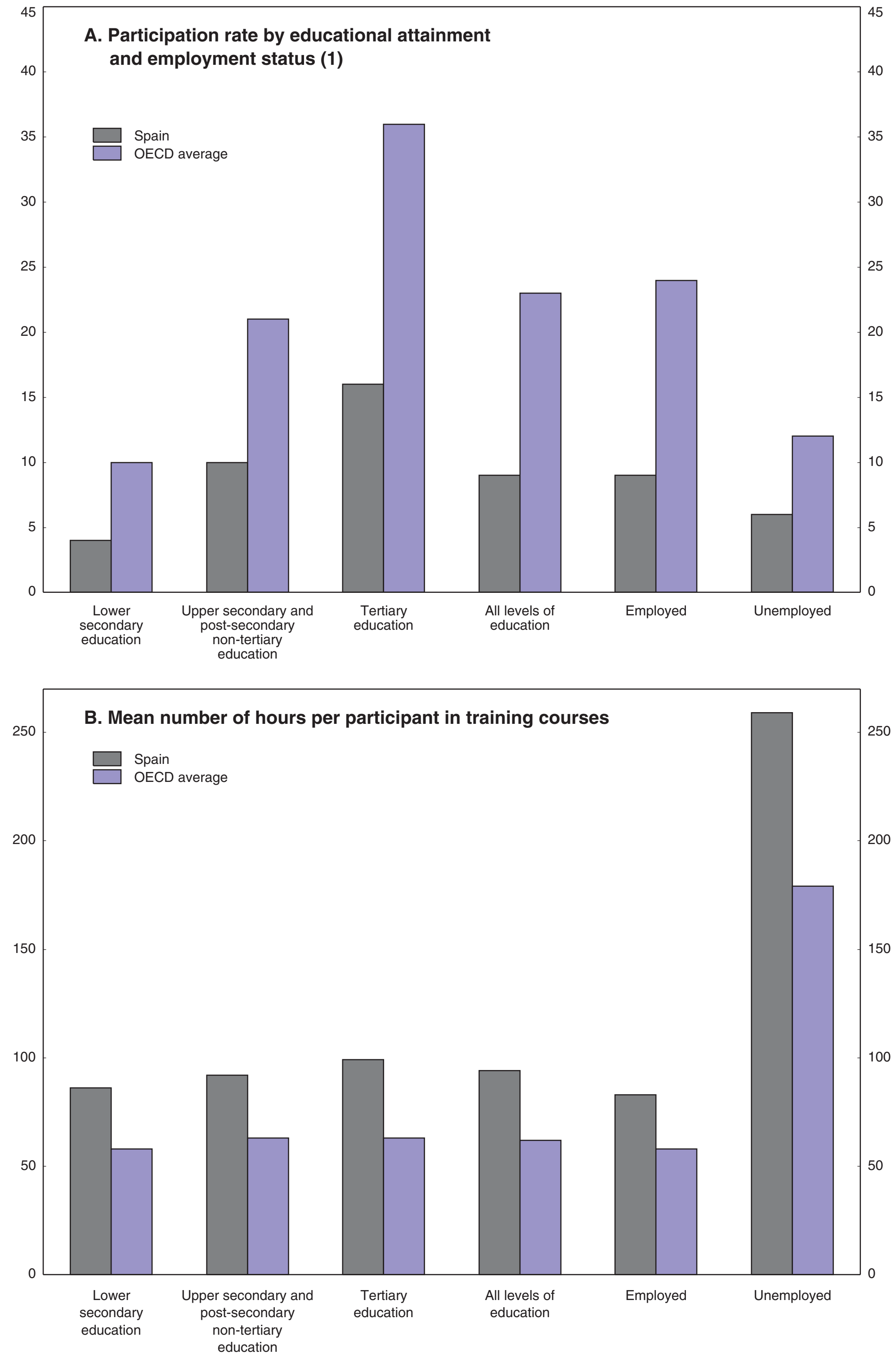
The continuous training system is under-developed

Continuous training is another important but still under-developed branch of the education system. Continuous training is becoming increasingly important because of the constant need to update knowledge and skills in a burgeoning knowledge economy, especially in Spain, which has to overcome the handicap of a lack of skills in the use of new technologies among a substantial portion of the population. Only 9% of the population aged between 25 and 64 took part in non-formal, employment-related training activities in 2003 compared with an OECD average of 23% (OECD, 2005a). The use of such programmes is particularly low among workers employed in small businesses (COTEC, 2005), especially those with higher education (Figure 4.7). This situation is doubtless partly due to over-education and the high proportion of temporary jobs, which reduces the incentive for firms and employees to invest in continuous training. People in positions that do not correspond to their skills frequently have temporary jobs and look for other work, rather than investing in training. In addition, training still too often seems to be regarded as a fringe benefit awarded on the basis of "political" considerations in negotiations between management and labour, rather than on the basis of technical criteria (Ramírez del Río, 2006). Yet the funds earmarked for training should be treated like investments, the return on which needs to be evaluated.

Generally speaking, the authorities recognise the economic and social importance of continuous training, which is not given enough emphasis as a means of supporting innovation and competitiveness. Reforms have been carried out in recent years to improve the management of training organisations, in which the central government and the regions now play a greater role. Under the terms of an agreement between the social partners concluded in February 2006, continuous training systems for those in employment and for the unemployed, formerly separate, have now been integrated within a single framework. Steps have been taken to give SMEs easier access to funds for training. Social security contributions will be cut to encourage firms to spend more on training. Steps have also been taken to improve the quality of courses and to evaluate the operation of the system in terms of efficiency and results. An annual report will also be prepared and

Figure 4.7. **Participation in continuing education and training**

Participation rate and mean number of hours for 25-to-64 year-olds, 2003



1. Non-formal job-related continuing education and training.

Source: OECD, *Education at a Glance*, 2005.

will provide the basis for possible improvements. Such evaluation measures appear necessary, for the programmes on offer still look ill-matched to the demand from businesses (CyD, 2005). The continuous training courses offered by universities, for example, seem too long and too inflexible (courses lasting more than 150 hours make up 53% of all those offered) and target the under-30s above all (60% of participants). International comparisons show that Spanish courses are on average 50% longer than those in other OECD countries (Figure 4.7). To improve the situation, joint financing of training projects by firms and government would no doubt contribute to ensure that public subsidies go where they are the most useful. More generally, greater efforts are also needed to enhance the functioning of training markets by putting in place an adequate system of recognition of skills and easier access to training leaves.

Making the framework conditions more favourable for innovation

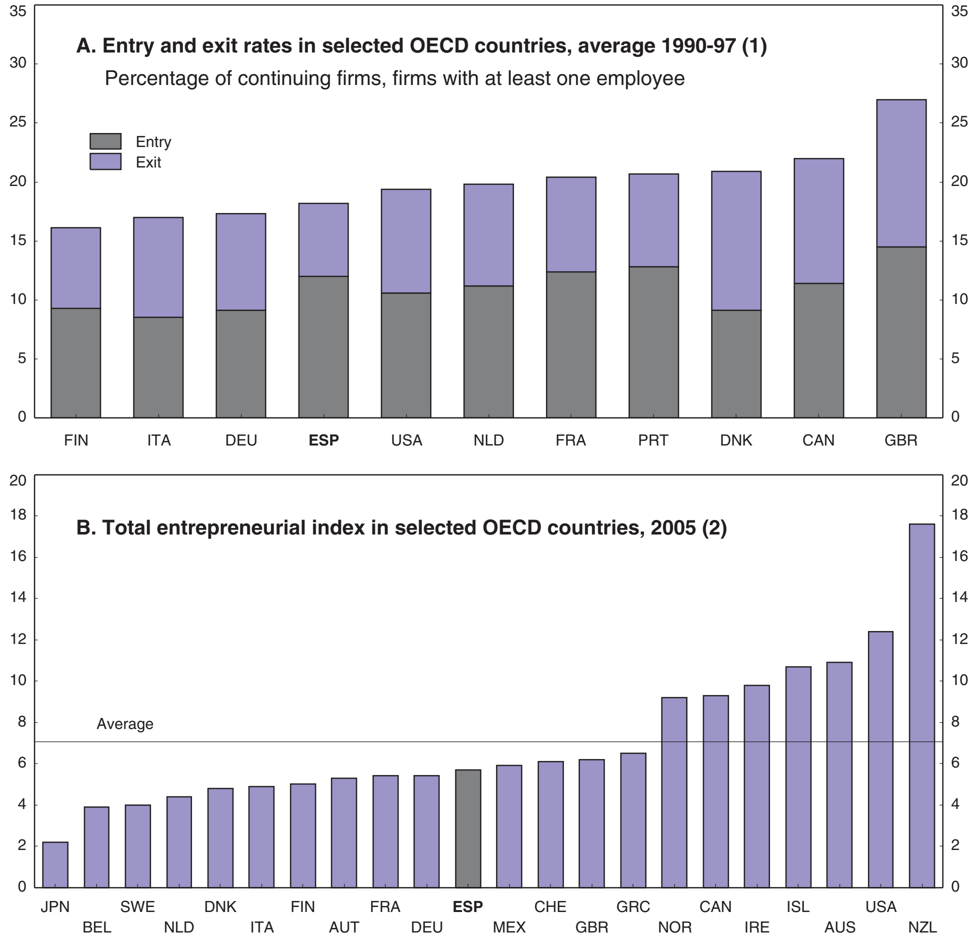
The framework conditions influencing entrepreneurship have an appreciable impact on innovation – one which is at least as pronounced as that of innovation policies *stricto sensu* (Jaumotte and Pain, 2005b). Incentives encouraging risk-taking are needed to boost private-sector innovation, which stems, to a large degree, from new firms (Baumol, 2003). Firm creation must not be hindered by obstacles of a regulatory or other nature, nor must start-ups be prevented from accessing the funding they need to develop their projects. The functioning of the goods and services and labour markets is also very important. For example, it is crucial that firms be fully involved in international trade and investment and new products and processes originating from abroad. Moreover, foreign and domestic competition has a powerful influence on innovation and the adoption of new technologies[34] (Jaumotte and Pain, 2005b), even if this link is a complex one. Finally an over-regulated labour market tends to hamper company reorganisation, which is often necessary following the adoption of new technologies, or to generate inappropriate incentives liable to curb efforts to innovate.

Some of the obstacles to company creation and closure have been reduced

As in a number of other countries, the authorities are seeking to promote entrepreneurship. The main problem is not that too few firms are being created, although room for improvement exists also in this domain (Chapter 1); it is that their size and openness to foreign markets needs to be increased, as does the share that is technology-based. Firms are being created at much the same pace as in other OECD countries, even if the rate of closure is lower and the spirit of entrepreneurship appears less widespread than in the average OECD country, as in much of Europe (Figure 4.8). This no doubt accounts for the very small proportion of young companies with strong growth potential.[35] The percentage of SMEs is certainly higher than in other countries and their average size smaller, with the result that they are often involved only with the local market (OECD, 2005b). Only 3% of firms export, and the technology content of such exports is less than in the other EU countries (MITyC, 2005). As a result, the efforts made in recent years to respond to these difficulties were stepped up in early 2006 with a new support plan for entrepreneurship (*Plan de Fomento Empresal, PFE*), which is one of the pillars of the National Reform Programme.

The PFE encourages the spirit of enterprise by means of measures aimed in a number of directions. It includes initiatives in education and aid (micro credits) targeted towards young people and women -groups traditionally not very inclined to innovate. A system providing information on business creation and management has also been set up (CIRCE,

Figure 4.8. **Entrepreneurship indicators**



1. Spain: 1995-2002; Germany: 1990-98; France: 1990-96; Italy: 1987-93; USA: 1990-96; Denmark: 1990-94.
2. The number of people currently setting up a business or owning/managing one that existed no more than 3.5 years, relative to the adult population 18-64 years old.

Source: Bank of Spain; Global Entrepreneurship Monitor, 2005 Executive Report.

centro de información y red de creación de empresas). This consists of a network of information and advice bureaux (PAIT, *puntos de asasoramiento e inicio de tramitación*). Operating on a one-stop basis, the network advises entrepreneurs during the first few years of their firms' existence and is to be extended to all the regions and coupled with a system of online virtual assistance. These measures come in the wake of the 2003 modernisation of the bankruptcy law (*Ley Concursal*), which has made it easier for debtors to start firms up again after application of the procedures (except in the case of fraud) and has helped to reduce the stigma for entrepreneurs who have experienced a setback. In 2003, the authorities also created a new form of limited liability company, which is better suited to the requirements of small firms in that it simplifies incorporation procedures and the management of their accounts. Business start-ups and closures, which for a long time involved protracted, complex and costly administrative procedures (Table 4.1), have recently for example been made much simpler. The time needed to set up a company has been shortened from 47 days to less than 48 hours, while the 15 forms that used to have to be filled in have been replaced by just one.

Table 4.1. **Costs of business creation**
In early 2000s

	Number of procedures	Time (in days)	Cost (in per cent of per capita income)
Spain	**10.0**	**47.0**	**16.5**
Australia	6.5	19.5	6.8
Canada	2.0	3.0	0.9
Denmark	3.0	5.0	0.0
Finland	3.0	14.0	1.2
France	7.0	8.0	1.2
Germany	9.0	24.0	4.7
Italy	9.0	13.0	15.7
Netherlands	7.0	11.0	13.0
Portugal	11.0	54.0	13.4
United Kingdom	6.0	18.0	0.7
United States	5.0	5.0	0.5
OECD	6.5	19.5	6.8

Source: The World Bank Group, *www.doingbusiness.org.*

For SMEs and start-ups, access to credit has been facilitated

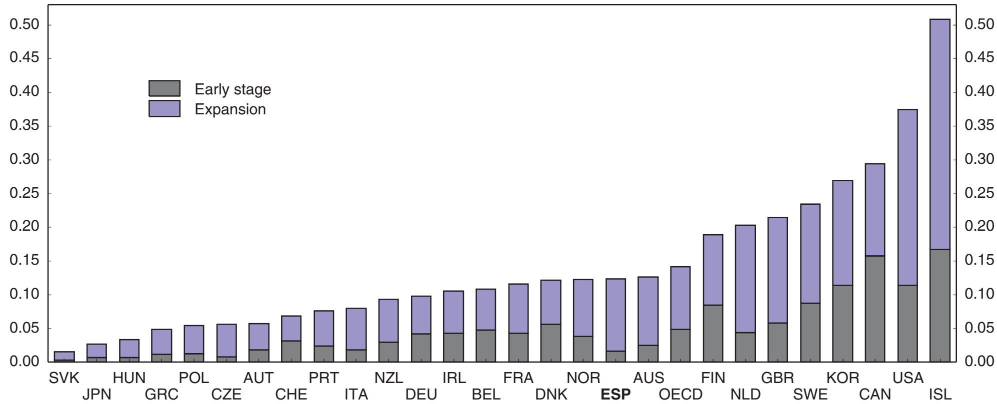
Another aspect of the support plan for entrepreneurship concerns SMEs' access to credit. According to Lopez-Garcia and Puentes (2006), the structure and level of young firms' borrowing influences their chances of survival irrespective of their profitability, which would seem to point to imperfections in the financial market. The system of subsidies to SMEs has been greatly reinforced to make good these shortcomings. The total amount of such aid, which prompted a very strong demand by firms in 2005 and typically made it possible to obtain low-interest credits, was budgeted at € 8 billion in 2006 (0.9% of GDP), a 75% increase. The PFE specifically comprises programmes that encourage the internationalisation of SMEs and stimulate the creation and growth of firms, especially technology-based. In this connection, subsidies are to be made available to encourage firms to modernise on the technological, management and marketing fronts (*Innoempresa* programme), while a pilot project (innovation clusters) is also to be launched to stimulate research co-operation between clusters of firms with similar markets and technologies; this will be done by means of a virtual network. These programmes should be implemented with care in order to reduce their risks of deadweight loss.

Efforts are being made to promote venture capital

To complement these efforts, work is also being done to build up the venture-capital market. It is a market that is much used in North America and the United Kingdom to finance projects put up by young entrepreneurs with no professional track record or financial guarantees, who sometimes need several years' investment before becoming profitable. And in fact a recent study has shown that venture capital also had a positive impact on Spanish firms, especially those geared towards high-tech activities (Martí *et al.*, 2005). Such investment, which has expanded since the mid 1990s, is still less than the average OECD country and, above all, is concentrated on major transactions and low-risk, capital-widening operations in mature firms (Figure 4.9). In 2004, operations in favour of start-ups accounted for just 3.5% of total venture-capital investment, compared to an OECD average of 7%. Furthermore, the high-tech sectors attracted less than 20% of this type

Figure 4.9. **Venture capital investment flows**

Per cent of GDP, 2000-03[1]



1. 2000-2002 for Iceland; 1998-2001 for Australia, Japan, Korea and New Zealand.

Source: OECD, Economic Policy Reforms: Going for Growth, 2006.

of capital between 2000 and 2003, as against an EU15 average of 35% and 75% for the United States.

The difficulty of channelling venture-capital investment in the direction of young firms stems from a variety of factors. These include a financial culture resistant to risk, which is partly due to the important role played by commercial and savings banks as investors on this market, while institutional investors are not very active because of their lack of expertise and on account of regulatory restrictions.[36] Foreign companies, and particularly British ones which accounted for almost half of all venture-capital investment in Spain in 2001 and which have solid management experience, lack information about investment opportunities. They have few contacts with universities and few incentives to establish such contacts since there are obstacles to academic staff participating in commercial activities (see above). Lastly, entrepreneurs are often reluctant to turn to venture-capital companies for fear of losing control of their firms and through ignorance about the assistance that they can obtain with regard to management, planning and marketing strategy – over and above financial backing.

To develop venture-capital activity and channel it towards financing young technology-based firms, measures adopted in 1999-2000 included tax deductions on the capital gains and dividends of start-ups and the creation of a second market (*Nuevo Mercado*) for technology-based firms. These initiatives had little impact, partly because of the bursting of the equity-market bubble in 2001. However, the 1999 law also had gaps which prompted the majority of Spanish venture-capital firms to organise themselves outside the intended legal framework and use foreign financial vehicles. As was the experience of many other countries, moreover, the Spanish economy proved to be too small to ensure an adequate volume of transactions for its second market, which is a major hindrance to the development of venture capital, because it prevents investors from realising capital gains on their investments.

The regulatory framework was therefore modified in 2005 to eliminate these shortcomings, with the introduction of a simplified system involving less administrative supervision for venture-capital companies. Investment regulations were also made more flexible by authorising acquisitions of listed companies for delisting operations and by

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

broadening the definition of activities in which these companies can invest. The new framework also permits the creation of funds of funds facilitating access to this sector for institutional and private investors, while tax breaks have been extended so as to encourage the emergence of business angels. In addition, a government programme (NEOTEC venture capital) with funding of € 176 million has been launched to cover the period 2006-2013 and promote the creation of Spanish technology-based start-ups through participations in venture-capital companies (10 to 15 funds) each investing in at least 10 start-ups or early-stage, technology-based SMEs. This investment will be long-term and will be less sensitive than private capital to cyclical fluctuations. By setting up a network organised with the help of the CDTI, the programme also seeks to improve the information available to investors (foreign in particular) concerning the opportunities provided by Spain's technology-based firms. These changes, which seem to be appropriate, may be complemented by a reduction of the regulatory obstacles to institutional investors' participation in venture-capital companies. It would however probably be wise to evaluate these changes thoroughly, so as to ensure that the use of the expanded range of activities in which these companies can invest, with a more flexible framework and generous tax deductions, has a favourable cost-benefit ratio.

Strengthening competition in goods and services markets is beneficial for innovation

The positive impact that competition has on private-sector entrepreneurship and innovation is stressed in empirical studies (OECD, 2003b). Further liberalisation of goods and services markets appears to be necessary in Spain, as is shown by the OECD's regulation indicators, even if the latter do not take account of certain recent reforms aimed at facilitating business creation, for example (Figure 4.10). Competition remains weak in certain sectors, such as energy and also telecommunications, where high-speed Internet connection costs are high. Then again, while there is appreciable openness to foreign markets and to inward direct investment, the risks of regional segmentation of the domestic market have increased in recent years – for example in retail distribution. Markets that are too narrow and fragmented prevent firms from reaching a critical size, which lessens their capacity to innovate. Greater competition in the area of government procurement, which is to a large extent dominated by the territorial authorities, would no doubt also be desirable even if, in this event, improved planning of government technological requirements would help Spanish firms to prepare themselves better to contend with foreign competition when responding to government calls for tender. All in all, increased competition would be beneficial for the creativity of the Spanish economy – as is recognised by the government, which has taken a number of measures in this area. These questions are analysed in greater detail in Chapter 5 below.

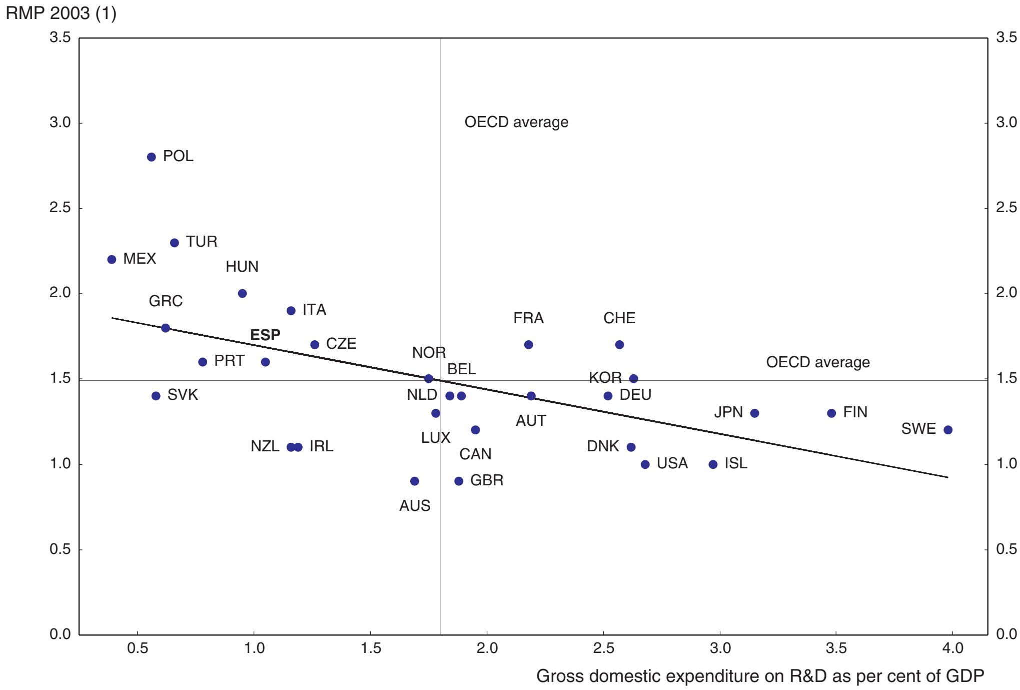
Reducing the duality of the labour market

Efforts must also be made to improve certain labour-market institutions which are not conducive to innovation and productivity growth. From this point of view, the most serious impediment is the very pronounced duality of the market, between workers with permanent jobs and those with temporary contracts. The latter account for one-third of wage-earners, *i.e.* the highest rate among the OECD countries, where the average is 13%. The extensive use of such contracts with their low redundancy costs (eight days of salary per year of service in the firm) is due to Spain's maintenance of employment protection legislation (EPL) that is uncertain[37] and, in the main, very rigid for workers on indefinite-

Figure 4.10. **Product market regulation and R&D expenditure**

Gross domestic expenditures on research and development

2003 or latest year available



1. Indicator of product market regulation: 0 (least restrictive) to 6 (most restrictive).

Source: OECD, Going for Growth, 2006 and OECD, Main Science and Technology Indicators database.

term posts. Dismissals that the courts deem unfair in 90% of cases incur redundancy costs amounting to 45 days of wages per year of service up to a ceiling of 42 months for standard contracts. Reforms have been in progress going back to 1997, with the object of introducing financial incentives and reducing redundancy costs for the hiring of certain groups of workers on permanent contracts. Taking on women and persons aged under 30 and over 45 thus benefits from redundancy costs reduced to 33 days of wages per year of service, with a maximum of 24 months. Even with these reforms, however, the protection afforded to permanent workers remains amongst the highest in the OECD area (Table 4.2). The fact is that the proportion of temporary jobs has barely declined since 1997, although the private-sector share has fallen while that of the public sector has grown, especially in local government.

Labour-market segmentation acts negatively on innovation and productivity in two main ways. In the first place, it hinders the introduction of innovative products and processes within firms. Rigid EPL frequently results in a sub-optimal adjustment by firms to innovation and technological change inasmuch as it retards the organisational adaptation needed to take full advantage of these technologies, as for example in the case of ICTs in Spain. The negative link between redundancy costs and innovation is generally more marked in low-tech than in high-tech sectors, the latter not being very highly developed in Spain since innovation frequently results in workforce cuts or redeployment[38] (OECD, 2003b). Another factor is that the duality of the labour market keeps "marginal" workers (immigrants, women and young people) in unstable situations (Figure 4.11), which does not favour their attachment to firms offering them often very

Table 4.2. **Overall EPL indicator and severance payments for workers with permanent contracts**

Compensation in months of salary, 2003

	Unfair dismissal, compensation at 20 years of tenure	No-fault individual dismissal, compensation at 20 years of tenure	Overall strictness of protection[1] (index)
Spain[2]	**22**	**12**	**2.9**
Australia	6	1	1.5
Austria	6	0	2.4
Belgium	14	0	1.7
Canada	..	2.1	1.3
Czech Republic	8	1	3.3
Denmark	9	1.5	1.5
Finland	14	0	2.2
France	16	4	2.5
Germany	18	0	2.7
Greece	12	5.9	2.4
Hungary	10	5	1.9
Ireland	24	1.9	1.6
Italy	15	0	1.8
Japan	9	2.9	2.4
Korea	6	0	2.4
Mexico	16	3	2.3
Netherlands	18	9	3.1
New Zealand	..	0	1.7
Norway	12	0	2.3
Poland	3	0	2.2
Portugal	20	20	4.2
Slovak Republic	10	1	3.5
Sweden	32	0	2.9
Switzerland	6	2.5	1.2
Turkey	26	20	2.6
United Kingdom	8	2.4	1.1
United States	..	0	0.2

1. The overall indicator takes into account other variables, like procedural barriers, notice period for dismissals and difficulty of dismissals. Scores can range from 0 to 6 with higher values representing stricter legislation.
2. In Spain close to 90% of dismissals are considered as unfair dismissals by tribunals.

Source: OECD (2004), *Employment Outlook* and "Assessing the OECD Jobs Strategy: Past Developments and Reforms", ECO/CPE/WP1 (2004)8.

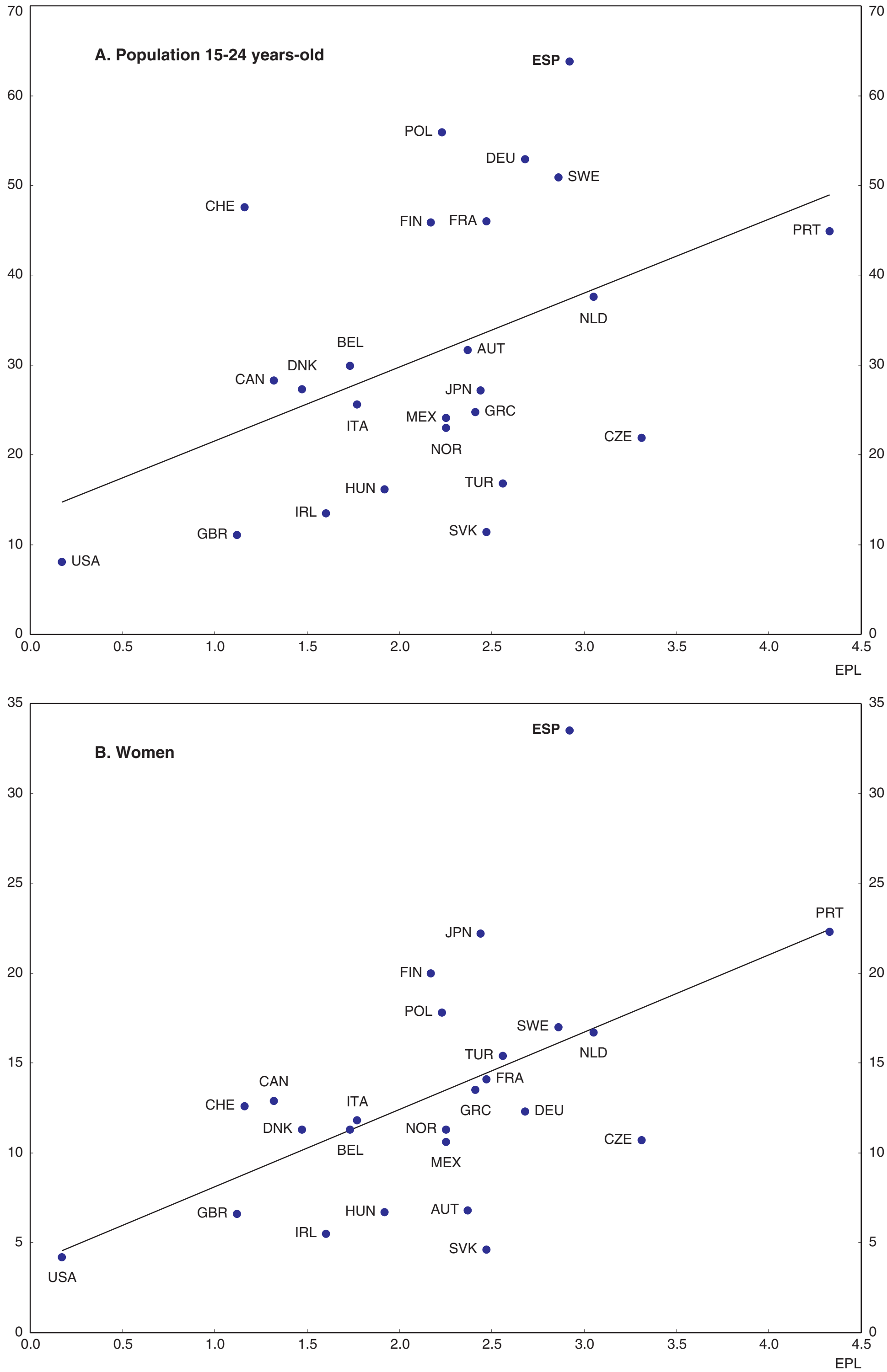
short contracts.[39] This does not encourage such employees to make an effort, whereas some of them are better trained than the established workers and could help the firms in question to absorb new technologies. A low level of attachment also lessens the incentive for temporary workers and firms to invest in specific occupational training, while the solid protection enjoyed by permanent workers can also potentially discourage them from boosting their human capital since they run no risk of losing their jobs by failing to improve their skills.

A second way in which excessively rigid EPL is detrimental to innovation is that it slows the reallocation of employment to more innovative, high-productivity sectors, which has a strong potential impact on productivity growth (Caballero *et al.*, 2004). Legislation which is too restrictive not only hinders adjustment in low-tech sectors but also discourages worker mobility, since employees who voluntarily change jobs lose their protection (OECD, 2006d). This lack of mobility is, moreover, underscored by analysis of gross job flows on the labour market.[40] Lastly, the prevalence of temporary jobs over permanent jobs is likely to skew

Figure 4.11. **Temporary work and employment protection legislation (EPL)**

Temporary workers as per cent of total dependent workers of the group

EPL for permanent workers: Index scale of 0-6 from least to most restrictive, 2003[1]



1. 2001 for the United States temporary employment data.

Source: OECD.

investment flows towards not very innovative sectors such as construction, where the majority of jobs are temporary.

In addition to the segmentation of the labour market, the wage negotiation system is another factor that is not very conducive to the accumulation of human capital. It is a complex system, in which discussions take place at provincial and sectoral level more often than at enterprise or national level, and it has the effect of compressing the wage structure between employees with different levels of education, thereby weakening incentives in favour of human capital formation.[41] Also, active labour market policies (ALMPs), which can play a useful role in helping both the jobless and employed workers to adapt to technological changes, are of limited effectiveness. In 2004, two-thirds of this expenditure (0.5% of GDP, which is the highest figure among the OECD countries behind Belgium) served to subsidize jobs (mainly permanent ones with reduced redundancy costs), whereas the cost-effectiveness ratio of this type of action tends to be lower than for other activation measures, mainly because of large deadweight losses (Martin and Grubb, 2001). These other measures, which are managed by the regions, include assistance in looking for work and targeted training; they are not very highly developed by comparison with other countries and are not regularly evaluated, and their co-ordination with the passive measures managed by central government is inadequate (OECD, 2005c).

Fully aware of the need to take fresh steps to reduce labour market segmentation, given its negative effects – including on the social front, the authorities recently adopted new measures which came into force on 1 July 2006. These are the fruit of more than a year of negotiations, which resulted in a consensual agreement with the unions and employers, in accordance with the commitment entered into by the government at the start of its term not to implement any changes without the consent of the social partners. *First*, the measures are designed to limit the excessive use of temporary contracts. Those who have had at least two consecutive contracts on the same post, covering more than 24 months within a period of 30 months, will be entitled to a permanent contract.[42] On top of this measure, moreover, will come others aimed at limiting turnover, which will be discussed during collective bargaining. *Second*, the reform increases and changes the financial incentives in favour of permanent contracts with low redundancy costs. The period during which social insurance contributions in respect of these contracts are reduced has been extended from two to four years (or to the entire duration of the job for those over 45), while these subsidies will in future be calculated not on a proportional but on a flat-rate basis, which will favour those on lower wages, with rebates ranging between € 500 and € 3 200 per year, depending on the characteristics of the beneficiary. *Third*, an emergency plan (*plan de choque*) has been adopted with the object of encouraging a reduction in temporary jobs: all temporary contracts converted into permanent contracts before end-2006 will attract an annual subsidy of € 800 for three years, including for workers aged between 30 and 45 who do not benefit from subsidised contracts. Temporary contract conversions concluded before end-2007 will also attract redundancy costs reduced to 33 days of wages per year of service, a possibility which was previously confined to contracts signed before end-2003. *Fourth*, a reduction in social insurance contributions and an increase in certain benefits were decided. The rate of unemployment insurance contributions for permanent workers, in particular, was cut from 6 to 5.75% and will fall to 5.5% on 1 July 2008, whereas it is being kept at 6.7% in the case of temporary jobs. Also, unemployment cover for workers aged over 45 and without dependants has been improved. *Lastly*, the government has undertaken to modernise the public employment services and increase the resources allocated to ALMPs in forthcoming budgets and also to increase workplace inspectorate numbers by 20% in order to ensure that the reform is strictly adhered to.

This agreement, signed against a background of rapid growth in employment, is a positive and reassuring signal regarding the vitality of social dialogue in Spain, and it points to the existence of a consensus among the social partners on the need to reduce labour-market segmentation. It is probable that these measures will reduce the proportion of temporary jobs in the economy without impairing the buoyancy of job creation, since they do not lessen market flexibility. Mention has been made of the conversion of approximately 1 million temporary contracts to permanent ones, out of the 5.3 million existing temporary jobs, which would lower the temporary employment rate from 33.3 to 26.8%, according to the authorities.[43] The rate would remain higher than in other countries, partly because of a production structure biased towards sectors which are big users of temporary and seasonal employment (construction, tourism, agriculture).

While the reform seeks to reduce the excessive use of temporary contracts, it leaves the level of protection afforded to permanent jobs intact, the latter benefiting in return from increased subsidies to make them more attractive. However, the cost effectiveness of such remedies is questionable. The budgetary cost of the reform is high – in the region of 0.15% of GDP,[44] quite apart from the increase in workplace inspectorate numbers. The fall in the temporary employment rate could, in addition, be more moderate than predicted and partly transitory.[45] Firms will probably try to get round the constraints on using temporary contracts for a particular worker on a given post for more than two years. Furthermore, the shift to flat-rate subsidies is liable to result in redistribution in favour of low-wage workers, especially the young, to the detriment of those over 45, thereby causing something of a substitution effect between these groups. The reduction in unemployment insurance contributions on permanent jobs is welcome, but it only slightly narrows the gap between the cost of these indefinite-term contracts by comparison with temporary ones.[46] As past experience shows, it is doubtful whether transitory aid in support of permanent contracts can have a long-term impact on their use, even though the duration of these subsidies has been extended. More fundamentally, the reform is not going to make the market more fluid for permanent workers, or reduce the marginal and precarious nature of temporary jobs, even if the relative balance between these two markets has changed somewhat. This means that the functioning of the labour market will remain unhelpful when it comes to the economy adjusting to shocks such as those of globalisation, which require structural adjustment of the productive system in favour of sectors with a higher technology content. The real challenge in seeking to create the better-quality jobs needed to back up this sort of adjustment is to ensure that the labour market allows firms to be more receptive to technological changes and the production structure to shift more easily towards innovative, higher value-added industries.

One interesting way of moving in that direction would be to promote labour market entry via a single contract by introducing a gradual increase in severance pay based on length of service. A more flexible single contract could encourage innovation in sectors at the forefront of technology, where a certain degree of experimentation, including with regard to employment, is essential. Gradually increased employment protection would also avoid firms having to make choices based on threshold effects, which habitually make them balk at converting an expiring contract which is very flexible into one which is very rigid. It is important to look for a better balance between the employer's need for flexibility and the employee's demand for security and protection against unemployment. This means modifying the relative importance of employment protection legislation, active labour market policies and the unemployment insurance system, and improving co-ordination between these institutions. Making greater use of activation measures in exchange for less permanent employment protection, as in Denmark, could for example be envisaged. It might also be worth drawing on the Austrian model, in which every wage earner has an individual redundancy protection account into which contributions are regularly paid that the employee can use upon loss of job, or at the end of one's career to supplement retirement savings. This sort of approach would eliminate the uncertainty involved in the application of EPL and would increase the mobility of permanent workers who would still be protected in the event of a voluntary change of job. Reforms along these lines would nevertheless be costly for the budget or for firms if the financing of the measures involved was not coupled with a reduction in net wages. That said, they would probably be more effective than the reform recently introduced, which is itself quite expensive.

Improving the balance of the reform strategy so as to strengthen innovation performance

Improving the Spanish economy's innovation performance, which is one of the key objectives of government in its efforts to stimulate productivity growth, rests on a comprehensive reform strategy, since it is designed to increase the effectiveness of innovation policy proper, to improve the performance of the education system and to make the framework conditions more conducive to innovation. This is a welcome approach, international experience having shown that the countries with a balanced and sound performance in these three areas usually obtain the best innovation outcomes (Trend Chart, 2005). Analysis of the main components of Spain's reform strategy shows that significant efforts have been made in all these sectors. However, the intensity and ambition of the measures undertaken does not always seem to match the scale of the problems to be solved, and there is a certain imbalance between the different poles of this strategy. The reform of *innovation policy* based on the *Ingenio 2010* Plan is particularly developed and backed by substantial funding. Because of the diverse nature of the existing obstacles and the various forms of innovation activities, the approach adopted, which involves taking action on numerous fronts and having recourse to a variety of instruments, seems appropriate, although it will be important to be very careful on the efficient use of the public resources spent. The draft university reform also seems commensurate with the important problems to be solved in this sector, even though it will probably need to overcome resistance to be approved. Lastly, much more ambitious measures are clearly needed in the labour market, the positive impact of which would extend well beyond the expected improvement in innovation performance. Recommendations aimed at better balancing this reform strategy and maximising its chances of success are presented in Box 4.2.

Box 4.2. **Recommendations for strengthening innovation performance**

Strengthen innovation policy

- Consider reducing the splitting up of research teams by abolishing the restrictions whereby there can be only one government-backed project per principal researcher.
- Improve the governance of public research centres so as to ensure that they have sufficient budgetary and administrative independence to be able to recruit and manage staff and purchase capital goods.
- Enhance the social standing of research in the public sector with the object of improving its quality, which means more attractive compensation and recruitment based to a greater degree on performance evaluation.
- Improve technology transfers through increasing the ability of technology transfer offices to act by grouping them together or organising them in networks.
- Improve co-ordination among innovation-oriented programmes within central government and among the regions so as to facilitate access to information by firms, and particularly SMEs.
- Devote special attention to assessing the different types of incentives (subsidies, tax deductions, reduced social insurance contributions) aimed at encouraging private research and innovation expenditure, and to diffusing ICTs in order to draw lessons and carry out the policy changes that are possibly required.

Strengthen education, especially at the higher level

- Improve statistical information on the functioning and results of universities as well as dissemination.
- Attribute more importance to applied research and technology transfers to firms in the researcher assessment system. Apply this assessment to non-civil-servant researchers. Publish the results of the national quality agencies' assessments on a regular and comprehensive basis.
- Strengthen the system of income-contingent loans for students. Increase university spending per student, financed in part by raising tuition fees.
- As is provided for in the university reform project, remove the obstacles to teachers moving to the private sector and participating in spin-off firms. Increase the freedom of universities to recruit non-permanent professors and to adjust all professors' remuneration according to performance.
- At secondary level, increase the use of computers in the teaching of science subjects, particularly mathematics.
- In further education, step up assessment work so as better to adjust to demand from firms. To this end, joint financing of training projects by firms and government would contribute to ensure that public subsidies go where they are the most useful.

Improve the framework conditions for entrepreneurship

- Persist with efforts to step up competition (see Chapter 5).
- Improve the planning of general government's technological requirements so as to help Spanish firms to be better prepared to respond to public tenders.
- Reduce the regulatory obstacles to institutional investors' participation in venture-capital companies. Make sure that the use of the expanded range of activities in which these companies can invest, with a more flexible framework and generous tax deductions, has a favourable cost-benefit ratio.
- Reform the collective bargaining system by encouraging discussions at firm level so that the wage structure between employees with differing levels of education provide appropriate rates of return on university training.

Box 4.2. **Recommendations for strengthening innovation performance** *(cont.)*

- Promote a more fluid labour market for permanent workers. To this end, consider the introduction of a single work contract by bringing in a gradual increase in required redundancy payments linked to length of service. Step up activation measures on the labour market in exchange for less protection of permanent employment. Reduce the uncertainty attaching to the application of EPL and the obstacles to the mobility of workers by drawing, if necessary, on the Austrian example of individual protection-against-dismissal accounts.

Notes

1. The gradual reduction in European structural funds between 2007 and 2013 will be partly offset by the creation of a € 2 billion EU innovation support fund for Spain (worth 0.2% of GDP).
2. To increase innovation in the EU, the European Commission promotes the co-ordinated development of technology platforms on strategic themes. For this purpose, the Framework Programmes have been established. They are based on research projects awarded on a competitive basis.
3. In May 2006, 16 362 researchers in 5 142 research groups were enrolled with Madrid+d, the body that manages the Madrid region's supply of research services, *i.e.* an average of three researchers per team. In addition to the small size of research teams, the frequent lack of foreign language skills of Spanish researchers could also explain their inability to win international projects.
4. The centres of the CSIC (*Consejo superior de investigaciones científicas*), the main public research organisation, have no budgetary or administrative autonomy, which restricts their financing capacity and ability to recruit new research groups. Also regularly criticized by the staff of these bodies and the companies using their services is the excessive rigidity of the way these centres are managed, which affects the acquisition of equipment (COTEC, 2004).
5. Currently, men between 30 and 45, which is the typical age for researchers who have completed their university degree, are not eligible for permanent contracts with lower severance payments and reduced social security contributions.
6. Available information suggests, however, that senior researchers (professor level) in universities have comparable statutory salaries to those of several other European countries even though more junior staff benefit from lower wages (OECD, 2006).
7. In 2004, 7.5% of university research was funded by businesses, *i.e.* more than one percentage point more than the OECD average. This figure had stood above 8% in 1995 (OECD, 2006a).
8. At end-2001, 95% of OTTs employed fewer than five people. Each technician had on average to cater for 165 researchers and manage 85 contracts.
9. Being general government employees prevents university professors from pursuing full-time jobs in companies. Should they take a voluntary leave of absence, rejoining the public service involves having to again sit a competitive examination.
10. According to an OECD (2003), the number of spin-offs and start-ups per OTT was 0.48 of a unit in Spain in 2001, whereas in the other countries considered it was 1.44 on average. The number of licenses negotiated per public institution was equally small, with just 9% of patents being the subject of a license, compared to between 30 and 50% in Germany, Korea, the Netherlands, Norway and Switzerland.
11. Because of the uncertain returns on R&D expenditure, firms have less incentive to innovate, particularly since, in the event of success, competitors are likely to benefit from the innovation even though intellectual property rights can be protected for a number of years. On the other hand, the customers and suppliers of innovative firms also enjoy positive spin-offs, and the industrial rate of return on such expenditure is less than the social rate of return because there are positive human-capital externalities.
12. In the 2005 budget, 42% of funds allocated to research consisted of aid to private firms, and 93% of these resources were granted in the form of subsidised credits (COTEC, 2005). This type of support rose between 1995 and 2005 from 5% to 54% of the State research budget (COTEC, 2004).

13. Between 2001 and 2003, the State financed more than 10% of corporate R&D, whereas the average for the OECD was 7%. The proportion of researchers in firms fell from 28.6% in 1990 to 22.8% in 1995 but has risen since then to 29.8% in 2003 (OCDE, 2006).

14. Deductions can reach as much as 50% of expenditure on a broad range of operations, including staff expenditure, the acquisition of technology and purchases of material. However, just 20% of R&D and innovation projects are estimated to have benefited from these incentives in recent years, at a budgetary cost of nearly € 300 million in 2004 (COTEC, 2005).

15. These targets include: increasing the proportion of firms using e-commerce (from 8% at present to 55% in 2010) and of those with fewer than 10 employees with an Internet connection (from 36% to 70%). The aim, too, is to increase the proportion of households connected to the Internet, the number of computers connected to the Internet per student and the availability and utilisation of on-line public services.

16. In the past in Spain, the subsidies seem often to have benefited large companies, which would have undertaken research in any case (Corchuelos and Martinez-Ros, 2004; Gonzalès *et al*., 2004).

17. The initial draft of corporate tax reform (see chapter 3) aimed at removing tax deductions for innovation. The authorities have postponed this measure, which could however gradually be applied as from 2012.

18. In this domain, the issue of the relative efficiency of tax breaks versus grants or subsidies remains open as international observation shows both examples of public intervention leading to sizeable waste of money (*e.g*. Japan's fifth generation software project) but also occasionally to considerable progress (with the development of information technology in the United States).

19. This focus on evaluation is part of a broader strategy aimed at increasing the effectiveness of public policies by setting up quality appraisal agencies (see Chapter 3).

20. Only 15% of CDTI projects in receipt of public subsidies concerns service enterprises, whereas the service sector accounts for 47% of value added. Tamura *et al.* (2005) suggest some possible policy strategies to stimulate innovation in the service sector.

21. Eighty-nine per cent of the generation born in 1940 had no qualifications or only primary education, compared with 40% of the generation born in 1970. The proportion is approximately 15% in the four major European countries (COTEC, 2005).

22. The research, using an indicator developed by Hirsch (2005), assesses the quality of researchers' output in a given field on the basis of the number of published articles that have been cited. The value of the indicator, which can also be calculated for departments or even regions in each discipline, confirms the modest quality of Spanish university research (Imperial and Rodríguez, 2006).

23. For students in long-cycle courses the rate varies between 0.1% and 20% according to the field (CyD, 2005). Available estimates suggest that more than 90 000 students drop out of their university courses every year, with an estimated cost of € 1.2 billion or 0.1% of GDP (El País, 2006a).

24. The average ratio of students to teachers, 11.8 in 2003, was lower than the OECD average (14.9) and, as indicated by (Subirats, 2001), varied between 6 and 29 according to the university at the turn of the century.

25. In the early 1990s, 12.5% of universities were private and accounted for 3.4% of first- and second-cycle students. In 2004-05, they represented 31.5% of the total number of institutions and 8% of students.

26. The lack of consideration is reflected, for example, in a paucity of technical and material support (see above).

27. According to a recent survey, 70% of the university professors have obtained their tenure following a selection process in which they were the unique candidate and 50% of them have been recruited by the university where they studied (Cruz-Castro, 2006).

28. The *I3* programme subsidises the recruitment into permanent positions of researchers who have taken part in the *Ramon y Cajal* programme. Aid is also granted if a researcher is recruited from abroad for a permanent teaching position and to allow the most productive researchers to spend more time on research (by freeing them from teaching tasks). At the end of 2006, about 10% of the staff concerned still did not have a permanent contract.

29. University study grants represented only 0.08% of GDP in 2003 compared with an OECD average of 0.25%, and the system provides only modest subsidies to a small number of students: in Catalonia, only 12% of students have a grant, and the amount of the grant is plainly inadequate (Ferrer, 2006).

30. Only 70% of teachers take part in the assessment scheme, and the failure rate among participants varies between 20% and 50%, depending on the field. Teachers can also ask to be assessed every five years on their teaching performance in order to obtain another bonus, but in this case almost all of them obtain it.

31. However, the law addresses many other issues, such as relations between the public and private sectors, including religious education, and certain aspects of teachers' careers. It also encourages greater involvement by families in the management of schools.

32. Considerable differences exist between the results of OECD countries in the education of the children of immigrants (OECD, 2006c). Generally speaking, the best results are achieved by countries that allow schools greater autonomy while monitoring their results.

33. According to Eurobarometer (2006), 56% of Spaniards speak no foreign language at all, compared with a European average of 44%.

34. The relationship between competition and innovation depends on the difference between profits before and after innovation (Aghion *et al.,* 2002). If competition increases from a low level, existing firms are prompted to innovate in response to this situation, while potential entrants innovate in order to catch up with or overtake the technologies used by the operators in place. If, however, competition is very keen, the gains deriving from an innovation may be too small to act as a sufficient incentive, while lower profits may also reduce firms' capacity to finance their innovative projects.

35. According to GEM (2004), the proportion of new firms with strong growth potential is well below the average for other countries. Their projections show that fewer than 1% of firms in existence for between 3 and 42 months are likely to increase their labour force by more than 20 workers and their turnover by more than 50% within the space of five years, compared with an EU average of 8½ per cent.

36. Investment in unlisted companies by insurance undertakings and pension funds cannot exceed a maximum of 10%, but this ceiling is in fact rarely reached (Tejada, 2003).

37. A major area of uncertainty has to do with whether redundancies are justified or not.

38. High redundancy costs are not necessarily a constraint in high-tech sectors, which are characterized by a cumulative innovation process. In these sectors, it is in fact less costly to improve the skills of existing staff than it is to recruit new workers without the necessary specific training.

39. In 2005, 15.6 million temporary contracts were signed (ten times more than the number of permanent contracts), *i.e.* an average of 3 per year per person for the 5.2 million workers concerned.

40. In Spain, for workers with temporary contracts, flows into and out of unemployment and employment are similar to those in countries with labour markets with a high level of dynamic efficiency, like the United States, whereas for workers with permanent contracts, the scale of such flows is similar to that found in more rigid markets like Portugal's (Estrada *et al.*, 2002).

41. Between 1990 and 2001, 13% of negotiations took place at enterprise level, 27% at national level and 60% at intermediate, mainly provincial level. In 2000, the salaries of people with university degrees were, on average, twice those of manual workers in wage agreements signed by firms, whereas the ratio was 1.7 in the case of national agreements and just 1.5 in those agreed at provincial level (Izquierdo *et al.*, 2003).

42. According to official social security records, at mid-2006 some 300 000 persons were likely to find themselves in this situation (Gómez and Pérez Infante, 2006).

43. The initial results of this reform are encouraging: in the two months following its implementation, the number of indefinite contracts negotiated was 50% higher than during the corresponding period a year before, mainly because of the strong rise in the conversions of temporary to permanent contracts.

44. The budgetary cost of these measures, two-thirds of which stems from the reductions in contributions, is put at € 871 million (less than 0.09% of GDP) in 2006 and € 1.3 billion (0.13% of GDP) in 2007 and is likely to reach € 1.7 billion (0.16% of GDP) as of 2009.

45. Bentolila and Dolado (2006) put the probable fall in the number of temporary jobs at 300 000. Gómez and Pérez Infante (2006) are more optimistic, however.

46. Calculated over 365 days, the implicit rate of contribution for the protection of employment on contracts with redundancy costs of 8 days is 2.2%, while it is 9.0% for 33 days and 12.3% for 45 days, *i.e.* rates which, in the latter two cases, are well above the unemployment insurance rate of 5.75%.

Bibliography

Aghion, P., N. Bloom, R. Blundell and P. Howitt (2002), "Competition and Innovation: an Inverted U Relationship", *NBER Working paper*, No. 9269.

Alemy, Ch., E. Castro, I. Fernández and A. Gutierrez (2006), "Cooperación Universidad-Empresa en la Comunidad Valenciana", presentation to a seminar: Universidad emprendedora. Competitividad y entorno institucional. Parques científicos y spin-off universitarios. 8 febrero, Valencia (España), *www.ingenio.upv.es/intranet/publicaciones/Archivos/AC/AC99_1_CooperacionUEenCVEnc.pdf*.

Baumol, W.J. (2003), "Four sources of Innovation and Stimulation of Growth in the Dutch Economy", in G. Gelauff, L. Klomp, S. Raes and T. Roelandt (eds.), *Fostering Productivity: Patterns, Determinants and Policy Implications*, Elsevier Science, Amsterdam.

Bentolila, S. and J.J. Dolado (2006), "Anatomia de la Reforma Laboral", Article published in *Expansión*, 24 May.

Budría, S. and A.I. Moro-Egido (2005), "Education, Over-education, and Wage Inequality: Evidence for Spain", FEDEA, *Estudios sobre la economía española*, EEE211, September.

Busom, I. (2000), "An Empirical Evaluation of the Effects of R&D Subsidies", *Economics of Innovation and New Technologies*, Vol. 9.

Caballero, R.J., K. Cowan, E. Engel and A. Micco (2004), "Effective Labor Regulation and Microeconomic Flexibility", *NBER Working paper* 10744.

Chant, J. (2005), "How We Pay Professors and Why It Matters", *Education Papers*, C.D. Howe Institute, No. 221, November, *www.cdhowe.org*.

Corchuelos, M.B. and E. Martinez-Ros (2004), "Incentivos fiscales a la I+D y su aplicación en las empresas manufacteras españolas", *www.uib.es/congres/ecopub/papers/microeconometrics1/Corchuelo-Martinez.pdf*.

COSCE (2005), "Acción CRECE, Comisiones de Reflexión y Estudi de la Ciencia en España", Confederación de Sociedades Científica de España, *www.cosce.org/pdf/crece.pdf*.

COTEC (2004), "El Sistema Español de Innovación: Situación en 2004", Fundación COTEC para la innovación tecnológica, Madrid, *www.cotec.es*.

COTEC (2005), *Informe COTEC 2005*, *Tecnología e Innovación en España*, Fundación COTEC para la innovación tecnológica, Madrid, *www.cotec.es*.

Cruz-Castro, L. (2006), "Tenure and Mobility at Universities and Public Research Centres: Evidence from Individual Trajectories Data", Contribution to the Proceedings of the OECD Workshop "Research Careers for the 21st century", Madrid, 26-27 April; see also CSIC nota de prensa, *www.csic.es/prensa*.

CyD (2005), *Informe CYD 2005*, Fundación Conocimiento y Desarrollo, *www.fundacioncyd.org/Publicaciones/InformeCyD2005.asp*.

Dolado, J.J., C. Garcia and J.F. Jimeno (2000), "Drawing Lessons from the Booms of Temporary Jobs in Spain", *CEPR, discussion paper series*, No. 2884.

El País (2006), "Los jovenes piden carreras estables", 21 de mayo.

El País (2006a), "Dejar la carrera tiene un precio", 23 de octubre.

Estrada, A, P. García and M. Izquierdo (2002), "Los Flujos de Trabajadores en España: el Impacto del Empleo Temporal", Boletín Económico, febrero.

Eurobarometer (2006). "Europeans and their Languages", European Commission, Special eurobarometer 243, February.

Eurostat (2003), "School Leavers in Europe and the Labour Market Effects of Job Mismatches", Population and Social Conditions, Theme 3-5/2003.

Ferrer, L. (2006), "B-Ks", El País, 30 de enero.

Garcia, E.C. and L. Sanz (2003), "The Evolution of Knowledge Management Strategies in PROs: the Role of S&T Policy in Spain", in OECD, *Turning Science into Business*, Patenting and Licensing at Public Research Organisation, Paris, GEM Spain.

Global Entrepreneurship Monitor (2004), "Informe ejecutivo GEM España 2004", www.*ie.edu/gem/resultados.html*.

Gómez, V. and J.I. Pérez Infante (2006), "Reforma Laboral: Más luces que Sombras", Article published in *Expansión*, 8 June.

 OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

Gonzáles, X., J. Jaumandreu and C. Pazó, (2004), "Barriers to Innovation and Subsidy Effectiveness", August, Forthcoming in the *Rand Journal of Economics*, *http://webs.uvigo.es/cpazo/research_archivos/barriers.pdf*.

Hirsch, J.E. (2005), "An Index to Quantify an Individual's Scientific Research Output", Department of Physics, University of California, San Diego, *http://polymer.bu.edu/hes/articles/rp-hirsch05.pdf*.

Imperial, J. and A. Rodríguez (2006), "La Univeridad española y el índice h", *El País*, 3 de mayo.

Instituto Universitario de Ciencias de la Educación (2006), "Formación e Investigación sobre el uso de las Tecnologias dela Información y la Comunicación en Matemáticas para la ESO y los Bachilleratos", Universidad Autónoma de Madrid, *www.infoymate.net/investiga/Publicación.pdf*.

Izquierdo, M, E. Moral and A. Urtasun (2003), "El Sistema de Negociación Colectiva en Esapña: un Análisis con Datos Individuales de Convenios", *Documento Ocasional* No. 0302, Banco de España. *www.bde.es/informes/be/ocasional/do0302.pdf*.

Izquierdo, M. and A. Lacuesta (2006), "The Recent Evolution of the Wage Inequality in Spain", Banco de España, mimeo, March.

Jaumotte, F. and N. Pain (2005a), "An Overview of Public Policies to Support Innovation", *OECD Economics Department working paper* No. 456.

Jaumotte, F. and N. Pain (2005b), "Innovation in the Business Sector", *OECD Economics Department Working Paper* No. 459.

King, D.A. (2004), "The Scientific impact of Nations", *Nature*, Vol. 430, 15 July, *www.nature.com/nature*.

Lopez-Garcia, P. and S. Puentes (2006), "Business Demography in Spain: Determinants of Firm Survival", *Documentos de trabajo* No. 608, Banco de España.

Martí, J., L. Alenany, N. Zieling and M. Salas de la Hera (2005), "Impacto Económico y social del capital riesgo en España: periodo 1991-2002", Asociación Española de entidades de capital riesgo, junio.

Martin, J. and D. Grubb (2001), "What Works and for Whom: A Review of OECD Countries' Experiences with Active Labour Market Policies", *Swedish Economic Policy Review*, Vol. 8, *www.ekradet.konj.se/sepr/Martin.pdf*.

Merino, J.C. (2005), "El esfuerzo en innovación está muy disperso", Entrevista, *Cinco días*, 7 de febrero.

Ministerio de Educación y Ciencia (2005), "Evaluación de la Educacion primaria 2003", Instituto Nacional de Evaluación y Calidad del Sistema Educativo (INECSE), *www.ince.mec.es/pub/evaprimaria2003.pdf*.

Ministerio de Industria, Tourismo y Comercio (2005), "Plan de Fomento Empresal", 27 de enero.

Modrego, A., A. Barges, Ll. Santamaría and O.F. Wald (2004), "Informe de Evaluación del Programa PROFIT", Ministerio de Educación y Ciencia (MEC) y Federación Española de Entidades de Innovación y Tecnología (FEDIT).

OECD (2002), *Dynamising National Innovation Systems*, OECD, Paris.

OECD (2003), *Turning Science into Business*. Patenting and Licensing at Public Research Organisation, OECD, Paris.

OECD (2003a), "Discussion Paper: S&T in Spain", DSTI/STP(2003)24.

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

OECD (2005), "Public-Private Partnerships for Research and Innovation in Spain: Background and Issues for Discussion", Directorate for Science, Technology and Industry, internal document, OECD, Paris.

OECD (2005a), *Education at a Glance*, OECD Indicators – 2005 Edition, Paris.

OECD (2005b), *OECD SME and Entrepreneurship Outlook 2005*, OECD, Paris.

OECD (2005c), *OECD Economic Surveys: Spain*, Paris.

OECD (2006), "Complete Results of the SFRI Questionnaire on the Working Conditions of Researchers in the Universities and Public Research Organisation", DSTI/STP/SFRI(2006)1, OECD, Paris.

OECD (2006a), "Main Science and Technology Indicators". Statistics, Vol. 2006/01.

OECD (2006b), *Are Students Ready for a Technology-Rich World? What Pisa Studies Tell Us*, OECD, Paris.

OECD (2006c), *Where Immigrant Students Succeed*, A comparative review of Performance and Engagement in Pisa 2003, OECD, Paris.

OECD (2006d), “OECD Jobs Strategy: Lessons from a Decade’s Experience”, ECO/CPE/WP1(2006)1.

Ramírez del Río, A. (2006), “Competitividad económica y fomación continua en España”, *El País*, 15 de enero.

Schleicher, A (2006), “The economics of Knowledge: Why Education is key for Europe’s success”, The Lisbon Council, *Policy Brief*.

Segura, I. (2005), “Los Centros Tecnologicos y la Innovación: Orígenes, Situación actual y perpectivas”, Federación Española de Entidades de Innovación y Tecnología (FEDIT), presentation to a seminar: Jornadas UNED : La cultura de la innovación, Madrid, 29 de marzo 2006.

Subirats, J. (2001), “Universidad en España: época de cambio o cambio de época?”, *Educar*, 28, 2001, *www.bib.uab.es/pub/educar/0211819Xn28p1.pdf*.

Tamura, S., J. Sheeshan, C. Martinez and S. Kergroach. (2005), “Promoting Innovation in Services”, in *Enhancing the Performance in the Services Sector*, OECD, Paris.

Tejada, R. (2003), “Venture Capital: Country Note: Spain”, *STI Working Papers*, No. 2003/18, Directorate for Science Technology and Industry, OECD, Paris, *www.oecd.org/sti/Working-Papers*.

TrendChart (2004), “Annual Innovation Policy Trends and Appraisal Report. Spain 2004-2005”, European Trend Chart on Innovation, European Commission Enterprise Directorate, *http://trendchart.cordis.lu/reports/documents/Country_Report_Spain_2005.pdf*.

TrendChart (2005), “2005 European Innovation Scoreboard. Comparative Analysis of Innovation Performance”, European Trendchart on Innovation, *www.trendchart.org/scoreboards/scoreboard2005/scoreboard_papers.cfm*.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

ANNEX 4.A1

The organisation and main instruments of innovation policy

Spain's innovation system was put in place in the mid-1980s and has evolved in line with a National Plan drawn up every four years by central government. The Plan is the basic instrument used to define technological and scientific priorities, with funding allocated mainly on the basis of projects that are selected on a competitive basis.

Numerous influences are at work at various institutional levels (European, national, regional and local) when it comes to identifying the priority areas for action. That said, it is during the annual budget discussions that the funding of the Plan is decided, depending on appropriations from the main ministries concerned, primarily Industry, Education and Science, but also Economic Affairs and Finance, Defence, Health and the Environment.[1] Until recently, the Plan consisted of a vast range of programmes contained in a framework that was fragmented because of the tendency of ministries to pursue their own initiatives. This was detrimental to the co-ordination of government measures, despite the efforts of the Inter-ministerial Commission on Science and Technology (CICYT), which oversees the application of the Plan (OECD, 2005a).

The Plan possesses four types of instrument: *i)* project financing; *ii)* measures in support of human resources; *iii)* the development of technology transfer mechanisms aimed at strengthening the link between science and business and co-operation between the public and private sectors; and *iv)* the financing of scientific and technological infrastructure and equipment, which is partly covered by European funds. In 2004, the vast bulk of subsidies (65%) went to project financing, while 29% went to human resources, 3% to technology transfers and 2% to infrastructure development.[2]

The Plan also comprises other economic policy measures, in particular a generous system of tax incentives for companies and participation in international research organisations and programmes (European Space Agency, European Framework Programmes, etc.). The resources devoted to innovation also include European structural funds, which make up some 13% of overall government funding and benefit the most disadvantaged regions, above all for the acquisition of scientific equipment.

Then again, the 17 autonomous regions and communities (CCAA) also have extensive powers with regard to innovation, and the majority of them have a science policy plan. Regional funding, which has gained in importance in recent years as a result of decentralisation, accounts for approximately 20% of that of central government. There is little coherence between the regional plans and the Plan (OECD, 2003a). Also, the strategies devised and the extent of the backing for R&D vary across CCAAs: regional public spending on R&D measured as a proportion of regional GDP ranged between 0.04% and 0.4% in 2003 (COTEC, 2005). Some regions have focussed on strengthening public research centres and universities, while others have encouraged private research and innovation more directly by developing technology centres.

Notes

1. In 2005, 47% of research budget credits (comprising a large share of those earmarked for defence) were managed by the Ministry for Industry and 28% by the Ministry of Education; government research bodies managed 20% of the total budget.
2. If not only subsidies but also subsidised loans are taken into account, the breakdown is: 48% to project financing, 9% to human resources, 26% to technology transfers and 17% to infrastructure.

OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

ANNEX 4.A2

Evaluating aid for the recruitment of company researchers

The IDE initiative (*Incorporación de doctores en empresas*) was launched in 1996 and then replaced in 2001 by the *Torres Quevedo* programme, the aim of which was to encourage firms to employ research staff. Under the IDE programme, the recruitment of this manpower was subsidised for a two-year period (€ 18 030 in the first year and half that amount in the second year), which resulted in 602 contracts being created between 1997 and 2001 in 371 firms (of which 36% had fewer than 20 employees). Since 2001, the programme has expanded in scope and resulted in the recruitment of 1 782 researchers in the private sector, of which 41% had doctorates. An appraisal of the IDE programme revealed the following points (COTEC, 2005):

- The various forms of aid had a positive impact on firms' innovation activities: 83% of them said that they were satisfied with the quality of doctoral training, their independence and capacity to take the initiative and to learn. The presence of these skilled staff facilitated collaboration with public research centres, which resulted in scientific publications being produced and, to a lesser extent, in patents being registered.
- These subsidies also had a favourable longer-run impact on the employment of those researchers who benefited from them: 80% of persons recruited kept a post in the private sector after the subsidies stopped (58% in the same company). They were usually offered indefinite-term contracts, with much bigger salary increases than in the case of those who remained in or returned to academia.
- However these subsidies, which were concentrated in the pharmaceutical, chemical and R&D services sectors, served mainly to intensify innovation activities already under way, rather than to trigger programmes in firms that were not innovating. The fact is that 80% of the firms that benefited from these programmes had already obtained government aid in support of R&D, while 64% said that they would in any case have recruited one of these graduates.

While having had a positive impact on firms' research capacities, this type of programme also therefore had an appreciable deadweight loss, even if it no doubt made it easier to match pre-existing vacancies and applications for highly skilled jobs.

ANNEX 4.A3

The role of technology centres

Technology Centres (TCs) play a crucial role in the improvement of innovation performance of enterprises, especially SMEs. TCs work closely with them, trying to solve the difficulties they face in order to achieve the level of competitiveness that the globalised market demands. By providing firms with technological services (R& D projects, technology transfers, technology advice, …) Technology Centres concretely foster innovation in enterprises.

There are various reasons why technology centres have developed unevenly across the regions (Segura, 2005). In the case of the Community of Valencia, for example, the emergence of the centres was helped by the existence of numerous SMEs working in the same sector (leather). In the Basque Provinces, technology centres appear to have developed in response to the universities' shortcomings in the area of research. In other cases, such as in Castilla y Léon, this development reflects a regional innovation policy choice. The experience of this Community, which is one of Spain's least developed regions, is an interesting one in that it is a response to the business community's lack of understanding, even distrust, as regards research and innovation.

The innovation programme put together in Castilla y Léon was based on developing a partnership with regional actors and setting up a network at local level using a bottom-up approach. Efforts were made to encourage intermediate bodies with a strong local presence to help to develop the local business community's interest in and access to innovation (Trendchart, 2004). It is an approach with heavy management costs in that it involves a large number of people and negotiated contracts (signing of agreements, recruitment of experts, …), but the results have been positive. Private R&D expenditure in Castilla y Léon, which stood at 0.5% of regional GDP in 2004, was thus close to the national average (0.6% of GDP) and above the figure (0.25%) for the other less developed regions (eligible for target 1 Community funding).

ISBN 92-64-02920-6
OECD Economic Surveys: Spain

Chapter 5

Improving the functioning of goods and service markets

As part of their efforts to establish conditions conducive to increased productivity growth, the Spanish authorities have made improving the functioning of the goods and services markets one of their priorities. Efficient organisation of these markets is one of the essential ingredients of a dynamic economy, helping as it does to stimulate efficient static resource allocation, reduce costs and encourage innovation. In Spain, there is indeed a great deal of room to enhance competition. This chapter looks at the main shortcomings of the product markets and analyses the reforms introduced in recent years. These reforms are designed first of all to modernise the general competition policy framework, but they also concern numerous sectoral aspects such as the regulation of certain network industries, in particular electricity and the distributive trades sector, as well as questions relating to corporate governance. The main economic policy recommendations deriving from this analysis are summarized at the end of the chapter.

A reform of the general framework for competition policy is under way

There have been few changes in the general competition law and enforcement institutions since 1989, whereas the majority of OECD countries have taken steps to make their laws more effective over the period in question (Hoj *et al., 2007*). In Spain, the application of general competition policy depends on two bodies: the Service for the Defence of Competition (SDC), which is responsible for conducting inquiries and comes under the Ministry for Economic Affairs and Finance, and the Tribunal for the Defence of Competition (TDC) which is independent and is responsible for decisions. These two entities coordinate their actions with the enforcement agencies of the European Union and its Member States for matters that may have a European Community dimension. In addition, there are the sectoral regulatory authorities: the National Commissions for Energy (CNE), the Telecommunications Market (CMT) and the Securities Market (CNMV). Resources for the SDC and TDC were increased in the early 2000s so as to help them to perform their tasks more effectively. The institutional set-up has been complicated by the creation, following a 1999 decision by the Constitutional Tribunal, of bodies in some of the regions for applying competition law in matters affecting their territory. Devolution of such responsibility to sub-national levels is unusual among OECD countries, but it seems to have worked relatively smoothly so far in Spain.[1] Since 2004 the newly created commercial courts have been competent to apply European Community competition law, even though they have not performed that role in applying Spanish legislation. Under the circumstances, it appeared necessary to adapt the Spanish competition law institutions better to developments at the Community level and to correct problems with the system that had been revealed by experience. A draft reform was hence submitted to Parliament in the second half of 2006 with the aim of bringing it into force in early 2007. It changes three important aspects of the law: *i)* the institutional organisation of the regulatory authority; *ii)* substantive antitrust rules; and *iii)* merger control provisions.

From the institutional point of view, the reform aims to merge the SDC and TDC into a single body, the National Competition Commission (CNC), headed by a chairman who will be in charge of and co-ordinate two operationally independent services responsible, on one hand, for initiating investigations (the Directorate for Investigations) and, on the other, for handing down decisions (the Council). This change, which will bring efficiency gains with the deadline for settling cases of anti-competitive behaviour being reduced from 24 to 18 months, is intended above all to make the institution more independent of the political authorities. The new Commission will therefore have its own budget, separate from that of the Ministry for Economic Affairs and Finance. The independence of Council members, who are to be reduced in number from eight to four, will also be enhanced by having a six-year non-renewable mandate instead of five years renewable as at present. Although the Council members will continue to be appointed by the government, they will have to submit to a prior hearing by Congress. The CNC will also be more accountable for the results of its actions in that its chairman will report regularly to Congress, while all its decisions and studies will be published so that its activities are more transparent. Furthermore, the plan is to extend the prerogatives

 OECD ECONOMIC SURVEYS: SPAIN – ISBN 92-64-02920-6 – © OECD 2007

of the commercial courts to the application of Spanish law and to increase co-ordination between national, regional and sectoral regulators. Lastly, the new Commission will be equipped with additional means to promote competition: not only will it have the capacity to analyse and to propose reforms in the functioning of most sectors, it will also be able to assess the impact of government assistance and administrative measures that can distort markets.

Substantive antitrust rules will be clarified and simplified, making them consistent with current European Community practices, while the measures used to combat anti-competitive conduct will be strengthened. Provisions against so-called "abuse of economic dependence", which could invite using the competition law in inappropriate settings, will be dropped. A leniency programme similar to that of the EU will be adopted, and the maximum financial penalties against violations by companies and responsible individuals, will be increased. With regard, lastly, to merger controls, the reform will above all reinforce the role of the competition authorities and limit the risks of political interference in this area. A step forward was taken with the abolition, in April 2006, of the golden share held by the government in certain large companies, which the European Court of Justice had ruled illegal. Conversely, however, the recent strengthening of the CNE's powers to allow companies to participate in energy sector activities in order to guarantee the country's security of supply shows that government intervention in this sector, which is seen as strategic, could remain extensive. For its part, the bill provides that concentration operations approved by the Commission after examination of the files can be implemented directly, meaning that the political authorities will in future be able to intervene only in cases where the CNC imposes specific conditions for authorising mergers, or when it refuses them. The Council of Ministers will in such cases have the authority to amend these decisions by citing a matter of general interest on the basis of a pre-established list of ten criteria.[2]

The principal elements of this reform, to streamline the institutional structure and adapt it better to the new European processes, while reducing the role of the government in merger decisions, are welcome improvements. Strengthening the means of combating anti-competitive practices will have a positive deterrent effect, while the new authority's increased role in promoting competition is also very welcome. In recent years, not enough work has been done on assessing the shortcomings of the legislation[3] and on examining the functioning of sectors that are traditionally not very exposed to competition, such as government procurement and certain professional services, where barriers to competition are relatively important (Copenhagen Economics, 2005). Merging the two general competition bodies into one will also create synergies in such surveys. The authorities might consider going further by assigning consumer protection responsibilities to the new Commission. International experience shows that these activities have complementary features, though it is important to ensure that handling a multitude of consumer complaints does not drain the institution's resources (Hoj *et al.*, 2007). The efforts to strengthen the independence of the competition authorities, while at the same time making it more accountable for its actions, could also be usefully extended to the sectoral regulation bodies.[4] It is also important that the public authorities do not make excessive use of the powers to intervene that they have kept in the case of mergers, the need being to establish the independence of the new Commission. While it has been introduced with the aim of increasing transparency, the list of questions of general interest that can elicit review by the Council of Ministers might be too long. Motives such as "the guarantee of appropriate pursuance of the objectives of sectoral regulation" might be invoked to justify arbitrary intervention. Lastly, it is important to make sure that co-ordination between national and regional competition bodies remains harmonious so as to avoid the risks of market segmentation that could occur if these territorial institutions had more powers in, for example, the area of mergers of firms from the same region.

Network industry regulation can be improved

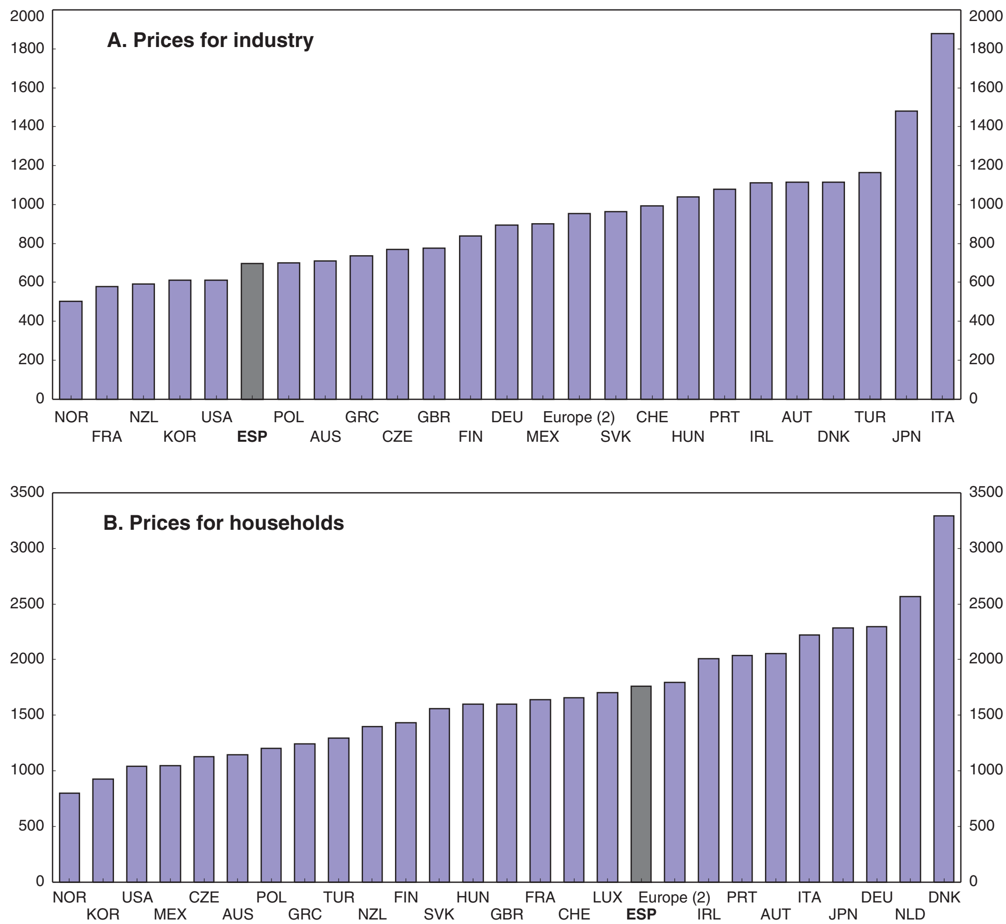
Network industry liberalisation is farther advanced in Spain than the EU average. That said, the functioning of some of these markets continues to be impaired by numerous distortions that the authorities are taking steps to remedy.

Electricity

The electricity sector, where demand has risen steeply in the last few years (by 4.7% per year on average between 2000 and 2005, compared to 3.1% for real GDP), has recently been at the centre of intense debate, whether because of the takeover bids for one of the main Spanish companies in this sector or because of the market's operating problems, although electricity prices are lower than the European average for industry (Figure 5.1). Reforms are in fact under way in the electricity sector, as was scheduled by the

Figure 5.1. **Electricity prices for industry and households**

US dollars/toe 2004[1]



1. Price excluding tax for the United States.
2. OECD-Europe. Weighted average.

Source: IEA, Energy Prices and Taxes, 2nd quarter 2006, IEA/OECD, Paris.

NRP following the publication in June 2005 of a White Paper recommending regulatory improvements (Pérez Arriaga, 2005).

Although the electricity market has been liberalised, the sector still suffers from major shortcomings due primarily to its structure (Box 5.1). It is not at all open to the outside world, which limits competitive pressures. It is dominated by two big companies (*Endesa* and *Iberdola*) controlling not only a large share of supply but also demand (as intermediaries), which could provide both firms with incentives to abuse market power by charging consumers´ prices above competitive levels. These big companies' marked vertical integration also gives them the ability to discourage independent commercialisers with little generating capacity from entering the market.[5] The market power deriving from this situation is strengthened by the rigidity of demand on the wholesale market which operates as a spot market. There are in fact few possibilities for substitution in the short term, yet 90% of transactions are negotiated on a spot basis. *De facto* they benefit from a preferential treatment relative to forward bilateral contracts, which are very uncommon (see below) (Beato Blanco, 2005).

Box 5.1. **Main features of the electricity market**

The openness of the electricity market, the liberalisation of which was completed in 2003, is very limited. Because of the weak interconnection with Portugal and, above all, France (the barrier of the Pyrenees), electricity imports account for less than 3% of national production. This sector, which is regulated by the CNE together with the Ministry of Industry, Tourism and Trade, is organized around a wholesale electricity market, which operates as a spot market. All consumers can choose their supplier as they wish and get their electricity from "commercialisers" on the basis of freely negotiated prices or from distributors on the basis of tariffs set by the government. There is a legal unbundling of distribution and transport from generation and commercialisation, and the transmission is managed by an independent company. However, the market is dominated by two firms (*Endesa* and *Iberdola*), which are involved in all other areas of activity. At 60%, the share of the two companies in total electricity generation is admittedly not exceptional compared to other countries, and it partly reflects the existence of economies of scale. However, these groups also manage 80% of electricity demand via commercialisers and distributors.

Electricity market prices are, moreover, subject to distortions that reduce their influence on consumer behaviour. Until recently, the prices set have remained skewed by the stranded cost compensation (CTC, *Costes de transición a la competencia*)[6] paid to electricity companies to amortise the power stations built to operate in a regulated framework after deregulation . These subsidies, which were paid only if the market price was less than € 36 per MWh, provided an incentive for large producers to try to keep prices under this level, then distorting the market.

A more important problem concerns government regulation of tariffs, whose rise was capped at 2% per year from 2003 until July of 2006, preventing the oil and gas price rises from being taken fully into account. The new government regulation of electricity tariffs to be effective in 2007 will increase them on average by 2.8% for households and by 5.5% for industry. However, the possibility of quarterly revisions of these tariffs as from June 2007 is not excluded. Additional rises will be necessary in the future in order to reflect the cumulated increase of actual production costs over the last few years. Under-estimating these costs results in price gaps between the tariffs and the wholesale spot market prices, which have generated deficits that have widened considerably in recent years, reaching € 3.8 billion in 2005 (0.4% of GDP), and that have to be repaid to the firms[7] . However, the pass-through mechanism of cost increases to prices is extremely slow, since it will take until 2020 to compensate for the 2005 deficit. As a result, few big consumers purchase their electricity on the open market and only 35% of all electricity is supplied at non-regulated prices. This regulation has also created an entry barrier for new players and has inhibited the development of the futures market. So, demand for electricity is not very much affected by the market price, which partly explains why it has continued to grow sharply in recent years.

A number of measures were taken in 2005 and early 2006 to solve these problems. Regulatory adjustments were made in order to hasten the implementation of the Iberian electricity market with Portugal (MIBEL), agreed in 2001, and these were accompanied by an increase in interconnection capacity with the Lusitanians. An increase in physical interconnection capacity has also been negotiated with France so as to reach 10% of the Spanish market by 2010. The transparency and homogeneity of information on users' electricity consumption have also been improved so as to make it easier to change suppliers. Measures have also been taken to reduce price gaps and the distortions in the wholesale market. The regulation capping electricity tariff increases has been abolished, as have the payments of CTCs. Since March 2006, a ceiling of € 42.5 per MWh has also been set on transaction prices in the wholesale market on a temporary basis, in principle until new regulation is drawn up. This will also be temporary since the regulated tariffs will be phased out by 2011, consistent with the European directive on electricity. The authorities have also announced their intention of encouraging the growth of forward bilateral contracts. In addition, the dominant firms' market power to set the wholesale electricity prices has been limited by forbidding the purchase and sale of electricity for the same time slot by establishments belonging to the same company. Finally, it is envisaged to set up a system of virtual bids obliging dominant operators to transfer to third parties the management of part of their electricity supply.[8]

It was in this context that two rival takeover bids were launched for *Endesa*: one by *Gas Natural,* which is the leading company on the gas market in Spain, and the other by the main German electricity company, EON. In the first case, the operation was authorised by the government, with strict conditions concerning asset sales. The second case came within the competence of the European Commission, which also gave its approval, but in March 2006 the Spanish Government gave the CNE the right to ascertain what impact the operation might have on activities subject to regulation in this sector, in order to correct a regulation gap.[9] In July 2006, the CNE drew up 19 conditions, including asset sales considered strategic amounting to a third of the production capacity of *Endesa* in the Iberian Peninsula, for authorising the merger.[10] The European Commission indicated that most of these 19 conditions were inconsistent with EU rules and also asked the Spanish authorities to modify the decree extending the CNE's powers. Despite efforts from the Spanish government to take into account the Commission recommendations, a disagreement persists between the Spanish and European authorities concerning the conditions of E.ON's takeover bid and the strengthening of the CNE's powers. It is hence necessary to continue seeking an agreement ensuring a market-based solution for this operation and avoiding discriminatory measures against any company. It would also seem preferable for the Spanish authorities to reinforce the independence of the CNE rather than its formal power.

Above all, improving the functioning of this sector requires better market regulation. This implies the abolition of the temporary ceiling on the wholesale market price for electricity. In fact, the new regulation on tariffs adopted by the government to be effective in 2007 does not contemplate this ceiling the swift implementation of the set of measures envisaged, which are heading in the right direction. This is the case in particular of the development of forward bilateral contracts, which will encourage the emergence of more price-elastic demand and will make for better planning of investment in generating capacity and the market entry of new players. These measures should be accompanied by the adoption of a rule whereby electricity prices would adjust more rapidly and transparently to changing energy costs. Lastly, as the White Paper recommends, a clearer distinction needs to be made between non-competitive distribution activities and those relating to generation and commercialisation.

Gas

Like the electricity sector, the gas sector is dominated by a large, vertically integrated company, which has the capacity to obstruct new market entrants. In 2004, *Gas Natural* controlled 45% of supply, 85% of distribution and 52% of commercialisation, while it is also one of the main shareholders in *Enagas*, the company which manages Spain's gas infrastructure assets. Liberalisation in this sector was completed in 2003 and seems to have been fairly effective, although prices appear relatively high for households, partly due to lower *per capita* consumption and population density that make distribution more costly (Figure 5.2). The share of transactions carried out at deregulated prices grew from less than 10% to over 80% between 2000 and 2004. The competitive situation has also improved from the gas supply point of view, with the decline in *Gas Natural's* market share since the sale by auction of 25% of its import contracts with Algeria in 2001, and with the construction of combined-cycle power stations obliging electricity companies to look for gas supply contracts.[11] Reforms need to be continued, however, in order to curb *Gas Natural's* dominant position with regard to distribution and commercialisation, which is what the government intends to do. After devising a transparent pricing system designed to ensure fair access to the distribution network for third companies, the government is intending to cap at 1% the voting rights and equity holdings in *Enagas* of companies operating in the gas market.[12] It is also planning to separate, from an operational and accounting standpoint, *Enagas's* network management activities from the distribution activities it carries out with *Gas Natural*. Access to the information needed to develop the commercialisers' provision of complementary services will also be improved, as will the price transparency of these services, which will make it easier to change supplier. These efforts, which are a step in the right direction, may be backed up by the organisation of a secondary wholesale market in order to improve the sector's liquidity; this would require increased storage capacity.

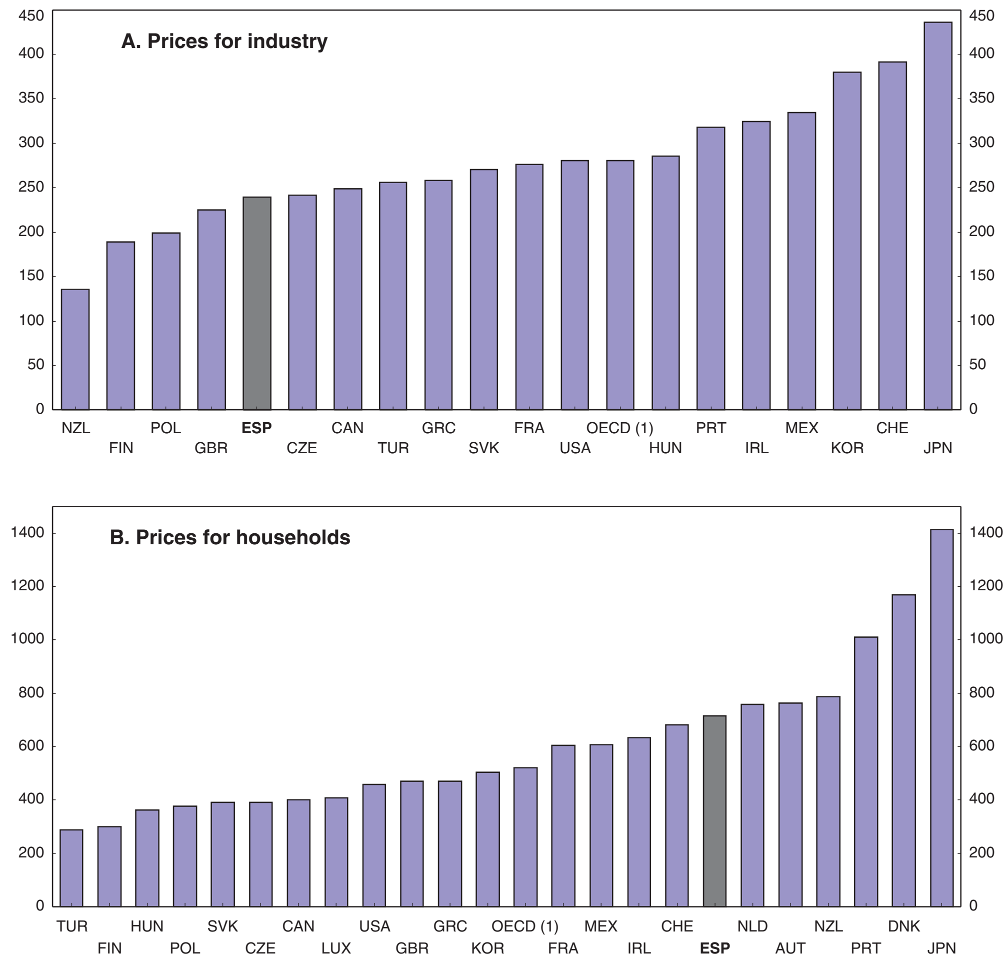
Oil distribution

Oil distribution is dominated by two big operators (*Repsol* and *Cepsa*), which control more than 90% of refining capacity in Spain and some 60% of retail distribution. The number of service stations per head of the population is lower than the average for other EU countries, and service stations attached to super and hypermarkets are few in number (2.2% of the total) because of the administrative barriers put in place by local authorities.

Figure 5.2. **Natural gas prices for industry and households**

US dollars/toe

2004



1. Weighted average.

Source: IEA, Energy Prices and Taxes, 2nd quarter 2006, IEA/OECD, Paris.

Also, many service stations are tied to the two main companies by very long-term contracts (25 to 40 years), although, following a change in the regulations, it has been impossible since 2000 for contracts to exceed five years after renewal. Under the old contracts, *Repsol* still has exclusive rights over more than 500 service stations (*i.e.*, 16% of the network). To make the use of the sector's transportation and storage facilities more transparent and fair, participation by the main companies in CLH (*Compania Logística de Hidrocarburos*), the monopoly managing this infrastructure, has been reduced to less than 50%, and the CNE has stepped up its surveillance in this area with the publication of the provisions governing storage and transportation contracts.

Even so, increased contestability in the distribution sector remains necessary, as the retail share held by *Repsol* and *Cepsa* has diminished only moderately in recent years (from 63.5 to 59.5% between 2001 and 2004) despite a temporary freeze on the growth of points of sale, which ended in 2003. The government recently decided to stimulate competition by authorizing farm co-operatives to retail fuel to the public. After a two-year survey, moreover, the European Commission has reached an agreement with *Repsol* that should lead to the reform of the long-term agreements which still give it exclusive operating rights over numerous service stations (EC, 2006a). The list of service stations which may change contracts will be published on the Internet so as to inform potential competitors. All the companies in the network will, moreover, be able to apply lower prices than those recommended by *Repsol*. Lastly, *Repsol* will not be allowed to buy further independent service stations for two years. These welcome measures may possibly be extended to *Cepsa* if its market power so warrants. Also, it would be desirable to guarantee that the limitations on the opening of service stations in super and hypermarkets really respond to safety rules and are not simply obstacles to entry raised by local governments. This could for instance be ensured by providing for a right of appeal to the national competition authorities in case of refusal to authorise opening such stations.

Telecommunications

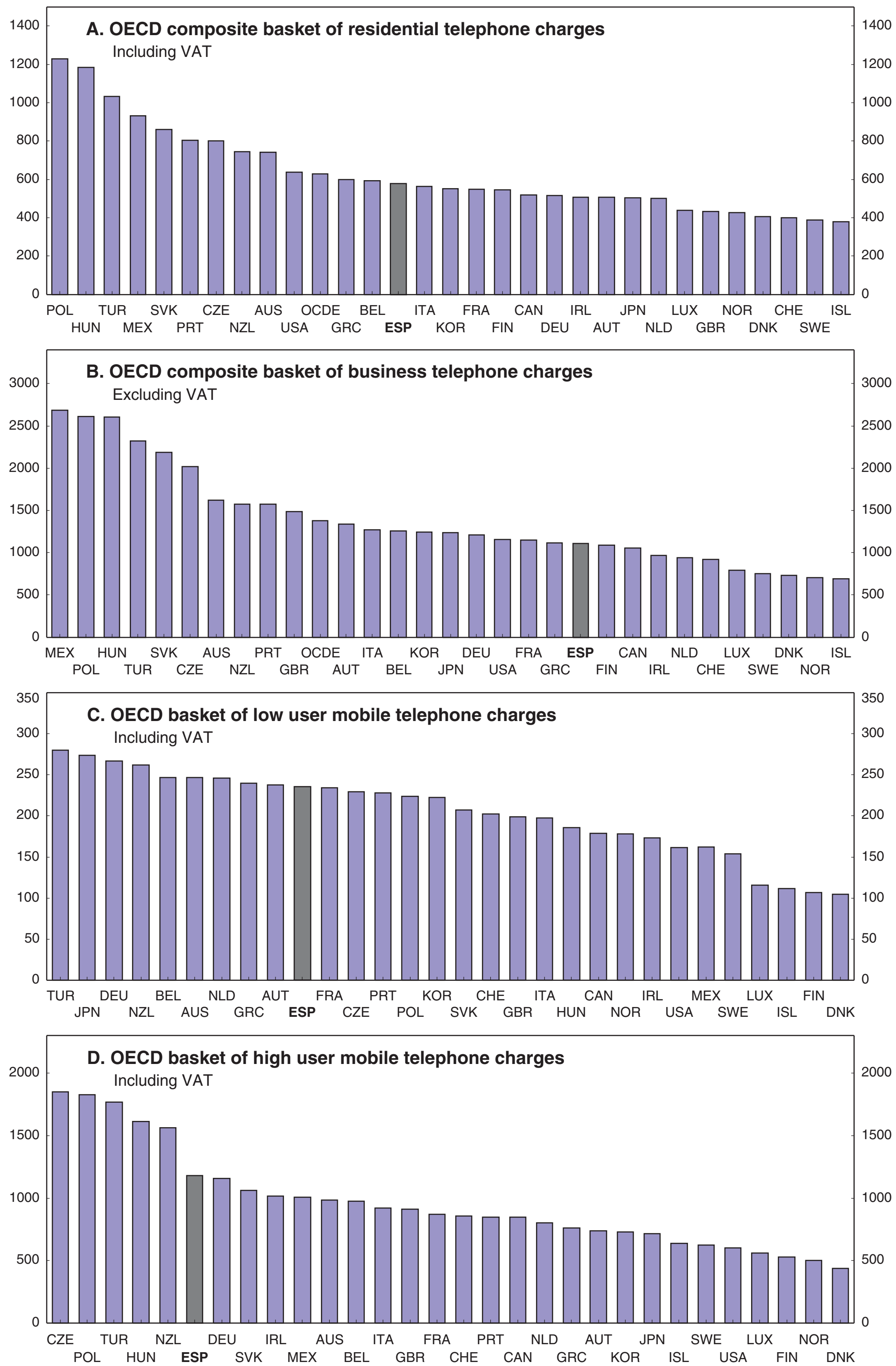
For a number of years now, telecommunications have been undergoing far-reaching technological change, requiring adjustments to the regulatory framework. The liberalisation strategy for the sector, which is along the lines adopted at European level, is now based on evaluating competition by service rather than by technology. In accordance with the Community directive, the CMT (the industry regulator) has carried out a regulatory review of the 18 different markets identified in the sector. The idea is to ascertain, in each of them, which operators have significant market power and to apply the appropriate remedies if there are any obvious problems, or to liberalise prices if effective competition exists.

As regards fixed-line telephony, where prices of communications are lower than the average for other OECD countries (Figure 5.3), market analysis resulted in the price cap on communications tariffs previously imposed on the main operator (*Telefonica*) being removed with effect from the second half of 2006. The CMT will nevertheless supervise which services market operators are providing in order to check that they conform with competition law. The price caps will, however, be kept for the fixed monthly charge because liberalisation in this segment of the market, which implies direct access to users and infrastructure investment, is taking longer for its effects to be felt. The fact is that the market share held by *Telefonica*, which was in a monopoly situation until 1997, still stood at approximately 90% in 2004.

With respect to Internet connections, narrowband access prices have been liberalised and are low compared to other countries. The prices of broadband access, however, are high by international comparison, and penetration remains more limited than the OECD average (see Figure 1.10). Where Internet access via ADSL is concerned, *Telefonica* remains in pole position with 89% of the market, despite local loop unbundling which came into effect in January 2001. *Telefonica* has in fact been accused of unfair practices because of excessively high wholesale prices, leaving insufficient trading margins. The CMT, which sets these wholesale prices, has just lowered them significantly (by around 20%) and has decided to revise the way they are determined on the basis of a cost accounting system, which would mean *Telefonica's* accounts having to show the costs and margins attaching to its wholesale Internet access offering separately from its other services (CMT, 2006). It is also going to have to allow its competitors to provide very high speed Internet services (10 to 20 megabyte ADSL2 +), which they have been unable to do until now. Moreover, the development of cable technology should also increase competition following the merger

Figure 5.3. **Telephone charges**

US dollars (using PPPs), August 2004



Source: OECD Communications Outlook 2005, Paris.

between the two main operators in this field where investment is expanding rapidly.[13] Then again, in response to the numerous complaints about the exaggerated claims of some Internet providers or the poor quality of their services (misleading advertising regarding speed of connection, telephone help lines not working, telephone lines constantly engaged, etc.), the government has taken measures inasmuch as the CMT does not have the legal authority to defend consumers' rights. The said measures are designed in particular to punish firms contracting unsolicited changes in a customer's telephone company ("slamming") and to enforce the reimbursement of charges if there is any lapse in the services provided. A draft bill is also being prepared with the object of: guaranteeing that users can cancel their subscriptions as easily as they take them out; abolishing penalties that are excessive and are implemented unilaterally by firms when consumers terminate their contracts; and, more generally, imposing billing for services based on actual usage instead of by the minute or by period of 30 seconds.

In the mobile telephony sector, where the market is divided among three active operators in a fairly balanced manner, prices fluctuate freely. The latter have continued to fall in recent years, though at a slower pace than in many other European countries,[14] and their level is still higher than the OECD average (Figure 5.3). In February 2006 the CMT found that the three active operators had significant market power and it reformed the regulation of mobile virtual network operators (MVNOs) in order to step up competition. These operators will therefore be able to negotiate access to the networks of the three dominant firms who will have to grant them at reasonable prices. By December 2006 three MVNOs had appeared. Finally, a reduction in the termination charges by firms for calls from a different mobile operator was decided in September 2006. They will be cut by more than 40% by September 2009. In addition, the holder of the fourth UMTS license (Yoigo) renegotiated its entry conditions with the Ministry of Industry, Tourism and Trade and launched commercial operations in December 2006.

All told, the efforts being made to stimulate competition in the telecommunications sector are significant and need to be continued. In those areas where there are still dominant operators, as in the case of broadband Internet access, it is important to adopt adequate regulations, in the first place so that effective competition can emerge and, secondly, so that there are still sufficient incentives to invest in network development.[15] To back up these measures, the government may also consider entrusting the CMT with responsibility for the defence of consumers' rights, given that this sort of surveillance would complement its role as industry regulator.

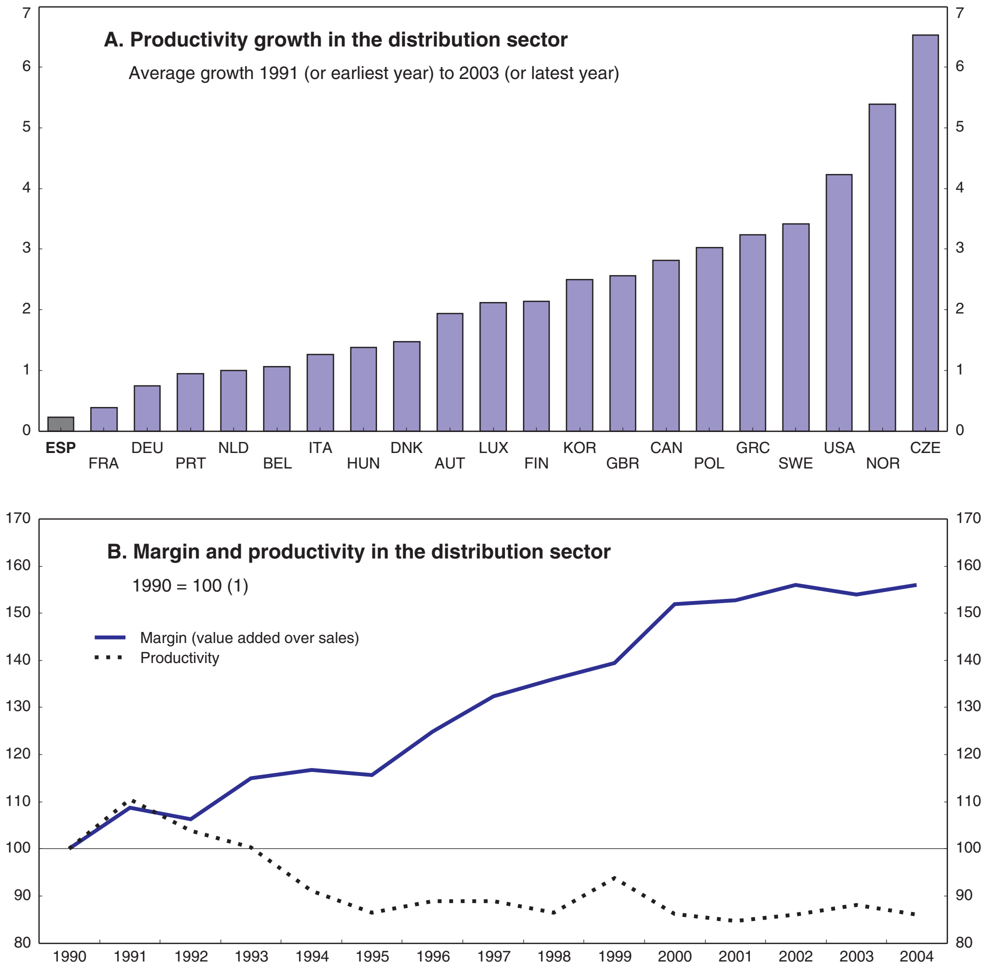
The distributive trades sector has still to be liberalised

The performance of the distributive trades sector, which accounts, for 15.3% of total employment and 10.9% of value added, is important to the economy as a whole. However, the regulations governing the sector, which greatly influence the way it operates, are amongst the most rigid in the OECD (Figure 1.13). This appraisal, which conforms with that carried out by Copenhagen Economics (2005), is backed by the analyses performed by the Tribunal for the Defence of Competition (TDC, 2003). These regulations have become tighter since the early 1990s, while at the same time the regions' regulatory powers over the sector were increasing as a result of various decisions by the Constitutional Tribunal. Freedom of shop-opening hours, a decision which was taken by central government in the mid-1980s, was thus gradually reduced as a result of the actions taken by the autonomous communities with respect to shops above a certain size[16] (typically 150m^2). The national regulations, which allow shops to open for a maximum of 90 hours per week and 12 Sundays per year, were made more restrictive in early 2005 to avoid disputes with the regions, the result being that the ceiling was lowered to 72 hours per week and eight Sundays a year. More importantly, the entry of new competitors has been restricted since the mid-1990s as a result of the decision, at regional level, that a second licence would be required in order to open a hypermarket (in addition to the municipal permit). Moreover, the new restrictions vary across the regions and are much broader than those set at national level, where hypermarkets are defined as retail outlets in excess of 2500 m^2. In some cases, licences were made a requirement for smaller shops (less than 500 m^2) or applied specifically to discount stores. In others they also depend on viability studies. By 2003 10 out of 17 regions had introduced a moratorium on the construction of hypermarkets.

There are several reasons behind the increasing rigidity of the regulations. One is the desire to safeguard local shops, which play a positive role in the life of certain urban centres and are useful, in particular, to the elderly with mobility problems. The restrictions on opening hours were also justified by the need to avoid forcing staff to work late or at weekends, and also because of the competition, deemed to be "unfair", that could otherwise result for small shops. That said, the tighter regulations also run counter to the consistent demand on the part of consumers for more flexible opening hours, making it easier to reconcile working and family life. Local authorities are also less willing to grant building permits for large supermarkets because they are as a rule sensitive to the pressure exerted by existing shopkeepers. These regulatory restrictions reduce competition to the advantage of existing firms, including large ones, and this has a damaging impact on productivity growth and inflation. Recent studies, by van Ark *et al.* (2002) among others, have shown for example that much of the productivity growth differential since the mid-1990s between the United States and European countries, and especially Spain, is due to their worse performance in services and, more specifically, the distributive trades (Banco de España, 2006).[17] As in other countries with rigid regulations, such as Germany, productivity gains in the retail trade have been small (Figure 5.4, Panel A). What is more, apparent labour productivity in the sector has grown less rapidly than in the rest of the economy since 1990, whereas profit margins appear to have risen faster (Figure 5.4, Panel B). Although the big marketing companies have adjusted their strategies to cope with the restrictions and have developed other forms of smaller establishments,[18] the beneficial impact on productivity and the price restraint attributable to the competitive pressure exerted by hypermarkets have been limited in Spain (Cruz and Oubina, 2006). Also, according to Múgica (2006), the fact that almost all the new entrants have been micro businesses have led to only a very small impact on productivity growth in the sector from the process of company creation/destruction and the attendant differential use of ICTs by size of firms. Yet the productivity growth from economies of scale and of scope combined could be substantial if the regulations were less restrictive, as the density of sales outlets *per capita* are very high at almost twice the EU average in 2002 (ICE, 2006).

Some regional governments, like Catalonia's in early 2006, have made minor adjustments to their regulations, but they remain very restrictive.[19] By mid-2006, only one region (the Balearic Islands) had not yet ended the moratorium on opening new hypermarkets, (which also applies to wholesale trade there). Central government has also recently adopted two plans to improve the functioning of the retail trade sector: the Plan to improve Trade Sector Quality 2005-2008 and the Plan to Improve Trade Sector Competition

Figure 5.4. **Productivity and profit margin in the distribution sector**



Note: Productivity is defined as value added divided by employment.

1. Relative to total economy. Refers to the retail distribution of food and beverages sector.

Source: Central de Balances Anual (CBA) of the Bank of Spain; OECD, STAN database.

and Efficiency 2005-2008. In this context, measures were taken to stimulate wholesale competition and enhance market transparency by regularly publishing information and indicators on prices and margins, especially for food products. Even so, there still needs to be a sizeable reduction in barriers to entry in retail trade, while more flexible shop opening hours would also be helpful. In this connection, the authorities have wisely adopted a strategy which involves relying on the European directive on services to remove the main regional obstacles to the opening of shops. Some regions (Cantabria) are already starting to lift barriers that impede the development of new large shopping centres. In any event, central government will have to take resolute action to reduce the variety of different regional regulations tending to fragment the Spanish market, the unity of which is guaranteed by the Constitution, as the Competition Tribunal has observed.

Reforms are probably needed in several other sectors

In the *retail pharmacies industry*, where framework legislation is the responsibility of central government and the detailed regulations are approved by the regions, there are still barriers to entry – as was noted in a recent opinion by the European Commission (EC, 2006c). Pharmacies are subject to planning rules which depend on the population (a minimum population of between 2 800 and 4 000 is required, while some regional governments have fixed a lower population limit) and on the distance between them (a minimum of 250 metres, which is also lower in some regions). In some communities, the authorisation procedures give priority to pharmacists who have already worked in that community, with the result that hospital pharmacists in other EU member states have difficulty obtaining the right to practice their profession in Spain (EC, 2006c). Lastly, no pharmacist can own more than one pharmacy, which seems excessive in that any pharmacy can be managed by a pharmacist who does not have to be the owner. These exaggerated and sometimes discriminatory restrictions ought to be relaxed.

Liberalisation measures have been taken in *rail transport*. In early 2005, the old operator, Renfe, was separated into a company managing the network, ADIF (*Administrador de Infraestructuras Ferroviarias*) and a transporter, RO (Renfe-Operadora), which will have to contend with competition. Applications for operating licences and route allocations have in fact already been submitted, even if RO is still the only passenger operator. Reforms are still needed if there is to be effective competition in the running of the network so as guarantee non-discriminatory and transparent rules for allocating routes and setting prices for their use. To this end, the Ministry of Development (*Ministerio de Fomento*) is scheduled to prepare a draft bill aimed at strengthening the independence and expanding the responsibilities and tasks of the industry regulator. At the same time, the authorities could also put the operation of regional passenger and freight transport services out to tender on a compulsory and regular basis, as other OECD countries already do or are considering doing (OECD, 2006).

Regulatory progress would also be an advantage in *road transport of heavy goods* (more than 3.5 tonnes), which is subject to excessive constraints. To obtain an operating licence, the companies in question are required to have at least three vehicles less than two years old, with a total payload of over 60 tonnes. As the Competition Tribunal (TDC, 2005) has observed, this obligation does not exist in Spain's main partner countries and seems disproportionate. It is likely to restrict the entry of new competitors in this market, which is very small in Spain, even if it is obviously necessary to maintain the appropriate standards as regards professional capacities and safety. The main problem of this sector is the strong presence of micro-firms, as compared with other EU countries. The authorities adopted in November 2006 some measures to increase competition in the road freight transport market. This includes for instance a reform of the licensing system, which allows transport firms to operate nationwide independently of the authority issuing the license. Previously, licenses could be granted for either local regional or national transports.

Serious obstacles to competition also hinder the *cement market*. The TDC, which has recently investigated this sector, has identified the importance of non-tariff barriers to imports. These take the form of unwarranted documentation requests or control tests aiming at guaranteeing the adequacy of technical norms, including for common types of cement, in addition to the obligation to purchase a public liability insurance of € 5 million minimum independent of the size of the firm, which is a disproportionate constraint for small enterprises. These regulations apply both to national and foreign companies. The European Commission contends that they infringe EU rules, and it has threatened to start proceedings before the European Court of Justice, if they are not abolished. *De facto*, the import share of cement has been falling over the last few years in contrast with the average trend registered for other goods. Moreover, the structure of this market has become increasingly concentrated, with leading firms having market shares reaching 40 to 50% in some regions. This is compounded by a highly vertically integrated structure, with firms following a limit-pricing strategy of setting prices occasionally below marginal costs so as to impede the entry of new competitors (TDC, 2006).

The *government procurement market*, which accounts for some 20% of GDP, as in the other OECD countries on average (OECD, 2002), is sizeable. In 2005, public works contracts alone were worth € 39.5 billion (4.3% of GDP), of which 70% were put out to tender by local and regional governments and 30% by central government (Seopan, 2006). There have been few analyses of the functioning of this sector, but various bits of information suggest that the vigour of competition could be intensified. In June 2006, the European Commission asked Spain to change its regulations to bring them into conformity with EU directives as far as the allocation of certain contracts without tenders is concerned (EC, 2006d). Two draft laws have been approved by the government and are now before Parliament. In the early 2000s, various reports by the Court of Auditors and by INSALUD, the body which until 2002 managed the as yet non-decentralised health services, had already revealed that the legal rules regarding disclosure and competition with respect to government procurement tenders were applied in only half of all hospital contracts. As a result, some hospitals were paying up to twice as much as others for the same pharmaceutical (OECD, 2003). As in other very decentralised countries, moreover, the suspicion remains that the territorial authorities often favour local bidders by imposing restrictive conditions. This was recently demonstrated by the European Commission in connection with Spain's health services. In this case the bidding companies had to have, at the time of submitting their bids, an office open to the public in the province or the capital of the province where the service was to be provided (EC, 2006d). To improve the functioning of the sector a "procurement contract" Internet portal is being developed, which will also be able to advertise tenders from the autonomous communities. This is a welcome initiative, as it will increase market transparency and lower the management costs of procurement in the case of standard purchases. This should lower the thresholds above which open public tenders are obligatory. Generally speaking, the competition authorities ought to pay closer attention to this sector, where there are substantial savings to be made.

Welcome changes to corporate governance are underway

As with most other OECD countries, many years ago Spain adopted principles guiding good corporate governance in order to address the conflicts that spring from the separation of ownership and management control of listed companies. A first code, *Olivencia,* drafted in 1997, followed up in 2003 by the *Aldama* code, provide the main recommendations in force to encourage good organisation and behaviour of company boards and to avoid conflicts of interest and ensure the transparency of management of listed companies, which is important to favour healthy competition on the product markets (CNMV, 2005). Consistent with international practices, these recommendations are generally not binding but based on the "comply or explain" principle, by which companies must justify why they do not apply some elements of the code.[20] A hardening of these recommendations has however been recorded in several countries over the recent past in response to various financial scandals, as evidenced by the recent revisions of the governance principles espoused by the OECD or the EU. The extent of companies' compliance with good governance principles is playing an increasing role in investor decisions in globalised

Box 5.2. Recommendations for improving the functioning of product markets

Reform and application of competition law

- Adopt the draft reforms under discussion, in particular the leniency programme.
- Extend the provisions aimed at increasing the independence of the CNC to all sectoral regulatory bodies.
- Avoid arbitrary interventions when using the list of general interest questions that can be raised by the government to justify its intervention in concentration operations, which has been introduced to increase transparency. .
- Ensure that co-ordination between national and regional regulatory authorities prevents any risk of market segmentation. Be more active in assessing the impact on competition of certain sectoral regulations, as in professional services.

Network industries

- Encourage the development of forward bilateral contracts in the electricity market. Adopt a rule requiring tariffs to be adjusted more transparently and rapidly on the basis of production costs. Separate firms' non-competitive distributive activities more clearly from those relating to generation and commercialisation.
- Lower the ceiling on the *gas companies'* stake in *Enagas* and make a clearer distinction between the latter company's distribution activities and those relating to network management. Encourage the emergence of a secondary wholesale market in the gas sector.
- Extend to all firms dominant in *oil distribution* the measures calling into question their long-term agreements with service stations. Develop further procedures to ensure that local obstacles to the opening of service stations in super- and hypermarkets are not artificial barriers to entry.
- Continue with the liberalisation measures taken in the telecommunications sector. Consider giving the CMT responsibility for looking after consumer protection in this market.

Distributive trades

- Take advantage of the European directive on services to reduce the regional barriers to entry affecting hypermarkets. In any event, take firmer action aimed at reducing the number and variety of regional regulations, at least with respect to the criteria for defining a hypermarket.

Other sectors and corporate governance

- Amend the excessive and sometimes discriminatory restrictions in the *pharmacies* sector.
- In the *rail sector*, strengthen the independence of the industry regulator and expand its range of activities. Make freight and regional passenger transportation services the subject of compulsory and regular tender procedures.
- Abolish the remaining unwarranted constraints involved in obtaining a *road freight haulage* operating licence.
- Remove the import restrictions on *cement* included in the Royal decree 1797/2003.
- Where *public procurement* is concerned, take active steps to strengthen the Internet portal so as to reduce management costs and improve transparency with regard to these contracts. Use the site's potential to lower the thresholds making open public tenders obligatory. Keep the functioning of the said market under close scrutiny.
- Encourage diversity of representation in the board of directors, including through a higher participation of foreign experts, but avoid recourse to legislative or regulatory approaches.

security markets; hence, the Spanish government has updated and unified the recommendations of the *Olivencia* and *Aldama* codes in order to reinforce financial market confidence and judicial certainty.

The new unified code, which will be applied as from 2008, includes many modifications (CNMV, 2006). One of the most important is to define more strictly when directors can be considered independent (with no link either to significant shareholders or the firm's executives) and to suggest a reinforcement of their presence on the board, so as to represent at least a third of its members. The excessively vague definition of independence currently used has indeed often led to the appointment of individuals who failed to uphold the rights of minority shareholders. The new code also recommends promoting the coordination and representation of small shareholders in the general shareholders' meeting[21] as their passivity could destroy share value in case, for instance, of anti-takeover bid measures adopted by the board or of unduly generous stock option plans and remuneration packages in favour of directors or executives. Greater transparency regarding the compensation of these senior officers is also recommended, with at least a consultative vote on these issues at the annual general meeting. In addition, the new text suggests setting up mechanisms allowing employees to denounce, on a confidential basis, irregularities carried out in the company in particular, in the financial and accounting domains (so-called whistleblowers). Finally, it is recommended to increase the currently very low female participation on the board,[22] which might have a positive impact on the firm value according to some studies (Carter *et al.*, 2003). Overall, these modifications are welcome, including the measures aiming at overcoming female under-representation on corporate boards, which has been strongly criticised by many firms. Enhancing board diversity, including by raising the participation of foreign experts, which also seems low in international comparisons,[23] would contribute to diversify the likely strategic behaviour of firms and hence stimulate competition by preventing tacit collusion. On the other hand, widening board diversity using state-control approaches is unwelcome, as envisaged in the draft law on equality which aims at raising female participation to boards at 40% in eight years through incentives that favour those enterprises complying with this norm in respect of public procurement.

Notes

1. Obstacles to competition affecting more than one region are under the national authority's competency. Eight out of seventeen regions have regional competition bodies organised in different ways. A few federal countries, like Germany or the United States, have analogous structures, which sometimes have led to problems of co-ordination. By contrast, the state-level governments in Australia, Canada and Mexico have no involvement in applying general competition law.
2. This list includes reasons relating to national defence, the safeguarding of public safety and health, constitutional rights and freedoms, free movement of goods and services throughout the national territory and the unity of the market, territorial equilibrium, the protection of the environment, social insurance, the protection of the pluralism of information, the promotion of innovation and technological development and the guarantee of appropriate pursuance of the objectives of sectoral regulation.
3. As Alcaide (2005) observes, the role of the TDC in competition assessment and advocacy has declined since 1999. In fact, only three analyses have been carried out since the responsibility in question was transferred from the TDC to the SDC.

4. The method currently used to appoint members of the sectoral regulatory bodies could do more to safeguard the independence of these institutions. The mandates of the members of the CNE and CMT can, for example, be renewed just once, which was also criticized recently by the IMF (2006).
5. The legal distinction between generation, distribution and commercialisation does not prevent cross-subsidies between these activities (Beato Blanco, 2005).
6. These temporary compensation payments by the central government to firms in the sector, reflecting the costs of transition to competition (CTC), are designed to amortize the power stations built to operate in a regulated framework after deregulation.
7. Banks finance these price gaps by securitising the compensation entitlements enjoyed by companies, which does however result in an additional financial cost for electricity producers.
8. This system amounts to limiting the electricity that dominant firms will themselves be able to sell on the wholesale market.
9. This assessment does not concern competition, but activities which cover the management of nuclear power stations, thermal power stations using coal produced nationally, the development of electricity systems outside the peninsula and gas supply and transportation security. According to the Spanish government, the recent reform granting new powers to the CNE corrects a regulatory gap, because this commission could intervene only to authorise operations by companies that already had activities in the regulated energy market, but not in the case of operations by firms not involved in such operations. In the case, for example, of the purchase of the El Corte Inglès department store by Gas Natural, CNE authorisation was required, but it would not have been, had the direction of the operation been reversed.
10. These asset sales concern nuclear power stations, thermal power stations using coal produced nationally and the electricity production and distribution in the Balearic and Canaries Islands and at Ceuta and Melilla. Other conditions imposed by the CNE include guarantees concerning the supply and investments in the gas and electricity sectors.
11. This resulted in the formation of re-gasification companies and of a new gas pipeline (Medgaz) from Algeria, which will come into operation in 2009.
12. In November 2006, Gas Natural held 20% of the capital of Enagas and 5% of the voting rights, while Chase Nominees held 9.9% of the shares and the voting rights
13. In 2004, cable Internet access covered 20% of subscribers and accounted for 12% of revenues.
14. Since 2001, regulations have allowed consumers to keep their mobile telephone number when they change operators. Instead of lowering their charges to attract new customers, firms have often offered them new mobile phones.
15. Wallsten (2006) suggests that the liberalisation of Internet access based on local loop unbundling and price regulations can in fact have a negative impact on investment.
16. In this connection, central government is now responsible for drawing up a reference framework for the whole country, involving setting a ceiling for opening hours and days, while at the same time leaving the autonomous communities some leeway to introduce more flexible conditions in their own regions.
17. International comparisons could, however, be somewhat distorted by certain differences across countries in the statistical treatment of the measurement of distributive trade output. These difficulties are recognized by national accountants who are working on solving them (Ahmad *et al.*, 2002).
18. In the food industry, for example, the share of supermarket sales rose by nearly 9 percentage points between 1995 and 2005, reaching 44.7% of total sales (ICE, 2006).
19. The Catalonia authorities attempted to take the jurisprudential rules of the European Court concerning distribution more fully into account than heretofore when drawing up their new territorial plan for commercial facilities. However, of the planned 417 000 m^2 of new buildable retail surface area, only 23 667 m^2, *i.e.* 5.7%, have been set aside for hypermarkets (Cinco días, 2006).
20. A number of corporate governance rules have however found their way into the Spanish legislation since 2003, such as, for instance, the requirement that all listed companies create an Audit Committee with sufficient independence from corporate management but also that the diffusion of a minimum set of information related to the firm's governance be guaranteed.

21. The law on public limited companies sets a 5% minimum share of voting rights for the shareholders to be able to put a new item on the agenda of the annual general meeting. This threshold is rarely reached by small shareholders, who are also not represented by pension nor investment funds in Spain by contrast with the situation in the English-speaking countries.
22. This participation, which is less than 4%, is partly explained by the late integration of women in the labour market.
23. Using a Panel of 270 of the largest European firms, in which all countries analysed are adequately represented, Egon Zehnder (2004) indicates that only 2% of the board members of Spanish companies were non-nationals. This ratio reached 12% in Italy, 20% in France, and more than 30% in the United Kingdom, the Netherlands and Switzerland.

Bibliography

Ahmad, N., F. Lequiller, P. Marianna, D. Pilat, P. Schreyer and A. Wölfl (2003), "Comparing Labour Productivity Growth in the OECD area – The Role of Measurement", paper presented at the OECD National Account Experts Meeting, 7-10 October, Paris.

Alcaide, C. (2005), "La evolución de la política de defensa de la competencia", Información Comercial Española, ICE No. 826, noviembre.

Banco de España (2006), *Informe anual*, *2005,* La economía Española.

Beato Blanco, P. (2005), "La liberalización de sector eléctrico en España, ¿un proceso incompleto o frustado?", Información Comercial Española, ICE No. 826, noviembre.

Carter, D., B. Simkins and G. Simpson (2003), "Corporate Governance, Board Diversity, and Firm Value", *The Financial Review*, Eastern Finance Association, No. 35.

Cinco Días (2006), "Cataluña duplica el espacio para centros comerciales", 13 de Abril.

Comisión del Mercado de la Telecomunicación (2006), "La CMT fija las condiciones del acceso mayorista de banda ancha", nota de prensa, 1° de junio.

Comisión Nacional del Mercado de Valores (2005), *Corporate Governance Report of Entities with Securities Admitted to Trading on Official Secondary Markets,* December.

Comisión Nacional del Mercado de Valores (2006), *Informe del grupo de trabajo sobre buen gobierno de las sociedades cotizadas*, 19 de mayo.

Copenhagen Economics (2005), *Economic Assessment of the Barriers to the Internal Market for Services*, Copenhagen, January.

Cruz, I. and J. Oubina (2006), "Estructura de competencia y dispersión de precios en el comercio minorista", Información Comercial Española, ICE No. 828, enero-febrero.

Egon-Zehnder (2004), "2004: The First European PWN Board Women Monitor", European Professional Women's Network.

European Commission (2006a), "Competition: Commission Increases Competition in Spanish Service Station Market", Brussels, Memo/06/163 and IP/06/495.

European Commission (2006b), "Marché intérieur: procédures d'infraction concernant l'Italie, l'Autriche et l'Espagne dans le domaine des pharmacies", Brussels, IP/06/858.

European Commission (2006c), "Qualifications professionnelles: des procédures d'infraction contre la France, la Grèce et l'Espagne", Brussels, IP/06/888.

European Commission (2006d), "Marchés public: procédures d'infraction contre la Grèce, l'Espagne et le Portugal, Brussels", IP/06/887.

Høj, J., M. Jimenez, M. Maher and G. Nicoletti (2007), "Product market competition in OECD countries: A synthesis", *OECD Economic Department Working Papers*, forthcoming.

OECD PUBLICATIONS, 2, rue André-Pascal, 75775 PARIS CEDEX 16
PRINTED IN FRANCE
(10 2007 01 1P) ISBN 92-64-02920-6 – No. 55485 2007

Spain

Special Feature: Innovation

Economic Surveys
Most recent editions
Australia, July 2006
Austria, July 2005
Belgium, May 2005
Canada, June 2006
Czech Republic, June 2006
Denmark, May 2006
Euro area, January 2007
Finland, May 2006
France, September 2005
Germany, May 2006
Greece, September 2005
Hungary, July 2005
Iceland, August 2006
Ireland, March 2006
Italy, November 2005
Japan, July 2006
Korea, November 2005
Luxembourg, July 2006
Mexico, November 2005
Netherlands, December 2005
New Zealand, September 2005
Norway, January 2007
Poland, June 2006
Portugal, April 2006
Slovak Republic, September 2005
Spain, January 2007
Sweden, August 2005
Switzerland, January 2006
Turkey, October 2006
United Kingdom, November 2005
United States, December 2005

Non-Member Economies
Most recent editions
Baltic States, February 2000
Brazil, November 2006
Bulgaria, April 1999
Chile, November 2005
China, September 2005
Romania, October 2002
Russian Federation, November 2006
Slovenia, May 1997
Federal Republic of Yugoslavia, January 2003

www.oecd.org

ISSN 0376-6438
2007 SUBSCRIPTION
(18 ISSUES)

OECD PUBLISHING

Volume 2007/1 – January 2007

ISBN 92-64-02920-6
10 2007 01 1 P