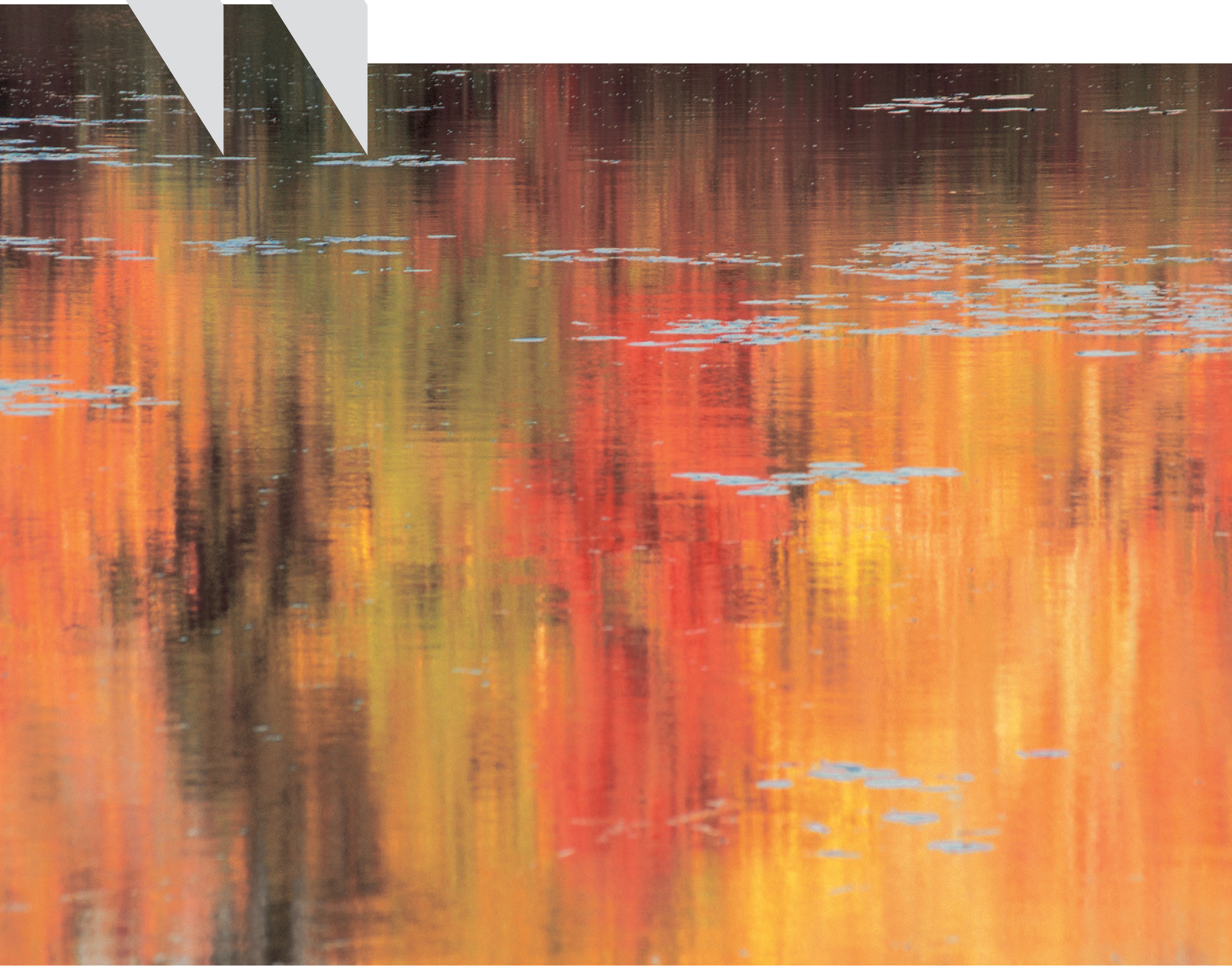
OECD Economic Surveys

SPAIN



Volume 2010/19
December 2010

OECD Economic Surveys: Spain 2010

Please cite this publication as:
OECD (2010), *OECD Economic Surveys: Spain 2010*, OECD Publishing.
http://dx.doi.org/10.1787/eco_surveys-esp-2010-en

ISBN 978-92-64-08996-9 (print)
ISBN 978-92-64-08997-6 (PDF)

Series: OECD Economic Surveys
ISSN 0376-6438 (print)
ISSN 1609-7513 (online)

OECD Economic Surveys Spain
ISSN 1995-3364 (print)
ISSN 1999-0421 (online)

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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 21 October 2010. 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 16 November 2010.

The Secretariat's draft report was prepared for the Committee by Andrés Fuentes, Anita Wölfl and Juan S. Mora-Sanguinetti, under the supervision of Pierre Beynet. Research assistance was provided by Desney Erb. The survey benefited from external consultancy work.

The previous Survey of Spain *was issued in November 2008.*

BASIC STATISTICS OF SPAIN (2009)

THE LAND

Area (1 000 km^2)		Major cities (thousand inhabitants)	
Total	506.0	Madrid	3 256
Cultivated (2007)	248.9	Barcelona	1 622
		Valencia	814
		Seville	703

THE PEOPLE

In thousands		Total labour force (thousands)	23 037
Population	45 929	Employment by sector (% of total)	
Net natural increase	109	Agriculture	4.2
Net migration	175	Industry	14.4
Number of inhabitants per km^2	90.8	Construction	9.7
		Services	71.8

PRODUCTION

Gross domestic product (GDP)		Gross fixed capital investment	
Billion euros	1 054	% of GDP	24.0
Per head (US dollars)	31 953	Per head (US dollars)	7 669

THE GOVERNMENT

% of GDP		Composition of Parliament (seats in March 2008)	350
Consumption spending	21.1	Spanish Labour Socialist Party (PSOE)	169
Revenues	34.7	Popular Party (PP)	154
Budget balance	–11.1	Convergence and Union (CIU)	10
Fixed investment		Basque Nationalist Party (PNV)	6
% of gross fixed capital formation	18.2	Other	11
		Next general elections: 2012	

FOREIGN TRADE

Exports of goods and services (% of GDP)	23.4	Imports of goods and services (% of GDP)	25.5
Exports in % of total goods exports		Imports in % of total goods imports	
Foodstuffs	13.5	Foodstuffs	7.0
Other consumer goods	27.2	Other consumer goods	24.0
Energy	3.4	Energy	16.4
Other intermediate goods	47.4	Other intermediate goods	44.5
Capital goods	8.5	Capital goods	8.1

THE CURRENCY

Monetary unit: euro		Currency units per US dollar, average of daily figures	
		Year 2009	0.720
		October 2010	0.720

Executive summary

The economy is slowly emerging from a deep recession, which will have a lasting effect. *While the depth of the recession in terms of real GDP has been similar to other advanced OECD economies, it has led to a much larger increase in unemployment and a sharper deterioration in government finances, both to a large extent structural. In Spain, the global crisis has been compounded by an unsustainable domestic demand boom driven by residential and business investment, resulting in rising private sector debt. While fiscal and financial policies had been relatively prudent before the crisis, investor confidence declined during the crisis and this may weigh on the recovery as sovereign spreads remain high. Nonetheless, following the publication of bank stress tests and bold policy initiatives, funding conditions have improved.*

Rebalancing the Spanish economy will require broadening and deepening the current policy efforts. *The government response includes substantial front-loading of fiscal consolidation, significant steps to address some of the long-standing shortcomings of labour market institutions, decisive measures to strengthen the savings banks and reforms to remove barriers to competition in product markets. These efforts need to be broadened and deepened. Labour market reform is the cornerstone to rebalance the economy. Combined with product market reforms, labour market reform will help to improve competitiveness. The public finances need to be put on a sustainable basis and the government is committed to doing so. Finally, sustainable growth will also require addressing environmental issues, notably the scarcity of water.*

A large structural fiscal shortfall needs to be closed. *More than half of the deterioration of the government balance is likely to be structural. The government's consolidation package makes substantial progress towards sustainability, although specific measures need to be spelled out. Once sufficient fiscal consolidation has been achieved, the tax system could be reformed to be more growth friendly by switching the tax burden from labour to consumption and property taxes. To contain significant ageing costs, a reform of old-age pensions, including an increase in the legal retirement age and restrictions to subsidised early withdrawal from the labour market, is urgent so as to allow for gradual implementation.*

Bringing the unemployed back to work requires deep reform of a broad range of institutions. *The approved labour market reform legislation is a positive step to reduce excessive protection of workers in permanent contracts, although some uncertainty remains on how the courts will interpret part of the new legislation. It should be ensured that severance pay entitlements are reduced substantially at least for all new contracts as intended. Firms and workers can now more easily agree to opt out from sectoral collective agreements. Nonetheless, abolishing the legal extension of collective bargaining outcomes to all businesses may be desirable. To improve human capital, entry conditions for youth to upper secondary vocational education and training should be eased. The performance of the regional public employment services should be benchmarked. Job search incentives for unemployment benefit recipients need to improve.*

The use of economic instruments in water management needs to be extended. *Water prices should better reflect total costs, including the opportunity cost resulting from its scarcity and* *environmental costs. The transparency and scope of cost recovery should be raised. Volumetric pricing should be further extended in irrigation. Further steps in this direction could include the easing of some limitations on concessions trade. Abstraction charges for overused aquifers would help stem overexploitation, which also requires ensuring adequate resources for control and enforcement. Governance of water policy should be strengthened by widening stakeholder representation in water management to more representatives outside the irrigation community, such as the scientific community.*

Assessment and recommendations

The recovery from a deep recession is set to be slow

After a decade of rapid growth, Spain entered a recession of unprecedented depth and length in 2008. While the size of the contraction of output was broadly similar to that of other European economies, it has resulted in a massive rise in unemployment. The recession accelerated the adjustment of the current account deficit built up as a result of dynamic growth of private sector indebtedness, which had funded strong business and residential investment. The economy resumed slow expansion in the first half of 2010, but growth is expected to remain subdued owing to the necessary further adjustments in the housing sector and a high degree of private indebtedness. As a consequence, unemployment is expected to remain high. While fiscal consolidation will put an additional drag on the recovery in the short term, it is crucial to improve confidence among domestic and international economic agents.

Addressing investors' confidence on fiscal sustainability is essential to foster the recovery

Owing to relatively prudent fiscal policy prior to the crisis, the government had fiscal space to allow the automatic stabilisers to operate fully and to support the economy through significant discretionary fiscal measures. These countercyclical policies account for around 40% of the deterioration of the fiscal position from a surplus of 1.9% of gross domestic product (GDP) in 2007 to a deficit of 11.1% in 2009. The remainder was structural, mainly reflecting a long-lasting decline in tax-rich domestic demand and lower potential GDP growth associated with the rise in structural unemployment. This deterioration in the structural fiscal balance combined with the expected increase in ageing spending, which will accelerate around 2030, has raised concerns in financial markets regarding fiscal sustainability. Sovereign spreads reached a peak in May 2010, prompting the government to take additional fiscal consolidation and structural reform measures. These measures, combined with the effect that the launch of the European Central Bank Security Market Programme to buy government debt and the announcement of the European Financial Stabilisation Mechanism had on euro area government bond markets, provided some relief. After the adoption of these measures, funding costs for the government fell and funding conditions for banks eased. While perceived uncertainty with regard to the exposure of banks to the residential housing sector contributed to a temporary increase in interbank funding costs relative to other euro area countries, the banking sector as a whole has withstood the crisis well, emerging from it with abundant capital and provision buffers, owing notably to prudent financial supervision.

The government has adopted a wide-ranging policy response

Investors' risk assessments of bank and government debt remain well above pre-crisis levels. In particular, if the high sovereign spreads persist, funding conditions in the private sector could be affected. The government has responded to this challenge with a wide range of ambitious measures, including a substantial, front-loaded budgetary consolidation programme. Steps to improve transparency of the financial position of banks with the detailed release of the banks' stress tests, as well as restructuring and reforms to strengthen the resilience of the savings banks, which are particularly exposed to the housing sector, have also helped allay risk perceptions. Reforms in product and labour markets are critical to rebalancing the economy. The measures taken so far in these areas are important and welcome steps but will need to be deepened and complemented by further steps, as discussed below and more in detail in this *Survey*.

Budgetary consolidation is advancing

The government consolidation measures are set to lower the government deficit from 11.1% of GDP in 2009 to 6% of GDP in 2011, with the aim of reaching a deficit of 3% by 2013. Measures already implemented include value added tax (VAT) and personal income tax increases, an average 5% cut in public sector wages this year and large cutbacks in public investment. Public wages and most pensions will be frozen in nominal terms in 2011, and only one out of ten jobs in the government sector falling vacant will be filled. These measures are reflected in the central government budget for 2011 which foresees a reduction of spending by 7.9%. It is important that a permanent improvement in the budget balance is achieved. The government will fully spell out spending cuts announced for 2012 and 2013 in future budgets. Specifying these spending cuts earlier could help improve confidence further. *The consolidation measures should be strictly implemented. As announced, the government should stand ready to take further measures if needed*, as some measures will be quite challenging to implement over time, such as the replacement of only one in ten government posts falling vacant. *Priorities need to be clearly identified where government employment can be cut while preserving quality of service provision.*

If further consolidation measures are needed to meet the fiscal targets, tax increases could also complement expenditure cuts as the overall tax burden in Spain remains relatively low in comparison to other high-income European economies. Well-selected tax increases could also have a relatively more benign impact on activity than some expenditure cuts. *Applying the higher VAT rate to more goods and services would be one possibility to raise revenues,* as indirect taxation has a smaller adverse impact on economic activity than many other taxes. *Using environmental taxes, rather than subsidies to encourage environmentally friendly behaviour would achieve the same internalisation of social costs, but at a much lower budgetary cost*. This principle needs to be applied, *inter alia*, in water policies (see below). *Selective increases of these taxes could also fund a reduction in some employer social security contributions*. Such a step could help reduce labour costs and improve competitiveness. *Lowering the taxes on housing transactions would help remove barriers to the mobility of workers and would create* *room for raising more revenues from taxing real estate property, which would generate relatively little distortion to economic activity.*

Pension reform must address ageing expenditures and improve work incentives

Spain faces a dramatic increase in ageing-related public spending between 2030 and 2060. Spain's old-age pension benefits offer a more generous return on contributions than those of many other OECD countries. As more workers with full career records will enter retirement and the dependency ratio will increase, pension costs will increase sharply. *The proposal for a phased increase in the statutory retirement age for a full pension from 65 years of age to 67 years would generate a significant decline in future pension spending. It should therefore be a high priority and be combined with other measures to contain spending. In the longer term, pension entitlement parameters, for example the statutory retirement age or pension benefits, should be indexed to changes in life expectancy. The government should phase in a revised pension benefit calculation formula that reflects the full working life of participants*. The latter would increase the linkage between contributions and pensions. Survivors' pensions make up a substantial share of pension spending. As young and middle-aged women increasingly participate in the labour market, *eligibility requirements for combining survivor benefits with other pensions should be tightened, for example by means-testing.* The government is envisaging reform along these lines.

Workers exit the labour market on average about one year before they begin to receive pension benefits and extended unemployment benefit payments for older workers are used in the transition period to retirement. Though modest, these benefits can be paid for up to nine years until early retirement is reached, raising reservation wages and lowering employment of older workers. *The extended unemployment benefit payments for older workers should be gradually shortened and eventually phased out. Subsidies to the partial retirement scheme should also be phased out.* An increase in the minimum period of contributions required to reach a full pension, currently set at 35 years, would also improve work incentives, especially if the period of earnings assessed for pension benefit calculation is lengthened.

Domestic stability rules need to be reinforced

Regional governments account for 35% of total government spending, although thus far they have contributed little to the national debt, reflecting the relatively recent completion of decentralisation of spending powers. In the recent boom years, the central government built up considerable surpluses in its own and in social security budgets, while regional governments ran small deficits. While the central government has strong powers, which have recently been enhanced, to intervene when regional governments do not meet deficit targets set in the *Budgetary Stability Law,* current regional funding and domestic stability rules could be improved to ensure that regional governments do not spend windfall gains in boom years. *The domestic stability rules limiting budget deficits of the different levels of government should be reformed to require larger surpluses when activity is above the domestic potential level.*

Fostering the rented housing market can help absorb excess supply and ease labour market adjustment

The housing market remains characterised by large oversupply. At the same time, a large number of young adults live with their parents and some low-income households remain poorly housed. Housing policies can influence the speed with which the empty housing stock is reabsorbed and can foster geographic mobility, especially by removing hurdles to the development of the rental market. Some welcome steps have been taken: judicial procedures for the eviction of tenants have been simplified; tax allowances for housing purchases have been eliminated except for low income earners; and the tax treatment of owners and tenants has been equalised. At the same time, the government subsidises social housing. Social housing is comparatively low but poorly targeted and reduces mobility because of waiting lists. *Government subsidies for the construction of social housing should be reconsidered. Support for low-income families should be provided through means-tested cash benefits towards housing costs instead of housing-related income tax allowances.*

Progress with product market reform is substantial but further steps would strengthen the recovery in the medium term

Progress in product market regulation can improve competitiveness, both by strengthening productivity and lowering prices. This could allow a faster reallocation of resources to the most efficient and fast growing sectors. Over the past decade, Spain has undergone widespread reforms that have made many markets more open to competitive pressures. Reforms are continuing, for example, in the draft *Ley de Economía Sostenible*. In retail trade, a recently passed law has removed the national requirement for a license for opening an outlet, although regional governments may require an authorisation under overriding reasons relating to the public interest. Scope for improvement remains. For example, some regional governments are making use of their powers to restrict entry of large-surface outlets. Besides, in professional services, qualification-related entry barriers are higher than elsewhere in the European Union. *Entry barriers for large-surface retail outlets imposed by regional governments should be lowered. In addition, shop opening hours should be liberalised in those regions where restrictions remain. Some qualification-related entry barriers in the liberal professions should be reviewed.*

Reducing duality in the labour market

The massive increase in unemployment, especially among the young and unskilled, has made the structural weaknesses in the labour market evident. Structural unemployment is high and is likely to have increased during the current crisis. Furthermore, employment reacts in a very volatile fashion to the cycle, amplifying welfare, output and budgetary costs of fluctuations in activity. High protection of permanent contracts contributes to these structural problems. Firms have been reluctant to convert temporary contracts into permanent ones, and this increases turnover as well as encourages a dual labour market. High protection of workers on permanent contracts has also contributed to making wages less responsive to labour market conditions and has made the integration of young people into the labour market more difficult. Finally, dual labour markets harm labour productivity, reducing job mobility and the incentives of individuals and firms to invest in human capital.

The labour market reform legislation, approved by Parliament in September 2010, is expected to make it easier for firms to have dismissals accepted as "justified" which reduces their costs. However, the law still leaves much room for judicial interpretation, so that it is not clear to what extent the legislation will change the practice whereby firms prefer to pay upfront the highest severance payment in order to avoid going to court. Making it easier for firms to have dismissals accepted as "justified" would affect all existing contracts, not only new ones, hence reducing insider forces in wage setting and fostering mobility, with significant benefits for productivity and the integration of young workers. If these measures fail to make it significantly easier for firms to have dismissals accepted as "justified" *further progress in easing the burden on businesses to prove that dismissals are justified may be needed. Steps to reduce the duration of judicial procedures would also help.* The reform package also foresees the replacement of part of accrued dismissal pay entitlements by mandatory contributions of businesses into blocked accounts, which would be made available to workers upon dismissal or retirement as well as for training or mobility purposes, for newly signed contracts from 2012 onwards (the so-called "Austrian-model-type" part of the reform). This measure should reduce dismissal costs further, which is welcome.

The reform package also widens the types of workers who are eligible to be hired on permanent contracts with somewhat reduced dismissal pay. However, different permanent contracts, some of which stipulate high dismissal pay for unjustified dismissal, continue to exist side-by-side. Hence, even with the recent reform, severance pay may still be excessively large, making firms reluctant to transform temporary contracts into permanent ones. *The reform would be more effective if these two types of contracts converged. This could for instance be achieved by introducing a single contract with severance pay which is low initially, but gradually increases with seniority.* If designed like this, it could *even replace the current system of temporary and permanent contracts*. The convergence towards a single contract should not lead to unnecessarily stricter regulation of temporary contracts, however. In fact, the current reform package tightens the regulation of temporary contracts. This is risky in the current situation, even if the law foresees phasing the tightening in between 2012 and 2015. *Restrictions on temporary contracts should be avoided. As a minimum they should only be introduced if the reform succeeds in lowering dismissal pay for permanent contracts and improves hiring on such contracts markedly.*

A more far-reaching reform of collective bargaining is necessary

The wage bargaining system has several drawbacks. *First,* collective bargaining takes place predominantly at the sectoral and provincial levels and hence at an intermediate level of centralisation which is unfavourable for the flexibility of wages both to aggregate and firm-specific shocks. *Second,* bargaining outcomes are extended to all firms of the same sector or region by law even if they do not participate in the agreement. *Third*, it used to be very difficult for firms to opt out from collective agreements. The 2010 reform substantially eases the conditions for firms to opt out from collective bargaining agreements as regards wage and other work conditions, although the statutory extension of collective bargaining remains in place. *Abolishing the legal extension principle may be desirable* although such a step may be difficult to reconcile with constitutional law. In any case, *it should be ensured that employers and* *workers can freely agree to opt out from collective bargaining agreements at the firm level as intended in the new legislation. Moreover, the system of collective bargaining could be simplified and give more room for wages and other work conditions to be decided at the firm level.* Reforms along these lines would help to curb the widespread indexation of collectively bargained wage increments to past inflation, which is typically triggered when inflation exceeds 2%. This could be harmful, for example, should prices of imported commodities rise.

The employability of young and low-skilled workers needs to be raised

Reducing the very high unemployment of young workers is a priority. In the current situation, reducing the number of pupils leaving school without upper secondary education would have a double dividend: it would raise human capital for the long term and would postpone entry of young and unskilled workers into a depressed labour market. The government has presented plans for wide-ranging reform of compulsory education, which will include steps aimed to reduce school drop outs. *In compulsory education, steps should be taken as soon as possible to focus the conditions for granting pupils promotion to subsequent grades on those core competencies needed to advance to any type of upper secondary education*, as argued in the 2008 *Economic Survey*. *This would lower drop-out rates and increase access to upper secondary vocational education.*

Middle-aged and older workers tend to be even less skilled than the young. Wider participation in continuous training could help improve skills. The current compulsory payroll contribution for the funding of continuous training seems to generate poor results, as investment into continuous training is low, while at the same time raising the tax wedge on employment. *The institutional setting of continuous training should be made less complicated and access of small firms to subsidised continuous training should be improved. Firms should also have more options as to the choice of training to ensure that the training meets the firms' needs, hence rendering the subsidies more effective. The government may also consider introducing training grants to individual adults, for instance in the form of vouchers covering course fees or allowances to cover indirect costs such as foregone wages.* Such schemes facilitate targeting and stimulate competition among training providers by giving individuals greater choice. *For such systems to be effective, though, it is important that provider quality is guaranteed, for instance by ensuring that accredited training providers meet strict quality standards.*

The matching process needs to be improved

The separation of responsibilities for the funding of unemployment benefits and active labour market policies, set at the national level, from responsibilities for the managing of placement services, set at the regional level, may distort placement incentives for regional employment offices. *Ideally, the responsibilities for funding of unemployment benefits and for managing the public employment services should be assigned to the same jurisdictional level (the central government). If this is not possible, comprehensive monitoring and evaluation of employment services at the regional level should be introduced, based on quantitative output indicators or targets. This could be combined with qualitative studies of placement successes and their impacts on job-seekers' employability by following former unemployed over time.* The reform according to which private firms (not only non-profit as previously) can provide placement services if authorised by public employment services is welcome as it could improve the effectiveness of overall placements of workers to jobs.

Spain follows a mutual obligation approach where, in return for benefits, recipients are required to engage in active job search activities, but the incentives of unemployment benefit recipients to search for a job could be further improved. *Benefit payment should not be paid retrospectively for the period prior to registration and the first full interview should be mandatory at the time of registration. Furthermore, Spain should increase the frequency of reporting of job search activity.*

The limits to more intensive use of natural freshwater resources have been reached

Water scarcity needs to be taken into account in economic decision making in order to preserve resources for the future and for natural habitats. Natural water resources are used intensively and scope for further raising the use of natural water supply, for example through increasing dam capacity, is limited. Climate change is expected to continue reducing supply, and make droughts more severe, especially in those river basins already most affected by water scarcity. Expansion of "non-conventional" resources – notably desalination and recycling – is still limited, as costs are often much higher than current prices paid by farmers. Irrigation accounts for around 65% of water consumption. But the range of water productivity observed in irrigation is large, with low value added production consuming a substantial share of water, even in basins most affected by scarcity. Government policy has responded to these challenges: achieving water savings, especially by modernising irrigation infrastructure, and support for "non-conventional" water resources were key measures taken, following the 2004 revision of the National Hydrological Plan.

The assignment of responsibilities according to river basins must be preserved

Public competencies for the management of water resources are assigned to river basin authorities, which are subordinated to the central government if river basins cover the territory of more than one autonomous community. This arrangement is appropriate. Recent amendments to some regional statutes lay claim on water resources management, for example, of river flows that are shared among several regions. *Competences over water resources that are shared to a significant extent across regions should remain clearly assigned to river basin authorities. In order to ensure a proper co-operation between the different levels of government in the management of water resources, the constitution of the Committees of Competent Authorities should be accelerated.*

River basin authorities have considerable budgetary and managerial autonomy, for example, in the assignment of water concessions or decisions on public infrastructure. Their work builds on the involvement of stakeholders in water use, especially through representation of users, who typically contribute a third of the members in decision-making bodies. In several river basin authorities, irrigation associations dominate user representation, generating risks of regulatory capture. *Risks of capture of regulatory authorities should be reduced by widening the participatory approach in water management to a broader set of stakeholders, such as scientists, or representatives of institutions protecting local* *ecosystems and the leisure services these provide. This enhanced participation should take place through the appropriate institutions, including in the river basin authorities.*

Water prices need to fully reflect all costs

Legislation on water pricing limits cost recovery to operating and capital costs in the provision of water services and hence prevents opportunity costs related to the scarcity of water and environmental costs from being included in water prices. A recent study estimates that a significant proportion of capital costs are not recovered, while pointing to lack of transparency and availability of relevant data. River basin authorities typically cannot fund investment from revenues obtained from water charges and have to rely on government funding instead. Higher revenues from improved cost recovery would in turn leverage substantial additional private funding for investment, providing benefits for water savings as well as economic stimulus. *Prices should more fully reflect all the costs involved in the provision of water services. The law should allow the inclusion of environmental and scarcity costs in water prices. Transparency in water charging should be improved, so as to provide information on the different costs involved in the calculation of tariffs. The provision of data on costs of water services should be made easily accessible nationwide. For example criteria on the attribution of costs to services with public goods characteristics, such as flood control, should be harmonised according to transparent criteria. Economic instruments, including tenders or auctions, could be used for the assignment of new water concessions instead of granting them for free.*

The government has provided substantial subsidies for the modernisation of irrigation techniques. Higher water prices may reduce the need for such subsidies. However, in the context of low prices, there is the possibility that water saved through modern techniques is being used to extend irrigation or for more water-intensive crops. In a recent programme to subsidise water-saving irrigation techniques (*plan choque de regadíos*), the government appropriately required the amount of water granted in concessions to be reduced for the beneficiaries of these subsidies, but the overall impact of the programme on water consumption is not clear. *In the short term, it must be ensured that subsidies for irrigation modernisation are conditioned on reductions in the amount of water that is designated in concessions to ensure that water savings resulting from the modernisation are made available to environmental flows or other economic use.*

Comprehensive water markets, including for the transfer of long-term water rights, have delivered efficiency gains worth several billion dollars in Australia and the United States by allocating increasingly scarce water supplies among competing agricultural, urban, and environmental uses. *Restrictions on the trade of water concessions should be eased. For example, caps on sales established on the basis of past consumption could be reviewed and the participation of dealers could be allowed. The requirement not to sell water to users considered to be of lower priority in the law should be reconsidered. Water banks could be extended to more river basins.*

Management of groundwater resources needs to improve further

A substantial share of groundwater resources is at risk of being overexploited and water quality is an issue. The management of groundwater resources in Spain faces a number of particular challenges: since most groundwater is used in agriculture, abstractions occur in a highly decentralised fashion, making monitoring particularly difficult. The large value added gains from groundwater use in agriculture, compared to surface water, generate incentives for overexploitation. Although river basin authorities have received powerful instruments to halt excessive abstractions and much progress has been made in registering groundwater abstraction rights, several observers have noted that this framework has not yet been sufficiently effective. *The monitoring of groundwater abstractions should be reinforced. To this end river basin authorities should be endowed with the necessary financial and human resources. The sanctioning regime could be reviewed by making it more transparent for water users and by ensuring that sanctions are graded and proportionate to the offence. Legislation should be introduced to allow the introduction of a charge for groundwater abstractions to cover both the cost of administering and enforcing the groundwater rights and the cost of internalising the common-resource externality.*

Many associations of aquifer users have been created, with government support, but they do not appear to have internalised the common resource externality associated to decentralised groundwater extractions effectively. Few are oriented towards the sustainable use of a common resource. Most limit their activities to the joint use of infrastructure. On the other hand, there are notable examples of successful resource managers, who have set up internal mechanisms of abstraction controls and fines, without requiring the authorities' intervention. *To create incentives for user associations to manage groundwater resources sustainably, a charge could be introduced for users of aquifers which are persistently not managed in a sustainable fashion.*

Chapter 1

Rebalancing the economy

Spain has recently exited a deep recession triggered by the global crisis. Growth is nevertheless expected to remain subdued as the economy still needs to correct part of the private sector imbalances built-up prior to the crisis despite a prudent macro-fiscal policy. Strong growth of private sector indebtedness, which reflected strong business investment as well as the overdevelopment of the residential construction industry, has led to a sizeable current account deficit, whose correction is underway. Rebalancing the Spanish economy and boosting potential growth will require full-fledged reforms, especially in labour and product markets. In particular, fostering competition in the service sector further could help reduce prices and improve competitiveness. Housing policies have advanced considerably in eliminating tax distortions in favour of housing ownership and removing barriers to the rental market, which can help support labour market adjustment and make a contribution to the absorption of the empty housing stock. However, the authorities should refrain from expanding the stock of social housing and favour instead means-tested benefits. Restructuring and reform of the savings banks has improved their resilience, although the role of regional governments in the savings banks' management should be further reduced.

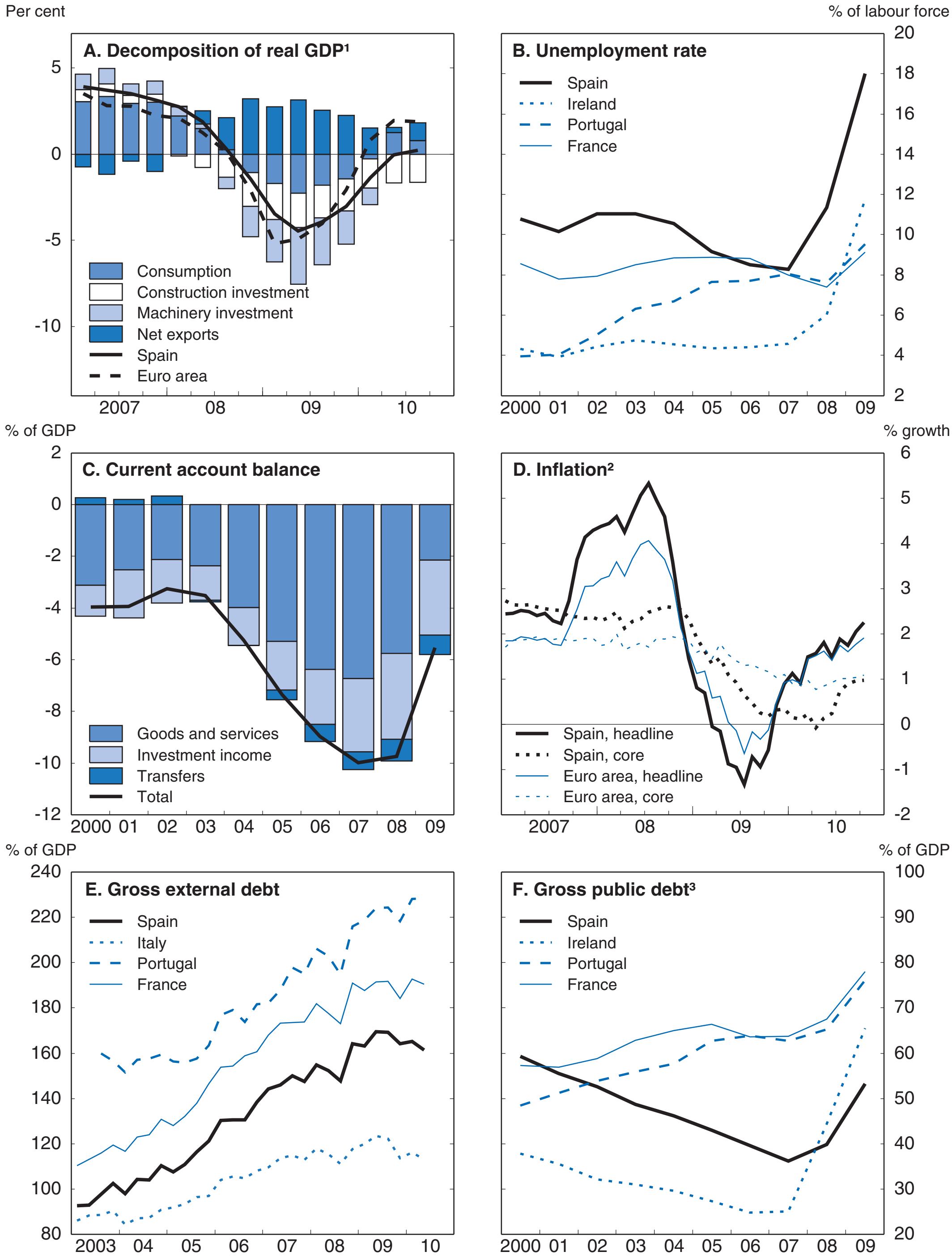
A cyclical downturn severely hit by the global crisis

After a decade of rapid growth, Spain entered a recession of unprecedented (in the last 50 years) depth and length, leading, in particular, to a steep rise in unemployment (Figure 1.1 and Table 1.1). The recession was triggered by the global crisis but has been compounded by the sharp domestic adjustment already underway related to the oversized residential construction industry. The crisis has accelerated the adjustment of the external imbalance built-up prior to the crisis, as a very dynamic growth of private sector indebtedness, which financed unusually high rates of business and residential investment, led to a sizeable current account deficit, despite both a prudent fiscal policy (several years of fiscal surpluses) and an adequate financial supervision framework (high bank capital and provision buffers).

The steep adjustment of the private sector led to an evaporation of fiscal revenues which, combined with discretionary fiscal stimulus, resulted in a sizeable budget deficit. Financial market tensions in the wake of the Greek crisis and financial investors' concerns on the capacity of the government to finance its fast-rising debt led to a steep rise in sovereign spreads over German 10-year bonds, which reached about 200 basis points in early May 2010 (Figure 1.2). While the banking sector proved resilient to financial market turbulence and exposures to the domestic housing market, financial investors' concerns about the condition of both financial intermediaries and the government mutually reinforced each other, with high credit default swap spreads moving in lockstep with the risk premium on long-term government bonds. The announcement of the European Financial Stabilisation Mechanism and the launch of the European Central Bank (ECB) Security Market Programme to buy government debt provided some relief, as did the decision by the government to frontload its fiscal consolidation and the publication of stress test results for almost all domestic banks. Steps to strengthen the resilience of savings banks (discussed below), as well as structural reforms, notably in the labour market, also helped improve confidence. The test scenarios included a severe hypothetical further deterioration of the domestic housing market. Nonetheless, spreads remain high by historical standards, emphasising the need for Spain to strengthen financial market confidence in the sustainability of government finances.

This first chapter of the *Survey* assesses the imbalances in more detail and the extent of the rebalancing that has already occurred. It also reviews developments in the two sectors more directly affected by the crisis, *i.e.* the housing sector and the banking system. Some policies to rebalance the economy, such as product market reforms, are also discussed in this chapter, but fiscal policy is more extensively covered in Chapter 2 while labour market developments and policies are assessed in Chapter 3.

Figure 1.1. **Recent macroeconomic developments**



1. Contributions to growth, year-on-year. The lines represent real GDP growth.
2. Inflation is measured by the year-on-year change in the consumer price index. Core inflation excludes food and energy.
3. Maastricht definition.

Source: OECD (2010), *OECD Economic Outlook: Statistics and Projections* and *Main Economic Indicators* (databases), November; and World Bank (2010), "Quarterly External Debt Statistics", *World dataBank*, November.

StatLink http://dx.doi.org/10.1787/888932363159

Table 1.1. **Economic indicators**[1]

	Current prices, billion euros	Percentage change, volume				
		Outcomes		Projections		
	2007	2008	2009	2010	2011	2012
Private consumption	481.0	–0.6	–4.2	1.5	1.7	2.3
Government consumption	152.6	5.8	3.2	0.3	–0.8	–1.3
Gross fixed capital formation	235.3	–4.8	–16.0	–6.8	–1.8	2.0
of which: Residential	59.2	–10.7	–24.5	–16.6	–3.6	–0.3
Final domestic demand	869.6	–0.7	–6.0	–0.7	0.4	1.5
Stockbuilding[2]	2.6	0.1	0.0	0.0	0.0	0.0
Total domestic demand	872.2	–0.6	–6.0	–0.7	0.4	1.5
Exports of goods and services	245.1	–1.1	–11.6	9.3	8.2	10.4
Imports of goods and services	328.1	–5.3	–17.8	6.4	5.9	8.7
Net exports[2]	–83.0	1.5	2.7	0.5	0.5	0.3
Gross domestic product	797.4	0.9	–3.7	–0.2	0.9	1.8
GDP deflator	. .	2.4	0.6	0.4	0.2	0.3
Memorandum items						
Harmonised index of consumer prices (HICP)	. .	4.1	–0.2	1.5	0.9	0.3
Core HICP (excluding food and energy)	. .	2.4	0.9	0.5	0.8	0.3
Private consumption deflator	. .	3.5	0.1	2.3	1.0	0.3
Unemployment rate (%)	. .	11.3	18.0	19.8	19.1	17.4
Household saving ratio[3]	. .	13.4	18.0	16.9	16.0	15.4
General government financial balance[4]	. .	–4.2	–11.1	–9.2	–6.3	–4.4
Gross debt (Maastricht definition)[4]	. .	39.8	53.2	62.9	68.9	70.3
Current account balance[4]	. .	–9.7	–5.5	–5.4	–5.1	–4.8

1. National accounts are based on official chain–linked data which introduces a discrepancy between real demand components and GDP. For further details see *OECD Economic Outlook* Sources and Methods at *www.oecd.org/eco/sources-and-methods*.
2. Contributions to changes in real GDP (per cent of real GDP in previous year), actual amounts in first column.
3. Defined in gross terms, per cent of disposable income.
4. Per cent of GDP.

Source: OECD (2010), *OECD Economic Outlook: Statistics and Projections* (database), November.

Spain has started rebalancing its economy

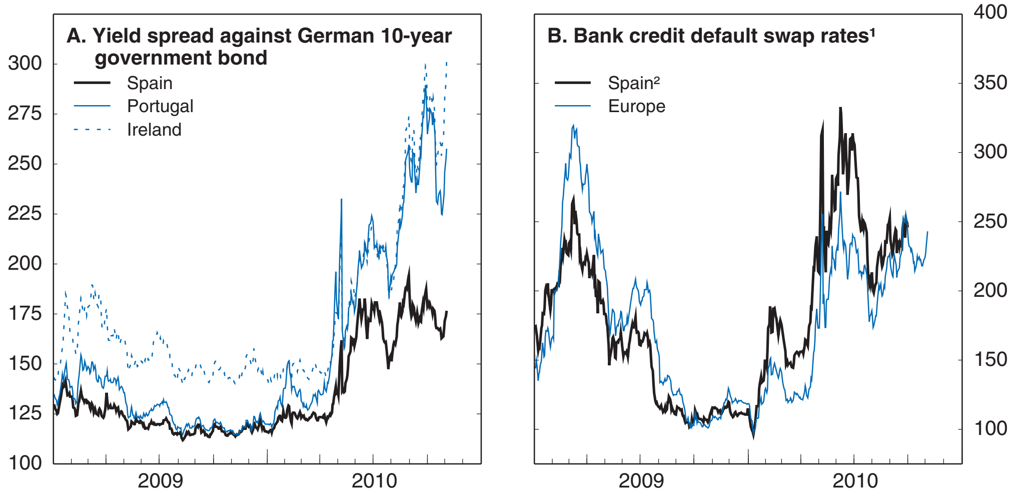
Spain entered the crisis with significant imbalances

Households and some businesses sectors are highly indebted

The debt burden of households relative to disposable income is high in comparison to other euro area countries (Figure 1.3). This largely reflects strong investment in housing, whereas savings were not unusually low (see further below). Net financial wealth relative to disposable income has fallen since 1998, albeit little below long-term averages, while the accumulation of housing wealth has boosted total net wealth. Nonetheless, the tightening of bank lending conditions as well as deteriorating labour market conditions contributed to the increase in the household savings rate from 12% in 2007 to 18% in 2009. The high savings rate should allow deleveraging to advance without further cutbacks in consumption. Nonetheless, household debt dropped by only 2% of disposable income in 2009, reflecting still high spending on residential investment and the accumulation of financial assets, in part because their remuneration was attractive relative to debt servicing costs and for precautionary purposes. Since interest rates on mortgage debt are typically indexed to short-term interest rates with a lag of about a year, households are likely to benefit from low debt servicing costs until 2011, easing the immediate pressures of the deleveraging process on consumption.

Figure 1.2. **Recent financial market developments**

Basis points



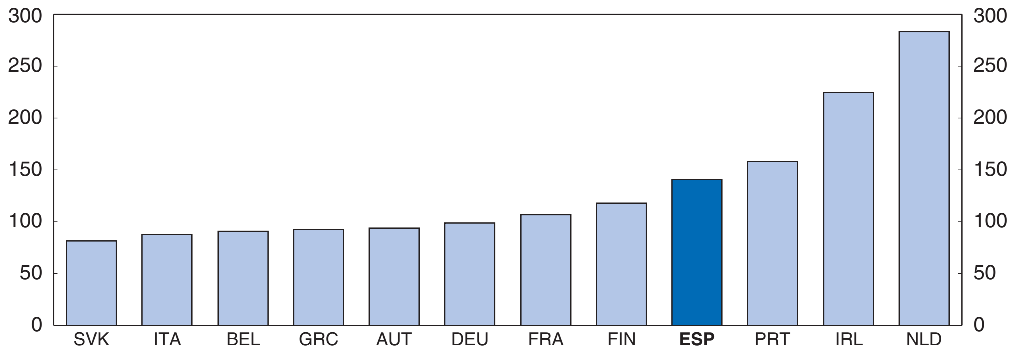
1. Mid-rate spread between the entity and the relevant benchmark curve.
2. Unweighted average of the four main banks.

Source: Datastream.

StatLink http://dx.doi.org/10.1787/888932363178

Figure 1.3. **Household debt in the euro area**[1]

Per cent of disposable income, 2009[2]



1. Total liabilities of the household sector including non-profit institutions serving households, non-consolidated stock.
2. 2008 for Greece.

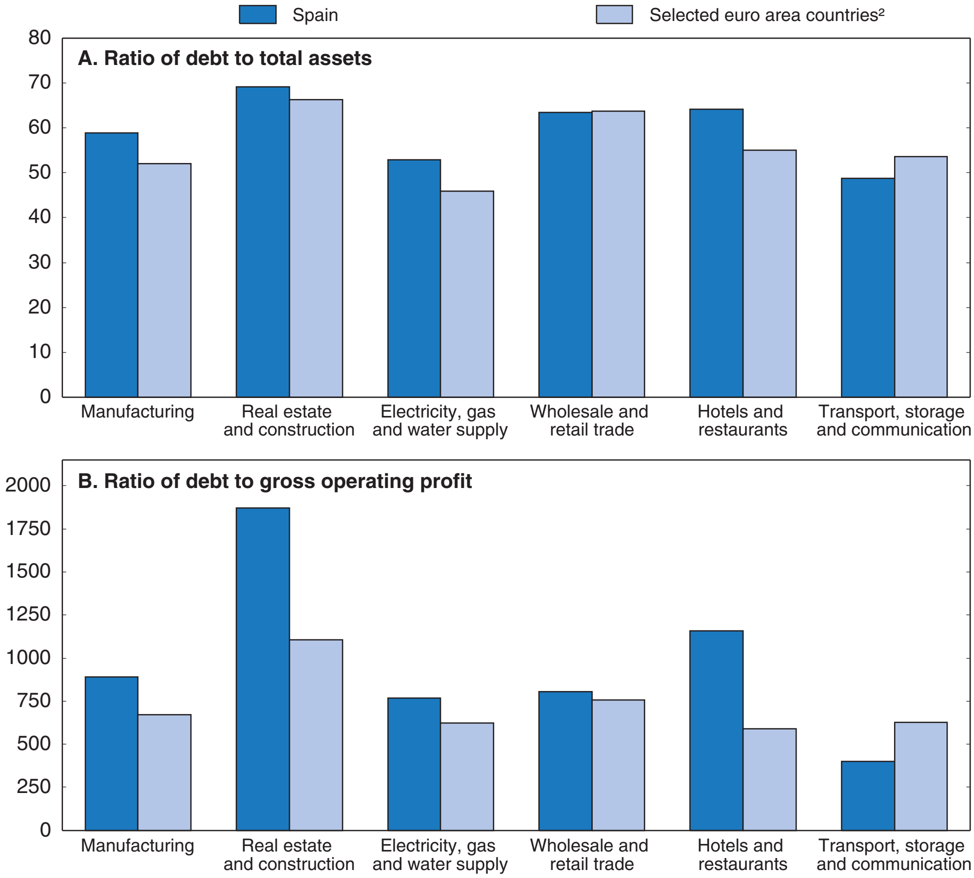
Source: OECD (2010), *OECD National Accounts Statistics* and *OECD Economic Outlook: Statistics and Projections* (databases), November.

StatLink http://dx.doi.org/10.1787/888932363197

Strong business investment before the onset of the crisis contributed to making Spanish businesses somewhat more leveraged than in other euro area countries. According to estimates by the Banco de España, in 2008, business debt amounted to 62% of total assets, compared to 59% in a weighted average of five euro area countries excluding Spain[1] (Figure 1.4, Panel A). The difference in business indebtedness between Spain and other euro area countries is more marked if measured relative to profits, especially in the housing sector (Figure 1.4, Panel B). This development reflects the sharp impact of the downturn, notably in the housing market, as the decline in sales reduced developers'

Figure 1.4. **Debt burden of non-financial enterprises by sector**[1]

Per cent, 2008



1. Debt includes commercial credit.
2. GDP weighted average of ratios for Belgium, France, Germany, Italy and Portugal.

Source: A. Fraile Izquierdo and C. Martínez Carrascal (2010), "El endeudamiento de las sociedades no financieras españolas. Evolución temporal y comparación con el área del euro", *Boletín Económico*, Banco de España, May.

StatLink http://dx.doi.org/10.1787/888932363216

ability to repay their debt and lowered profits. As a result, overinvestment in housing has resulted in debt write-offs by banks (see below).

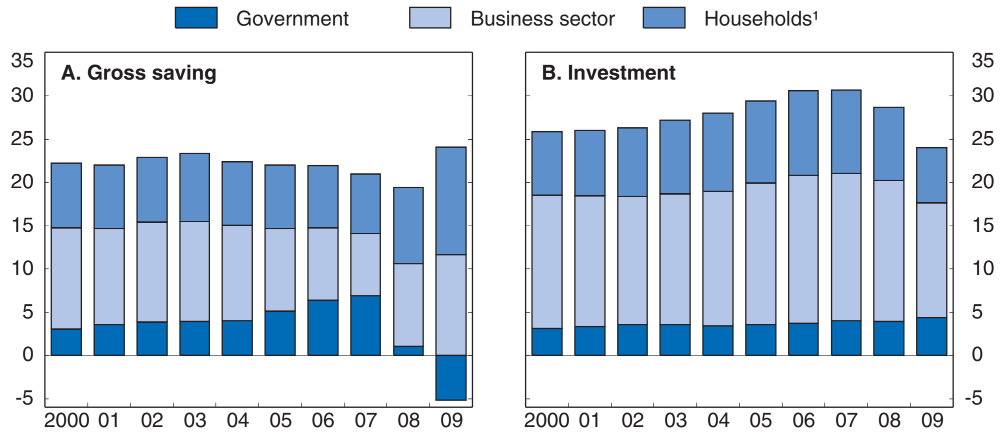
Among the non-construction sectors with a large weight in the economy, indebtedness appears relatively high in manufacturing and in tourism-related sectors.[2] By contrast, in sectors producing predominantly non-tradable goods and services, notably transport, communication, wholesale and retail trade, which may be more likely to face low product demand growth in future years, leverage does not appear to be particularly high. Aggregate data from business income accounts indicate that cash-flow has recovered to healthy levels in the course of 2010, and is now not much below pre-crisis years, suggesting that the ability to repay debt has improved. In part, this can be explained by the ease with which businesses have been able to lay off workers on temporary contracts at low cost.

Reliance on external financing has fallen

During the boom years, national savings remained substantial, notably sustained by rising public savings (Figure 1.5). As evidenced by a recent study on current account

Figure 1.5. **National saving and investment**

Per cent of GDP



1. Includes non-profit institutions serving households.

Source: OECD (2010), *OECD National Accounts Statistics* (database), November.

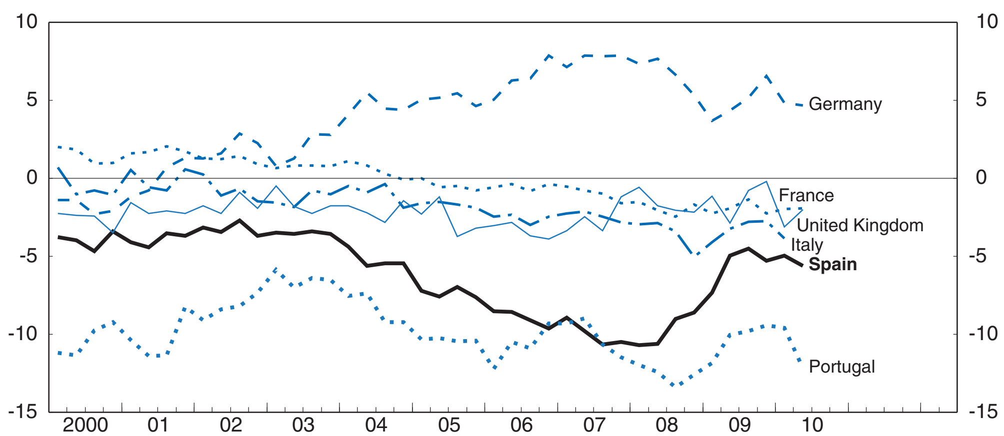
StatLink http://dx.doi.org/10.1787/888932363235

imbalances (Jaumotte and Sodsriwiboon, 2010), in the southern euro area, the fall in private saving compared to northern euro area economies was smaller in Spain than in other southern euro area economies (except Slovenia). However, unusually high investment rates significantly exceeded national savings, due both to businesses and the residential housing sector, resulting in a large current account deficit.

The drop of imports during the crisis has resulted in a marked narrowing of the current account deficit (Figure 1.6), even without substantial real exchange rate depreciation. To some extent this can be explained by the large contribution of business investment to the current account deficit in the boom period, as a large share of machinery and equipment investment goods is imported. Thus, falling purchases of machinery and equipment contributed strongly to the contraction of domestic demand in 2009 (Figure 1.1, Panel A).

Figure 1.6. **Current account balance**

Per cent of GDP



Source: OECD (2010), *OECD Economic Outlook: Statistics and Projections* (database), November.

StatLink http://dx.doi.org/10.1787/888932363254

Pro-cyclical lending conditions, with real interest rates below those observed in other euro area countries in the boom period, played a particularly significant role in residential construction, where they were magnified by tax subsidies, which further encouraged speculation on rising prices (see OECD, 2007 for a description of the subsidies).[3] Conversely, the large contribution of business investment to the deficit before the outburst of the crisis can to some extent be attributed to structural factors. Firstly, the decline in real interest rates following euro adoption also encompasses a structural component (*e.g.* owing to the better macroeconomic framework of the European Monetary Union). Secondly, the large trend increase in female labour force participation, which can be attributed to structural reasons, as well as large immigration flows, which are unlikely to be mostly accounted for by cyclical factors, raised labour supply substantially. This development raised the desired level of the capital stock. As shown in the 2008 *Economic Survey*, the strong business investment observed prior to the crisis was merely sufficient to avoid a widening of the gap in the capital intensity of labour between Spain and other euro area countries (OECD, 2008) since the mid-1990s.

The current account deficits have led to an accumulation of gross external debt of 165% of GDP (2009), which is moderate in international comparison.[4] The net external investment position of –87% of GDP in the second quarter of 2010 is, by contrast, relatively large. It reflects a smaller stock of Spanish financial and other foreign investment assets than in more mature economies. The recently observed current account deficits are higher than the level consistent with a constant net external investment position in the medium-term, although the gap of about 1-2 percentage points is not substantial.[5] As a consequence, the real exchange rate adjustment needed to bring back the current account deficit to a sustainable level may be limited.

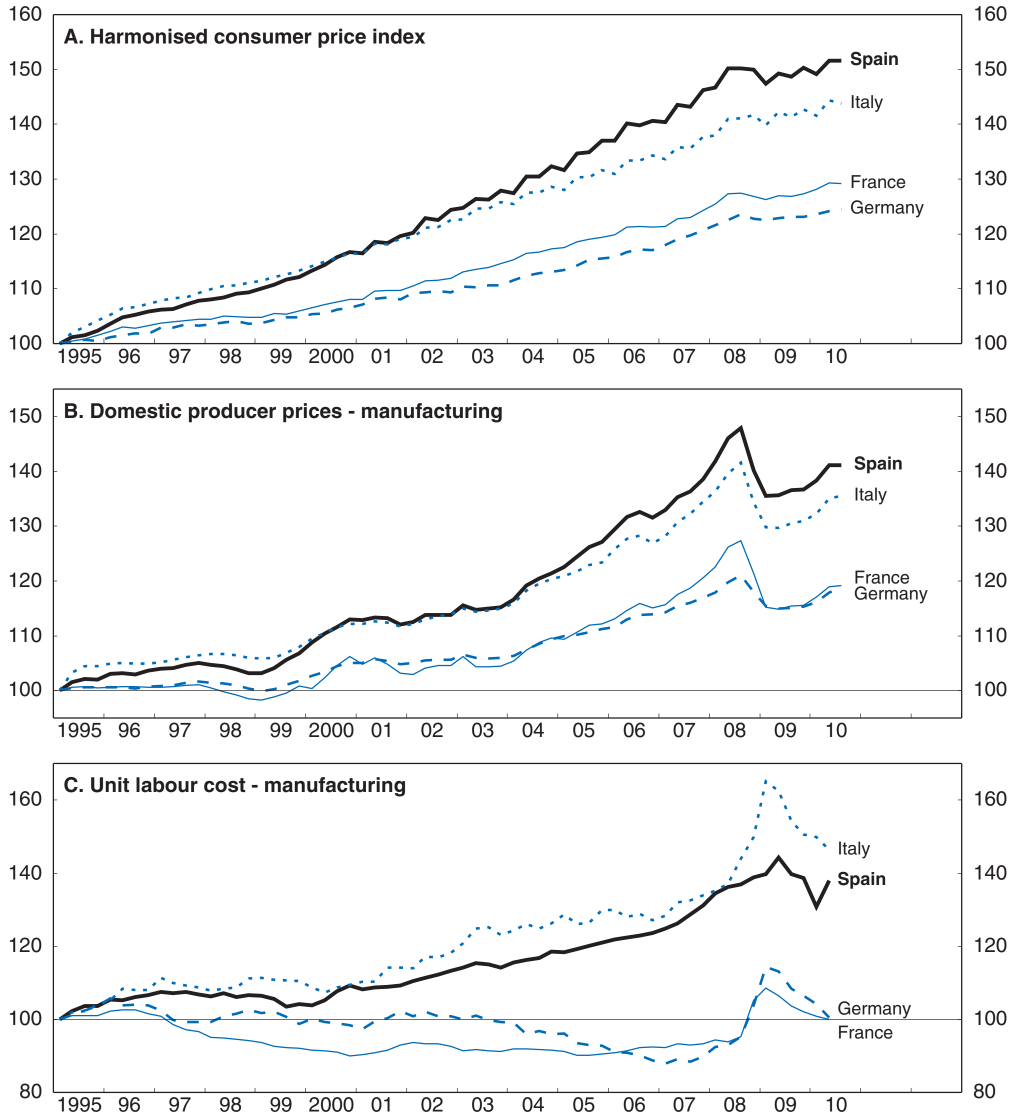
Looking forward, the current account deficit is projected to decline, on account of fiscal retrenchment, continued adjustment in residential construction and deleveraging among households and businesses. Structural funding needs may also diminish as labour supply growth is set to fall, immigration recedes and the scope for gains in female labour market participation will gradually diminish (see Box 1.2 below). Nonetheless, conceivably, convergence in the capital intensity of labour to rates observed in other European countries may yet require additional external funding. Policies to restore investor confidence, including through fiscal consolidation, are therefore essential, to ensure external funding remains accessible at moderate cost. They would allow some smoothing of the deleveraging process in the private sector, by allowing households and businesses to roll over part of their debt and to fund future investment needs.

Indicators of price and cost competitiveness have deteriorated over the past decade

The booming economy, along with the longer-term catch-up process, led to relatively high inflation of prices prior to the crisis (Figure 1.7). Several indicators suggest that prices and costs of the production of tradable goods have risen faster in Spain than in other euro area countries. This difference is particularly marked in cost indicators for tradable goods. While consumer price inflation (which includes the prices of non-tradable goods) have risen by about 15-20% relative to France or Germany, since 1995, relative unit labour costs in manufacturing have risen by 35% (Figure 1.7, Panel C) mainly due to low productivity growth. If there were a large overvaluation of the real exchange rate *vis-à-vis* other members in the euro area, it would be of particular concern, because it would have to be corrected through lower inflation than in the other countries of the currency area. With an inflation target of just below 2% for the euro area as a whole, a correction of a large

Figure 1.7. **Competitiveness indicators**

Index, 1995Q1 = 100



Source: OECD (2010), *Main Economic Indicators* (database), November.

StatLink http://dx.doi.org/10.1787/888932363273

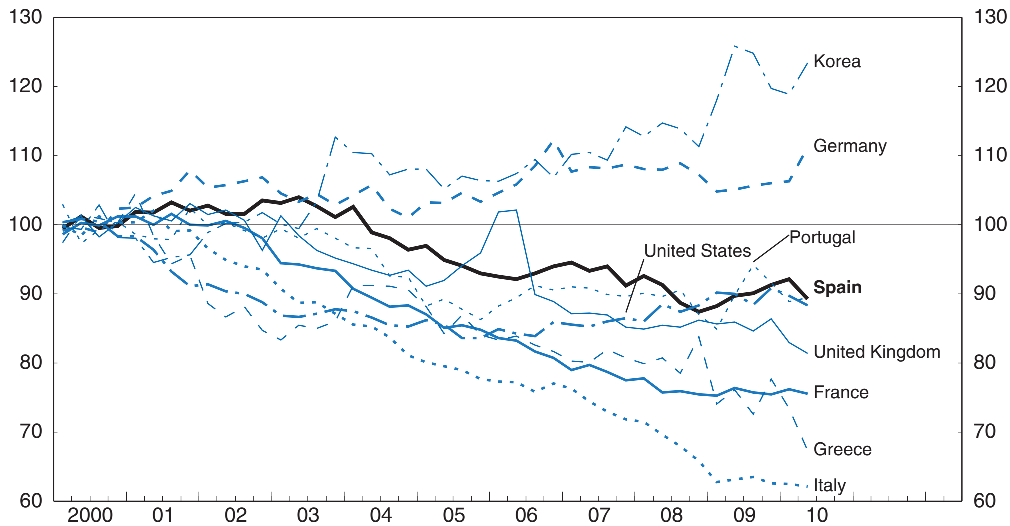
exchange rate overvaluation could require a long period of low inflation or even deflation, and hence a long period of weak activity to generate the required downward pressures on prices. The extent of output losses resulting from any needed real exchange rate realignment also depends on the extent to which policy settings encourage wage and price flexibility as well as productivity improvements (see further below).

Core inflation (excluding energy and seasonal food from the price index) fell below the euro area average in the course of 2009, reflecting the drop in domestic demand (Figure 1.1, Panel D). The headline rate has moved close to the euro area's recently, in part reflecting the bigger impact of rising oil prices on inflation in Spain, on account of a smaller tax component in fuel prices and more intensive oil use. The impact of the increase in value added tax (VAT) rates (from 16 to 18% for the standard rate, from 7 to 8% for the reduced rate) is estimated to raise inflation by about ½ percentage point from July 2010 onwards.

The need for continued unravelling of domestic demand over the next few years, notably on account of the needed budgetary consolidation and the continued adjustment of residential housing (see next section) suggest that some real exchange rate adjustment is needed, although this is likely to be moderate. Some arguments suggest that the adjustment will not need to be as large as to imply a return to levels near to those observed prior to the creation of the euro. Market shares of Spanish exporters have evolved relatively favourably in comparison to many other high-income countries (Figure 1.8). The expansion of non-tourism service exports has contributed to this development (OECD, 2008). The current account deficit diminished significantly without major real exchange rate adjustment. And an analysis of price level data from the OECD purchasing power parities database suggests that the level of prices of Spanish goods and services does not seem, on aggregate, higher than in other euro area countries, controlling for the effects of differences in income, productivity and indirect taxation (OECD, 2008).[6]

Figure 1.8. **Export performance**[1]

Index, 2000 = 100



1. Export performance is the ratio between export volumes and export markets for total goods and services. The calculation of export markets is based on a weighted average of import volumes in each country's markets, with weights based on trade flows in 2005.

Source: OECD (2010), *OECD Economic Outlook: Statistics and Projections* (database), September.

StatLink http://dx.doi.org/10.1787/888932363292

Several factors can contribute to rising costs relative to trading partners but may not require correction. Countries specialised in exporting goods whose prices rise in world markets should experience rising relative unit labour costs, and such a development should not be interpreted as a deterioration of competitiveness. For example, countries exporting goods with relatively low technology content (such as Spain) rather than high-technology goods, such as information and communication technology (ICT) products, whose prices are falling fast, may experience rising export prices. Prices of Spanish exports have indeed risen more quickly than in main trading partners.[7] In addition, countries whose per-capita income levels converge to high-income countries typically experience real exchange rate appreciation reflecting differential productivity growth between tradables and non-tradables (Balassa-Samuelson effect)[8] as well as higher prices producers of tradable goods with market power charge in markets characterised by higher per-capita income. However, productivity growth differences between tradables and non-tradables may not have played an important role in Spain (Estrada *et al.*, 2009).

Empirical evidence also suggests that prices of goods and services have been more responsive to demand conditions in Spain than elsewhere in the euro area (Estrada *et al.*, 2009, citing evidence from the European Inflation Persistence Network). This finding would contribute to explaining high consumer price inflation in pre-crisis years and is consistent with a relatively competition-friendly stance of product market regulation (see further below). It suggests that prices of goods and services should also decline relatively quickly in response to weakening domestic demand and with lower costs in terms of output lost.

Unwinding imbalances may lead to protracted slow growth

While the rise in relative price and cost indicators will not need to be reversed in full, the downsizing of residential housing activity, which is estimated to detract 2½ points from GDP between 2009 and 2011 (see further below), combined with the necessary consolidation of government budgets by around 5% by 2011, constitute a substantial country specific shock. Overall, after the contraction of output in 2009, growth is expected to remain weak over the coming years, as projected in *OECD Economic Outlook,* No. 88 (Box 1.1).

Box 1.1. **Short-term economic prospects**

GDP growth is expected to recover slowly in 2011, driven by external demand, with exports accelerating on the back of rising world trade growth. Domestic demand will be held back by marked budgetary adjustments and continued downsizing of residential construction. Household consumption is expected to recover nonetheless, as disposable income will continue to be supported by low mortgage rates, and households will be able to reduce high savings rates to some extent, while continuing to reduce debt. Low capacity utilisation will damp business investment. The unemployment rate is expected to begin falling significantly in 2011. Headline inflation is set to fall to below ½ per cent when the effect of the increased value added tax rates drops out in 2011 (Table 1.1), while the current account is projected to fall further. GDP growth is projected to reach 1.8% in 2012 as world trade strengthens, budgetary consolidation needs diminish and the downsizing of the residential housing sector will have run its course.

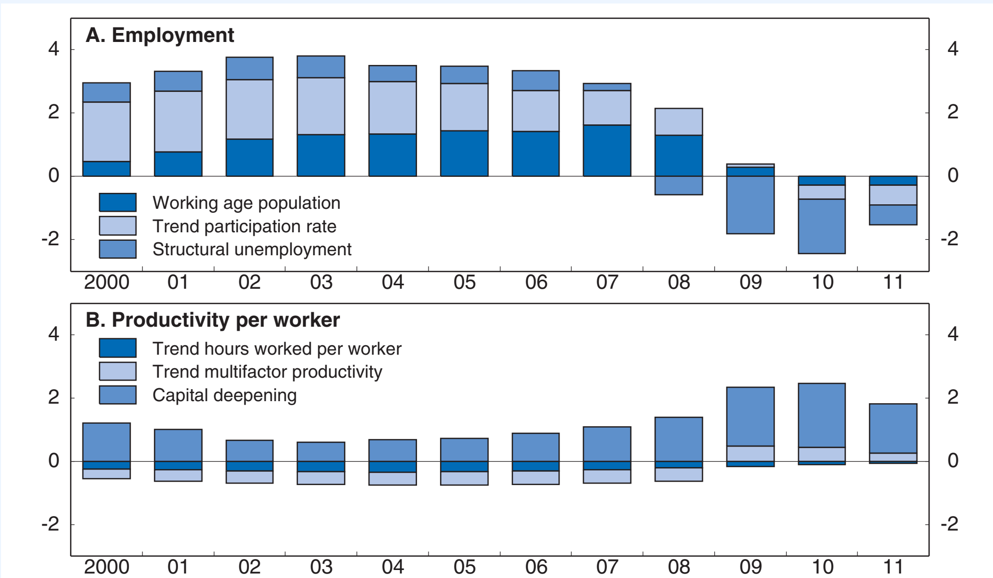
Policy initiatives to improve wage and price flexibility and strengthen productivity can facilitate the correction of these imbalances while minimising losses to activity. Labour and product market reforms also have an important role to play to boost potential growth, which appears to be declining, in part as a result of the economic and financial crisis (Box 1.2). Labour market reforms are necessary to lower high structural unemployment and foster the reallocation of workers who lost their jobs in the crisis. Product market reform would also expand productivity and employment in the medium term. Product market reforms are discussed below, labour market reform is discussed in Chapter 3. In a similar vein, further measures to improve education (the in-depth chapter of the 2008 *Economic Survey*) and training of adult workers (Chapter 3) would offset some of the adverse effects on human capital that result from increased long-term unemployment due to the crisis.

Box 1.2. **Potential output after the crisis and beyond**

Over the past ten years, GDP growth in Spain has been driven mainly by strong growth of labour utilisation (Figure 1.9). Since the 1990s, Spain had experienced continuously large inflows of net migration which had not only increased population, but had helped to keep wage growth down encouraging job creation in particular in low-skilled sectors such as construction and services. Furthermore, a strong increase in female labour participation has contributed to increased labour utilisation (Figure 1.9). In contrast, productivity growth advances have been weak, in part due to a sectoral concentration on low-productivity growth sectors such as construction and certain services, but also due to small improvements in within-sector multifactor productivity growth (MFP) (OECD, 2008).

Figure 1.9. **Potential output growth**

Percentage point contribution to potential growth[1]



1. Projections for 2010 and 2011.

Source: OECD Economics Department calculations.

StatLink http://dx.doi.org/10.1787/888932363311

In the aftermath of the crisis, potential growth prospects risk being lower in the medium term owing to reduced potential labour input growth. *First*, labour force participation may fall due to discouraged-worker effects, in particular among the young and the older workers. The past strong expansion of female labour supply cannot continue at the same pace in the longer term. *Second*, although the 2010 labour market reforms should help the absorption of the unemployed workers, some of the increase in unemployment risks being long-lasting and not completely reversed in subsequent recoveries. This may increase structural unemployment as workers who remain unemployed for a long period may become less attractive to employers (OECD, 2010). At the same time the decline of the residential construction sector has reduced the supply of jobs with modest qualification requirements, while the share of workers with low qualifications is large. *Third*, the future net inflow of immigrant population is uncertain. On the one hand, immigration has fallen significantly during the crisis, and adverse labour market conditions may keep immigration inflows low for some time. On the other hand, few immigrants have taken up

Box 1.2. **Potential output after the crisis and beyond** *(cont.)*

financial incentives to return to their home countries. This may reflect some factors which are supportive of immigration, such as high income differentials between Spain and the countries of origin.

The downsizing of low-productivity activity related to residential construction seems to have pushed productivity growth up temporarily, offsetting the negative prospects on potential growth to some extent. Further MFP improvements may be achieved in the medium term as further low-efficiency activities are discontinued and resources shifted to more productive uses within as well as across sectors. Lagged effects of the substantial reforms of product market regulation in recent years should also boost productivity in the near future as should the large gap in educational attainment between young workers entering the labour market and retiring workers.

Ongoing product market reform should help speed up the adjustment

Reform of product market regulation can help strengthen export-led growth and invigorate the non-traded sector. Such reform lowers mark-ups in prices and promotes higher rates of productivity growth, thereby improving competitiveness in the tradable sectors directly. Moreover, reforms in the regulation of non-tradable services which are used as intermediate inputs have particularly marked effects on aggregate performance by strengthening competitiveness in downstream sectors, including in sectors producing tradable goods and services (Conway *et al.*, 2007).[9] By damping consumer price inflation, more intense competition in non-tradable services also contributes to moderating bargained nominal wage growth. Empirical evidence for Spain shows that reducing barriers to competition in retail trade, for example, would have a marked impact on consumer price level in Spain (Matea and Mora-Sanguinetti, 2009). More generally, product market reforms can help tap new sources of potential output, by raising trend total factor productivity (TFP) growth which has been weak over the past decade (see Figure 1.9 and the 2008 *Economic Survey* for the past productivity trend). This is important in view of the end of the large-scale expansion of labour supply, which has driven potential growth in the past.

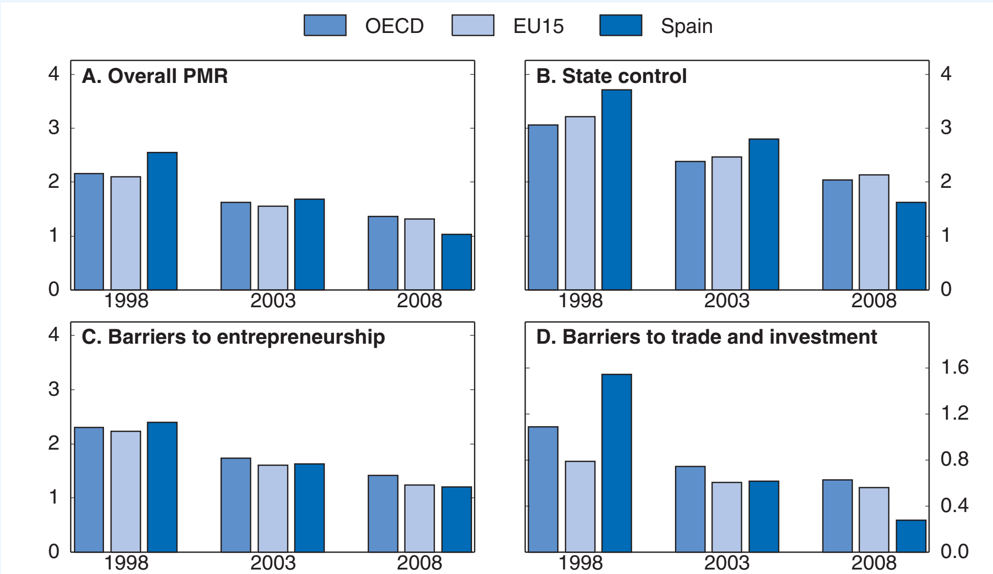
Over the past decade, Spain has undergone a relatively deep, widespread and sustained process of reform that has made many markets more open to competitive pressures in comparison to other OECD countries (Box 1.3 and 2008 *Economic Survey*). This has included less state intervention in business sector activities, liberalisation of access to many domestic markets and further integration into world markets. The experience of other countries suggests that performance gains from these reforms may not yet have materialised.[10] The reform efforts that have been introduced since 2009 have the potential of significantly reducing remaining barriers to competition (Box 1.3). The introduction of e-government application in addition to single contact points can substantially reduce the administrative burdens for setting up a business. The increased independence of sector regulators in energy, telecommunications and postal services should help to provide firms with reliable rules that are insulated from short-term political pressures and would hence foster investment. Finally, the reduction in the restrictions of professional services should increase entry and foster competition, thereby increasing the variety and reducing the prices of the services provided.

Box 1.3. **Spain's reforms of product market regulation since 1998**

According to the OECD system of indicators of product market regulation (PMR, see Wölfl *et al.*, 2009, for more detail), reforms in Spain have been deeper than in the average OECD country. Starting from a 1998 situation in which policies restricted competitive pressures more than in the average OECD (or EU15) country, Spain's product market reforms had by 2008 made policies more friendly to competition than in the average OECD country (Figure 1.10, Panel A). However, the indicators should be interpreted cautiously: they do not capture restrictive regulations imposed by subnational government levels in full. If transfers of competencies to subnational governments result in retained or tightened regulation, as has occurred in Spain with respect to retail regulation, the indicator values may underestimate the level of existing regulation.

Figure 1.10. **Product market reform in Spain: deep, widespread and sustained over time**

Level in index points, with 0 = least and 6 = most restrictive



Source: OECD (2010), *OECD Regulatory Database*.

StatLink http://dx.doi.org/10.1787/888932363330

Reforms in Spain have been widespread across the economy: starting from a relatively restrictive position in all domains covered by the indicators, Spain has eased restrictions to product market competition by reducing state control over business sector enterprises (Figure 1.10, Panel B), by reducing domestic barriers to entrepreneurship (Figure 1.10, Panel C) and by reducing barriers to trade and investment (Figure 1.10, Panel D). Moreover, Spain has been one of the few countries in which substantial changes in product market policies have occurred in both the 1998-2003 and 2003-08 periods. In most other countries, a significant slowdown in the reform process has been recorded over the most recent period (Wölfl *et al.*, 2009).

Progress has been marked in the following areas and sectors:

- Markets were liberalised in crucial network sectors. Several former monopolies have been opened up to competition, in accordance with (and sometimes going beyond)

Box 1.3. **Spain's reforms of product market regulation since 1998** *(cont.)*

EU directives. Spain has strongly liberalised the gas, electricity and telecommunications markets. Essential vertical separation requirements are in place and decisive steps have been taken to create a level playing field between incumbents and market entrants in recent years. In other network sectors, Spain has opened up to competition, particularly air and road transport – albeit from a relatively restrictive situation in 1998 as compared to other European countries.

- Where needed, regulation has been made increasingly light and has been based on incentive mechanisms. Coming from a very restrictive regulatory environment in 1998, some of the reforms undertaken were such as to get the general regulatory conditions closer to best practice. In the PMR indicators this is illustrated through less use of command and control regulation, which reflects a move towards incentive-based (as opposed to coercive) regulation in general and in specific service sectors, as well as much less use of price controls.
- An important element of Spain's drive to increase product market competition was further opening up to trade and foreign direct investment. Spain has lifted several barriers to foreign ownership, for instance by lowering the limits to foreign acquisition of shares in publicly-owned firms. Furthermore, Spain has caught up with other European countries in terms of non-tariff barriers to trade, in particular in terms of an increased commitment to international harmonisation of regulatory procedures.

Since 2009, different reform efforts are being introduced that aim at reducing remaining barriers to competition:

- A general framework law has been approved by Parliament and sets the stage for more specific reforms at the sectoral level, such as implementing the Services Directive of the European Commission. A central component of this framework law is to further ease the process of complying with the legislation, for instance through the introduction of e-government applications as well as of "liaison points" in addition to existing single contact points such as to increase co-operation between administrations at the national and European level. Furthermore, it eliminates barriers to entry to the services' market except those based on overriding reasons relating to the public interest.
- As concerns specific sector regulation, the *Ley de Economía Sostenible* includes policy measures to strengthen the independence, accountability and powers of sector regulators for several network sectors. There are no longer entry restrictions to road passenger transport services. In the postal services, draft legislation eliminates the legal monopoly on selected services for the incumbent. Entrants can use the postal network under terms and prices (*ex post*) monitored by the Postal Sector Regulator (fully operative since 16 July 2010). In professional services, certain restrictions on the joint exercise of two professions as well as on advertising and prices set by professions are being eliminated. Furthermore, draft legislation aims at lowering entry barriers by eliminating the compulsory membership to the profession's association and a recent Royal Decree Law (August 2010) reduces substantially the number of cases in which professional services providers need to request special licenses for service provision. Finally, a recently passed law (2010) eliminates the national threshold limit of opening a large retail outlet and removes the requirement for a national license. However, under overriding reasons relating to the public interest the establishment of outlets may still require a regional authorisation.

There are nevertheless still some areas with scope for further reform (the 2008 *Economic Survey* provides a more detailed discussion):

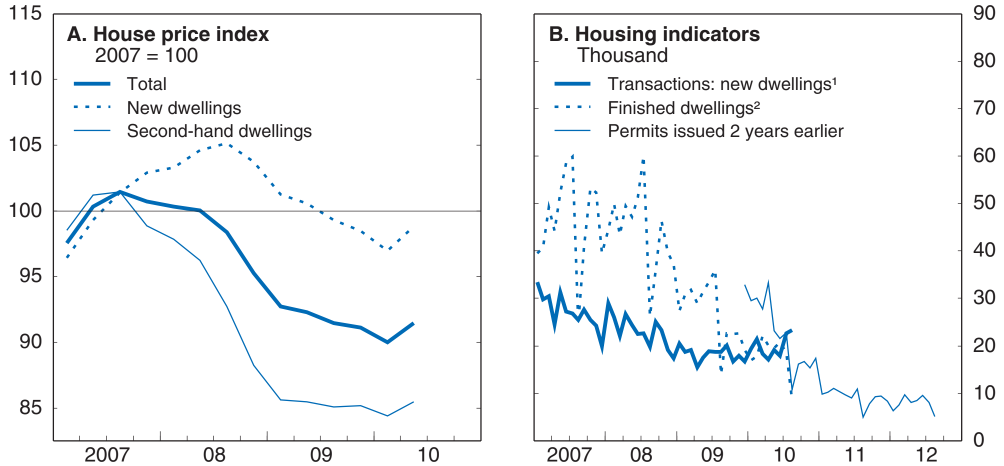
- Entry barriers at the regional level on *large-scale retail outlets* continue to depress productivity and raise prices in retail trade with a significant impact on aggregate outcomes. While the national threshold for setting up a large retail outlet has been eliminated, regional governments are able to impose a special licensing requirement for large outlets as long as this can be justified by criteria of public interest taking into account the principles of proportionality and non-discrimination. Regional governments should limit entry restrictions of large retail outlets.
- The national framework regulation establishes that regional governments cannot restrict the overall number of hours that shops can be opened to less than 72 hours per week. Several regional governments apply restrictive limits to opening hours. Shop opening hours should be liberalised in the regions where restrictions still exist. The government may also consider changing the national framework regulation so as to increase the minimum limit. This is one of the policy areas where regional governments' policies can be better aligned with country-wide economic objectives (see Chapter 2 on regional budget balances, Chapter 3 on public employment services and Chapter 4 on governance in water policy).
- Despite the most recent reforms (Box 1.3), the range of *professional services* for which Spanish regulation requires specific qualification requirements to be met is unusually large in international comparison. The number of such specific requirements should be reduced as they may generate barriers to entry.
- In *postal services*, competition is still hampered because market entrants have to individually negotiate access to intermediate service inputs from the incumbent, which are subject to natural monopoly conditions. Competitors should have an appropriate level of access to the public postal network and to the address databases of the postal services incumbent.
- In *road transport*, constraints involved in obtaining a road freight haulage operating license should be removed and the authorisation process should be reformed to make consolidation of firms easier. It should also be ensured that road passenger transport licenses are tendered on a competitive basis without favouring incumbents.
- In *rail transport*, the operation of regional passenger rail transport services should be put out to tender on a compulsory and regular basis and the incumbent should make its rolling stock available under non-discriminatory conditions.

The adjustment of the housing market will be long

The housing market remains depressed

Housing demand, as reflected in the number of housing transactions, peaked in 2006. The resulting fall in house prices, together with the adverse impact of the world financial and economic crisis and declining domestic activity and lending conditions further depressed the sector. The sharp drop in demand has led to the accumulation of a large stock of empty housing, reflecting the average duration of housing construction projects of approximately two years (Figure 1.11). The Banco de España (2010a) estimates a range of 750 000 to 1.2 million unsold units (2.8-4.4% of the total housing stock), about 600 000 units (2.5% of the total housing stock) more than in 2005 at the end of 2009. The Ministry of Housing has estimated that the stock of unsold new housing was around 700 000 at the end of 2009.

Figure 1.11. **Housing market**



1. *Registradores*.
2. Finished housing approved by the Surveyors College. Excludes housing promoted by co-operatives, physical persons and owners' communities.

Source: Banco de España (2010), *Síntesis de Indicadores*, November and INE (2010), "Construction statistics", *INEbase*, Instituto Nacional de Estadística, November.

StatLink http://dx.doi.org/10.1787/888932363349

The stock of unsold housing is likely to have peaked in the course of this year, as the number of finished housing units has matched the number of transactions of new homes (Figure 1.11).[11] The level of transactions remains depressed, a small recent increase notwithstanding, in spite of considerable improvements in the affordability of housing purchase, due largely to low interest rates. Land transactions, which are an early leading indicator of housing market developments, have barely recovered. If transactions of new housing remained at the current level, it would take three years for the surplus of empty housing to be absorbed by demand. According to official statistics, real house prices have fallen by 12% since the peak on average, somewhat less than most estimates of house price overvaluation in recent years (Table 1.2). This figure may however be an underestimate, because prices of transactions of new housing are recorded with a substantial lag. Prices have been falling more slowly in recent quarters, especially for used houses, but the estimates of oversupply suggest that there is still room for further declines.[12] Other segments of the real estate market do not appear to be characterised by large-scale oversupply. The office market in

Table 1.2. **Studies estimating the price overvaluation in the Spanish housing market**

Author and year	Year of estimation	Estimated overvaluation
Balmaseda *et al.* (2002)	2002	28
Ayuso and Restoy (2003)	2002	20
Martínez-Pagés and Maza (2003)	2002	8-17
IMF (2004)	2003	20
IMF (2005)	2004	20-30
OECD (2005)	2004	13
ECB (2006)	2004	30
Ayuso and Restoy (2006a, b)	2004	29
IMF (2008)	2007	20
Sosvilla (2008)	2007	7-15

Spanish cities appears to have behaved in a broadly similar fashion as in other European countries, although more recently the recovery of office rent prices appears to have been smaller in Spanish cities, reflecting the slower economic recovery.

Construction spending amounted to 18% of GDP before the onset of the recession, of which close to one half was accounted for by residential construction. While housing investment fell to 5% of GDP, half of its pre-crisis level, in the first quarter of 2010, it will have to fall further to adjust to oversupply, although the negative growth contributions are diminishing. In addition to the direct contribution of residential investment to GDP growth, the drop in housing demand has broader multiplier effects on activity, for example, by depressing employment through wealth effects resulting from lower prices. Including such effects, a simulation by the Banco de España (2010a) indicates that the housing crisis reduced annual GDP by about 3½ percentage points in 2009 compared to 2007, and may reduce output by a further 2½ per cent of GDP by 2011, when activity in the sector is expected to stabilise. These effects were simulated on the assumption that no resources would be reallocated from the residential construction sector to other sectors.

Further housing reforms are needed, including for the well-functioning of the labour markets

The large oversupply of empty new housing coexists with a substantial amount of potential demand which remains unsatisfied because of an underdeveloped rental market. Sixty-five per cent of 18-35 year olds (this age cohort comprises 12 million individuals) live with their parents, with the number of young people living with their parents being much higher than in other European countries.[13] Moreover past *Economic Surveys* reported that low income households are poorly housed. Both the young and the poor are likely to obtain access to housing more easily by renting. In 2008, only 13% of dwellings were rented, an increase of almost a third with respect to the previous year, but still among the lowest in the OECD area. Poor rental market mobility reduces labour mobility. Taxes on housing transactions, set by regional governments at rates of around 7%, contribute to high mobility costs among owner-occupiers.

The government has recently taken several measures to remove barriers to the rental market. At the end of 2009, new legislation simplified legal procedures for the eviction of tenants.[14] Indeed, poor enforcement of rental contracts, especially on account of complex and time-consuming eviction procedures, were a significant hurdle to the provision of rental accommodation.[15] It will be important to monitor the effectiveness of the measures taken to improve rental contract enforcement. The government has also presented draft legislation to Parliament to put the treatment of rented and owner-occupied housing in personal income tax on an equal footing, doing away with most of the current tax subsidies for owner-occupied housing (Chapter 2).

Central, regional, and local governments provide subsidies to social housing, including for new construction. While the central government housing plan (*Plan Estatal de Vivienda y Rehabilitación 2009-2012*) has provided some measures to subsidise the conversion of free to social housing[16] it also widens access to subsidised loans for development of new social housing.[17] In 2011, the plan will be modified, limiting subsidies for developers of social housing to only rental housing and eliminating direct subsidies for buyers of social housing. Government-promoted social housing projects risk adding to oversupply. This consideration is especially relevant in view of the fact that housing oversupply (as reflected in the extent of price reductions) seems fairly widespread. Moreover, the current downsizing of the residential construction industry can be expected to be largely permanent, suggesting that it should not be offset by subsidised construction projects. In 2008 and 2009, 135 000 new social housing units were completed. Expanding supply may exacerbate the needed adjustment of prices with adverse effects on household and bank balance sheets. Social housing is subject to an income test, but nonetheless risks being poorly targeted at low income households because of the difficulty of evicting tenants whose income situation improves over time. Targeting is further weakened because most social housing in Spain is, ultimately, available for sale, although, as part of recent efforts to cut public spending, these subsidies are increasingly targeted to social housing for rent. Moreover, owing to the long waiting periods for applications, it reduces worker mobility.

Public funds provided to support social housing should be redirected to a means-tested cash benefit for low-income households, earmarked to their rent payments. Such a means-tested benefit should also replace the planned modified income tax allowances for housing. The income limits notwithstanding, they are not well targeted as they provide little benefit to households which pay little income tax. A means-tested benefit would also have the advantage of providing scope for taking demographic household characteristics into account and would generate less deadweight loss. A housing benefit for young people, introduced in 2008, appears to have had significant success in mobilising housing demand, with support given to more than 200 000 rental contracts.

Difficulties in the banking sector have been confined to some savings banks

Banks' cushions to absorb losses are substantial but vulnerabilities remain

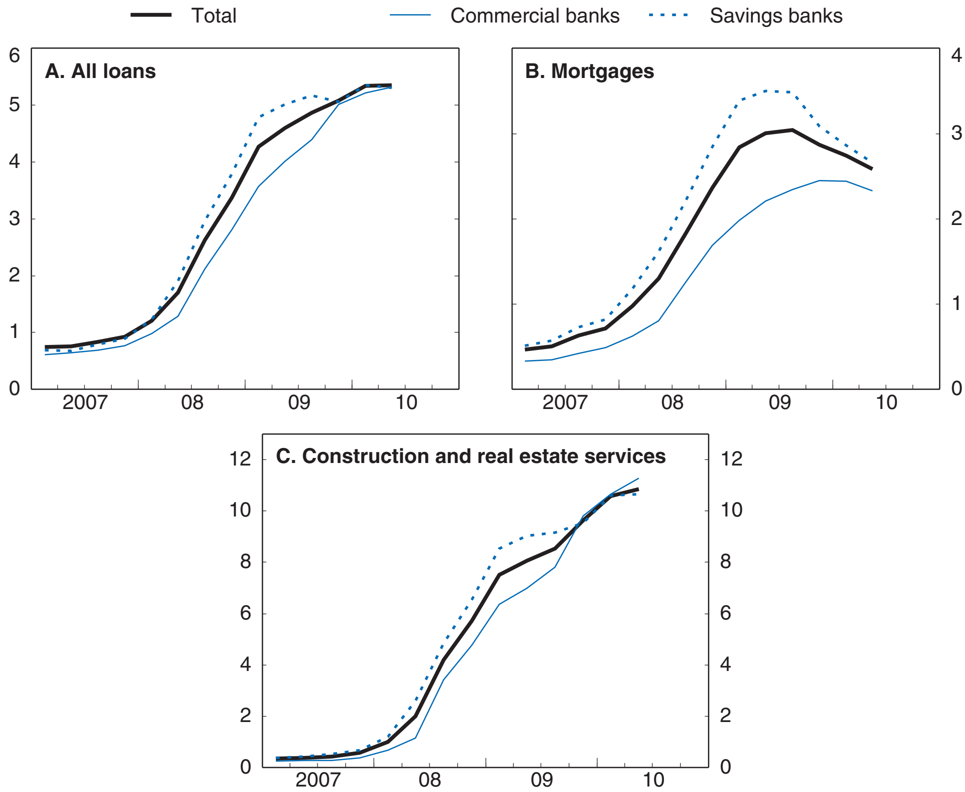
Non-performing loan (NPL) ratios continue to rise (Figure 1.12), but remain below the ratios observed during the 1993 recession. NPL ratios have fallen in the household mortgage loan sector. Several factors contribute to explaining this relatively favourable outcome, in view of the sharp housing market downturn and the huge employment losses: interest rates are low; employment is bottoming out; loan-to value ratios remained modest even in the peak of the lending boom; and borrowers' resources are comprehensively assessed for repayments. For example, banks have often required supplementary guarantees from borrowers (*e.g.* from family members; see OECD, 2008). Nonetheless, persistent unemployment constitutes a risk for the mortgage loan books of the banks, especially if this coincides with rising interest rates as the recovery takes hold in the euro area. NPL ratios continue to rise for loans to housing developers and construction companies. The total exposure of banks to these loans amounts to 442 billion euros, 43% of GDP.

The regulator, Banco de España (2009), pointed out that the gross operating surpluses of banks in 2009, 2010 and 2011[18] would be sufficient to cover losses equivalent to 40% of the outstanding total stock of loans to the construction and housing development sector. Given the collateralised nature of loans, a loss of 40% appears unlikely on average. The construction cost of the unsold stock of housing is likely to represent a fraction of the total amount of loans.[19] Some property developers diversified their business away from residential housing prior to the crisis, especially in the years preceding the boom. Moreover, as noted above, non-residential market segments of real estate, where loan losses tend to be the largest, are not subject to the same large-scale oversupply as observed in residential housing.

Provisions and equity provide additional buffers. Provisions can absorb losses of 15% on housing market exposures – including real estate assets acquired in exchange for loan

Figure 1.12. **Non-performing loan ratios**

Per cent of total loans



Source: Banco de España (2010), *Boletín Estadístico*, September.

StatLink http://dx.doi.org/10.1787/888932363368

cancellation – before current equity levels are affected (Banco de España, 2009). The regulator has required banks to provision in full non-performing loans more quickly and has strengthened safeguards to avoid that reported non-performing loans are kept artificially low by the transfer of real estate in exchange for loan extinction. Real estate acquired by banks must undergo a new valuation according to market conditions.[20] Banks have to provision 10% of this value upon acquisition of the real estate, a further 10% if they hold it for more than 12 months without selling it and an additional 10% (to a total of 30%) after 24 months.

Despite the robustness of the sector as a whole, perceptions of risks contributed to a sharp, albeit temporary, tightening of funding conditions. As the regulator pointed out (*e.g.* Banco de España, 2010b), exposures and losses on loans differ across individual institutions. Savings banks are more strongly exposed to the housing market, and, until the recently enacted savings bank reform (see below), they were subject to restrictions in raising external capital to offset losses (OECD, 2008). Uncertainty concerning the financial position of individual banks may affect perceptions of the risks to the sector as a whole, for example because of the financial links between banks. Moreover, perceptions of risks of the viability of banks are likely to have contributed to higher risk *premia* on interest rates on government bonds (Figure 1.2 above). Uncertainty about the viability of individual institutions was reduced by the results of the co-ordinated stress testing of banks in the European Union (Box 1.4). The testing was ambitious in Spain: almost the whole banking

Box 1.4. **Stress tests for Spanish banks**

The stress tests carried out for all European banks in July 2010 aimed to assess their solvency when confronted with a hypothetical stress situation. Specifically, the tests simulate the Tier 1 capital of the banks under a so-called "benchmark scenario" and under an "adverse scenario" to which further shocks were added (such as a sovereign risk shock). In Spain, they were conducted for all incorporated banks and all of the savings banks (27 institutions).

The adverse scenario

The adverse scenario assumes a cumulative decline of GDP by 2.6% in 2010 and 2011. The scenario assumes declines of 28% in the prices of finished housing, 50% in the prices of housing under construction and 61% in the prices of land from their maximum value in the last cycle until 2011. The tests added a further shock, notably on trading books, plus an additional haircut on government bonds on the trading book (an interest rate increase of 70% since 2009) and also an indirect effect due to an increase in interests (additional increases in the probability of default and loss given defaults). The hypothetical loan losses exceeded losses experienced in previous crises in Europe, such as in Sweden, by a multiple and are still more severe than the losses experienced by Korean banks in the 1997 banking crisis.

Results

The stress tests take as a reference a value for a Tier 1 capital ratio of 6%. This benchmark would define a minimum below which a recapitalisation is needed. The Spanish banking system as a whole would hold a Tier 1 ratio of 8.3% in the most adverse case. Only four relatively small savings banks* were below the set benchmark threshold of 6%. The capital needed to reach this ratio amounts to 1.8 billion euros (0.2% of GDP). Among the largest banks, the worst result was obtained by Júpiter (a group of merged savings banks lead by *Caja Madrid*), with a ratio of 6.3%.

* A fifth savings bank has been taken over by another savings bank.

sector was included in the exercise and the assumptions for the severest hypothetical scenario were tightened considerably in view of the domestic housing crisis.

Savings banks' resilience has been strengthened but further reforms are necessary

Savings banks face particular challenges in adjusting to diminished lending activity. They have a high density of branches, though not high employment levels. Mergers were hampered by the requirement that they be approved by regional governments, and the peculiar legal status of savings banks – they are private foundations – prevents mergers with other types of banks. The government has responded with two sets of measures to deal with these challenges. It created the Fund for the Orderly Restructuring of Banks (FROB, *Fondo de reestructuración ordenada bancaria*). Its task is to intervene in banks whose viability is at risk as well as to support mergers of institutions with capital injections, which has resulted in an extensive merger process among savings banks (Box 1.5).

Legislation approved in July 2010 addresses limitations that savings banks faced in raising external equity. The new law allows savings banks to issue voting shares and abolishes the limit on capital held by individual investors (previously 5% of external equity participations). It also allows savings banks to raise more than 50% of equity from new investors, provided the savings bank concerned transforms itself into a holding foundation which owns the remaining equity. Such a transformation has to be approved by two thirds

Box 1.5. **The Fund for the Orderly Restructuring of Banks**

The government created the Fund for the Orderly Restructuring of Banks (FROB) in June 2009 with a capital of 9 billion euros, of which 75% is provided by the central government and the remainder by the funded deposit insurance entities set up by the incorporated banks, the savings banks and co-operative banks, respectively. The FROB can potentially issue up to 90 billion euros worth of debt with government guarantees. The FROB's governing board is appointed by the Minister of Economy and Finance. Five members are proposed by the regulator (the Banco de España) and three members by each of the three bank deposit insurance funds.

The FROB can support restructuring of banks with weak solvency, provided they have exhausted recourse to private capital markets as well as to the banks' own deposit guarantee schemes. In this case, the FROB takes over the management of affected banks. This happened in the case of one small savings bank, which was supplied 800 million euros of equity by the FROB.* The FROB intervened after a merger attempt between this and another savings bank had failed. The FROB can also decide to liquidate the intervened institution.

The FROB can also support mergers provided the merged institution is fully viable and the merged banks provide a business plan which generates cost savings, including through a reduction of capacity, and which strengthens the stability of the financial system. The business plans are assessed by the Banco de España. The FROB supplies convertible temporary preferential equity participations, which must be repurchased by the merged institution after five years or in exceptional cases after seven years at the latest. They are remunerated at an interest rate of at least 7.75%. The deadline for applications to this fund expires at the end of 2010. Until this date, banks which remain solvent but present some weaknesses in their capital position can also be recapitalised.

Twelve mergers have been initiated since 2009, including 38 out of 45 savings banks, covering 92% of the sector's assets. Of these, seven mergers are supported by the FROB with 10.2 billion euros (1% of GDP) worth of capital. The largest mergers supported by the FROB imply a relatively light degree of organisational integration (Institutional systems of protection, IPS) and are temporary arrangements, with a minimum duration of ten years. However, these IPS are required to comply with minimum requirements on governance, risk control and mutual support among the institutions involved. The breakup of an IPS requires Banco de España's approval. The merged savings banks typically create a subsidiary in the form of an incorporated bank, which takes over strategic business decisions of the group, including risk management. The merged institutions have pooled their capital. However, each merged savings bank continues to manage its network of branches separately. A few mergers occurred among incorporated banks and in the small sector of mutual banks. None of these have requested support from the FROB.

* The authorities intervened another savings bank before the creation of the FROB, in 2009. The savings banks' funded deposit insurance scheme injected capital.

of the general assembly. This reform strengthens the resilience of savings banks substantially, widening their capacity to offset losses by raising equity.

However, progress in reducing the strong powers of regional and local governments in savings banks has been more limited. The new law reduces the ceiling on voting shares of public administrations from 50% to 40%. In addition, political appointments will be incompatible with membership in any of the governing bodies of the savings banks, and current individuals holding such political appointments must leave them within three years. Moreover, representatives of the regions and municipalities will be elected by their assemblies rather than the governments. However, practically, the decision to raise more than 50% of equity from external sources may still require regional or local government approval. Mergers among savings banks also continue to require approval by regional governments (they are now required to present a list of criteria which must be followed in such decisions). Thus, the requirement for regional governments to approve mergers of *cajas* should be eliminated. To simplify such mergers, the division of public-sector representation of the regions in the savings banks to be merged could be determined *ex ante*. In any case some time for monitoring the results of the reform is required.

Empirical evidence on savings banks' performance suggests that they have been more cost-efficient than incorporated banks, which may support maintaining them as a distinct type of banking institutions (see Annex 1.A1). However, there is also some indication that savings banks with the lowest costs may have been less successful in screening loans with respect to their risks, although this relationship is statistically significant only in one year. Empirical evidence (Cuñat and Garicano, 2010) also suggests that the professional qualifications of *cajas'* management are correlated with the performance of savings banks with respect to non-performing loans. The new legislation has taken some steps to improve management in savings banks by requiring that 50% of board members have professional experience. To further strengthen management and supervision by the board, independent selection panels could be created to supply a list of possible candidates for management positions in the savings banks, as recommended in the 2008 *Economic Survey*.

Box 1.6. **Recommendations to help the economy to adjust to macroeconomic disequilibria**

To improve confidence of investors, implement structural reforms, notably in labour and product markets, as soon as possible and implement ambitious budgetary consolidation (see Chapters 2 and 3 for details).

Foster competition in services sectors further

- Consider putting the operation of regional passenger *rail transport* services out to tender on a compulsory and regular basis. Require the incumbent to make its rolling stock available with non-discriminatory conditions.
- Remove the constraints involved in obtaining a *road freight* haulage operating license, and reform the authorisation process to make consolidation of firms easier. Ensure that road passenger transport licenses are tendered on a competitive basis without favouring incumbents.
- Ensure an appropriate level of access of competitors to the public *postal network* and ensure access to the address databases of the postal services incumbent.
- In *retail trade*, regional governments should limit entry restrictions of large retail outlets. In addition, shop opening hours should be liberalised in those regions where restrictions remain. The government may also consider raising the national minimum which applies to the limit that regions can impose when regulating shop opening hours.
- The range of *professional services* for which Spanish regulation requires specific qualification requirements should be reduced.

Box 1.6. **Recommendations to help the economy to adjust to macroeconomic disequilibria** *(cont.)*

Progressing with reform of the housing market

- Public funds provided to support social housing should be redirected to a means-tested cash benefit for low-income households, earmarked to their rent payments. Such a means-tested benefit should also replace the planned modified income tax allowances for housing.

Strengthening the resilience of savings banks further

- The role of regional governments in business decisions of the savings banks should be further reduced. The requirement for regional governments to approve mergers of *cajas* should be eliminated. To simplify such mergers, the division of public-sector representation of the regions in the savings banks to be merged could be determined *ex ante*.
- Independent selection panels could be created which supply a list of possible candidates for management positions in the savings banks

Notes

1. Belgium, France, Germany, Italy and Portugal.
2. Indebtedness is also high in the energy and water supply sectors but it makes a relatively small contribution to activity.
3. Indeed, oversupply of the scale observed in housing has not built up in the office market, for example.
4. Gross foreign liabilities vary substantially across OECD economies, for example, reflecting the extent of international activities of banking sectors and location decisions of multinational enterprises.
5. Assuming a trend growth rate of nominal GDP of 4%, a current account deficit of around 4% would hold the net foreign asset position of –100% of GDP broadly constant. With a trend growth of 3%, a current account of about 3% would stabilise the net external position.
6. Indirect taxes (such as VAT) are typically levied on imported goods but not on exported goods, so contribute to differences in price levels for goods and services between countries. High income countries typically also experience higher price levels because of Balassa-Samulson effects and because producers of tradable goods with market power may price-discriminate in favour of low-income countries.
7. Export price deflators (which include goods and services) remained broadly steady in France and Germany since 1995 while rising by 30% in Spain. Divergences in the terms of trade were less marked; they were steady in France and Germany on average and rose by 9% in Spain. Export price developments for goods compare somewhat less favourably if unit value indices for goods exports are compared. However, these indices are not calculated in ways that are consistent with national accounts data, In addition, they are affected by changes in quality of goods.
8. The Balassa-Samuelson effect on the real exchange rate need not be offset by the terms-of-trade effect mentioned above. It will not be offset if strong productivity growth in tradable goods is the result of higher productivity growth within exporting industries (because of catching up with the technological leader in each of these industries), rather than specialisation on industries which experience strong productivity growth worldwide.
9. For example, Bourlès *et al.,* (2010) show that over the 1995-2007 period, on average, eliminating regulatory burdens in upstream sectors would have increased MFP growth by up to 1.7 percentage points per year.
10. See for instance Megginson and Netter (2001) for empirical evidence of the impact of privatisation and liberalisation on productivity of firms, or Wölfl *et al.* (2010) on the effect of product market reforms on aggregate growth in GDP per capita. Both studies indicate substantial lags between reforms and resulting performance gains.

11. Some finished dwellings, notably for co-operatives, are not recorded as sold even though they are acquired by final users, which may overestimate the difference between sold and finished dwellings.

12. The declining trend in prices of used housing is consistent with trends observed in alternative databases such as those of web-based housing transaction enterprises or other private enterprises (*Sociedad de Tasación*, *Fotocasa* and *Expocasa*). All these sources also show that the decline is slowing. The Ministry of Economy and Finance expects a further decrease in prices of around 10% in 2010, a null variation of prices in 2011 and an expected increase in prices according to the consumer price index in 2012 and 2013.

13. Following Becker *et al.* (2010), over 65% of Spanish young people aged between 25 and 29 years are living with their parents, compared with 20-22% in France, the Netherlands or the United Kingdom.

14. Specifically, the new Law generalizes the use of the "oral" procedure (*juicio oral*) in order to solve an eviction. This ensures a less formal (and therefore faster) procedure than current procedures (Mora-Sanguinetti, 2010). The new legislation also allows owners to evict tenants within the minimum five year contract period if the owners' family members want to move in (this was already possible for the owner previously).

15. For example, Mora-Sanguinetti (2010) finds that an increase in the judicial efficiency of court procedures has a significant effect on rental market development. Regulation of the rental contracts itself, by contrast, does not appear excessively restrictive. After a minimum contract duration of five years, landlords can dispose of their property freely, *i.e.* they require no justification for eviction and can reset the rental price freely. Within the period, owners can evict tenants for own use as well as for use by family members; the rental price is indexed to consumer inflation.

16. All owners are now entitled to convert, rather than only developers, giving access to subsidised loans for purchasers.

17. It also fosters refurbishment as an alternative to newly constructed social housing to support activity in the sector while avoiding subsidies for the construction of new units.

18. The stability of operating surpluses can in part be attributed to the prominence of retail banking, as investment banking is subject to more volatile profits.

19. If the total amount of loans to the residential construction sector had financed the construction of the stock of housing which is now unsold, each unit would have to cost around 600 000 euros.

20. However, a few questions can be raised about the independent values, as their business clients are the banks themselves. Moreover, the valuation process is based on offer prices in the market, which, in its current depressed state, may be below transaction prices.

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ANNEX 1.A1

Cost efficiency of Spanish banks: A stochastic frontier analysis

Introduction

This Annex presents an empirical study of cost efficiency, comparing performance of the different types of banks within the Spanish banking sector, notably savings banks and incorporated banks. A more complete account of the results is available from the OECD.[1] The study on which this Annex is drawn also presents comparisons of efficiency scores of savings banks in several European countries; these results are not shown below.

The authors employ the stochastic frontier approach (SFA), introduced by Aigner *et al.,* (1977) and Meeusen and van den Broeck (1977) to generate cost efficiencies for each bank along the sample during the period under analysis. This specification allows for the control of general environmental factors by estimating simultaneously the parameters of the stochastic frontier and the inefficiency model.

Data and variables

The main source of data collection is the *Bankscope* database, from which the authors retrieve financial data for banks. Additional data are collected from Global Market Information Database (GMID), and the 2010 version of the World Bank Database on Financial Development and Structure (Beck *et al.*, 2000). The study covers the period 2001-08.

The authors adopt the value added approach, according to which earning assets as well as deposits are considered to have some output characteristics. That is, deposits provide for transaction and safekeeping output services and also add to input costs. In a value added context, deposits typically account for over half of all capital and labour expenses at banks and so, in this sense, output services are produced.[2] A cost function is estimated, in which costs depend on banking outputs, inputs and input prices. Costs and outputs are normalised by banks' equity to reduce heteroscedasticity and scale biases.

Accordingly, the authors specify three variable outputs: loans (composed of the value of home loans, loans to firms, etc.), other earning assets, and deposits (the sum of demand, saving and time deposits). Prices for two variable inputs are also specified. Consistent with previous studies, these are: cost of borrowed funds (W1), calculated as the ratio of interest expenses to customer deposits and short term funding; and the cost of non-financial inputs (W2), calculated by dividing the overhead expenses by total assets.[3] To impose linear homogeneity restrictions the authors normalize the dependent variable and all input prices by W2.

A time trend (T = 1 for 2001, T = 2 for 2002, …, T = 8 for 2008) is included in each specification to allow for technological change, using both linear and quadratic terms in order to identify neutral technical change, and is also specified to interact with the output and input prices in order to identify non-neutral technical change (Caves *et al.*, 1981; Baltagi and Griffin, 1988). Following Berger and Mester (1997), the authors specify equity as a fixed input to control for differences in risk preferences, which may arise due to regulation, financial distress, or informational asymmetries.[4] The dependent variable is total cost defined as the sum of operating cost (including all expenditure on labour and equipment) and financial cost (*i.e.* interest expenses of deposits). Finally, the authors use dummy variables to control for different types of institutions (*i.e.* incorporated, savings and co-operative banks).

Empirical results

While the incorporated and savings banks have broadly similar market shares in loan and deposit markets, they are both much more important than the co-operatives, accounting together for more than 95% of the loan and deposits markets.

Table 1.A1.1 presents the average cost efficiency for all the Spanish banks, as well as for each one of the three types of institutions during 2001-08. The results show that savings banks, incorporated banks and credit co-operatives experience a similar trend along time in terms of cost efficiency.

Table 1.A1.1. **Cost efficiency scores**

Type of bank	2001	2002	2003	2004	2005	2006	2007	2008	Average
Savings banks	0.97	0.97	0.96	0.95	0.95	0.96	0.96	0.97	0.96
Incorporated banks	0.90	0.90	0.88	0.88	0.90	0.91	0.95	0.94	0.91
Credit co-operatives	0.97	0.97	0.95	0.93	0.95	0.96	0.96	0.98	0.96

Source: A. Lozano-Vivas and F. Pasiouras (2010), "Cost Efficiency of Spanish Banks: A Stochastic Frontier Analysis", Study commissioned by the Economics Department of the OECD.

Savings banks record the highest cost efficiency that is equal to 0.96, on average. This result can be interpreted as follows: on average savings banks could reduce their cost by around 4%, while maintaining the same level of output, if they all matched the efficiency of the most efficient banks. The average cost efficiency of credit co-operatives is roughly the same as that of savings banks. The average cost efficiency of incorporated banks is lower, being equal to 0.90. Incorporated banks could reduce their cost by around 10% (on average) while keeping their output constant, to match the performance of the most efficient banks. The higher performance shown in the results of savings banks respect of incorporated banks are in accordance with the results obtained by Grifell and Lovell (1997); Lozano-Vivas (1998) and Tortosa-Ausina (1999) among others.

Turning the attention to the evolution of cost efficiency over time, savings banks outperform incorporated banks during the entire sample period, 2001-08. At the same time, the market share of savings banks increased at the expense of the domestic incorporated banks' market share, with that of credit co-operatives remaining constant.

The authors also present cost efficiency scores for three different size classes (results not shown). The conclusions remain broadly the same for each size class. There is no marked relationship between bank size and efficiency. Among savings banks, efficiency scores are similar across all size classes.

Relationship between cost efficiency and non-performing loan ratios

The authors also investigate whether there is a trade-off between estimated cost efficiency scores and exposure to risk, as captured by non-performing loan ratios. As noted in the main text, savings banks are more heavily exposed to lending related to the housing market. For example, the share that savings banks hold in the mortgage loans of the industry is on average almost 60% higher than that of incorporated banks. The outputs considered in the analysis of cost efficiency include loans without taking into account the share that is non-performing or may be at a particularly high risk of turning into non-performing in the future. Over the sample period, savings banks experienced a bigger increase in non-performing loans than other banks. As noted in the main text, this gap closed subsequently. However, efficiency scores could not be calculated for later years because the data were not available.

To analyse whether there is a relationship between cost efficiency and exposure to risk, the authors calculate the Spearman correlation coefficient between cost efficiency and non-performing loan ratios across individual institutions for each year of the sample and for each type of institution. The results (not reproduced here) show that incorporated banks are characterised by a negative correlation between cost efficiency and non-performing loans although this correlation is only statistically significant for the years 2006 and 2007. This implies that more efficient incorporated banks are characterised by lower shares of non-performing loans. By contrast, for savings banks the correlation is positive and statistically significant in 2008, although correlations are of varying signs and always insignificant between 2001 and 2007. Arguably, the result obtained for 2008 is of particular interest, because this was the year in which risks resulting from the exposures to the housing market became increasingly apparent over the most recent housing cycle. A possible interpretation of the result is that the effectiveness of monitoring may vary across all institutions but has different effects depending on the type of institution. In the case of incorporated banks, monitoring by stockholders and board members for this type of institution has the desirable effects on cost efficiency as well as on exposure to risks (Anandarajan *et al.*, 2005) while monitoring by the general assemblies and boards of savings banks may not have these effects.

Notes

1. Professor Ana Lozano-Vivas, University of Malaga, and Fotis Pasiouras, Assistant Professor, Technical University of Crete, provided research and drafting for this annex.
2. Ignoring the output characteristics of deposits could penalise savings banks, since taking deposits is one of the main services that they provide.
3. Other studies include three input prices, one for labour (*e.g.* personnel expenses to total), one for borrowed funds (interest expenses to deposits) and one for physical capital (non-interest expenses other than personnel expenses to fixed assets). However, this approach would reduce the number of observations in the sample due to missing values. Therefore, the authors restricted this analysis to the two input prices discussed in the text. Our approach is similar to the one of Hasan and Marton (2003), Bonin *et al.* (2005) and Berger *et al.* (2009), among others.
4. Berger and Mester (1997) argue that failure to control for equity could yield a scale bias, while the efficiency of banks could be mismeasured even if they behave optimally given their risk preferences. For more in-depth discussions, see Mester (1996), Berger and Mester (1997) and Berger and Bonaccorsi di Patti (2006).

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ANNEX 1.A2

Progress in structural reforms

This table 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 December 2008
MANAGING FISCAL POLICY IN THE MEDIUM AND LONG TERM	
Reconsider the tax incentives for private pension plans.	No action taken since the reduction in the ceiling of tax-deductible contributions into private pensions and the elimination of incentives for lump sum withdrawals in 2006.
Grant the public policy evaluation agency a high degree of independence from the political process and ensure its findings are easily available to the general public.	None.
Develop a comprehensive strategy to tackle future deficits in the pension system and raise incentives to work at old age, including parametric reforms as well as raising public savings.	Pension reform options are under consideration in the *Pacto de Toledo* parliamentary commission. The government proposals include raising the statutory retirement age from 65 to 67.
Base spending caps set in the central government's budgetary process on estimated potential GDP.	The Ministry of Economy and Finance elaborates a report every year which includes the potential growth of the economy. This report is taken into account when setting the expenditure ceiling for the central government.
Ensure that regional financing mechanisms do not unduly raise the central government's burden; make it robust to demographic developments by making transfers more reflective of their average net budgetary impact. Provide incentives for regional and local governments to rely increasingly on their own taxing powers.	In 2009, a new financing system for the regions was passed which establishes a fund to cover the spending needs for basic services taking demographic variables into account on a yearly basis. The new system increases the share of regional governments in tax revenues and raises the tax-setting powers of regional governments.
Develop benchmarking for services provided by subnational governments and make results public. Relax the obligation for regional governments to spend minimum amounts on health care.	The minimum spending requirements have been abolished.
Reduce the bias in favour of less developed regions in allocating central government investment. Use more effective instruments in supporting poor regions' growth potential.	A new fund introduced by the 2009 reform of the regional financing system, allocates additional resources to less developed regions or to regions with negative demographic dynamics.
Improve local government's reliance on real estate tax and abolish the local business tax.	None.
Introduce means-tested co-payments on drugs for pensioners.	None
IMPROVE THE FUNCTIONING OF THE HOUSING MARKET	
Substitute subsidising social housing by means tested earmarked cash benefits. Abolish social housing for purchase. Phase out the tax deductibility of mortgage and rent payments.	As from 1 January 2011, subsidies for the purchasing of social housing will disappear. Draft legislation proposes to phase out tax deductibility of mortgage and rent payments except for low income families as from January 2011.
Implement in full the plans to speed up the resolution of conflicts between tenants and landlords.	New legislation simplifies judicial procedures as concerns the eviction of tenants.

Recommendations in previous *Survey*	Action taken since December 2008
IMPROVING THE FUNCTIONING OF THE LABOUR MARKET	
Make severance pay for permanent contracts less generous, reducing the difference in the degree of protection between temporary and permanent contracts.	The reform of the labour market approved by law in September 2010 specifies the reasons for justified dismissals (implying severance costs of 20 days' wages per year of job tenure) and broadens the use of permanent contracts with reduced severance pay of 33 instead of 45 days' wages.
Consider the introduction of a single work contract with moderate increases in severance payments according to length of service.	None.
Allow firms to opt out of higher level collective agreements or replace the compulsory extension rule with an opt-in system that allows employers the choice of whether to adopt the agreement.	Opting-out is reinforced by the 2010 law on labour market reform. In particular, the agreement between the firm and its workers is enough to opt out. In case of disagreement a mediation procedure is available.
Encourage the elimination of inflation indexation clauses in collective bargaining or use at least an inflation measure that excludes oil and other commodity prices and further reduces the degree of indexation.	The multiannual agreement on collective bargaining signed in February 2010 postpones temporarily a revision with past inflation.
Redirect subsidies for hiring unemployed on permanent contracts to better targeted active labour market programmes (ALMPs).	The 2010 law on labour market reform has limited these subsidies to specific groups such as unemployed young people and long-term middle-aged unemployed workers
Implement a system of benchmarking of regional employment services, and make this information publicly available. Successful regional placement services should receive a financial reward.	Private companies are authorised to provide labour intermediation subject to conditions.
Make registration for placement a precondition for benefit payment and conduct a full interview already at registration. Shorten the job search reporting period of benefit recipients. Make participation in ALMPs compulsory after a defined period of unsuccessful job search.	Benefits continue to be paid retroactively following registration. A revision of ALMP's is on the way.
Increase health and homecare provision for dependent elderly.	Legislation that improves government funding for such services is being implemented.
IMPROVING THE INTEGRATION OF IMMIGRANTS	
Improve the recognition of foreign qualifications through bilateral agreements with originating countries and an on-the-job skill assessment programme.	A 2009 Royal Decree allows certification of professional competences acquired by work experience.
Improve public language training. Adapt the national system of language certification to the needs of the labour market.	None.
Allow non EU immigrants (with a valid permit) to hold jobs in at least some parts of the public administration.	None.
FURTHER IMPROVING ACCESS TO AND QUALITY OF EARLY CHILDHOOD EDUCATION	
Disburse central government subsidies for accredited childcare facilities in the form of vouchers to low income households with children, covering the full cost of a place in accredited childcare facilities. Increase daycare facilities for young children.	Some autonomous communities subsidise part of private childcare education in the form of income-contingent vouchers. Central and regional government funding has been made available for the creation of 74 600 public places for children aged 0-3.
MAINTAINING AN INCLUSIVE PRIMARY AND SECONDARY SCHOOL SYSTEM	
Enforce the prohibition of raising fees from parents in publicly funded primary and lower secondary schools as well as of selection criteria. Ensure a level playing field in the rules assigning resources to public and publicly funded private schools.	Draft legislation aims to increase the resources assigned to public and publicly funded private schools which enrol a larger number of students with special needs.
Link the disbursement of subsidies to upper secondary schools to the obligation of offering schooling free of charge.	The introduction of a maximum fee for students in private schools equivalent to 10% of public funding is under consideration.
RAISING THE SHARE OF STUDENTS GRADUATING FROM UPPER SECONDARY EDUCATION	
Widen the choice of options at the final stage of compulsory schooling.	Separate academic and vocational streams are planned for the last year of compulsory schooling; new curricula have been designed for support programmes (*Formación professional inicial*) for weak-performing pupils.
Raise child benefits and make them conditional on continued attendance in full time education. Link payment of more generous benefits to an in-work benefit for low income families.	Access to grants is given to students over 16 from low-income families who participate in support programmes and who are at risk of abandoning lower secondary education. Public education for children between 3 and 6 years old is free as of 2008.

Recommendations in previous *Survey*	Action taken since December 2008
Use nationwide sample-based evaluations of education outcomes to evaluate the impact of regional educational policies.	In 2009 and 2010, representative national diagnostic assessments of students were carried out in 4th year of primary education and 2nd year of compulsory secondary education. In 2011, such assessments will be carried out in 6th year of primary education and 4th year of compulsory secondary education.
Extend external testing at the school level to all regions, and use this to benchmark performance against targets.	An agreement with regional governments to introduce such testing is planned.
Widen autonomy of schools, notably with respect to hiring decisions of teaching staff and curricular content and give schools powers to hire, reward and dismiss teachers.	Legislative action to widen the autonomy of schools is planned for 2011.
STRENGTHEN HIGHER LEVEL EDUCATION	
Publish the results of the national quality agencies' assessments on a regular and comprehensive basis.	Systematic publication of monitoring reports of university degrees that are carried out by the national quality agencies is planned.
Remove the obstacles to university 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.	Draft legislation foresees introducing leave periods for professors and researchers who want to move to the private sector or to spin-off firms. It would give universities more flexibility to recruit prestigious researchers and to establish closer links between professors' remuneration and performance.
Introduce joint public-private financing of training projects.	The International Campus of Excellence Programme of 2009 seeks to promote co-operation of public and private institutions. Draft legislation allows the creation of Schools of Doctoral Studies that are funded through public-private partnership.
Introduce loans with income contingent repayments for all tertiary education students. Increase fees at public universities and introduce fees for tertiary vocational courses.	A new financing strategy for public universities is being developed that foresees that fees should more closely reflect education cost.
Link university funding more strongly to indicators of teaching output. Strengthen further the independence of universities, notably with regard to the setting of contract conditions and pay.	The planned new financing strategy of public universities proposes a performance-based funding based on indicators of teaching and research output.
Create a nationwide funding scheme, supplementing existing regional funding, to reward the creation of centres of excellence in university education.	Implemented.
RAISING THE ATTRACTIVENESS OF VOCATIONAL EDUCATION	
Evaluate vocational schools with respect to their success in the transition of graduates to qualified jobs.	From the academic year 2010/11 onwards, information is collected on students' acquisition of professional competence and their integration in the labour market.
Widen non-vocational education content in core competencies in upper secondary vocational education.	Since 2008, vocational education programmes offer teaching of foreign language, communication and entrepreneurship skills.
Improve opportunities for transferring from upper secondary to tertiary education.	Draft legislation (notably the Draft *Ley de Economía Sostenible*) promotes the mobility between upper secondary vocational and university education.
Open up the teaching profession in vocational schools more widely to practitioners.	The Draft *Ley de Economía Sostenible* increases the participation of companies in the design and implementation of vocational education.
Raise vocational schools' capacity to adjust curricular content more strongly to local labour market needs.	The Draft *Ley de Economía Sostenible* aims to adapt vocational training supply to the specific requirements of companies and to foster co-operation with local businesses.
IMPROVING THE FUNCTIONING OF PPRODUCT MARKETS	
Increase the independence of sectoral regulatory bodies and strengthen their powers.	This is expected to be implemented once the draft *Ley de Economía Sostenible* is approved by Parliament.
Eliminate barriers to the establishment of new firms.	2009 legislation removed a substantial number of authorisations at the national and regional level and simplified the procedures to ask for licenses. The Draft *Ley de Economía Sostenible* reduces time and costs to create small companies and removes local licences for innocuous activities. An Action Plan to reduce overall administrative burden on all new and incumbent businesses by 30% in 2012 (EU objective 25%) is being developed.
Reduce the regulatory obstacles to institutional investors' participation in venture-capital companies.	None.

Recommendations in previous *Survey*	Action taken since December 2008
	Energy markets
Streamline the authorisation process for new infrastructures.	A new legal framework is being developed to simplify the authorisation process for new generation, transport and distribution infrastructure.
Phase out regulated retail gas and electricity prices.	Since July 2008 or July 2009 respectively, retail gas and electricity prices are liberalised for consumption above 50 000 kWh per year or 10 kW.
Reform the current system of energy capacity payments by providing a variable payment that is linked to the use of capacity when capacity utilisation is high.	A reform of energy capacity payments is being prepared.
	Telecommunications
Give the telecom regulator responsibility for consumer protection.	None.
Allow the regulator, in an explicit manner, to mandate the functional separation of the incumbent as a measure of last resort.	None.
Ensure that the telecom incumbent is required to give sufficient notice to alternative operators when it plans to shut down exchanges.	A 2009 resolution of the national regulatory authority for telecommunications requires a notice period of at least six months.
	Transport services
Make the tender of regional passenger rail transport services compulsory. Require the incumbent to make its rolling stock available with non discriminating conditions.	The Draft *Ley de Economía Sostenible* requires competitive tender whenever the transport providers receives compensation for meeting universal service obligations.
Remove the constraints involved in obtaining a road freight haulage operating license. Ensure that road passenger transport licenses are tendered on a competitive basis without favouring incumbents.	The Draft *Ley de Economía Sostenible* reduces the duration of public services contracts of regular road passenger services in which there are exclusive rights.
	Postal services
Further liberalise postal services. Ensure an appropriate level of access of competitors to the public postal network and ensure access to the address databases of the postal services incumbent.	Draft legislation eliminates the legal monopoly on selected services for the incumbent. Entrants can use the postal network under terms and prices (*ex post*) monitored by the Postal Sector Regulator (fully operative since 16 July 2010).
	Retail trade and professional services
Relax regional retail trade regulations, at least the criteria for defining a hypermarket. Remove local obstacles to the opening of petrol stations in super and hypermarkets.	A 2010 retail trade law limits the authorisation for the opening of super or hypermarkets to specific cases. An authorisation to open a petrol station in super and hypermarkets is no longer necessary since 2009.
Amend the excessive and sometimes discriminatory restrictions in the pharmacies sector.	None.
Remove the import restrictions on cement.	None.
Review and narrow qualifications requirements for professional services, which are not covered by the Directive.	None.
	SAVINGS BANKS
Reform the regulation of acquisition of shares (*cuotas participativas*) by external investors, for example by removing the ceiling on individual holdings. Explore other ways for savings banks to increase their access to outside equity	Legislation approved in July 2010 allows savings banks to issue voting shares and abolishes the limit on capital held by individual investors. It also allows savings banks to raise more than 50% of equity from new investors if the savings bank concerned transforms itself into a holding foundation which owns the remaining equity.
Remove the requirement for regional governments to approve mergers of savings banks. Make approval by the Banco de España and the competition authority sufficient.	Regional governments are now required to present a list of criteria which must be followed in merger decisions.
Lower the ceiling on public-sector representation in *cajas'* General Assemblies.	The law reduces the ceiling on voting shares representing public administrations from 50 to 40%.

Recommendations in previous *Survey*	Action taken since December 2008
REDUCING GREENHOUSE GAS EMISSIONS	
Sell CO_2 emission permits through auctions as from 2012, and support the elimination of the EU rules that allow the sale of only up to 10% of the permits.	CO_2 emission permits will be auctioned between 2013 and 2020. In a phasing out process, some sectors will receive emission permits freely.
Conduct more studies on the cost effectiveness of the feed-in tariff regime for renewable electricity sources, comparing it with other abatement policies towards greenhouse gas emission reductions.	The government is reviewing the feed-in tariffs to adjust payments to delivery cost.

Chapter 2

Restoring fiscal sustainability

Spain's government has recently introduced an ambitious set of consolidation measures. Should budgetary outcomes fall short of targets, the government should stand ready to introduce further measures, as announced. Such measures could include subjecting more goods and services to the standard value added tax rate. They could also be used to fund a reduction in some social security contributions paid by employers. Once sufficient progress towards fiscal consolidation has been achieved, a further reform of the tax system towards more growth-friendly taxes should be contemplated. Spain also faces a dramatic increase in ageing-related public spending, mostly on account of pensions. The government proposal to increase the statutory retirement age by two years is a welcome step but further reforms in the pension system will be necessary to contain expenditure growth. Rules on the budget balances for each level of government should be reviewed so as to induce regional governments to run larger budget surpluses when activity exceeds potential.

Spain faces significant fiscal challenges

The government faces two major fiscal challenges. The most immediate is to achieve a rapid fiscal consolidation to foster investor confidence, while mitigating its negative impact on activity. The second is to ensure long-term sustainability of fiscal consolidation by implementing reforms to contain expenditure growth and rebalance the tax system so as to reduce distortions that may be harmful to activity. This chapter starts by examining the extent to which the sizeable fiscal deterioration since 2006 is structural. It then assesses how recent government measures help achieve rapid consolidation and discusses additional measures which could be taken, if needed. Finally, it examines the structural reforms that are needed to ensure the long-term sustainability of public finances.[1]

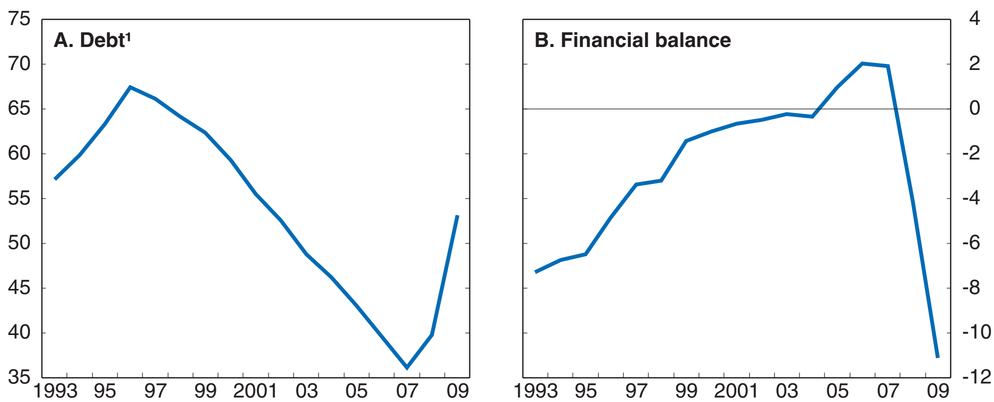
A structural deterioration of public finances

Despite an initially favourable fiscal position, a steep and structural fiscal deterioration

Spain's fiscal position has deteriorated sharply since 2007, which contrasts with the regular and significant improvement since the recession of 1993 (Figure 2.1). From a surplus of 1.9% of GDP in 2007, the fiscal balance moved to a deficit of 11.1% in 2009. The debt level has also increased significantly from 39.6% in 2006 to 53.2% in 2009, mainly as a consequence of the deterioration of the fiscal balance, but also because of government support to the financial sector, such as the 20 billion euros (2% of GDP) borrowed by the Financial Assets Acquisition Fund in 2008-09 to acquire high-quality financial assets issued by Spanish credit institutions. The central government contribution to the *Fund for the orderly restructuring of banks* (FROB) amounted to 6.7 billion euros (0.6% of GDP). In addition, the FROB issued a five year maturity bond guaranteed by the Spanish government in November 2009 which also contributes to

Figure 2.1. **General government debt and financial balance**

Per cent of GDP



1. Gross debt Maastricht definition.

Source: OECD (2010), *OECD Economic Outlook: Statistics and Projections* (database), September.

StatLink http://dx.doi.org/10.1787/888932363387

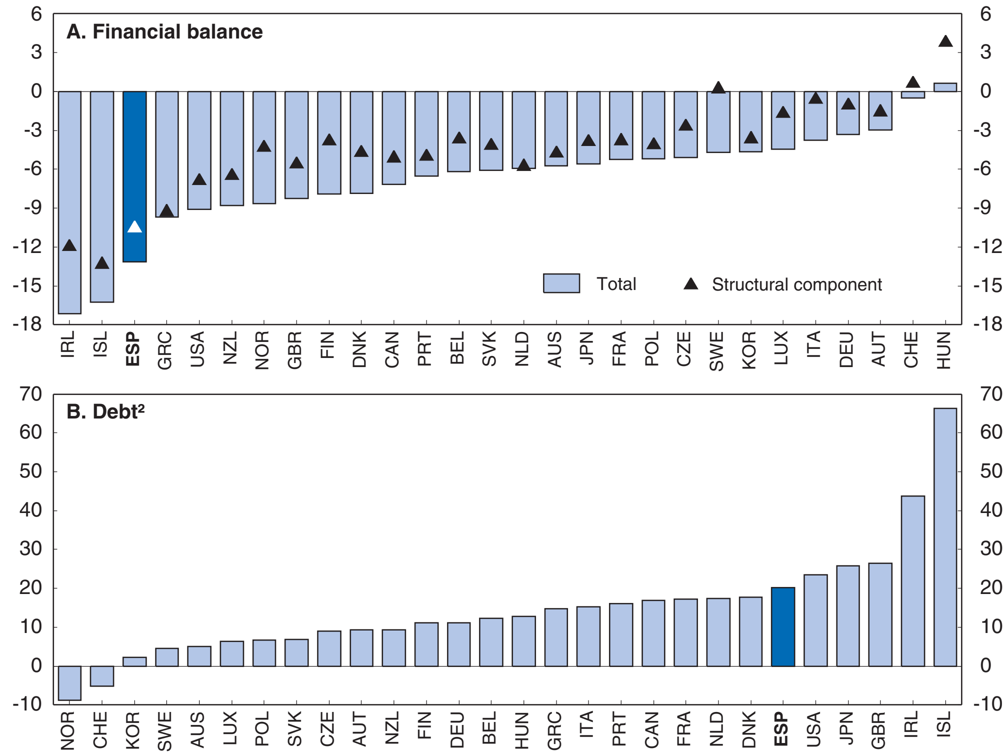
public debt. The capital injections by the FROB in the savings banks restructuring processes are expected to be unwound after five years or, exceptionally, after seven years.

In parallel, contingent liabilities have also increased as the government has granted guarantees to securities issued by credit institutions (48 billion euros in 2009) which is less than the volume of similar support provided by other countries (see Levy and Schich, 2010, for a comparison with data from 2008). This scheme has been extended until the end of this year at least and guarantees issued can last for up to five years.

The deterioration of Spain's fiscal position is particularly striking compared to other OECD countries. The cumulative deterioration of the fiscal balance since the last most favourable fiscal position (2006 in Spain) is among the largest in the OECD (Figure 2.2). The

Figure 2.2. **Effect of the crisis on government finances**

In percentage points of GDP, change from pre-crisis year to 2009[1]



1. The pre-crisis year is 2006 or 2007, whichever has the lowest value for debt or the highest value for the financial balance.
2. Gross financial liabilities based on national accounting criteria, which differ from Maastricht criteria.

Source: OECD (2010), *OECD Economic Outlook: Statistics and Projections* (database), October.

StatLink http://dx.doi.org/10.1787/888932363406

cumulative deterioration of the debt is a bit less marked compared to other countries, in part owing to the fact that Spain did not need to step in massively to support the financial sector, in contrast to some other countries (see Levy and Schich, 2010, for an international comparison). Gross debt remains lower than in the other major European economies.

The bulk of the fiscal deterioration is structural

Based on the OECD estimate of the cyclical component of the fiscal deterioration of about 2½ per cent (OECD estimate: 3%; EU estimate: 2%), the deterioration of the fiscal position since 2006 appears to be mainly structural (Figure 2.1). The estimated cyclically-adjusted general government budget balance deteriorated from a surplus of about 1½ per cent of GDP at end-2006 to a deficit of 8¼ per cent (OECD estimates) at end-2009. This does not imply that the full amount of the cyclically-adjusted balance deterioration should last, as part of this deterioration relates to temporary measures taken by the government to support the economy, measures which are to be withdrawn by end-2010. The total amount of discretionary measures supporting the economy taken both in 2008 and 2009 amount to roughly 3½ per cent of GDP (see Box 2.1). Out of this, about 2¼ points are temporary stimulus measures. Excluding them the structural deficit was roughly 6% of GDP at end-2009. Of the remaining stimulus, most is accounted for by the lagged effects of corporate and personal income tax reductions implemented in 2007, which were not funded by commensurate spending reductions.

Box 2.1. **Discretionary fiscal stimulus measures**

Substantial budgetary discretionary support was put in place in 2008, mainly in the form of tax reductions. This included support to households through personal income tax reductions (a 400 euro tax rebate), housing-related tax expenditure disbursements and liquidity support to businesses through accelerated value added tax repayments. Some of these measures (amounting to about 1% of GDP in total) have a permanent nature.

In 2009, a further stimulus of roughly 2% of GDP was provided, with the emphasis shifting to spending, mostly public investment undertaken by local governments of which most was funded by the central government. It also incorporated subsidies to businesses, for example on environment-related R&D spending. Table 2.1 summarises the size of the main fiscal stimulus measures.

Table 2.1. **Net impact of discretionary fiscal stimulus measures on the general government budget balance**[1]

Per cent of GDP

	2008	2009
Expenditure	**–0.0**	**–1.1**
Public investment	. .	–0.8
Other	. .	–0.3
Revenue	**–1.9**	**–0.7**
Direct taxes	–1.5	–0.1
Personal income tax	–0.8	–0.3
Corporate income tax	–0.7	0.2
Indirect taxes	–0.4	–0.6
VAT	–0.4	–0.6
Total stimulus measures	**–1.9**	**–1.8**

1. A negative sign indicates a negative effect on the budget balance (higher deficit).
Source: Banco de España; Spanish Ministry of Economy and Finance and OECD calculations.

Even after excluding the fiscal package, the sizeable deterioration of the structural deficit by about 8% since 2006 remains striking. Part is explained by the permanent tax reduction of the 2007 tax reform (about 1½ per cent of GDP). For the remaining part, one likely explanation is that the improvement of the structural balance prior to the crisis was overestimated because tax elasticities had reached a level above their long-term average while the current deterioration may also be overestimated. To assess the extent to which tax elasticities could explain current and past changes in the structural fiscal balance, an analysis has been made by decomposing the different factors behind the changes in the structural balance (see Box 2.2 for the methodology and the main results). As shown in Table 2.2, significant expenditure restraint was achieved from 2000 to 2005, contributing to the remarkable improvement in the fiscal balance. However, expenditures grew faster than nominal GDP in the last two years of the boom period (2006 to 2007), and the continuing improvement of the structural fiscal balance owed much to non-discretionary factors. Most likely the strong revenues reflected high tax elasticities, including the impact of the housing boom on revenues from housing transactions and revenues generated by higher asset prices (notably house prices).

Box 2.2. **To what extent do discretionary efforts contribute to fiscal sustainability?**

An improvement in the structural fiscal balance has different implications for fiscal sustainability depending on whether it originates from new tax measures or from a better control of expenditures. Empirical research shows that consolidation through the control of expenditures tends to be more sustainable (see Guichard *et al.*, 2007). Furthermore, an increase in tax collection does not necessarily reflect a discretionary effort by the government to collect extra revenues. Tax revenue elasticities fluctuate over time and may lead to exceptional – and consequently non-sustainable – tax revenues.

This phenomenon has an important consequence: it blurs the interpretation of the structural balance change. An improvement in the structural balance owing to a higher elasticity may be attributed to government efforts even if it is beyond government control. This fallacious interpretation stems from the construction of the structural balance, which is computed as the "residual" between the actual balance and its cyclical component (hence, the structural balance is usually called the "cyclically-adjusted" balance). Consequently, any factor that does not explicitly appear in the cyclical balance is, by construction, deemed structural.

A more satisfactory measure of the discretionary component of public finances has been proposed, among others, by Duchêne and Levy (2003). Their analysis focuses on two "structural effort" factors that explain changes in the structural balance: *i)* the gap between the growth in public expenditure and potential growth, which may be called the "structural expenditure effort", and *ii)* the new measures affecting the tax burden (compulsory levies collected by the general government). These two factors clearly isolate the discretionary power of the government as limiting the expenditure growth rate or raising taxes can lead to a sustainable improvement in the government balance. The residual part of the change in the structural balance can be attributed to non-discretionary factors as it mainly arises from changes in tax elasticities (and more marginally to non-tax revenues) that do not lead to a sustainable improvement in the government balance. Using this approach, Table 2.2 below analyses the underlying factors of the change in the Spanish fiscal balance since end-2001. Efforts to control public expenditure were particularly marked up to 2005. Afterwards, expenditure grew faster than nominal GDP and most of the continuing improvement of the structural fiscal balance from 2005 to 2007 seems to be related to non-discretionary factors, most likely higher tax elasticities than assumed.

Box 2.2. **To what extent do discretionary efforts contribute to fiscal sustainability?** *(cont.)*

Consequently, the drop in the non-discretionary component is particularly marked in the crisis years (2008 and 2009), reflecting a considerably steeper fall in tax collection than the fall in GDP.

Table 2.2. **Fiscal consolidation since 2000**

Per cent of GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
General government financial balance	–1.0	–0.7	–0.5	–0.2	–0.4	1.0	2.0	1.9	–4.2	–11.1
Change in the general government financial balance	0.4	0.3	0.2	0.2	–0.1	1.3	1.1	–0.1	–6.1	–7.0
Cyclical component	0.5	–0.1	–0.4	–0.2	0.0	0.2	0.4	0.3	–0.4	–1.9
Cyclically-adjusted component	0.0	0.5	0.6	0.5	–0.1	1.2	0.6	–0.4	–5.6	–5.1
Discretionary effort	0.1	0.6	0.2	0.0	–0.6	0.4	–0.3	–1.5	–3.0	–3.0
New measures affecting the tax burden	*–0.2*	*0.0*	*0.1*	*–0.6*	*–0.2*	*0.1*	*0.0*	*–0.4*	*–1.4*	*–0.6*
Effort in controlling nominal expenditure growth	*0.3*	*0.6*	*0.1*	*0.6*	*–0.4*	*0.3*	*–0.3*	*–1.0*	*–1.6*	*–2.4*
Non-discretionary component	–0.2	–0.1	0.4	0.5	0.5	0.8	0.9	1.0	–2.6	–2.1

Source: Eurostat, Banco de España and OECD calculations.

In the long-run, the main uncertainty relates to how tax elasticities will behave. The recession is likely to entail a fall in tax elasticity with respect to output. With the recovery of the economy, an improvement is likely, although this will take time to materialise as many sectors have been durably affected by the crisis. Consequently, it is possible that tax elasticity will durably remain below that prior to the crisis. The economy may also become more tilted toward external rather than domestic demand, as discussed in Chapter 1, and consequently be less tax rich and the housing sector may take many years to recover. This implies that stronger measures to durably cut expenditures or raise taxes are necessary to improve the structural balance.

Achieving rapid fiscal consolidation while mitigating its impact on growth

Recent measures are a positive step towards consolidation

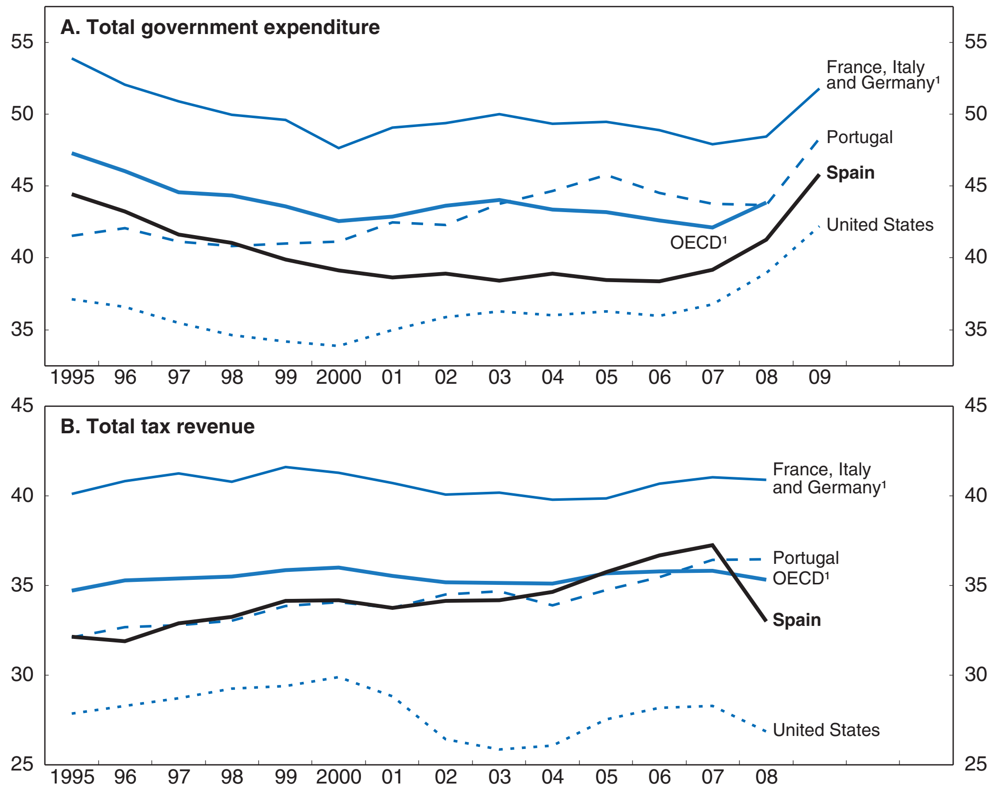
Consolidation should strike the right balance between expenditure cuts and tax increases

As evidenced by several studies, expenditure-driven consolidations prove to be more sustainable than revenue driven consolidations. They also tend to have a more favourable impact on economic growth in the long-run. Conversely, they have two drawbacks compared to tax-driven consolidations. *First*, identifying relevant expenditure restraint, and implementing it, which tends to be a lengthy process. As a consequence, rapid expenditure cuts are often *ad hoc* measures that are neither optimal from an economic point of view (such as capital investment cuts) nor sustainable in the long-run (such as public-sector wage cuts). *Second*, expenditure cuts may have a negative impact on growth in the short-run; in particular cuts in infrastructure investment spending, owing to relatively high multipliers, could be problematic in the case of a country with significant risks of falling back into recession.

The trade-offs between expenditure *versus* revenue based consolidation create a specific dilemma for Spain. On the one hand, the need for rapid consolidation and minimising the risks of falling back into recession calls for a more revenue-based consolidation. On the other hand, achieving a sustainable consolidation and boosting potential growth, which is critical in Spain, calls for an expenditure-based consolidation. While this dilemma would call for a fine-tuning of measures, it is clear that consolidation should in any case be achieved both from the revenue and the expenditure sides as the deterioration of the fiscal balance clearly arose from both sides (Figure 2.3). The main challenge for the government is then to carefully identify the most relevant expenditure restraint to be achieved in the long-run while raising less distortive taxes when necessary to obtain a rapid consolidation (see below).

Figure 2.3. **Government expenditure and tax revenue**

Per cent of GDP



1. Unweighted averages. For the OECD aggregate, in Panel A Mexico and Turkey are excluded, in Panel B 2008 is an estimate.

Source: OECD (2010), *OECD National Accounts Statistics* and *Revenue Statistics* (databases), November.

StatLink http://dx.doi.org/10.1787/888932363425

Recent measures make substantial progress towards sustainable government finances

The consolidation strategy laid out in the Stability Programme aims at reducing the deficit to 3% of GDP by 2013. The Stability Programme consolidation strategy was mostly revenue-based in 2010, while it relied on expenditure restraint for later years. The strategy became more frontloaded after additional measures were announced in May 2010 (while the target of a 3% deficit by 2013 was unchanged), which has resulted in a more expenditure-based consolidation in the initial years (see Box 2.3).

Box 2.3. **Fiscal consolidation measures**

The first element of the fiscal consolidation strategy is the withdrawal of most of the fiscal stimulus package. This will reduce spending by 1% of GDP in 2010 and increase revenues by about the same amount in 2010 (not taking into account other measures that reduce revenues, amounting to roughly –0.3% of GDP).

The main additional consolidation measure on the revenue side is the rise in value added tax rates on 1 July 2010 by 2 percentage points. This measure may raise revenues worth 0.2% of GDP in 2010 and an additional 0.3% in 2011, based on estimates by the Banco de España. Moreover, the 2011 budget introduced changes in the personal income tax code, including a higher top marginal income tax rate for incomes above 120 000 euros, with relatively small expected impact on expected revenues. On the expenditure side, the main immediate measures are the reductions in public sector wages by 5% on average (a total of 0.4% of GDP for 2010 and 2011) and a cut in public investment (0.5% of GDP). Other measures decided include a nominal freeze on most pensions (0.2% of GDP) and reductions in pharmaceuticals' spending (0.1% of GDP). These measures are reflected in the 2011 central government budget, which foresees a reduction of spending by 7.9%, while research and development spending is cut only slightly. The budget includes additional spending reductions of 0.23% of GDP which are not listed in Table 2.3. Half of these reductions concern transfers to regional governments. Table 2.3 does not include measures taken by regional governments individually, which may lead to underestimated spending and revenue measures. Regional governments have to adhere to adjustment programmes to lower their deficits (see also Box 2.4 below). For subsequent years, one of the main expected sources of expenditure restraint is the non-replacement of nine out of ten civil servants going into retirement, both at the national and subnational level. Combined with moderate wage increases and the 5% immediate cut in wages, this measure should save 1.9% of GDP. "The Expenditure Revision Plan" adopted in May 2010 outlines the spending reductions needed from 2011 to 2013 to reach the government's deficit objectives. These cuts concern public investment, intermediate consumption and subsidies. Measures to be taken in 2012 and 2013 will be spelled out in full in the respective annual budgets.

Table 2.3. **Net impact of 2010 measures on the general government budget balance**[1]

Per cent of GDP

	2010	2011
Expenditure	**1.6**	**1.6**
February 2010 Stability Programme Update (mainly withdrawal of stimulus package)	1.0	0.6
May 2010 additional measures	0.5	1.0
Revenue	**1.2**	**0.6**
February 2010 Stability Programme Update	1.2	0.6
Direct taxes	0.3	0.2
Personal income tax	0.5	0.3
Corporate income tax	–0.2	–0.1
Other	0.1	. .
Indirect taxes	0.8	0.4
VAT	0.7	0.4
Total impact	**2.7**	**2.2**

1. A positive sign shows an improvement of the balance. Only additional impact of new measures for each year.
Source: Banco de España; Spanish Ministry of Economy and Finance and OECD calculations.

Overall, the consolidation path seems appropriate. The government's objective is to reach a general government deficit of 6% in 2011, implying substantial early consolidation. According to OECD estimates, this will require an improvement in the cyclically-adjusted primary balance of around 5% of GDP in 2010 and 2011. The choice of a mainly expenditure based consolidation in the later years should help achieve a sustainable consolidation, while the partial reliance on tax increases in the first years will help speed up the consolidation process. Nonetheless, several risks remain. If they materialise additional consolidation measures may need to be contemplated to reach fiscal targets. Therefore, the government should stand ready to raise taxes further, if needed. Further measures may be required by 2013 for the following reasons:

- While the assumptions concerning tax revenues relative to GDP in the Stability Programme are appropriately cautious, the growth projections are on the optimistic side.
- Public wage cuts can be justified by the relatively high growth of public wages in the past; however, wage cuts may be difficult to sustain politically.
- Concrete measures to restrain public expenditure beyond 2011 are not fully spelled out yet as they will be specified in annual budgets; they require regional governments' co-operation to reach agreed deficit objectives (see below).

Tax reform could support economic growth while contributing to rapid consolidation

The structure of the revenue system in Spain varies significantly from others in the OECD, although it is similar to continental European countries. The distribution of revenues was skewed away from taxes on goods and services – for Spain, the value added tax (VAT) – and towards social security contributions (Table 2.4).[2] VAT has persistently represented a smaller share of revenues in Spain, even if the temporary VAT revenue reductions in 2008 (see Table 2.1) and the expected tax revenues from the 2010 VAT rate increases are added in (about 0.8% of GDP). Property taxes contribute less to revenues than on average in OECD economies, especially when taking the abolition of the wealth tax in 2009 into account. Social security contributions contribute significantly to a labour tax wedge that is higher than in the OECD area on average. A majority of European OECD economies have higher labour tax wedges, but their overall tax burden (as measured by tax revenues relative to GDP) is also often substantially higher.

Higher reliance on consumption taxes could be considered

Broad-based taxation of consumption is the least distorting tax instrument after taxation of immovable property (Johansson *et al.*, 2008). In that sense, the decision to raise the VAT rates on 1 July was appropriate. The normal rate increased from 16 to 18% and the reduced rate from 7 to 8%. The 4% rate for, *inter alia,* food and drink and prescription drugs was left unchanged. More revenue could be collected by broadening the VAT, as the VAT revenue ratio (VRR) – the ratio of VAT collections to the product of the normal rate and total consumption – is lower in Spain than in other OECD countries (Figure 2.4). A low VRR can be caused by a low tax base as a result of preferential rates.

A restructuring of VAT and an improvement in its administration could yield additional revenue without significant impact on efficiency or equity. These findings call for broadening the tax base. Preferential VAT rates typically are implemented to protect low-income consumers or respond to competitive pressure. The former purpose is meant to reduce or reverse the regressivity of VAT. The latter would apply the preferential rate to

Table 2.4. **Structure of tax revenue**

Per cent of total revenues, 2008[1]

	Personal income tax	Corporate income tax	Social security contributions	Property tax	Goods and services tax	Other taxes
Spain	**21.3**	**8.3**	**36.8**	**6.7**	**25.1**	**1.8**
Australia	36.7	23.1	0.0	8.9	26.6	4.7
Austria	23.1	5.7	33.5	1.3	27.1	9.3
Belgium	30.2	7.6	31.5	5.1	25.2	0.5
Canada	37.3	10.7	14.5	10.2	23.4	3.8
Czech Republic	11.0	12.4	43.8	1.1	31.3	0.5
Denmark	52.8	7.1	2.0	4.1	32.4	1.6
Finland	30.9	8.1	28.0	2.6	30.1	0.3
France	17.4	6.8	37.2	7.8	24.5	6.4
Germany	26.8	5.2	36.4	2.3	28.9	0.3
Greece	14.7	8.0	36.4	4.3	35.5	1.0
Hungary	19.3	6.5	32.5	2.2	37.2	2.3
Iceland	36.3	5.6	8.1	6.1	35.8	8.1
Ireland	27.8	9.7	17.7	6.5	37.1	1.2
Italy	26.8	8.6	31.1	4.3	24.4	4.8
Japan[2]	32.6	22.8	. .	15.1	29.1	0.4
Korea	15.0	15.9	21.9	11.9	31.6	3.6
Luxembourg	21.6	14.3	28.1	7.4	28.4	0.2
Mexico[3]	27.7	. .	15.3	1.7	53.1	2.2
Netherlands	20.4	8.7	36.2	3.3	29.9	1.5
New Zealand	41.9	11.0	0.0	6.0	34.2	6.9
Norway	21.7	28.7	21.1	2.8	25.7	0.0
Poland	15.2	7.9	34.3	3.4	38.2	1.0
Portugal	16.0	10.3	32.7	3.6	36.6	0.7
Slovak Republic	9.4	10.4	40.7	1.3	36.6	1.6
Sweden	29.3	6.9	24.8	2.3	27.8	8.8
Switzerland	36.4	10.6	23.1	7.8	22.0	0.0
Turkey	16.7	7.4	24.0	3.7	46.1	2.0
United Kingdom	29.9	9.9	19.2	11.6	28.8	0.4
United States	37.9	8.9	24.5	11.7	17.0	0.0
OECD	25.3	10.8	25.2	5.6	30.9	2.1

1. 2007 for Australia, Greece, Mexico, Netherlands, Poland and the OECD aggregate. Also for the goods and service tax in Belgium.
2. Social security contributions for Japan in 2007 were 36.4.
3. Data shown in the first column covers both personal and corporate income tax.

Source: OECD (2010), *Revenue Statistics* (database), September.

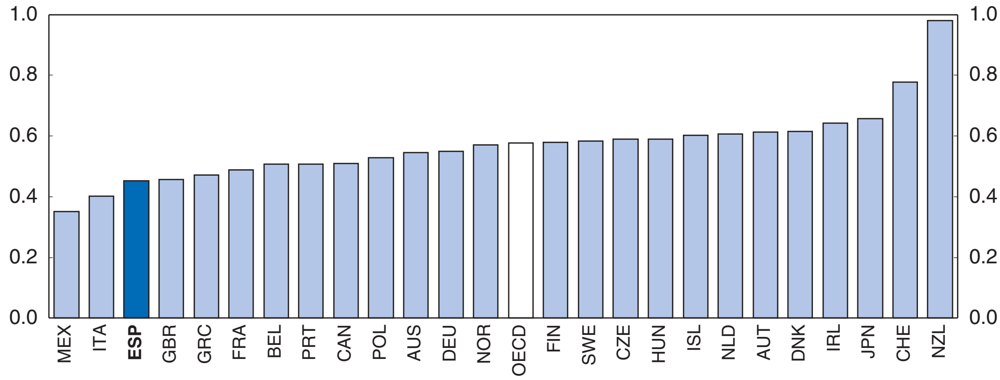
services, such as hotel accommodation, that share some of the characteristics of exports. With respect to protecting low-income consumers, preferential rates are subject to notoriously high leakage. Food and non-alcoholic beverages command only a 4% VAT rate, despite the fact the total spending on these products – although not their share of aggregate consumption – is positively correlated with income. Low-income households can be protected far more effectively with targeted transfers and work incentives. From an efficiency point of view, it is also questionable whether specific sectors should benefit from preferential tax treatment.

Tax expenditures should be further reduced

The government has presented draft legislation to parliament (*Ley de Economía Sostenible*) which aims at putting the treatment of rented and owner-occupied housing in personal income tax on an equal footing, doing away with most of the current tax subsidies

Figure 2.4. **VAT revenue ratio**[1]

2008[2]



1. The VAT revenue ratio (VRR) is defined as the ratio between the actual value added tax (VAT) revenue collected and the revenue that would theoretically be raised if VAT was applied at the standard rate to all final consumption. This ratio gives an indication of the efficiency of the VAT regime in a country compared to a standard norm. It is calculated as: VRR = VAT revenue/([consumption – VAT revenue] x standard VAT rate). In Spain, VAT tax revenues in 2008 were affected by changes in repayment schedules which lowered tax revenues temporarily by about 15%. Eliminating this effect would move Spain somewhat closer to the middle in the figure.
2. 2007 for Australia, Belgium, Greece, Iceland, Ireland, Netherlands, Poland and the OECD. The OECD aggregate excludes Korea, Luxembourg, Slovak Republic, Turkey and the United States.

Source: OECD (2010), *OECD National Accounts Statistics* and *Revenue Statistics* (databases), September.

StatLink http://dx.doi.org/10.1787/888932363444

for owner-occupied housing.[3] In particular, the draft law limits tax subsidies to gross family incomes below 24 000 euros in 2011[4] and proposes to apply this tax treatment also to rents. This reform is welcome. The favoured status of owner-occupied housing is eliminated and the proposed limits to the tax deductibility of housing-related expenditure reduce the leakage of the subsidies to higher-income families. However, families with the lowest incomes will still benefit relatively little, as they pay little income tax, so a case can be made for eliminating the housing tax credits entirely, especially in view of the fact that implicit rents from owner-occupied housing are not taxed.[5] To support housing for low-income households, these tax credits should be replaced by targeted cash-transfers (see Chapter 1). Such transfers could also take demographic characteristics of the household into account.

The draft *Ley de Economía Sostenible* contains a number of additional tax subsidies of questionable value. While these are temporary, narrowly targeted and have a minor impact on budget outcomes, other alternatives may be more efficient:

- Refurbishment of homes to improve energy efficiency and save water would receive a temporary cumulative tax credit of up to 10 000 euros per home and benefit from the reduced VAT rate. Promoting energy conservation is a desirable goal, but the tax credit is unlikely to be the most efficient way to achieve it. First, the improvement may have benefits for homeowners other than energy efficiency, for which owners, rather than taxpayers, should pay. Second and more important, a much more efficient way to provide an incentive to conserve energy or water is to tax their use. Such taxation would be more effective in generating the desired behaviour. For example, some of the favourable impacts of subsidies for energy saving equipment in homes will be offset because households may adjust their targeted ambient temperatures further in response to the introduction of the subsidies. Switching to appropriate taxes would increase rather than decrease revenue.

- The preferential treatment for rental income received when letting housing to individuals up to 30 years of age is likely to encourage the development of the rental market and deadweight loss may be reduced as a result of targeting the young. However, the measure benefits higher-income owners with higher marginal tax rates disproportionately. It also increases the relative attractiveness of investment in housing.
- The deductibility of employer payments for their workers' public transportation expenses from income tax is also regressive. As noted above, taxing the production of pollution is more efficient than providing subsidies for modes of transport which pollute less. It also rewards consumers for being environmentally conscious while raising revenue in the process. A further alternative policy to support the use of public transport rather than cars is to introduce pricing mechanisms for congestion, which fall under regional and local government competency. For instance, calibrating highway tolls according to the degree of congestion could both raise revenue and increase consumer welfare.

Policies towards a sustainable fiscal consolidation

While up-front consolidation is needed to reverse the public debt build-up and allay sovereign risk fears, efforts to ensure a long-term fiscal sustainability need to continue by implementing structural fiscal reforms. One aspect is to pursue a tax reform in a growth-friendly way, in particular by fostering environmentally sustainable growth. Those reforms that would lead to the reduction of taxes should be implemented only once sufficient progress in fiscal consolidation has been achieved. A second aspect is to contain the growth of age-related spending during the coming decades. A last aspect is to ensure that fiscal arrangements between the different levels of government provide the right incentives for fiscal sustainability at all levels.

A reform of the tax structure could foster growth once sufficient consolidation has been achieved

A shift from labour to consumption taxes could reduce economic distortions

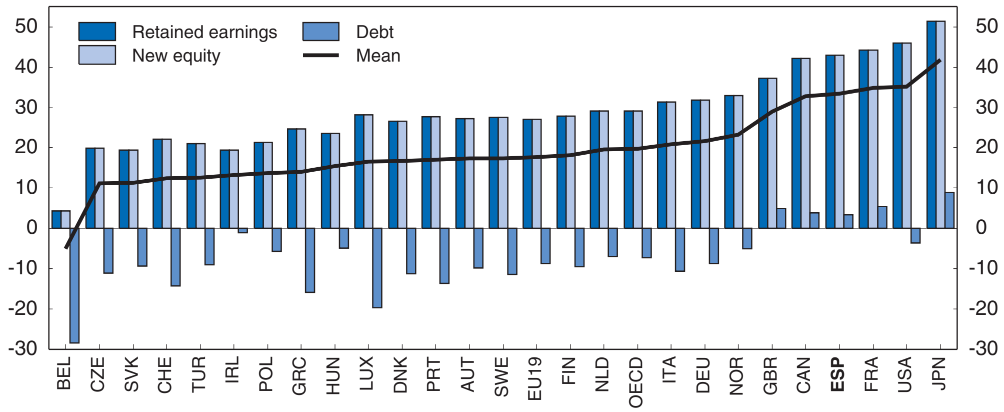
A reform option would be to shift some of the tax burden from labour to consumption. For instance, a decrease in some social security contributions could be financed by an increase in the VAT base or in the reduced rates. An option would be targeted reductions in the tax burden on low-skilled workers, for example, by reducing employer-paid social security contributions for all workers with low earnings. This option may be particularly attractive in view of the large supply of workers with modest qualifications and the deterioration in their job prospects following the downturn of the residential construction industry.[6]

Corporate taxes could be lowered

Corporate taxes can distort business decisions and retard growth. The corporate-level marginal effective tax rate (METR) on investment in Spain is among the highest in the OECD according to a recent study calculating such rates on the basis of tax code parameters (Figure 2.5).[7] This reflects both corporate taxation at the national level as well as local profit taxes on firms with a minimum turnover of 1 million euros per year. According to the Spanish tax authorities, the contribution of the local profit tax to the marginal effective tax rate may be overestimated by around 4 percentage points in this study. Moreover, according to the results of a study comparing average effective tax rates in European Union countries on the basis of data from individual incorporated firms' profits and tax payments, the average tax burden of Spanish corporations was lower than in most of 19 countries

Figure 2.5. **Corporate marginal effective tax rates**

Per cent, 2009[1]



1. The OECD aggregate is an unweighted average of the 24 countries for which data is available.

Source: M.P. Devereux *et al.* (2010), "Effective Tax Levels Using the Devereux/Griffith Methodology", Project for the EU Commission, TAXUD/2008/CC/099, Intermediate Report, Center for European Economic Research (ZEW).

StatLink http://dx.doi.org/10.1787/888932363463

compared in 2005 (Fernández Rodriguez *et al.*, 2008) even before the corporate tax reductions introduced in Spain in 2007.[8] According to tax collection data, which are not comparable internationally, the average effective corporate tax rate dropped from 25% in 2004 to 18% in 2008. Removing the preferential rate applying for small corporations as well as the threshold for the local profit tax would avoid disincentives for small businesses to grow. According to the 2011 budget law, the preferential corporate tax rate will continue to apply to those small and medium-sized companies which grow above the threshold beyond which the normal corporate tax rate applies. However, this rule only applies until 2013.

Reforming taxation of real estate could raise economic efficiency

Spain relies primarily on the taxation of real estate transactions which has accounted for revenue of 1.5 to 2% of GDP in recent years, whereas taxation of real estate property values is relatively low (Table 2.5). In view of necessary budgetary adjustments, local governments have recently raised real estate taxes (this development is not reflected in the data of Table 2.5). Real estate taxes have the least distortive effects on activity (Johansson *et al.*, 2008). Taxation of transactions is an impediment to the transfer of ownership and the allocation of property to its best use. Moreover, transaction taxes reduce the geographic mobility of workers, creating obstacles for workers to move to those geographic areas where suitable jobs can be found, especially in Spain, where most workers are owner-occupiers. The absence of taxation of implicit rents of owner-occupied main residences also reinforces the case for higher taxation of real estate property values.

A difficulty in the Spanish context arises from the different allocation of these two tax types across levels of government. While regional governments set transaction taxes, local governments set taxes on real estate values. However, an agreement across levels of government to limit taxation of real estate transactions could create more room for strengthening taxation of real estate values as a local government revenue base, improving the efficiency of the tax system overall. Indeed, real estate taxation is a particularly appropriate tax source for local governments. For example, real estate tax revenues accruing to local governments may make them more accountable in their use of the resources to local home owners.

Table 2.5. **Property taxes**

Per cent of GDP, 2008[1]

	Recurrent taxes on immovable property	Taxes on financial and capital transactions	Other	Total
United Kingdom	3.3	0.7	0.2	4.2
France	2.2	0.6	0.6	3.4
Canada	2.8	0.2	0.4	3.3
Korea	1.0	1.9	0.3	3.2
United States	2.9	0.0	0.2	3.1
Luxembourg	0.1	0.6	2.1	2.8
Australia	1.4	1.4	0.0	2.7
Japan	2.0	0.3	0.3	2.6
Switzerland	0.2	0.6	1.5	2.3
Belgium	0.0	0.0	2.2	2.2
Spain	**0.7**	**0.9**	**0.6**	**2.2**
Iceland	1.7	0.0	0.5	2.2
New Zealand	2.0	0.1	0.0	2.1
Denmark	1.2	0.5	0.3	2.0
OECD	0.9	0.7	0.3	1.9
Italy	0.6	1.1	0.1	1.9
Ireland	0.7	0.9	0.2	1.8
Greece	0.1	1.0	0.3	1.4
Portugal	0.7	0.7	0.0	1.3
Netherlands	0.0	0.9	0.3	1.2
Poland	1.2	0.0	0.0	1.2
Norway	0.3	0.2	0.7	1.2
Finland	0.5	0.3	0.3	1.1
Sweden	0.8	0.3	0.0	1.1
Hungary	0.3	0.5	0.0	0.9
Turkey	0.2	0.7	0.0	0.9
Germany	0.4	0.2	0.2	0.9
Austria	0.2	0.3	0.1	0.5
Czech Republic	0.1	0.3	0.0	0.4
Slovak Republic	0.4	0.0	0.0	0.4
Mexico	0.2	0.1	0.0	0.3

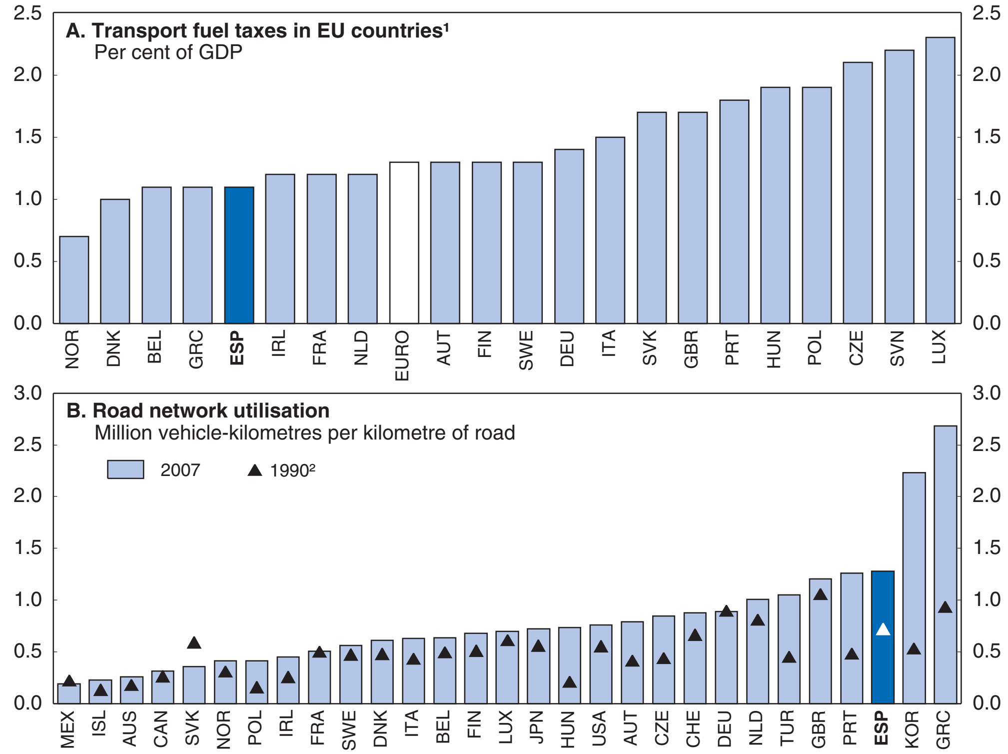
1. 2007 for Australia, Greece, Mexico, Netherlands, Poland and the OECD aggregate.

Source: OECD (2010), *Revenue Statistics* (database), September.

Environmental tax policy should promote green growth

Despite an improvement in the ratio of carbon dioxide (CO_2) emissions to GDP, Spain is still quite far from reaching its goal to hold the growth of CO_2 emissions in 2008-12 to a 15% increase relative to 1990; in fact emissions in 2009 were 43% higher. Reduced consumption of fossil-based fuels would reduce local externalities, including not only energy related externalities such as air pollution, but also externalities such as road congestion. Increased fossil fuel taxes could provide needed revenue in a relatively efficient manner as such taxation is not particularly high in Spain in per cent of GDP as compared to other countries (see Figure 2.6, Panel A) and this should still be the case after the increase in fossil fuel tax in 2009. At the same time road network utilisation has significantly increased (Figure 2.6, Panel B). Compared to road network utilisation, the revenues raised from tolls are not particularly high: the level of revenue per kilometre is relatively low, suggesting room to increase toll revenues further (see Figure 2.7). Some recent steps to raise private sector funding of infrastructure investment projects will lead to the introduction of further road tolls. In addition, calibrating road tolls according to the

Figure 2.6. **Transport taxes and road utilisation**



1. Aggregates are GDP-weighted averages.
2. Data refer to 1991 for Germany and to 1992 for Slovak Republic.

Source: Based on OECD environmental data, OECD calculations and European Commission (2010), "Taxation trends in the European Union: Data for the EU Member States, Iceland and Norway".

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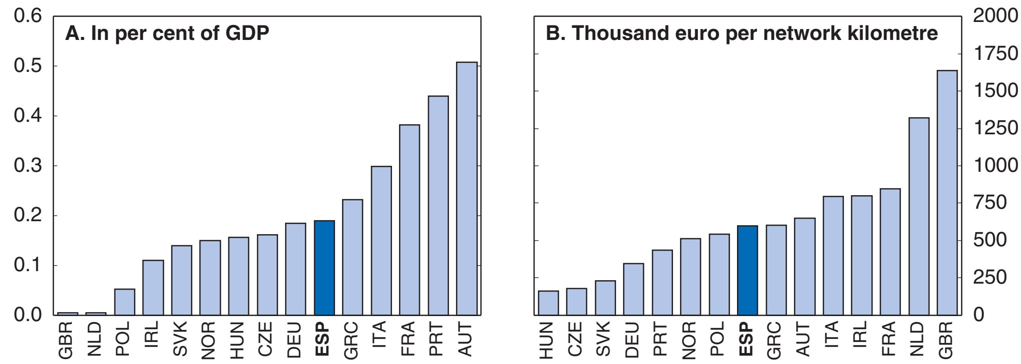
Figure 2.7. **Toll revenues**

Net revenues, 2009[1]



1. Preliminary value for Austria and provisional figure for France.

Source: ASECAP (2010), *Statistical Bulletin*, Association européenne des concessionnaires d'autoroutes et d'ouvrages à péage and OECD (2010), *OECD Economic Outlook: Statistics and Projections* (database).

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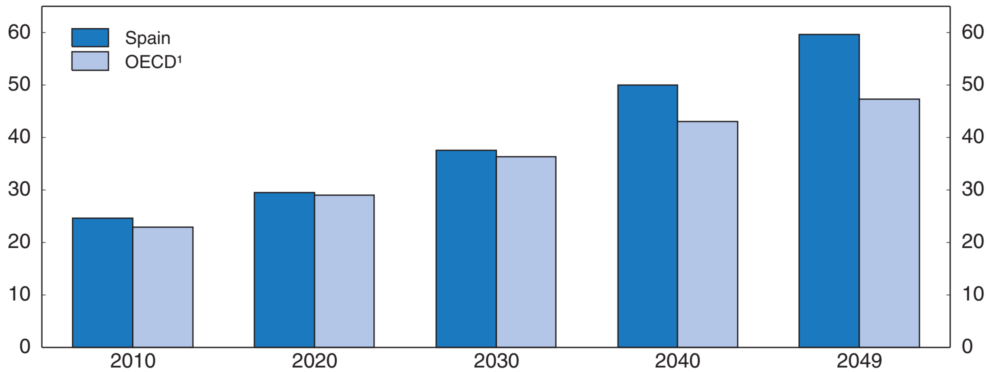
degree of congestion would improve the efficiency of road use. Such a policy can simultaneously raise revenue and increase consumer welfare. Other examples include improved market incentives to manage other scarce resources, such as clean air and water and uncontaminated soil (see Chapter 4 for a discussion on water issues).

Sustainable consolidation requires containing ageing expenditures

Population ageing will be particularly strong and rapid in Spain (Figure 2.8), reflecting the low total fertility rate and high life expectancy, as well as a somewhat later baby-boom than in other countries. By the middle of the century, Spain could have 1.7 persons of working age per elderly compared to 2.2 on average in other OECD countries.

Figure 2.8. **Projected old-age dependency rates**

Population aged 65+ as a percentage of population aged 15-64



1. Unweighted average.

Source: INE (2010), "Proyecciones de población a largo plazo 2009-2049", *INEbase* (database), Instituto Nacional de Estadística and OECD (2010), *Demography and Population* (database), July.

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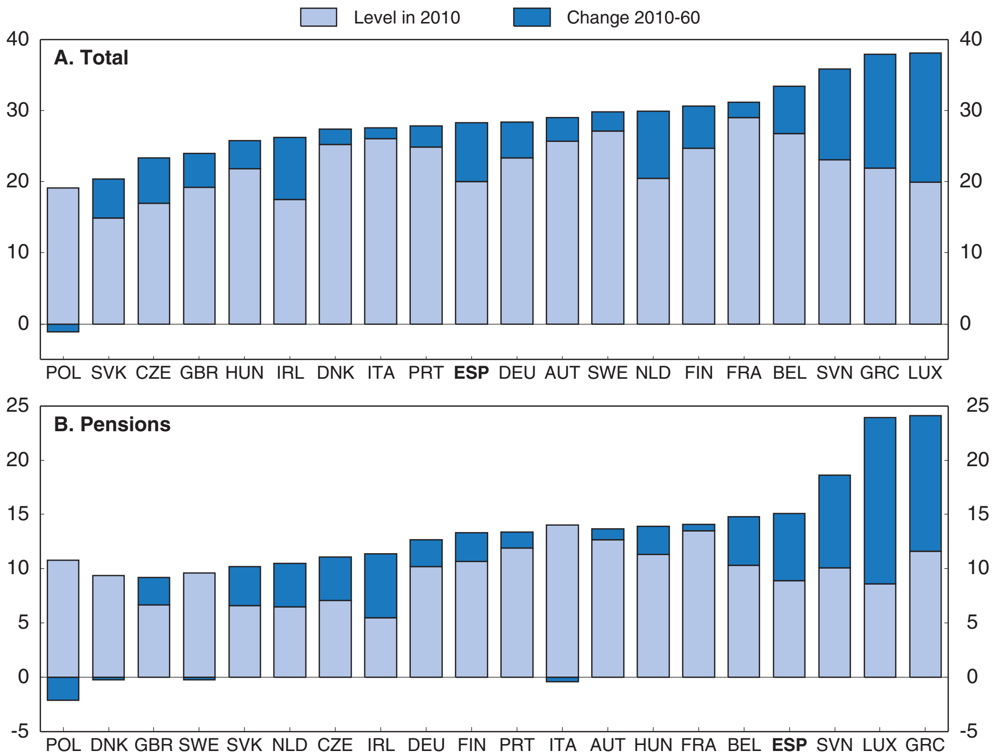
The growth of public age-related spending places Spain among the EU countries facing the strongest pressures over the coming decades (Figure 2.9). The projected growth of such spending of 8.4 percentage points of GDP between 2010 and 2060 is almost double the increase anticipated for the EU as a whole. Absent reforms, public pension spending would increase by 6.2 percentage points of GDP during the projection period, more than two and a half times faster than in other EU countries, albeit from a lower initial level. Furthermore, public health-care spending is likely to grow much more rapidly than shown in Figure 2.9 if allowance is made for the impact of technological advances in health care. While they improve diagnostic and curative effectiveness, not to mention life expectancy and the quality of life, technological advances are an important determinant of rising health care spending, public and private (Newhouse, 1992). Allowing for this factor could more than double the projected increase in public health-care spending (European Commission, 2009a).

Reforms enacted during the past decade had offsetting impacts on pension growth; the lengthening of the minimum contribution period and the increased penalties for early retirement reduced prospective spending, whereas the increased generosity of survivor pensions, notably in terms of a widening of benefit entitlements, and the extension of early retirement rights to all cohorts in 2002 had the opposite effect (Sánchez Martin and Sánchez Marcos, 2009). The most recent reforms – initiated in 2007 – centred mostly on

Figure 2.9. **Projected age-related spending**[1]

Per cent of GDP



1. After elaboration of this report some countries, such as Greece, have introduced pension reforms that reduce the expected increase in pension spending. These reforms are not reflected in the projections.

Source: European Commission (2009), *Sustainability Report 2009*, European Economy, No. 9.

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further lengthening the effective minimum contribution period, including for early retirement pensions, and broadening eligibility for postponing retirement beyond age 65. The reforms also tightened eligibility for disability and survivor pensions. On balance, these reforms do not change the picture on the long-run outlook for public pension spending. This can be gleaned from a comparison of the contribution of each of the key factors impacting long-term pension spending growth, as estimated in the European Commission's 2009 *Ageing Report*, with the estimates in the 2006 report (Table 2.6). Looking

Table 2.6. **Projected change in public pension/GDP ratio and contributing factors**

Per cent of GDP, 2007-50

	Public pension expenditure, 2007 (% of GDP)	Impact of changes (% points) in:				Change (%)
		Dependency ratio[1]	Coverage ratio[2]	Employment rate[3]	Benefit ratio[4]	
2006 *Ageing Report*	8.4	12.4	–2.3	–1.8	–0.8	7.0
2009 *Ageing Report*	8.4	10.6	–1.0	–0.9	–1.1	7.0

1. Population aged 65 and over/population aged 15-64.
2. Pensioners/population aged 65 and over.
3. Population aged 15-64/number of employed persons (inverse employment rate).
4. Average pension/average income.

Source: European Commission (2009), *2009 Ageing Report: Economic and Budgetary Projections for the EU-27 Member States (2008-2060)*, European Economy, No. 2.

at the period 2007-50 that overlaps both reports, the projected growth in the pension/GDP ratio remains unchanged as the positive impacts of the recent reforms have been offset by more pessimistic assumptions in the latest report.

Further reforms are thus needed to curtail the growth of public pension spending over the coming decades. Identifying reforms will require a holistic approach. Pension programmes are highly complex, and changes to any of the key parameters will have intra and inter-generational impacts that warrant careful study. It would be appropriate to undertake such an exercise by elaborating a white paper, as has been done in a number of OECD countries during the past few decades.[9] There are a number of ways in which reforms to Spain's public pension system would be consistent both with conceptual underpinnings of social insurance and with international best practices (Whiteford and Whitehouse, 2006).

Raising and sustaining increases in the effective retirement age

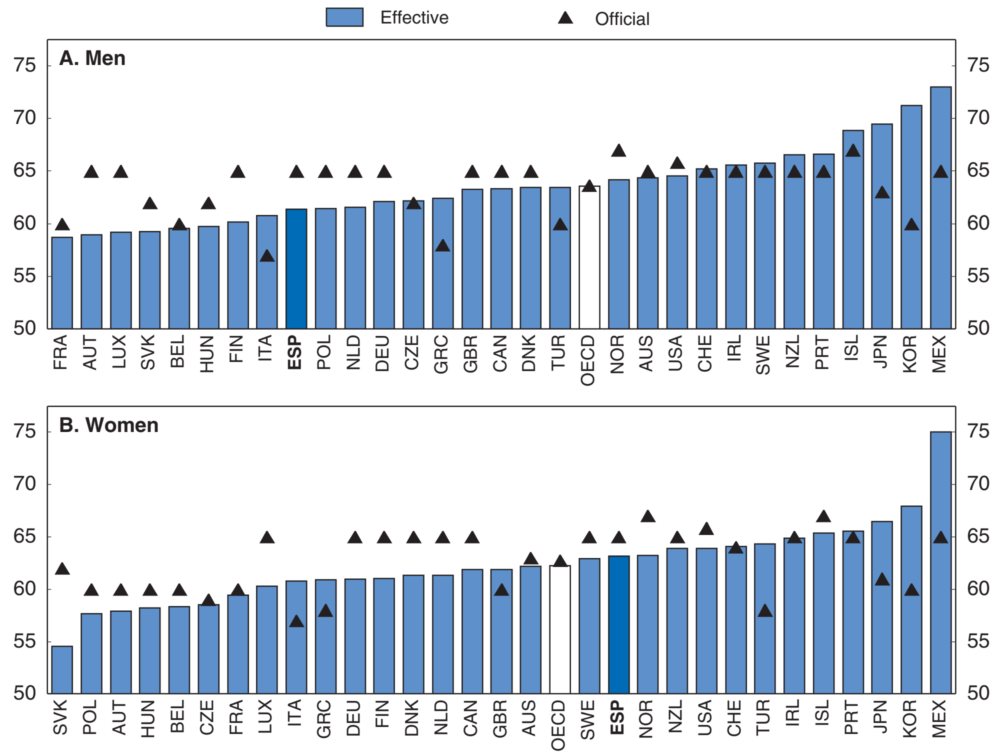
One of the most effective policies for reducing the impact of demographic change on government finances, via both general revenues and pension spending, is to increase the average age at which workers can retire and draw pensions. Workers exit the labour market on average at the age of 62.6 years (in 2008), which is low among OECD countries (Figure 2.10).[10] The government's recent proposal to gradually phase in a two-year increase in the statutory retirement age to 67 is thus an appropriate policy adjustment, although it will also need to be ensured that this change is reflected in the age at which retirement actually occurs.[11] *First*, the policy will help to rebalance the relative sizes of the retired and working age populations. *Second*, by slowing the growth of pension outlays and boosting the labour force participation of older workers, the increased retirement age will help to limit the increases otherwise needed in pay-as-you-go contribution rates, providing some measure of inter-generational sharing of the adverse impact of the transition to a permanently older population. *Third*, a higher effective retirement age would mirror improvements in longevity.[12] In order to increase the effective age of retirement, the qualifying age for early retirement will need to be raised in lockstep with increases in the full-pension age.

Rising life expectancy is a major contributor to growing pension spending. An increase of one year in life expectancy at birth is estimated to add 0.3 percentage point of GDP to the ratio of public pension spending to GDP in Spain by 2060 (European Commission, 2009b). Against the backdrop of an increase of close to 11½ years in life expectancy at birth between 1960 and 2007, and prospects for continued gains during the next half-century, a solid case exists for linking the normal retirement age to life expectancy. Indexing the statutory age for a full pension to improvements in life expectancy, as practiced in a number of other countries, would formalise the relationship and ensure durable improvement in the pension system's finances.

Workers exit the labour market on average about one year before they begin to receive pension benefits and extended unemployment benefit payments for older workers are used in the transition period to retirement. Unemployed workers above the age of 52 can receive an extension of the regular unemployment benefits if their regular entitlement (up to almost two years depending on the unemployment insurance contribution record) is exhausted. The extended benefit is modest: a flat rate of currently about 480 euros per month. Workers receiving this benefit are not exempt from search requirements, but they can receive it without limitation in duration until early retirement pension entitlements set in at the age of 61. While the discounts that apply to the early retirement benefits are sufficiently high to ensure actuarial neutrality of pension benefit payments in early

Figure 2.10. **Average effective age of retirement *versus* the official age**[1]

2002-07



1. The average effective age of retirement is defined as the average age of exit from the labour force during a 5-year period. Labour force (net) exits are estimated by taking the difference in the participation rate for each 5-year age group (40 and over) at the beginning of the period and the rate for the corresponding age group aged 5-years older at the end of the period. The official age corresponds to the age at which a pension can be received irrespective of whether a worker has a long insurance record of years of contributions. For Belgium and France, workers can retire at age 60 with 40 years of contributions; for Greece, at age 58 with 35 years of contributions; and for Italy, at 57 (56 for manual workers) with 35 years of contributions.

Source: OECD (2010), *Ageing and Employment Policies* – Statistics on average effective age of retirement, available at *www.oecd.org/document/47/0,3343,en_2649_34747_39371887_1_1_1_1,00.html.*

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retirement on average, the very long duration of unemployment benefit payments for older workers raises their reservation wages, thereby reducing their likelihood of employment. As a result, some businesses are likely to be prompted to dismiss workers prematurely at the expense of public finances. Moreover, weaknesses in enforcing search requirements for unemployment benefits (Chapter 3) generally generate the risk that benefit recipients may not be encouraged to look for a new job effectively, reinforcing such effects. The extended unemployment benefit payments for workers should be gradually shortened and eventually phased out. Special early retirement rules also apply to some groups of civil servants with long careers, who can retire at the age of 60 without any discounts. The discounts applied to early retirement pensions in the general social security scheme should be applied to all civil servants.

A further *de facto* avenue into early retirement is the partial retirement scheme, available from age 61 onwards, though subject to a minimum contribution record of 30 years. This allows workers to work part-time provided the reduced working time is offset through replacement hiring (see Annex 2.A1). Pension benefits are calculated *pro rata* without any discounts with respect to the pension that the worker would receive at age 65 with the same earnings record. This scheme, which was taken up by 13% of each retiring cohort in 2009, entails substantial subsidies from social security, estimated at 126 000 euros for each beneficiary (see Ferreras Alonso, 2010). Subsidies to partial retirement should be abolished.

Further disincentives to working longer result from the current procedure for determining benefit replacement rates. Workers can get a 50% replacement rate after only 15 years of work and reach the maximum replacement rate of 100% after only 35 years. In other words, a worker who starts his or her career at age 25 receives no benefit increase for working past 60, other than the phase-out of the early retirement penalty. To redress this problem, the accrual pattern should be redesigned to provide additional incentives to work longer. A higher accrual rate in the final years leading up to retirement can provide a strong incentive to remain active and postpone pension take-up. Incentives for postponement of retirement beyond the statutory age are also weak and could be increased from the current 2-3% per year premium in addition to the increase in the legal retirement age.

At the same time, policies seeking to maintain the relative durations of working life and retirement need to be mindful of the lengthy careers of some workers whose working lives begin at an early age. One option to reward long working lives directly would be to provide a full pension on the basis of an index defined on the basis of contributory years and age at retirement.

Reducing the generosity of benefits relative to contributions

The poverty rate (without taking into account the implicit rental income derived from home-ownership) among Spanish elderly is comparatively high (OECD, 2009), reflecting in part the low level of some actual pensions. At roughly 880 euros, the average old-age retirement pension in May 2010 was 58% of average earnings in 2009. The average old-age retirement pension for relatively young beneficiaries, between 65 and 70 years of age, however, was 1 000 euros, or roughly two-thirds of average earnings, reflecting both better earnings records and price indexation of pensions during the retirement period. The moderate average replacement rate is due to several factors that have been highlighted in previous *Economic Surveys*. *First*, due to low labour market participation of the cohorts of women currently in retirement, average female pensions are lower. With the employment rates of women rising steadily, the importance of this factor can thus be expected to diminish. *Second*, the pension system includes special schemes for the self-employed; workers in the fishing, farming, and mining sectors; and domestic help. As noted in previous OECD *Surveys* (2001, 2005), participants in several of these special schemes – representing a bit more than one third of retirement pensioners in September 2010 – contribute on low incomes and, as a result, pensioners tend to be bunched at the minimum pension. While these workers earn low pensions, the fact that they tend to contribute over relatively short periods results in very high internal rates of return (OECD, 2001). Reforms should continue to phase out these special schemes and integrate the participants into the general contributory and self-employed schemes, as recommended in the *Pacto de Toledo*. In the case of the self-employed, who can choose the earnings base which is subject to contribution payments (within defined limits), it is particularly important to improve the link between contributions paid and benefit entitlements obtained. Where special work risks exist, such as in mining, workers could be compensated, including by the age at which a worker qualifies for a pension.

Still, benefits of the Spanish public pension scheme are by design comparatively generous in relation to contributions paid. The average benefit accrual rate of 2.9 percentage points per year[13] generates an OECD estimate for the average theoretical gross replacement rate of slightly over 81% for workers earning the median income, the 7th highest in the OECD (Table 2.7). Potential gross pension wealth (*i.e.* the total lifetime value of pensions), at over 12 multiples of the average wage, is the 6th highest.[14] One way of assessing the generosity of Spain's contributory scheme is from the angle of the internal rate of return (IRR), that is, the rate of return that equalises the present value of lifetime contributions and lifetime pensions. Estimated at around 4%, the IRR is well above Spain's rate of potential output growth. Nonetheless, the public pension scheme has been able to run surpluses, even in recent years, because of the massive expansion of labour supply, reflecting rising female participation and immigration, combined with the fact that these workers have not yet reached retirement age. Against a backdrop of an unsustainable growth of old-age spending, reducing the statutory generosity of the public pension scheme appears to be warranted. The increase in the legal retirement age from 65 to 67 is a welcome step in this direction. While it is projected to generate a significant reduction in the projected spending, assuming that this measure is accompanied by other steps to raise the effective retirement age, it is unlikely to be sufficient.

Several reforms would reduce the growth of total pension outlays over the long run, improve incentives for labour market and system participation, and make the system more actuarially fair:

- *First*, the average accrual rate has to be reduced and the accrual method should avoid disincentives for working longer. A lower, constant accrual rate would be useful.
- *Second*, pension benefits should be based on a longer contribution history. At present, initial pension benefits are calculated as a proportion of the average earnings over the final 15 years before retirement.[15] Beyond these 15 years, the proportion varies with years of service, but not the earnings base to which it is applied. One of the likely consequences of the shortness of the earnings history used to calculate the initial pension is to weaken the link between social security contributions and pension benefits for workers who have not yet reached the last 15 years of their active working life. Indeed, for these workers, the amount of their earnings assessed for social security contributions is irrelevant for their future pension. This raises the extent to which social security contributions are perceived as pure taxes, damping incentives to supply labour and to declare revenues to social security and for taxation. The rule also results in unjustifiable differences in internal rates of return among workers depending on their labour market performance in the last years of their working lives.
- The need to lengthen the earnings base for pensions has long been acknowledged in Spain, as early as in the *Pacto de Toledo*, but change has remained elusive after the 1997 reform that increased it gradually from 8 to 15 years. The government has commendably indicated, however, its intention to consider this in the context of ongoing broader reforms to public pensions.[16]
- *Third*, the procedure for indexing the earnings history should be revised. Price indexation discriminates against workers with a flat wage profile relative to workers whose wages increase rapidly at the end of their careers. Indexation by the trend rate of growth in covered wages – the sustainable, steady-state rate of return on contributions in a pay-as-you-go pension scheme – provides a greater degree of intergenerational equity

Table 2.7. **Theoretical gross pension replacement rates[1] by level of earnings**

Per cent

		Median earner	Individual earnings, multiple of mean				
			0.5	0.75	1	1.5	2
Spain		**81.2**	**81.2**	**81.2**	**81.2**	**81.2**	**66.7**
Australia		45.7	67.0	50.0	41.6	33.1	28.9
Austria		80.1	80.1	80.1	80.1	76.4	57.3
Belgium		42.4	58.1	43.1	42.0	32.5	24.3
Canada		50.2	76.5	55.2	44.5	29.7	22.2
Czech Republic		54.9	79.2	59.6	49.7	36.4	29.0
Denmark		88.0	124.0	94.9	80.3	67.5	63.7
Finland		56.2	66.5	56.2	56.2	56.2	56.2
France		53.3	61.7	53.3	53.3	48.5	46.0
Germany		43.0	43.0	43.0	43.0	42.6	32.0
Greece		95.7	95.7	95.7	95.7	95.7	95.7
Hungary		76.9	76.9	76.9	76.9	76.9	76.9
Iceland		91.7	108.3	93.0	90.2	87.5	86.1
Ireland		39.8	68.4	45.6	34.2	22.8	17.1
Italy	Men	67.9	67.9	67.9	67.9	67.9	67.9
	Women	52.8	52.8	52.8	52.8	52.8	52.8
Japan		35.7	47.1	38.3	33.9	29.4	26.6
Korea		45.1	64.1	49.4	42.1	33.6	25.2
Luxembourg		90.1	99.4	91.9	88.1	84.3	82.5
Mexico	Men	36.9	55.3	37.6	36.1	34.5	33.7
	Women	32.5	55.3	36.8	29.9	28.6	28.0
Netherlands		88.9	93.4	90.0	88.3	86.6	85.8
New Zealand		45.6	77.5	51.6	38.7	25.8	19.4
Norway		59.6	66.2	61.0	59.3	49.8	42.2
Poland	Men	61.2	61.2	61.2	61.2	61.2	61.2
	Women	44.5	49.0	44.5	44.5	44.5	44.5
Portugal		54.1	63.0	54.3	53.9	53.1	52.4
Slovak Republic		56.4	56.4	56.4	56.4	56.4	56.4
Sweden		61.5	76.6	64.6	61.5	75.6	81.3
Switzerland	Men	62.0	62.5	62.1	58.3	40.5	30.4
	Women	62.6	62.8	62.6	59.0	41.0	30.7
Turkey		86.9	86.9	86.9	86.9	86.9	86.9
United Kingdom		33.5	51.0	36.6	30.8	21.3	16.0
United States		40.8	50.3	42.6	38.7	34.1	28.8
OECD		60.8	72.2	62.7	59.0	54.3	50.0

1. The replacement rate is calculated for hypothetical workers. It is equal to the ratio of the initial gross pension, which for Spain is a price-indexed annuity, divided by gross, lifetime-average earnings. Earnings before the last year of employment are re-valued in line with economy-wide earnings growth. Given the assumptions used in the calculation, this is equivalent to the initial pension as a share of final earnings. Under these assumptions, workers earn the same percentage of economy-wide average earnings throughout their career. In this case, lifetime average revalued earnings and individual final earnings are identical. For countries where the pension adjustment during retirement follows a different type of indexation (for example to wage growth), the initial pension used in this calculation is adjusted accordingly.

Source: OECD (2009), *Pensions at a Glance 2009: Retirement-Income Systems in OECD Countries*.

than price indexation, but also reduces the capacity to rely on future productivity gains to offset the falling support ratio (*i.e.* workers/retirees) as the population ages.

Tightening eligibility for survivors' pensions

Survivors' pensions account for over 25% of total pensions. In effect, survivors pensions are payable not only to a surviving spouse and dependent children, but also to other family members (parents, grandparents, siblings) dependent on the deceased, so long as the total amount of the pension does not exceed 100% of the insured person's pension base. On prospects of increasing possession of own-retirement pensions among women, as female labour force participation has grown in recent decades, widow's pension spending can be expected to decline. Widow's pension outlays amount to 20% of total public pensions at present. The government is considering introducing measures to tighten eligibility requirements for widows' benefits. Such options include a reduction in eligible recipients as well as tightening requirements for combining survivor benefits with other pensions for example by means testing. Other factors, such as the contribution career of the decedent, the age of the beneficiary and the presence of dependent children could also be taken into account. A more fundamental reform in line with actuarial principles underlying private pensions would be to phase in optional two-life annuities for married couples. Under a two-life option, the retirement pension would be reduced (or the pension contribution raised) in exchange for an entitlement to a survivor benefit following the death of the insured.

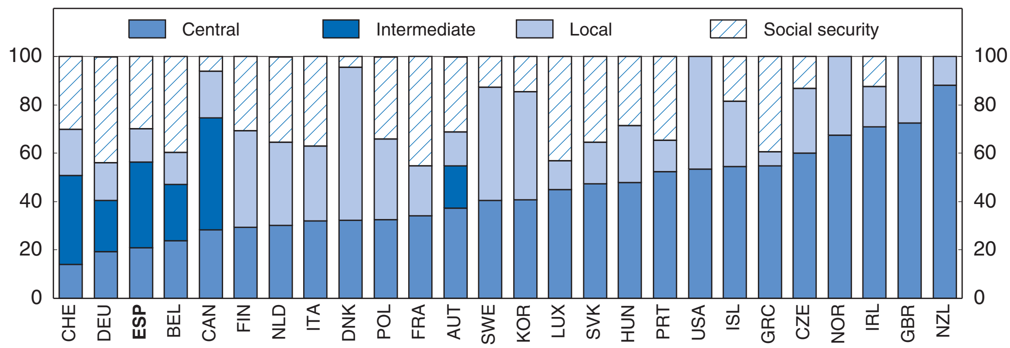
A new internal stability pact is needed

Regional governments have incurred little debt so far but have conducted a procyclical fiscal policy

The spending share of subnational governments is among the highest in the OECD (Figure 2.11). While local governments play a relatively minor role, regional governments account for more spending than the central government. Devolution of spending responsibilities to regional governments was completed only in 2002 and was coupled with the assignment of larger tax revenue shares.[17] Subsequent years have been years of very strong tax revenue growth. Hence, thus far, the contribution of regional governments to the national debt is small, reaching only 8% of GDP in 2009.

Figure 2.11. **Expenditure by level of government**

Per cent of total general government expenditure, 2009[1]



1. Excluding transfers paid to other levels of government. 2008 data for Korea and New Zealand. In countries where data on regional government spending is not available it is included in local government.

Source: OECD (2010), *OECD National Accounts Statistics* (database), November.

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Regional governments devote most of their spending to education and health care (Table 2.8). Conversely, they are responsible for most overall government spending in these two policy areas for which they also have important regulatory competencies, although the national government level sets framework conditions. Devolution of spending responsibilities does not appear to have led to spendthrift behaviour: in international

Table 2.8. **Regional government expenditure**

Consolidated expenditure by economic function

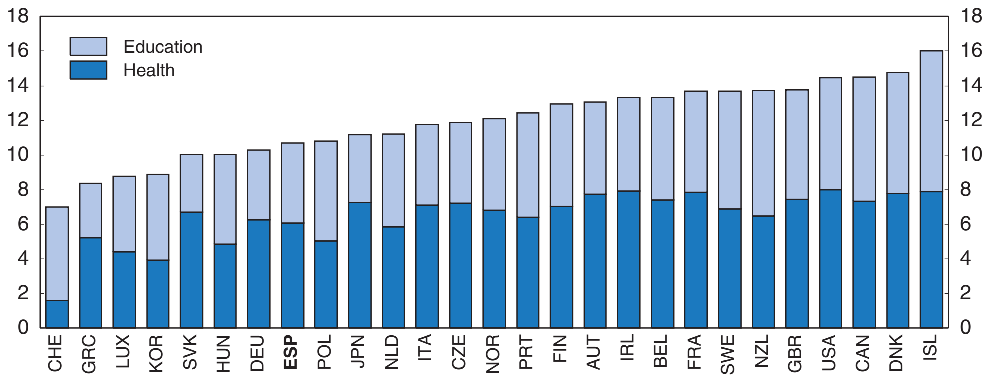
	2000		2007	
	Million euros	%	Million euros	%
General public services	4 552	7	7 276	5
Defence	0	0	0	0
Public order and safety	1 839	3	3 972	3
Economic affairs	10 322	15	20 792	14
Environment protection	1 291	2	2 280	2
Housing and community amenities	1 741	2	2 297	2
Health	19 256	28	54 832	37
Recreation, culture and religion	2 673	4	5 297	4
Education	24 486	35	41 779	28
Social protection	3 607	5	8 452	6
Total	**69 767**	**100**	**146 977**	**100**

Source: IGAE (2008), *Actuación Económica y Financiera de las Administraciones Públicas 2007*, Intervención General de la Administración del Estado.

comparison, health and education spending as a share of GDP are modest (Figure 2.12).[18] The regional governments also have some social spending responsibilities, such as social assistance, but this has so far played a minor role, in part because of low generosity of such entitlements, although this may change in view of the rise in long-term unemployment, especially among unskilled workers.

Figure 2.12. **Public expenditure on health and education**

General government expenditure in per cent of GDP, 2008[1]



1. Or latest year of data available: 2005 for New Zealand; 2006 for Canada; 2007 for Iceland, Japan and Switzerland.

Source: OECD (2010), *OECD National Accounts Statistics* (database), November.

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A large share of regional government spending is determined by expenditure that is not affected by in-built automatic stabilisers. Spending is largely determined by long-term spending programmes, which are difficult to cut within a short period of time. By contrast their revenues are subject to cyclical variations which are generally as marked as for general government revenues as a whole. Regional governments receive 50% of personal income tax and VAT revenues. While they do not receive corporate tax revenues, they do receive 58% of excise duties and all revenues from own taxes (such as inheritance taxes, transaction taxes, including on housing, vehicle registration and fuel taxes).

A sustainable budgetary stance hence requires that regional governments avoid spending temporary windfall gains on spending programmes which are difficult to reverse. Observed outcomes have been at odds with these requirements (Table 2.9). While the central government and social security experienced substantial budget surpluses in the boom years, regional governments ran small deficits prior to 2007.[19] Deficits deteriorated much less at the regional than at the central government level in 2009, mostly on account of more favourable revenues. While the discretionary stimulus measures, which were fully funded by the central government, explain part of this discrepancy, two other temporary effects played an important role. *First,* regional government received additional transfers from the central government as a result of a new arrangement for the funding of the regions (see Box 2.5 below). *Second,* tax revenue shares due to regional governments are determined according to advance estimates, carried out in 2008, which were higher than final tax revenues. As a result of this gap, regions will have to reimburse this difference from 2012 onwards.

Table 2.9. **Budget outcomes by level of government**

Per cent of GDP

	2000	2003	2005	2007	2009
Budget balance	**–1.0**	**–0.2**	**1.0**	**1.9**	**–11.1**
Central government	–1.0	–0.5	0.2	1.1	–9.4
Regional government	–0.5	–0.5	–0.3	–0.2	–2.0
Local government	0.1	–0.2	–0.1	–0.3	–0.6
Social security funds	0.5	1.0	1.1	1.3	0.8
Expenditure	**39.1**	**38.4**	**38.4**	**39.2**	**45.8**
Central government	20.3	15.2	14.7	15.1	19.9
Regional government	11.8	13.8	14.5	14.9	17.3
Local government	6.0	6.1	6.0	6.6	7.2
Social security funds	16.1	11.5	11.5	11.5	14.2
Revenue	**38.1**	**38.2**	**39.4**	**41.1**	**34.7**
Central government	19.3	14.7	14.9	16.2	10.6
Regional government	11.3	13.3	14.2	14.6	15.3
Local government	6.1	5.8	6.0	6.3	6.6
Social security funds	16.6	12.5	12.6	12.8	15.0

Source: OECD (2010), *OECD National Accounts Statistics* (database), November.

To some extent the different cyclical behaviour of budget deficits at the central and regional government level can be explained by the fact that regional governments are not guided by macroeconomic stabilisation objectives which played a significant role for the central government. The large weight of regional governments makes it difficult for the central government to offset any procyclical spending policies during upturns, reinforcing the need for budget rules that prevent regional governments from spending revenue windfalls during periods of strong economic expansion.

Regional funding rules are too weak in periods of expansion

Regional governments' finances are subject to controls by the central government when they exceed budget balance limits set in the Budgetary Stability Law (Box 2.4). As from 2010, regional fiscal frameworks have been reinforced by making the government authorisation for additional regions' indebtedness conditional to the achievement of

Box 2.4. **Domestic budgetary stability rules**

Regions must comply with the budget stability principles set up by the Budget Stability Law (2007). The law establishes that if GDP growth nationwide is above 3%, all administrations[1] should run a budget surplus, if growth is between 2 and 3%, all administrations should have budget stability; and if growth is below 2%, a deficit is allowed, limited to 0.2% of GDP for the central government, 0.25% for the regional governments and 0.05% for local governments (OECD, 2007).[2] In addition, allowances for investment and research and development spending, up to 0.5% of GDP, can be deducted, with half of the ceiling applying to regional governments, although such allowances must be approved by the central government. The budget balance requirements are defined in aggregate. Targets for specific regions are agreed through multilateral agreements.

If jurisdictions exceed the deficit limits they must present an adjustment plan to return to budget stability in the medium term (*Plan de reequilibrio económico-financiero*) which needs to be approved by the fiscal and financial policy council (CPFF, *Consejo de Política Fiscal y Financiera*), which comprises representatives from the central and regional governments. Since regional governments have exceeded their deficit limits or are expected to do so, they have had to present adjustment plans. The CPFF has set a deficit path for regional governments, to be reached through such adjustment plans. The corresponding adjustment plans were approved, although in some cases regional governments have been asked to present more ambitious plans with respect to those initially presented. The CPFF[3] meeting of June 2010 established an objective of a 2.4% deficit for 2010 and 1.3% for 2011 for the regional budgets. The CPFF is controlled by the central government: it holds 50% of the votes and only needs the representative of one of the regions to vote in favour or abstain in order to carry a vote.

All debt issuance by regional governments whose budget outcomes do not meet the requirements of the Budget Stability Law must be approved by the central government. This approval will be conditional on the achievement of the targets established in the adjustment plans; if the targets are not reached the central government will recommend additional consolidation measures. Moreover, under all circumstances regional governments can only issue debt of maturity exceeding one year in order to finance investment spending and the servicing of this debt must not exceed 25% of current revenues. All long-term debt issuance must be approved by the central government.

1. In the case of the local administration, this principle only applies to big municipalities, for the others the target is balance or surplus.
2. OECD (2007), *OECD Economic Surveys: Spain*.
3. Some objectives were agreed in the Agreement of the Council of Ministers of 19 June 2009.

approved deficit targets (see Box 2.3). Monitoring is held back to some extent by the late elaboration of regional government accounts following the national accounts definitions. Budget balance requirements vary according to the rate of GDP growth. However, the rules on budget balance give little room for cyclical effects on revenues. For example, when real GDP growth exceeds 3%, regional governments are only required to have a minimal surplus. Moreover, some investment and research and development spending can be deducted, subject to central government approval, which may allow regional governments to run small deficits even when economic growth is very strong. The thresholds are set as a function of growth rates of GDP, whereas revenues are linked to the *level* of economic activity and hence, over the cycle, to the output gap. This characteristic of the budgetary rules also encourages excessive spending during long economic upturns: regional

Box 2.5. **Funding arrangements for the regional governments**

A new funding arrangement for regional governments came into force in December 2009, replacing a previous arrangement from 2002 (de la Fuente, 2009a and 2009b). As the previous arrangement, reflecting constitutional provisions, it includes all except two regions (the Basque country and Navarre are excluded). The new system increases resources made available by the central government by 11 billion euros (1% of GDP) and it corrects a main shortcoming of the previous arrangement which did not take demographic changes sufficiently into account.

The arrangement raises the share of revenues accruing to the regional governments according to tax revenues accrued locally from 70 to 90%. They now receive 50% of personal income tax revenues, 50% of value added tax revenues and 58% of indirect taxes on specific goods, such as fuels and tobacco. The new arrangement strengthens regional tax-setting autonomy, especially with respect to the personal income tax: regional legislatures can set regional tax rates, provided a progressive tax structure is maintained. In addition, the regions' regulatory powers regarding own taxes have been increased.

The new financing system created several funds to cover different aims:

- **Guarantee fund** (*Fondo de Garantía de Servicios Públicos Fundamentales*). This fund ensures equal per (adjusted) capita financing in each region to provide health, education and social services but does not earmark funds. It will be shared among regions according to their "adjusted population", which is updated every year, with the young children and elderly citizens attracting more funding. Together with additional resources from the central government, regional governments contribute with 75% of their normative tax revenues.*
- **Sufficiency fund** *(Fondo de Suficiencia Global)*. This fund provides resources for the remaining spending responsibilities.
- **Convergence funds** *(Fondos de Convergencia Autonómica)*. These funds aim to reduce remaining disparities in revenues per capita adjusted with population weights (*Fondo de Competitividad*) and channel revenues to the poorest regions and the regions with particularly low population growth (*Fondo de Cooperación*).

* Normative tax revenues are defined as those tax revenues that would accrue to regions if they exercised no tax setting powers.

governments are not required to keep increasing their budget surpluses as positive output gaps keep rising. A further shortcoming of the current rules is that governments are not required to offset the impact of overshooting deficit targets on the level of debt. In addition, the current growth threshold of 3% above which regional governments are required to run surpluses in their budgets now appears high (well above estimated rate of potential growth estimated by the OECD), in view of the slowdown in potential growth (Chapter 1).

These arrangements may induce regional governments to spend revenue windfalls in economic upturns, delaying budgetary adjustments to recession periods. They generate a risk that any spending control occurs primarily in periods of weak growth or during recessions, and that spending cuts affect the most those programmes where spending cuts can be implemented quickly, such as in public investment, but where spending cuts might not be the most desirable. They may also foster overreliance on tax increases. Regional governments have significant tax-setting powers, especially in personal income taxation (Box 2.4), and some have raised top personal income tax rates or are considering doing so in 2010. Alternatively, regional governments may perhaps raise demands for increased central government transfers.

The budgetary rules across levels of government could be reviewed to ensure that regional governments' spending decisions are aligned with long-term revenue developments. The budgetary rules across levels of government should require larger surpluses in periods in which economic activity is above potential. It may be preferable to set rules concerning budget balances as a function of the nationwide output gap, rather than the growth rate of output. Another reform option is to adjust the transfers the regional governments receive from the fiscal equalisation system (as described in Box 2.5) with a cyclical factor. In particular, the revenues the regional governments receive could be adjusted as a function of the output gap, resulting in lower transfers received when activity is above potential. The transfers regions pay into the fiscal equalisation system could continue to be based on the development of actual tax bases. This would result in the redistribution funds accumulating positive balances in periods in which activity is above potential. These balances would be drawn down at times of low or negative growth.

Several OECD countries (for example, recently the United Kingdom) have introduced independent Fiscal Councils to provide an assessment about the extent to which governments meet budgetary rules. Such councils can provide independent revenue and expenditure forecasts, which administrations could be obliged to accept as the basis for budgeting. There is evidence that such normative judgments on fiscal policy decisions provided by such councils can be effective in improving fiscal outcomes (Debrun *et al.*, 2009). In Spain, however, there is scope for improvement in the design of budgetary rules and the timely availability of budgetary data at the regional government level, suggesting that these issues are more important. Moreover, over the past decade, central government budgetary projections have not generally been over-optimistic.

A new funding arrangement addresses some weaknesses

A new regional funding arrangement for the regional governments (Box 2.5) makes several improvements over the previous arrangement. The new funding rules make the distribution of resources more responsive to ongoing demographic changes, which is important in view of the fact that regional governments fund social services for which the demand is highly dependent on demographic developments. The previous arrangement had been intended to be permanent but only lasted for seven years because it failed to reflect the unequal distribution of demographic pressures resulting from immigration on the different regional governments. The new funding arrangement also widens their taxing powers with respect to personal income tax considerably and strengthens the extent to which revenues depend on taxes accrued locally.

Since the redistribution of tax revenue across regional governments is strong, incentives for regional governments to foster economic growth, for instance, with education policy are weakened. Geographic externalities resulting from mobility of workers after completion of full-time education may also weaken regional governments' pursuit of effective education policies, especially with respect to non-compulsory education. Moreover, the cost of the higher probability of unemployment which results from early school departure is largely born by the central government, rather than by regional governments, through unemployment insurance benefits. These arguments strengthen the case for benchmarking regional education outcomes. Transfers to poor regions could to some extent be linked to outcomes, notably in education, to offset geographic externalities in the provision of such services. For example, regional governments could be rewarded for raising graduation rates from upper secondary vocational education, which is poorly developed in Spain (see the 2008 *Economic Survey of Spain*).

Box 2.6. Recommendations on restoring fiscal sustainability

Short/medium-term consolidation strategy

- Ensure that the consolidation measures are strictly implemented. If risks emerge that fiscal targets may not be reached, further fiscal tightening measures may need to be contemplated.
- Raise the least distortive taxes if needed. Specifically, consider reducing the use of preferential value added tax rates.
- Eliminate or further reduce remaining tax subsidies for households' housing as well as for investment in rental properties.
- Review tax subsidies for energy efficiency. Use the tax system to internalise externalities instead. For instance, consider raising taxes on the use of fossil fuels further. A congestion toll on highways would generate revenues as well as environmental benefits and reduce congestion.

Making the tax system more growth friendly

- Consider shifting some of the burden of labour taxes to consumption taxes.
- Consider reducing taxation of corporations. Phase out preferential rates for small businesses.
- Increase the share of revenue obtained from taxing real estate property and lower taxes on housing transactions.

Reducing ageing costs

- Implement the increase in the legal retirement age from 65 to 67 years, as proposed.
- In order to maintain a balance between duration of working life and time spent in retirement, begin to index the statutory retirement age (or other parameters of the pension system) to changes in life expectancy, following full phase-in of retirement age to 67 in 2025.
- Base pension entitlements on a participant's lifetime earnings rather than the final 15 years.
- In combination with a lengthening of the earnings history used in calculating the pension base, reduce the average annual accrual rate sufficiently to lengthen the duration of the contribution record needed to obtain a full pension.
- To improve incentives for older workers to remain active, reduce the duration and gradually phase out supplementary unemployment benefits paid to older workers until they reach retirement. Consider increasing the "bonus" for postponing retirement beyond the statutory retirement age. Abolish subsidies for partial retirement.
- Continue tightening eligibility for survivors' pensions through closer scrutiny of employability of beneficiaries under a certain age, phase out benefits to non-immediate family beneficiaries, and integrate survivor benefits more closely with own old-age pension benefits.
- As planned since the 1997 reform, phase out special schemes and integrate them into the general public pension system. Introduce discounts for pensions of all civil servants retiring before the legal retirement age.

Improving budgetary rules across levels of government

- The budgetary rules across levels of government should require substantial surpluses in periods in which economic activity is above the national potential.

Box 2.6. **Recommendations on restoring fiscal sustainability** *(cont.)*

- Budget outcomes of regional governments should be published in a timely manner.
- Rules concerning budget balances for the regional governments could be set as a function of the national output gap, rather than growth rates of output. Another reform option is to adjust the transfers the regional governments receive from the fiscal equalisation system according to the estimated output gap.
- Consideration should be given to make stronger use of benchmarking of regional government services with respect to quality and cost of services they provide. Transfers to poor regions could be linked to outcomes in education, to offset geographic externalities in the provision of education services funded by regional governments. For example, transfers to regional governments could be linked to graduation rates from upper secondary vocational education.

Notes

1. Robert Hagemann and Robert Gillingham contributed analysis and drafting to this chapter.
2. These patterns can also be observed if 2007 revenue data are used, although they are less marked.
3. Tax credits are available for 15% of amortisation and interest payments on mortgage debt, subject to an annual maximum. See OECD (2007) for a detailed description of these subsidies.
4. For incomes exceeding 18 000 euros, the deduction is gradually phased out.
5. In principle, taxation of implicit rents of owner occupiers could be seen as the preferred solution to avoid preferential tax treatment, as it is the tax exemption for implicit rent that is the true tax preference (owners with no or limited recourse to mortgage for house purchase still receive preferred tax treatment in the absence of taxation of implicit rents and no interest deductibility). However, the deductibility of mortgage repayment – as incorporated in the owner-occupied tax credit in Spain – is an extreme subsidy that not only reduces revenue, but also seriously distorts behaviour.
6. Unlike the existing hiring subsidies, which are already in place (see Chapter 3), these social security reductions would also not be limited to newly hired workers and would not be limited to an initial period following the hiring of a worker. As pointed out in Chapter 3, hiring subsidies generate incentives for firms to hire workers benefitting from the hiring subsidies and to dismiss them once the subsidy expires, adding to excessive worker turnover, which could by itself raise unemployment.
7. A comparison of average effective tax rates yields similar results.
8. Other European countries which have since lowered corporate tax rates include Denmark, Germany, Italy and Netherlands.
9. A similar proposal was recently put forward by the Fundación de Estudios de Economía Aplicada (FEDEA, *www.crisis09.es/pensiones*).
10. As of May 2010, only 7.2% of old-age pensioners were under the age of 65. This would imply that the average effective age of first pension benefit receipt has risen, since 27.5% of old-age pensioners were between 65 and 69.
11. At the same time as the minimum age for receiving a full pension is increased, the government will need to proscribe the use of provisions for mandatory retirement at age 65 made in collective bargaining agreements.
12. With an unchanged retirement age, increased longevity increases the net wealth of retirees, and the internal rate of return on contributions. It is, therefore, an implicit benefit *increase*. Increasing and then maintaining the ratio of working life to time spent in retirement limits this intergenerational redistribution.
13. The average benefit accrual factor of 2.9% is the maximum replacement ratio divided by the contribution period for a full pension (OECD, 2001).

14. Spain's ranking is somewhat lower when account is taken of taxes paid on pensions; net replacement rates are the 9th highest, while net pension wealth is the 7th highest.
15. The pension calculation for civil servants is based on the whole working life instead of the last 15 years in the social security system.
16. One study estimates that lengthening the earnings history from 15 to 35 years could save 2 percentage points of GDP off the increase in aggregate pension spending by 2050 (Alonso-Meseguer and Herce, 2003).
17. Among the largest regions, Andalusia and Catalonia obtained these spending responsibilities earlier.
18. In education this result is to some extent explained by demographics, as the share of youth in full-time education in the total population is relatively small.
19. The regional governments were also net borrowers in 2007. Most regions had balances close to zero.

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ANNEX 2.A1

The public pension system and recent reforms

The public pension system in Spain comprises both contributory and non-contributory components. The latter consists of a minimum pension financed from general revenues and paid to persons not eligible for a contribution-based pension. The contributory scheme provides old-age, disability and survivors' pensions based on a participant's earnings and the number of years of contributions. The contributory scheme is financed mostly from social insurance contributions paid by workers and employers, plus a subsidy from general revenues to cover supplementary payments to bring the lowest earned pension up to the minimum pension.

There is a minimum required contribution period of 15 years after which the pension benefit is equal to 50% of the earnings base. Pension benefits then accrue at the rate of 3% per year for the subsequent ten years, followed by 2% per year for the final ten years, yielding a maximum statutory accrual of 100% after 35 years. The earnings base is the average of the final 15 years prior to retirement, indexed by changes in consumer prices during all but the final two years. Moreover, the earned pension is capped by an indexed maximum, and is supplemented if it falls below the indexed minimum (the minimum tends to be raised by more than would be required by price indexation). The supplements are increasingly being financed from general revenues.

The full pension is payable at age 65. An early pension is available to an involuntarily unemployed worker from age 61 with at least 30 years of contributions (the unemployed has to have contributed at least two years in the last 15 years before retirement). The Law also requires that the unemployed be registered as a jobseeker at the public employment services for a period of at least six months immediately preceding the date of application of retirement (this requisite can be avoided if the company paid to the worker a certain compensation during the two years preceding the date of the application for retirement). As a result, the pension is reduced by 6-7.5% per year of age below 65, with the reduction depending upon the number of contributory years. A voluntary early pension is available at age 60 if the worker entered the system before 1967 (or 1970 in some cases), with a penalty of 8% per year; if retirement is involuntary, the penalty rates are the same as for persons whose contributions began after 1967. A 2-3% per year additional accrual is provided to compensate for retirement after age 65, together with a waiver of both employer and employee social insurance contributions, which is gradually introduced from age 60 onwards. Early retirement at age 64 is allowed if the position of the retiring worker is filled by an unemployed person (few workers entering retirement in recent years have used this option). Partial pensions can be combined with part-time work, subject to certain conditions: hours worked must be sufficiently reduced and the partial retirement must be offset with the hiring of a younger person. The minimum age is 61 years with a contribution of 30 years. The reduced hours will be between a minimum of 25% and a maximum of 75%.

Disability pensions are payable at replacement rates that vary with the degree of disability, the cause of disability, age, and duration of the contributory period. Early retirement is also available for disabled workers. Survivors' pensions are payable to a widow(er) and/or dependent children at replacement rates that depend on whether or not the deceased was a pensioner or still working. All survivors' and orphans' benefits must not exceed 100% of the deceased person's earnings base.

Finally, there are five special schemes within the social security system, one for each of: farmers/farm workers, self-employed, seamen, miners and domestic employees. Each has its own contribution scheme and benefit determination. Civil servants from the central administration, the military and the judiciary are covered under special regimes outside the social security system.

Ongoing reforms were introduced in 2007. The principal measures included:

- *Prolonging working life*. Restrictions on access to bonus accrual for remaining employed beyond age 65 were eased.
- *Partial pensions*. Partial retirement pensions were rationalised and qualifying conditions tightened.
- *Lengthening of contribution period*. The effective period of contributions was raised by terminating the granting of extra days in exchange for extra contribution payments.
- *Disability pensions*. Incentives for early exit via disability were reduced.
- Widow(er) *pensions*. Eligibility criteria for married couples were tightened under certain conditions but eligibility was extended to other types of union.

In January 2010, and in line with the *Pacto de Toledo*, the government proposed to gradually raise the retirement age from 65 to 67, and to identify parametric and administrative measures to:

- Improve the relationship between contributions and pensions.
- Further tighten eligibility for disability, widow(er) and orphan pensions.
- Restrict access to pensions via unemployment routes.

Chapter 3

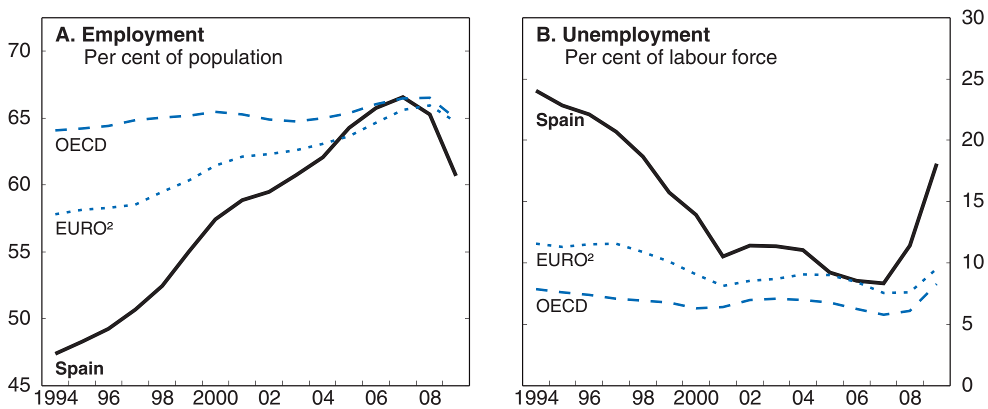
Reforming the labour market

After steady employment growth since the 1990s, Spain has experienced the sharpest increase in unemployment among OECD countries during the crisis. Structural problems of the labour market have amplified the employment losses resulting from the crisis, which were considerably larger than in other OECD economies. Very high de facto *severance payment of permanent contracts has resulted in a rigid dual market with adverse effects on unemployment and productivity. The collective wage bargaining system has hindered firms from adapting to macroeconomic shocks exacerbating their negative effects on the labour market. The recent labour market reform legislation is a positive step to reduce excessive protection of workers in permanent contracts, although some uncertainty remains on how courts will interpret it. It also makes it easier for firms to opt out from higher level collective agreements. The large drop-out rate from lower secondary education is an important factor explaining very high unemployment among young workers. Better access of young people to training is an effective tool to keep them out of a depressed labour market. Finally, the matching of people to jobs, notably through the public employment services, needs to be made more efficient, all the more so as the currently tight fiscal constraints make it imperative to get better value for public spending on active labour market policies. Although the recent reform allows private for-profit firms to provide placement services, more needs to be done. Performance of regional public employment services should be benchmarked and incentives of unemployment benefit recipients to search for a job increased.*

The Spanish labour market in the crisis

Since the 1990s and until 2007, Spain had experienced a prolonged period of impressive employment growth (Figure 3.1) which successfully absorbed a large and continuous inflow of immigrants (OECD, 2008a). As a result, the unemployment rate had been cut from 25% in the early 1990s to 8% (the EU-average) in 2007, its lowest level since 1980.

Figure 3.1. **Employment trends**[1]



1. Age 15-64 for euro area and OECD, age 16-64 for Spain. Data for 2009 is estimated.
2. Euro area 12 member countries prior to enlargement in 2007.

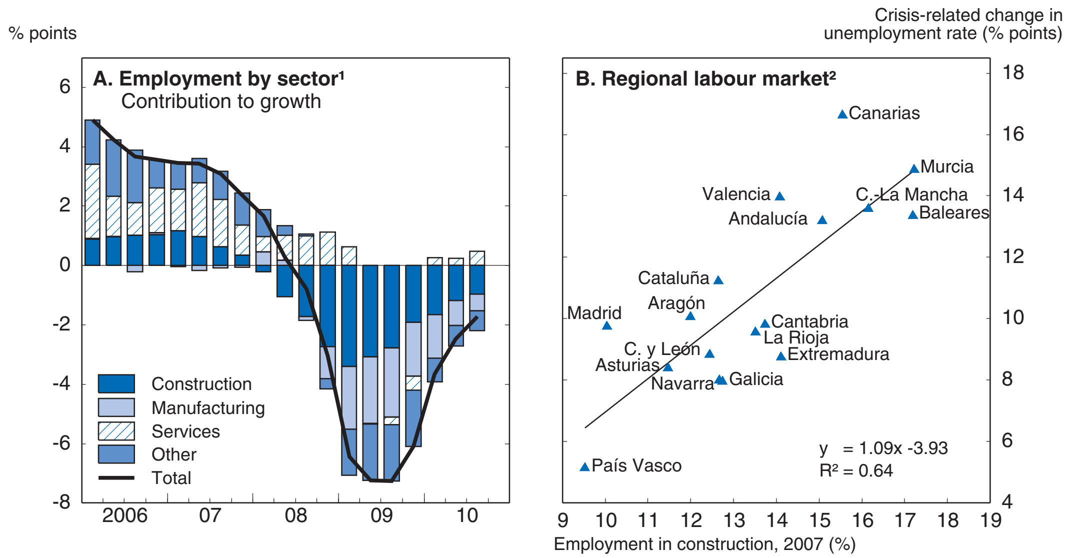
Source: OECD (2010), *Labour Force Statistics* (database), November.

StatLink http://dx.doi.org/10.1787/888932363615

During the crisis however, Spain experienced the sharpest increase in unemployment among OECD countries, amounting to more than 10 percentage points between the fourth quarter of 2007 and the second quarter of 2010. The effect of the crisis on employment is spread across sectors, with construction and some manufacturing sectors being hit most (Figure 3.2, Panel A). The significant loss of employment in the construction sector (both residential and non-residential) and in financial and real estate services reflects, among other things, the sharp loss of jobs that had been created during the housing boom.

There were also very large differences in the effects of the crisis on employment across regions (Figure 3.2, Panel B). This can to a large extent be explained by the specialisation of regions on construction or other housing related sectors, as suggested by a high correlation between differences in employment losses across regions and employment losses in the construction sector. There are reasons to believe that this result is further aggravated by the lack of geographical mobility of workers, slowing the reallocation of workers from high-unemployment regions to low unemployment regions and therefore hampering labour market adjustment overall. Even before the crisis, internal migration rates in Spain were among the lowest in the OECD area, leading to a mismatch between qualified workers and

Figure 3.2. **Sectoral and regional structure**



1. Contributions to year-on-year percentage growth of total employment. Break in series in first quarter of 2009 due to a change in activity classification.
2. The change in the unemployment rate covers the period 2007Q4 to 2010Q1. Regional employment specialisation is measured by the share of the construction sector in total employment in 2007Q4.

Source: INE (2010), *INEbase* (database), Instituto Nacional de Estadística, November.

StatLink http://dx.doi.org/10.1787/888932363634

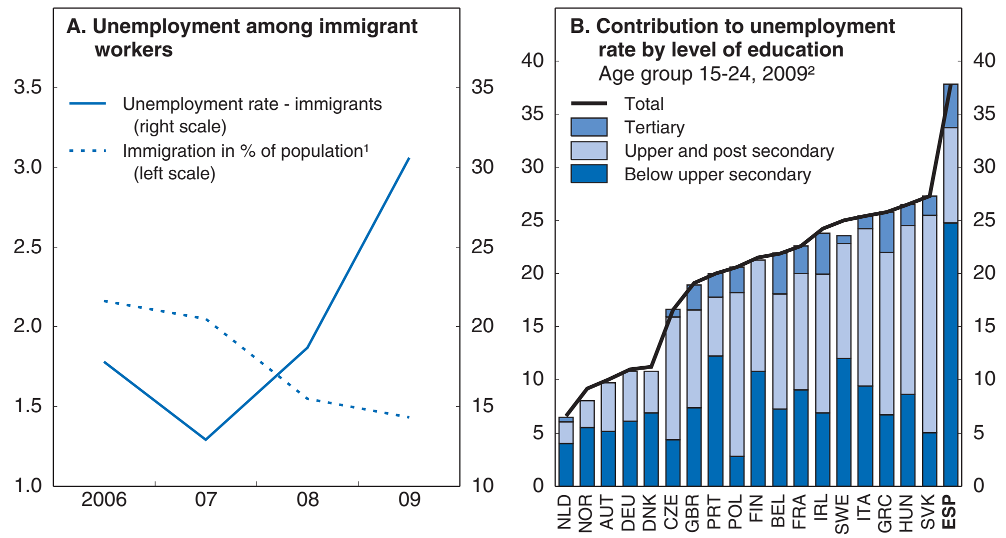
jobs (OECD, 2008a). This mismatch was reflected in much larger disparities in employment and unemployment rates across regions in Spain compared to most other OECD countries (OECD, 2006).

The sectoral composition of employment losses, with significant losses in the construction sector, also helps to explain the very strong increase in unemployment among workers with an immigrant background (Figure 3.3, Panel A). While immigrants are among those most strongly hit by the crisis in most OECD countries (OECD, 2010), the incidence of immigrant unemployment is higher in Spain as a result of the continuously strong inflow of immigrants since the 1990s. Specific policies to integrate immigrants in the labour market are therefore particularly important in Spain and were reviewed in the 2008 *Economic Survey* (see also Annex 1.A2). Immigration had tempered demand pressures on real wages inducing sustained job creation, in particular in the service and construction sectors that require abundant low-cost labour. The overrepresentation of immigrants in construction, retail trade, hotels and restaurants may, in part, also be related to the extensive use of temporary contracts in those industries.

A very high unemployment rate can be found among young people, in particular those between 15 and 24 years old (Figure 3.3, Panel B) with a very low level of education, and youth unemployment has doubled since the end of 2007. This high level and change in youth unemployment in Spain, as compared to other countries reflects to some degree weak employability of early school drop outs and may also relate to a high incidence of temporary contracts among young workers. Reducing unemployment among young, notably unskilled, workers should be a first priority in order to avoid these people becoming discouraged and withdrawing from the labour force.

Figure 3.3. **Unemployment among youth and immigrant workers**

Per cent



1. Population of working age (15-64).
2. Age group 16-24 for Spain.

Source: INE (2010), "Encuesta de migraciones", *INEbase* (database), Instituto Nacional de Estadística, September and Eurostat (2010), "Population and Social Conditions", *Eurostat Database*, June.

StatLink http://dx.doi.org/10.1787/888932363653

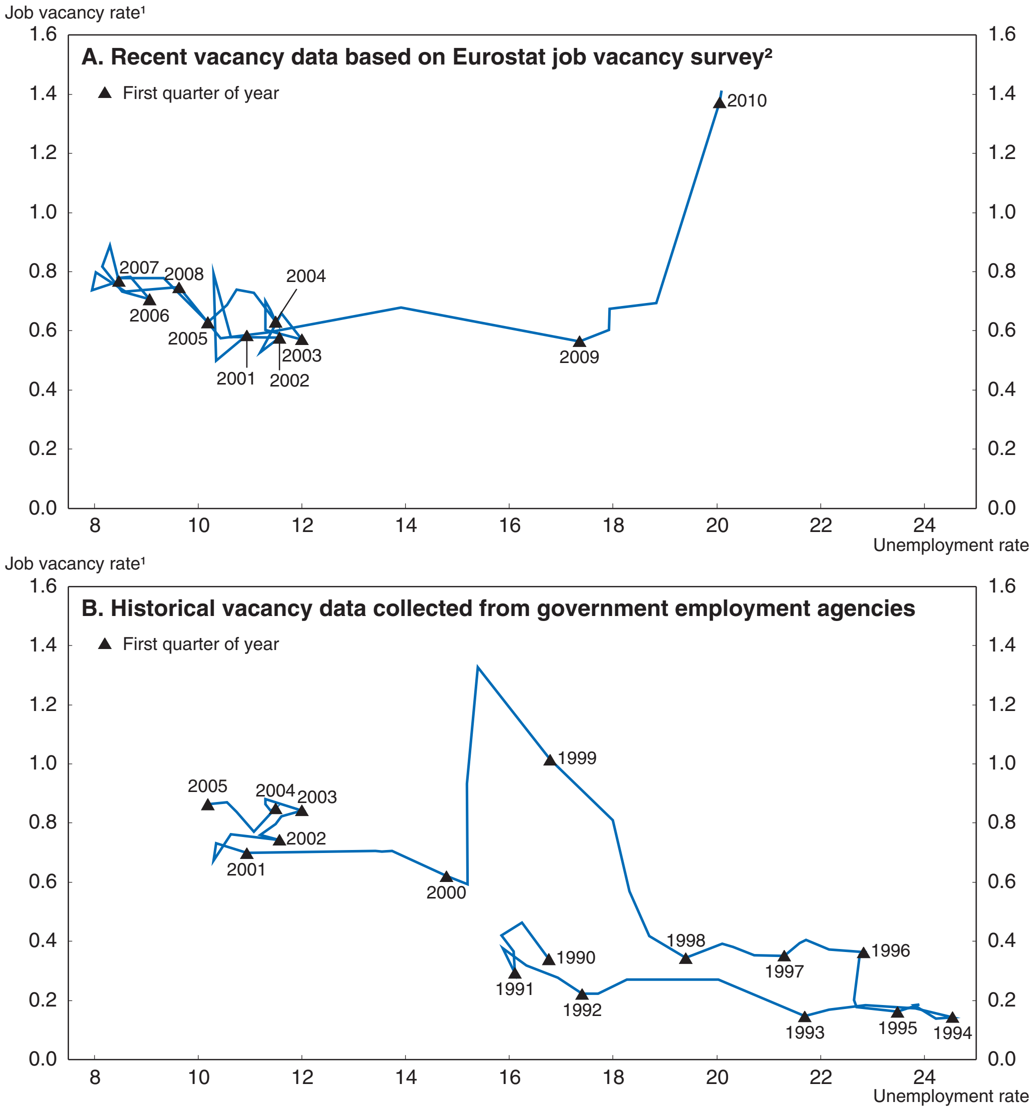
These developments highlight two main structural problems of the Spanish labour market:

- *First*, high structural unemployment does not appear to have decreased much over the past two decades and is likely to have increased during the current crisis. The Beveridge curves (Figure 3.4) did not clearly shift significantly in the past two decades, suggesting that changes in employment since the 1980s have been to a large extent cyclical.[1]
- *Second*, employment (and indirectly unemployment) reacts in a very volatile way to the cycle as is especially observable in the very strong increase in unemployment during the recent crisis (Figure 3.1, see also Bentolila and Jimeno, 2003; and Costain *et al.*, 2010). While in most OECD countries, the reduction in labour input during the recession was accomplished via a combination of employment shedding and reductions in working hours, in Spain employment has played a stronger role in adjusting labour input (OECD, 2010). The strong reaction of employment in Spain as compared to other countries can to some extent be explained by nominal wage inertia and by frequent use of temporary contracts (see below).

It is important that these structural problems are addressed so as to improve the functioning of the labour market. Allowing wages react in a more flexible way would help the labour market to absorb and reallocate workers. Reducing the mismatch between workers and available jobs would facilitate the shift towards a more export-led economic growth. And reducing the volatility of the labour market would make the labour market more resilient to shocks. Moreover, addressing these structural problems quickly would help to limit the risk of unemployment persistence. Long-term unemployment in Spain was brought down to relatively low levels as compared to other European countries prior to the crisis, but has increased substantially recently (Figure 3.5, Panel A). Moreover, a surge

Figure 3.4. **Beveridge curve**

Per cent



1. Defined as the number of job vacancies in per cent of the total number of occupied and vacant posts.
2. In industry, construction and services (excluding activities of households as employers and extra-territorial organisations and bodies).

Source: Eurostat (2010), "Population and Social Conditions", *Eurostat database* and OECD (2010), *Main Economic Indicators* (database), November

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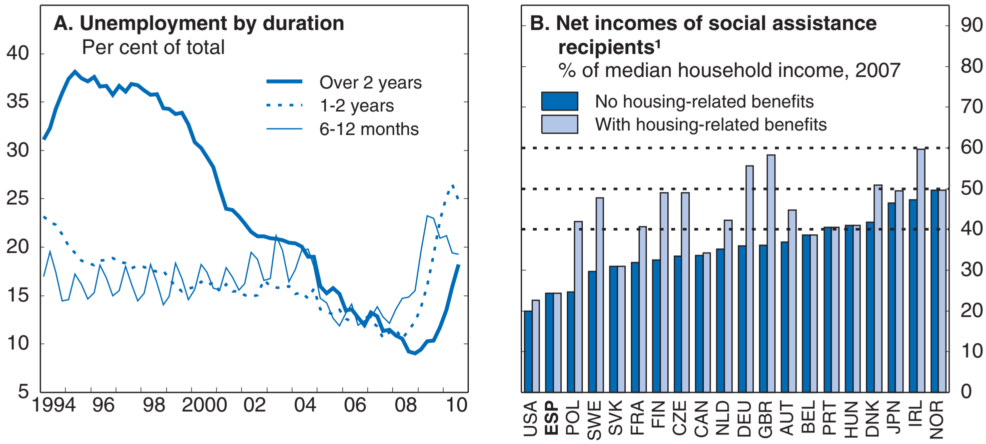
in long-term unemployment risks leading to a rise in poverty as support is low for those unemployed with little unemployment benefit entitlement and the replacement rate for social assistance is significantly below typical poverty thresholds (Figure 3.5, Panel B). It also risks raising the level of structural unemployment.

Since April 2008, the Spanish government has approved a series of measures to stimulate the economic recovery and to alleviate the negative burden of the crisis on the labour market (Box 3.1). These include: *i)* wider unemployment benefit entitlements; *ii)* subsidies (basically temporary social security rebates) for hiring targeted groups of

Figure 3.5. **Long-term unemployment and poverty**



1. For a married couple with two children. The horizontal lines on the graph indicate alternative poverty lines. See the *OECD Employment Outlook* Table 1.6 and Figure 1.20 for full details of calculations and coverage.

Source: MEH (2010), *BDSICE* (database), Ministerio de Economía y Hacienda, November and OECD (2009), *OECD Employment Outlook 2009: Tackling the Jobs Crisis*.

StatLink http://dx.doi.org/10.1787/888932363691

Box 3.1. **Immediate policy action in response to the crisis**

Since April 2008, the Spanish government has approved a series of measures, combined in the larger "Plan E", to stimulate the economic recovery and to alleviate the burden of the crisis on the labour market. Besides new measures, some existing measures were made more generous or applicable to other target groups. The Plan E is centred around four principle axes: *i)* the support of small and medium-sized enterprises through financial incentives; *ii)* employment promotion through hiring benefits and social security rebates for hiring on permanent contracts of unemployed workers with family obligations; *iii)* support of the financial system; and *iv)* further structural reforms in services, transportation, energy and telecommunications, as well as a reform of the pension system.

Within this broader program, more specific measures in order to support existing jobs or the creation of new jobs include the following:

Measures to increase labour demand through lower labour costs

- Employers' social security contribution (SSC) rebates to promote hiring on permanent and full-time contracts of unemployed workers with family obligations; the rebates are paid for a maximum duration of two years and are applied to new permanent contracts offered before 31 December 2010.
- Employers' SSC rebates for hiring unemployed in social exclusion on permanent or fixed contracts during a maximum of three years.
- Employers' SSC rebates to promote new jobs in strategic sectors and activities (such as research and development and renewable energies).
- SSC rebates to promote self-employment among young people below 30 years old for up to five years.

Box 3.1. **Immediate policy action in response to the crisis** *(cont.)*

Measures to support unemployed people

- A means-tested unemployment benefit for those workers who have reached the end of unemployment insurance and assistance entitlements until the end of February 2011.
- Increase of 40% to 60% of accumulated unemployment benefits for unemployed who opt for the capitalisation of their benefits to start up an enterprise.

Measures to support return to work

- Special plan to facilitate self-employment of workers older than 45 years.
- Funding worth 1 106 million euros into the 2009 Job Plan for Social Works for direct job creation and to promote training of unemployed.
- Hiring of 1 500 case managers in Public Employment Services to improve placement of workers in sectors that are most affected by the crisis.
- The payment of 350 euros per month in addition to the unemployment benefit to workers in such sectors during the job search period.

According to the recent labour market reform of September 2010, firms that hire young and unqualified unemployed, or unemployed older than 45 years, on permanent contracts receive hiring subsidies in the form of social security rebates. These hiring subsidies are limited to a period of three years after the worker is hired and apply to those contracts signed before 31 December 2011. Additional wage subsidies are introduced for hiring on training contracts that are signed before 31 December 2011.

unemployed workers on permanent contracts and promoting the creation of jobs in strategic sectors; *iii)* financial incentives to promote self-employment; and *iv)* the extension of the resources of the public employment services.

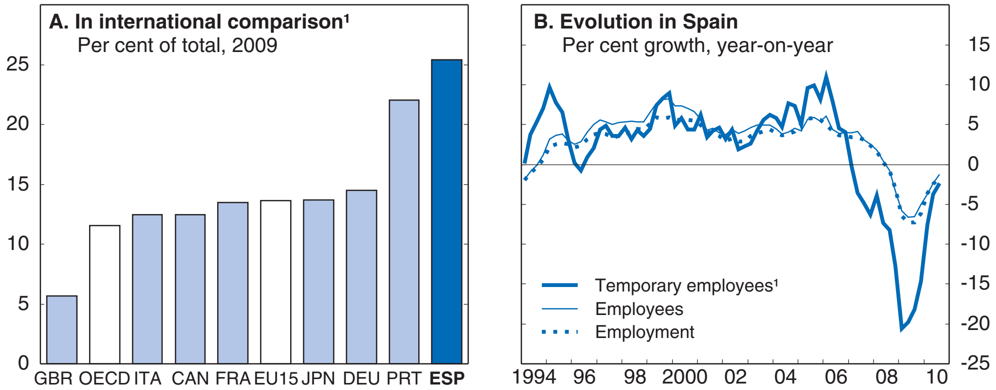
These measures were appropriate to support the job market during the recession. In particular, hiring subsidies that are concentrated on newly created jobs targeted on groups most affected by the crisis have the potential to be more cost-effective than broad reductions in labour costs. Nonetheless, these measures should be removed as soon as the economic situation improves as they may hinder necessary job adjustments and risk being ineffective in reducing unemployment durably. Furthermore, significant subsidies for hiring on permanent contracts, which are paid over a limited period of time after a worker is hired, will remain after expiry of the crisis-related temporary programmes. As such subsidies may increase turnover further and have proven relatively ineffective in the past, they should be abolished or replaced by targeted active labour market policies.

Reducing duality in the labour market

Employment protection of permanent contracts has been very high…

Provisions in the employment protection legislation have led to *de facto* severance payments for workers on permanent contracts that are very high. This resulted in a rigid dual labour market with adverse effects on unemployment and productivity. In Spain in 2009, about 25% of all workers have been hired on temporary contracts, a percentage that is more than double the OECD average (Figure 3.6, Panel A) and positive or negative employment growth is mainly driven by the creation or cuts of jobs on temporary contracts (Figure 3.6, Panel B).

Figure 3.6. **Temporary employment**



1. Temporary employees are wage and salary workers whose job has a pre-determined termination date as opposed to permanent employees whose job is of unlimited duration. National definitions broadly conform to this generic definition, but may vary depending on national circumstances. Country-specific details can be found at *www.oecd.org/els/employment/database*.

Source: OECD (2010), *Labour Force Statistics* (database), November and MEH (2010), *BDSICE* (database), Ministerio de Economía y Hacienda, November.

StatLink http://dx.doi.org/10.1787/888932363710

The setting of employment protection legislation (Box 3.2) and its enforcement has been unfavourable for a flexible labour market for three reasons:[2]

- While *de jure* dismissal costs were relatively low by OECD standards, even before the 2010 labour market reform, a lack of adequate enforcement and slow judicial procedures in the case of conflicts made firms apply the law in a way that rendered *de facto* employment protection much more restrictive. Workers on permanent contracts who were dismissed for "justified" reasons were entitled to a severance pay of 20 days' wages per year of seniority, which is slightly below the OECD average. However, dismissed workers on permanent contracts have the option to appeal to a labour court and, if the dismissal is judged to be "unjustified", firms have to pay 45 days' wages. In the majority of cases, the dismissals have been judged "unjustified". Moreover, the judicial procedures have tended to be long which has added to the firm costs as they have also needed to pay the interim wages for the entire length of the judicial period. As a consequence, firms have preferred to declare the dismissal upfront as being "unjustified" and to pay 45 days' wages per year of seniority to avoid litigation (including paying interim wages).[3]
- A permanent contract with reduced severance pay also exists, the so-called PEP contract (*contrato de fomento de la contratación indefinida*), which entails severance pay of 33 days' wages per year of seniority for unjustified dismissals. However, the use of this contract has been very limited for several reasons, notably because its applicability has been restricted to unemployed workers outside the age bracket of 30 to 45 years and with unemployment spells of more than six months. Firms had limited interest in using the PEPs as it was also subject to the 45 day compensation rule if the firm declared the dismissal as "unjustified" to avoid litigation.
- While the overall duration of temporary contracts has been limited by law to a total of 24 months, the law could be easily interpreted in broad ways. The condition for linking together fixed contracts refers to contracts on the same job. Hence redefining the job has been legally sufficient to circumvent the time limit. And contracts under which workers

Box 3.2. **Two-tier reforms of employment protection legislation (EPL) in Spain since 1984***

According to the 1980 Workers' Statute, the reference point for later labour market reforms, open-ended contracts were the general form of contract; temporary contracts could only be used for seasonal jobs, temporal substitution of permanent workers or temporary increase in activity. Dismissal costs of permanent contracts – still valid until now – depend on the reasons for dismissal. The latter are: *i)* objective (*e.g.* workers' incompetence) and economic reasons; and *ii)* disciplinary reasons. Being dismissed for objective (or economic) reasons implies a mandatory severance payment of 20 days' wages per year of service with a maximum of 12 months' wages. However, workers under permanent contracts can appeal to labour courts. If the dismissal is judged as "unjustified", employers can choose between readmission or termination of the contract with compensation of 45 days per year of service up to 42 months. Furthermore, employers have to pay wages during the judicial period.

Following the second oil price shock, the unemployment rate surged to 20% and the need for more flexibility became evident. The 1984 reform allowed firms to use temporary contracts also for jobs that are not temporary by nature. A new employment-promotion contract was introduced, the *contrato temporal de fomento del empleo* (EP), which entailed a severance payment of 12 days' wages per year of service. The EP contract had a maximum duration of three years, after which it either had to be terminated or transformed into a permanent contract.

As a result of this two-tier reform, the proportion of temporary contracts surged to about 35% in the early 1990s leading to an immense turnover rate. Turnover was reinforced by the easy access to generous unemployment benefits at that time. In order to reduce the share of temporary jobs, a set of countervailing employment protection legislation (EPL) reforms were introduced subsequently which either restrict the use of temporary jobs or reduce mandatory firing costs for open-ended contracts.

In 1994, the EP contract was greatly restricted; it could only be used to hire certain groups of disadvantaged workers, notably workers older than 45 years, handicapped workers, and long-term unemployed who were hired by small firms. Remaining temporary contracts were: *i)* the *contrato de obra y servicio* under which the worker is hired to perform a specific work or service, and *ii)* fixed contracts for jobs of temporary nature. These remaining temporary contracts involved no severance payment. Another element of the 1994 reforms was to extend the reasons for objective dismissal to enable firms to adjust their workforce in the face of future financial liabilities.

In 1997, another partial EPL reform aimed to reduce further the duality of the labour market. A new permanent contract, the *contrato de fomento de la contratación indefinida (*PEP contract), was introduced which entails a lower severance payment of 33 days' wages per year of seniority up to 24 months. However, this PEP contract was introduced only: *i)* until 2001; *ii)* for a targeted group of workers that exclude workers between 30 to 44 years old with unemployment spells below one year; and *iii)* for unemployed people, not for workers on temporary contracts. Furthermore, significant social security rebates have been introduced for firms that hired workers on the new PEP contracts or converted temporary contracts into permanent ones.

In 2001 and 2002, in the middle of an economic slowdown, it was decided to extend the use of the (PEP). The age bracket was extended to cover 16-30 years old (instead of formerly 19-29) and those unemployed with more than six months of registered unemployment also became eligible. At the other end, a severance payment of eight days'

Box 3.2. **Two-tier reforms of employment protection legislation (EPL) in Spain since 1984*** *(cont.)*

wages per year of seniority was established for some of the still available temporary contracts. Finally, the reform opened up the opportunity for firms to avoid judicial procedures if they acknowledged that the dismissal was "unjustified" and deposited upfront the severance payment of the regular permanent contract (45 days' wages).

Since the number of temporary jobs remained large and their conversion rate limited, a 2006 reform opened up the conversion of temporary contracts to PEP contracts to workers between 31 and 45 years old if they were hired before the end of 2007. The law also introduced several rebates in payroll taxes if temporary contracts were converted to PEP contracts of more than three years duration before the end of 2006. At the other end, the law restricted the linking of temporary contracts by requiring that contracts that lasted for two years in the same job with the same firm during a period of 30 months would be automatically converted to permanent contracts.

* This box draws on Bentolila, S., J.J. Dolado and J.F. Jimeno (2008), "Two-Tier Employment Protection Reforms: The Spanish Experience", *CESifo DICE Report*, Vol. 6, No. 4, CESifo Group, Munich.

have been hired to perform a certain task or service could be extended if it could be proven that performing the task needed more than 24 months.

… and this may have had adverse effects on employment, welfare and productivity

Very high *de facto* dismissal cost of permanent contracts makes firms reluctant to convert temporary contracts into permanent ones and hence increases turnover. Even if firms are satisfied with the performance of the worker, it may still be cheaper to fire the worker and search for a new candidate. Empirical evidence suggests that the propensity of employers to terminate employment contracts peaks just prior to employment durations associated with discretionary hikes in accumulated claims for severance pay (OECD, 2001).

Higher turnover is likely to raise unemployment as workers seek new jobs. This may be compounded by limited geographical and occupational mobility of workers, as well as potentially wrong incentives at public employment services and for unemployment benefit recipients. This is confirmed by empirical evidence. For instance, García-Serrano (1998) finds that a rise of 1 percentage point in the proportion of temporary contracts increases the flows from employment to unemployment by 0.26 percentage points.

Increased dualism in the labour market may also increase unemployment through higher pressure on wages. In particular, in the context of a wage bargaining system that protects the interests of permanent workers, insiders' power may keep wages for all workers above market-clearing levels. The empirical evidence confirms these effects in the case of Spain. For instance, Bentolila and Dolado (1994) find that an increase in the rate of temporary employment of 1 percentage point raises the wage growth of workers on permanent contracts by about 0.3%.

Even if unemployed workers find a job, they may have to go through many spells of unemployment and low productivity entry-level jobs, before obtaining a regular job. Scarpetta *et al.* (2010) estimate that the probability of a (young) person finding a permanent contract after having had a temporary contract the year before is slightly higher than 20%, whereas the same probability is around 55% in the United Kingdom. This implies that workers are trapped in situations of low job and income security, hence reduced overall welfare.

Moreover, the dual labour market may hamper human capital accumulation which would slow productivity growth. It is not only firms that have weak incentives to invest in training of workers on temporary contracts. Students with the prospect of starting on and remaining for some time on temporary contracts may have weak incentives to invest in their own education as the return from this investment may be low (OECD, 2008a). In fact, the evidence points to an increasing phenomenon of over-education or over-qualification (see also Bentolila *et al.*, 2008; Dolado *et al.*, 2000; and Felgueroso *et al.*, 2010).

Reducing the duality of the labour market has a positive side-effect on public finances, as it reduces the amount of subsidies, in terms of social security rebates or wage subsidies, which the government has been paying so as to make it more attractive for firms to hire workers on permanent contracts. In Spain in 2007, such subsidies amounted to about 0.32% of GDP, although with limited effect in terms of uptake of regular or PEP permanent contracts (García Pérez, 2010).

The recent reform represents significant progress

The recent reform adopted by Parliament in September 2010 (Box 3.3), should lead to significant progress towards reducing the duality in the labour market. It aims to reduce the upper range of dismissal costs for permanent contracts and to smooth the difference in dismissal costs between temporary and permanent contracts:

- *First*, the law aims to make it easier for firms to have dismissals accepted by the courts as justified. If this reform is effective, it will reduce severance payment of firms substantially, from the current practice of 45 days' wages to 20 days' wages.
- *Second*, it broadens the base for which the permanent contract with reduced severance payment of 33 days' wages can be applied and guarantees that this reduced severance pay also applies now in cases where firms would prefer to declare the dismissal upfront as "unjustified" (to avoid litigation).
- *Third*, the introduction of a capital-funded component, similar to the one introduced in the framework of the Austrian severance pay reform (Box 3.4), further reduces the one-time costs of dismissal.

While the law aims to make it easier for firms to have dismissals accepted as justified, it is not clear that it will change the current practice, whereby employers accept dismissals as unjustified upfront in order to avoid legal costs. The law may leave some uncertainty for businesses as to whether the dismissal would eventually be judged to be "justified", as it still leaves a wide range of interpretation to the courts. Further progress in easing the burden on businesses to prove that dismissals are justified may be needed. Steps to reduce the duration of judicial procedures would also help.

Different permanent contracts, some of which with high dismissal pay for unjustified dismissal, will continue existing side-by-side, even for new hires. Even with the planned extension of the 33 days' contract, there still is a large range of cases in which firms would have to pay 45 days' wages in the case of unjustified dismissal. For example, while young people looking for a first job can register in the Public Employment Service, it appears that school leavers are often not registered as unemployed, so are not eligible for the "33 days contract", unless they are now induced to register so as to qualify for this contract. The reform would be more effective if the 33 days contract were to replace the current regular contract of 45 days' wages.

Box 3.3. **The EPL-related measures of the 2010 labour market reform**

The labour market reform, approved in September 2010, aims to reduce the duality in the Spanish labour market by implementing several measures.

First, the law expands the conditions under which a dismissal for objective reasons could be justified. In this case, the employer pays 20 instead of 45 days' wages of severance pay per year of seniority. The law clarifies the definitions for "technical", "organisational", or "productive" reasons that would justify collective or individual dismissals. More importantly, it broadens the conditions under which a dismissal can be justified under "economic reasons". This can be in cases of current or anticipated losses or persistent decline in a firms' level of income which may affect its viability or its ability to maintain the volume of employment. Moreover, the firm no longer needs to provide an objective proof, but some evidence that the dismissal decision was needed to preserve the firm's current or future competitive position in the market. Furthermore, the notice period of dismissal for objective reasons is reduced from 30 to 15 days. These provisions apply to all existing contracts whereas the following provisions apply only to new contracts.

Second, the law facilitates the use of permanent contracts with reduced severance pay of 33 days' instead of 45 days', wages in the case of unjustified dismissal (PEP contract). The range of beneficiaries of this contract is extended to: *i)* persons with disabilities; *ii)* persons registered as unemployed for at least one month (instead of six previously); *iii)* unemployed who have continuously been on temporary contracts during the preceding two years; and *iv)* unemployed who have been on a permanent contract in another company during the preceding two years. Furthermore, the severance payment of 33 days' wages is now also applicable in the case in which the employer avoids going to court by acknowledging upfront that the dismissal of a worker on a PEP contract was unjustified.

Third, a worker's capital fund will be established and will enter into force in January 2012. Instead of paying the total amount of severance pay at dismissal, employers would pay regularly an amount equal to a certain number of days' wages per year into this fund; the amount is yet to be specified. The employee may benefit from this fund in the event of dismissal, geographical mobility, for training purposes, or in the case of retirement. The money is kept in the worker's account in the case that the worker changes employers voluntarily.

Fourth, the law makes the use of temporary contracts more restrictive. The compensation paid by the enterprise upon termination of temporary contracts increases from 8 to 12 days. Furthermore, the law introduces a maximum duration of three years for *contratos de obra y servicio* under which the worker is hired to perform a specific task; this limit can be extended by another year through collective agreement. The maximum duration and the conditions under which contracts can be extended remain basically the same for the other types of temporary contracts.

The law foresees some transitory arrangements. The compensation for termination of temporary contracts will increase only gradually and will not reach 12 days before 2015. This is to avoid hindering employment growth in the recovery from the crisis. Until 31 December 2010, companies can transform those temporary contracts that existed at the time of the publication of the law into PEP contracts. Those concluded afterwards or which have a duration of less than six months can be transformed until 31 December 2011. Finally, until the creation of the Capital Fund, part of the severance payment of dismissal of permanent contracts (eight days per year of service) will be funded through recourse to the government (the Wage Guarantee Fund, FOGASA).

Box 3.4. **The 2003 severance pay reform in Austria***

In Austria until 2002, employers paid severance pay to their employees upon termination of the employment contract, including for retirement, if the employee had worked for this employer for at least three years. The payment amounted to two monthly wages and increased with the duration of the job up to one year's wages after 25 years. This system was criticised for excluding workers on short-term contracts (*e.g.* seasonal workers) and for inhibiting labour mobility as employees lost their entitlement to severance pay in the case of self-termination. Furthermore, it was pointed out that small and medium-sized enterprises might have liquidity problems if they had to make several severance payments simultaneously.

In 2003, the traditional severance pay system was replaced by a system of individual saving accounts. The account of each worker is funded by the employer via an untaxed payment of 1.5377% of the gross wage and is managed by an employee fund that invests the balance on capital markets. The payments start in the second month of the employment relationship. If the employee is dismissed after three years of job tenure, he can choose between a cash payment, further investment in the same employee fund or in the employee fund of the new employer, and transferring the respective amount as a one-time payment to a pension insurance fund. The entitlements to severance pay can thus be cumulated by an employee over his or her entire working career, serving as a form of retirement saving. Upon retirement the employee can either claim a cash payment or convert entitlements into an annuity. If the employee leaves the company voluntarily or is dismissed during the first three years of the job contract, no cash payment can be claimed, though the claim is not lost as it can be transferred to the new job.

The reform extended the entitlement to severance pay considerably as entitlement starts after one month and neither depends on the job tenure nor on the way in which the employment relationship is terminated. The level of the payment now depends on the performance of the employee provision fund on the capital market, though the nominal contribution paid by the employer is guaranteed. From an employer's perspective, the new scheme avoids the one-time costs of dismissal and the uncertainty related to the size of the payment at the time of hiring. However, the contributions to the individual accounts add to labour costs.

* This box draws on Hofer (2006), "The Severance Pay Reform in Austria" (Abfertigung Neu), CESifo DICE Report, No. 4/2007, CESifo Group, Munich; and R. Koman, U. Schuh and A. Weber (2005), "The Austrian Severance Pay Reform: Toward a Funded Pension Pillar", Empirica, Vol. 32, No. 3-4, Springer. See also OECD (2009).

Even with the reduction in severance pay and an extension of the 33 days permanent contracts, firing costs of permanent contracts are likely to remain large enough to make firms reluctant to transform temporary contracts into permanent ones. This is particularly applicable if the reform to make it easier for firms to have dismissals accepted as justified turns out to be ineffective. Hence, even with the recent reform, severance pay may still be excessively large. It may therefore be desirable to reduce severance pay for new permanent contracts further. The reform would be more effective if the temporary and permanent contracts converged, for instance, by introducing a single permanent contract for new hires with severance pay that is low initially, but increases gradually with seniority.[4] Such a single contract could also replace the existing system that distinguishes between permanent and temporary contracts and would hence have the advantage of simplifying a highly complex system. Care would still have to be taken to ensure severance payments did not rise too high and unduly restrict the labour market.

There is a risk that the Austrian-type capital-funded component could lead to higher employment costs. This could happen in particular if the money paid into the blocked accounts is not recognised as a wage component in collective bargaining, so that employer contributions to the accounts are not offset by lower wages. This is particularly relevant in the current situation in which employment costs need to be contained. Hence, employers' contributions to the capital fund should be offset, as is planned by the government. This could for instance be funded by higher environmental taxation or a widening of the value added tax base (Chapter 2).

Finally, while the planned measures to restrict temporary contracts would in principle reduce the incentive of firms to link temporary contracts, restricting temporary contracts would be risky in the current situation. And this may still be the case if the government postponed the tightening as planned to 2012-15 as these contracts allow businesses to expand employment quickly when demand picks up.

Reforming the collective bargaining system

The institutional setting has adverse effects on employment

The institutional setting of collective bargaining is unfavourable for employment for the following reasons:

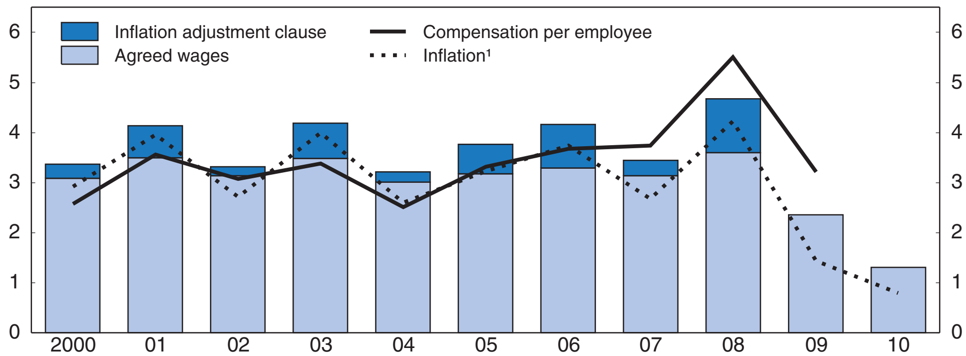
- *First*, Spain is characterised by an intermediate degree of centralisation in which collective bargaining takes place predominantly at the sectoral and/or the regional level. About 90% of workers are covered by industry agreements at varying geographical levels and only about 10% are covered by agreements at company level (CCOO, 2010). Such an intermediate system is typically considered to be less favourable for employment as compared to a fully centralised or fully decentralised system (Bassanini and Duval, 2006). In contrast to a centralised bargaining system, an intermediate system would tend to lead to nominal wage rigidity as the inflationary and unemployment effects of wage increases are not internalised through moderate wage demands. Empirical evidence for Spain suggests that this is the case (Izquierdo *et al.*, 2003). In contrast to a fully decentralised system, an intermediate degree would not tailor wage agreements sufficiently to the circumstances of individual companies and would tend to diminish wage differentials. Strong relative wage compression would hinder employment of low-skilled unemployed or workers living in low productivity regions.
- *Second,* collective bargaining is characterised by a complex system of overlapping bargaining at industrial, provincial and firm levels. Lower levels could often only deviate from higher level bargaining outcomes if work conditions, such as wages, were set more favourably for the worker. If work conditions were set less favourably for the worker at lower levels, then deviation was only possible under restrictive requirements.
- *Third*, while union density is low, coverage of collective bargaining is high and this is due to the institutional principles of the Spanish collective bargaining system as fixed in the Worker's Statute of 1980. In particular, the principle of *statutory extension* states that any collective agreement at higher than company level must be applied to all companies and workers forming part of the same geographical or industry level, even if they had not participated in the bargaining process. Small and medium-sized enterprises are most affected by this.
- *Fourth*, it has been very difficult for firms to opt out from collective agreements. Opt-out or opening clauses have typically two positive effects on employment. Opening clauses

allow firms to absorb negative shocks by lowering wages instead of firing workers, and should therefore be able to prevent the deterioration of human capital. Additionally, firms with opening clauses may hire more employees in the first place, as they expect to be able to lower their wages when things turn sour.[5] By law, firms had the option to opt out from collective agreements already before the 2010 reform. However, before the reform, opening clauses were part of central collective agreements in which it has been specified when and to what extent firms could deviate from sectoral agreements. Moreover, deviations, *i.e.* the application of opt-out clauses, were subject to consent by a council of representatives from trade unions and other firms in the same sector.

- *Fifth*, wage increases can be fixed through an asymmetric *ex post* wage indexation that may lead to wage inertia (Figure 3.7).[6] This effect is aggravated by the observation that bargaining agreements take place only every two years or more implying that wages may continue to increase even if inflation was very low (Izquierdo *et al.*, 2003; and Du Caju *et al.*, 2008).[7]

Figure 3.7. **The impact of collective bargaining on wages**

Per cent



1. Consumer price index, year-on-year percentage change in December of previous year.

Source: Banco de España (2010), *Informe Anual 2009*.

StatLink http://dx.doi.org/10.1787/888932363729

The recent reforms may be a substantial improvement

The reform of collective bargaining included in the approved labour market reform of September 2010 (Box 3.5) has the potential to improve the flexibility of the wage setting agreements to macroeconomic and firm-specific effects. However, the reform of the collective bargaining process could be made more effective in the following ways:

- Abolishing the statutory extension principle would be desirable. Such a step may however be difficult to reconcile with constitutional law. Alternatively, consideration should be given to replacing the compulsory application of wage agreements reached at higher levels with an opt-in system that allows employers the choice of whether to adopt the wage agreement.[8] In any case, employers and workers should be able to agree to opt out from collective bargaining without being subject to other conditions. This is intended in the labour market reform of September 2010.
- The system of collective bargaining could be simplified and give more room for wages and other work conditions to be decided at the firm level.

Box 3.5. The 2010 reform measures aimed to improve the adaptability of firms to shocks

Besides reforms of employment protection, the 2010 labour market reform aims also at improving the adaptability of the labour market to shocks.

First, the law changes the conditions under which a firm can opt out *ex post* from collective agreements: it widens the causes under which firms can opt out from lower level agreements as is the case, for instance, for specific company-level pacts. Moreover, it eases the conditions for opting out from higher level collective agreements at sectoral or regional level. In this case, firms that want to opt out no longer need to ask for consent from the social partners (notably trade unions); instead, agreement between employers and their employees would be sufficient. If such an agreement between employers and employees cannot be reached, collective bargaining must provide for solutions through arbitration. Furthermore, firms can now also opt out as regards a larger range of working conditions, beyond wages, including working time and firm organisation.

Second, the law opens up company-internal flexibility in terms of reductions in working time (including short-time work). Such flexibility is now given independently of the number of workers concerned; previously it could be applied only in the case of full suspension of contracts or collective dismissal. In addition, the law extends existing employers' social security rebates in the case of short-time work if such work was combined with training of the workers concerned.

The 2010 labour market reform foresees a reform of the collective bargaining process within six months since the law was passed by Parliament. If social partners do not reach an agreement, the government is willing to adopt necessary initiatives such as to further improve the collective bargaining process.

- While the agreement on collective bargaining signed in February 2010 temporarily suspends *ex post* inflation indexation during three years, *ex post* wage indexation rules remain in place. Eliminating *ex post* wage indexation should be encouraged.

Improving the employability of the young and the unskilled

Under the current circumstances, improved access to education or continuous training of young people, in particular those who leave or have left school without a basic degree, would have a double dividend. It would not only increase the skill level of young people, but would also avoid young people being thrown on a depressed labour market where they have little chance of finding a job. Policies to improve access to training or education may also help in particular low-skilled immigrant unemployed, beyond more specific policies for the integration of immigrants into the Spanish labour market (OECD, 2008a).

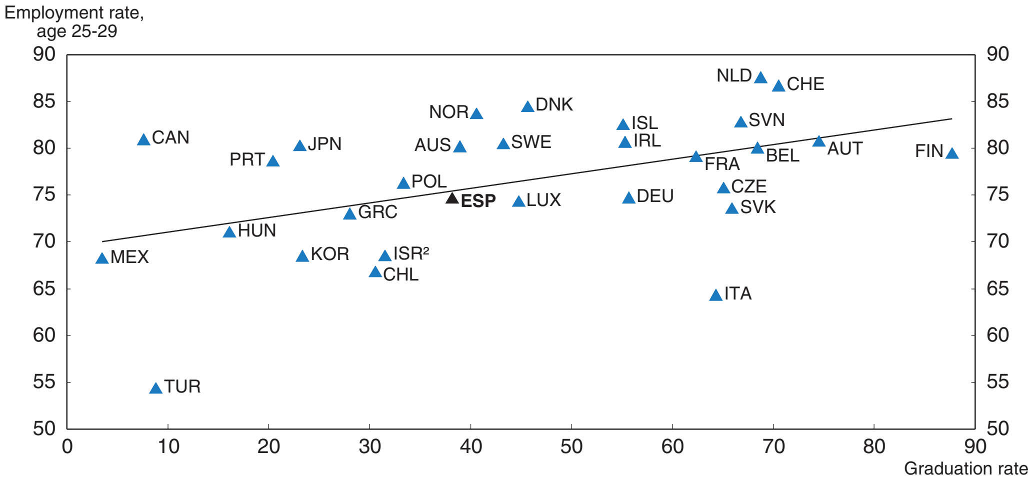
Recent reform efforts of vocational education will enhance school-to-work transition

Vocational education allows for an alternative track to keep young people in school until they obtain at least an upper secondary qualification and which provides work-related skills through curricula which emphasise the acquisition of practical skills that are relevant for work (OECD, 2006). The school-to-work transition of young people appears to be smoother in countries with well developed vocational education (Figure 3.8).

Within the larger framework of the *Ley de Economía Sostenible* (under discussion in Parliament), the Ministry of Education and Culture has very recently proposed several

Figure 3.8. **Employment rate of young adults and graduation from vocational training**[1]

Per cent, 2008



1. Graduation rates cover those from pre vocational and vocational programmes.
2. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2010), *Education at a Glance 2010* and OECD (2010), *Labour Force Statistics* (database), July.

StatLink http://dx.doi.org/10.1787/888932363748

measures that have the potential to make vocational education and training (VET) more attractive, effective and flexible. It is envisaged to: *i)* expand and update the curricula offered; *ii)* ensure that the education offered is closely linked to employers' needs; *iii)* increase mobility between vocational and general upper secondary education as well as with university education; *iv)* promote the development of an integrated system of information and guidance; and *v)* introduce a monitoring and performance evaluation system. Furthermore, the government has simplified the procedures necessary for private training providers to operate as official VET centres.

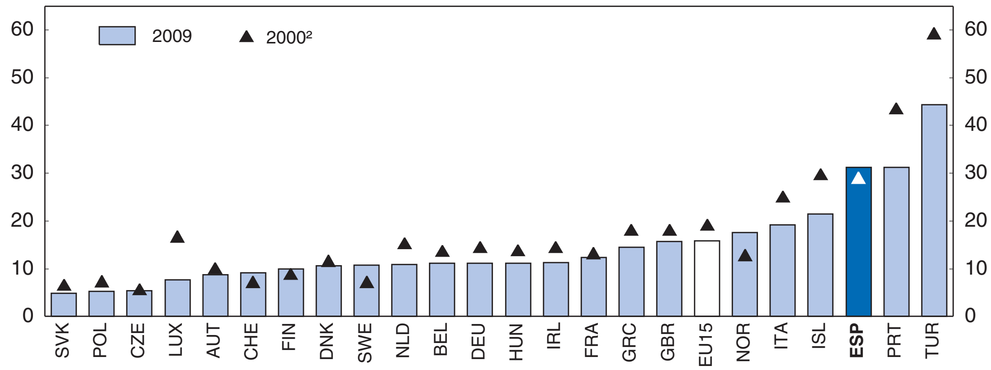
The proposals of the government are also promising in that they aim at introducing evaluation and monitoring systems. Such quality assurance mechanisms increase the effectiveness of VET by reducing the drop-out rates of students and enhancing students' employment prospects later on. The evaluation system could be combined with a system for data and analysis relating to VET, including data on the flow of students through education and on the labour market performance of young people with a VET qualification.

Employment prospects for early school leavers should be improved

In Spain, more than 30% of those in the 15-29 year age bracket leave school with at most lower secondary education (Figure 3.9) and there has been very little change in this rate over the past decade. In general, employment opportunities are much lower for early school leavers without upper secondary education and it takes longer for employment rates of early school leavers to converge to those of educated or prime age workers. Early school leavers are also more at risk of being trapped in temporary jobs before getting a permanent one and this appears to be particularly so in Spain: five years after leaving school, more than 50% of unqualified young workers are in temporary jobs in Spain as compared to 33% in the average EU10 country[9] (OECD, 2008b).

Figure 3.9. **Early school leavers**

Percentage of population with at most lower secondary education, age 18-24[1]



1. Excludes those in further education or training.
2. 2001 for Poland; 2002 for Czech Republic, Ireland and Slovak Republic.

Source: Eurostat (2010), "Population and Social Conditions", *Eurostat Database*, September.

StatLink http://dx.doi.org/10.1787/888932363767

There are different ways in which employment prospects for early school leavers could be improved (see also OECD, 2008a).

- *First*, while the government is introducing a wide range of reforms in early childhood and primary education, it may take some time for these measures to show effects. An important reform that would not be costly to public finances, and could hence be introduced more quickly, would be to focus the criteria for granting pupils' promotion to subsequent grades, and access to upper secondary education, more narrowly on those core competencies that are needed to follow any type of upper secondary education – as recommended in the 2008 *Economic Survey*. This would reduce grade repetition in compulsory secondary education.
- *Second*, targeted active labour market programmes represent an important option for those school drop outs who are already out of the educational system (OECD, 2006). Within such programmes early activation, notably job-search assistance, has proven to be most effective in terms of positive returns on employment and earnings. However, it is important that such programmes be closely monitored in terms of their success in helping the most disadvantaged youth find a job. Furthermore, such programmes would have to be made available also for youth who are not registered as unemployed such as to reach school drop outs with no working experience. Closer co-operation between schools and public employment services in the form of early career counselling within lower or upper secondary schools, or outreach programmes, could help to identify school-leavers having difficulty in finding a job. Increased active labour market programmes (ALMPs) could be financed through tightening and reallocating unemployment benefits as discussed below.
- *Third*, the recent labour market reform aims to make training contracts more attractive and applicable also for less qualified workers. It specifies that firms can pay less than the minimum wage in the first year of training in the case of the *contrato de formacion* (which is aimed at youth with secondary education). In addition, the 2010 labour market reform also makes it easier for firms to opt out from higher level collective bargaining agreements. This may have a positive effect on the attractiveness of training contracts to

the extent that firms may then be able to pay wages below minima set in collective agreements (see also section on collective bargaining above).[10]

The institutional setting of continuous training would have to be reformed

An increase in continuous training is associated with a higher ability of workers to stay in employment and to get re-employed after having been laid-off.[11] For instance, Ok and Tergeist (2003) showed that, controlling for individual characteristics, among workers who receive training in any given year the probability of being unemployed three years later is about 4%. This is 3.5 percentage points less than the probability of workers with comparable individual characteristics who did not receive training. Moreover, empirical evidence suggests that workers' training may increase enterprise productivity and hence has positive effects beyond pure employment effects.[12]

The existence of market failures justify some public co-financing targeted at particular groups.[13] While the Spanish levy system aims to address these market failures and to provide targeting, its particular design may encourage insufficient and inappropriate training. This is in particular linked to the strong involvement of social partners in the decision process (Box 3.6). Theoretically, involving social partners can be justified in that employers' or workers' representatives are expected to have more in-depth information on skill and training needs than the government. The strong involvement of social partners may have three adverse effects on training provision, though.

Box 3.6. **The institutional setting of continuous training in Spain***

Continuous training is institutionalised in the form of a tripartite "collective" agreement with a strong involvement of social partners in both the selection of training offered as well as the allocation of co-financing to training plans of firms.

Every company pays a training levy corresponding to 0.7% of payroll into a training fund. The firm can try to recuperate all or part of its payment through applications for grants to finance its training plan. The Ministry of Labour and Immigration issues every year open calls for submission of training plans. Companies with over 100 employees can submit individual plans, while small and medium-sized enterprises need to join forces and submit sectoral or territorial-based group plans. Funding applications have to be submitted to the legal workers' representatives.

The selection criteria applied are based on agreements reached in the so-called Parity Commissions. These are set up at national, sectoral and territorial level, with members coming from main trade unions and employer organisations. The Parity Commission set the framework for what types of training plans will be accepted. They are also involved in *ex post* control.

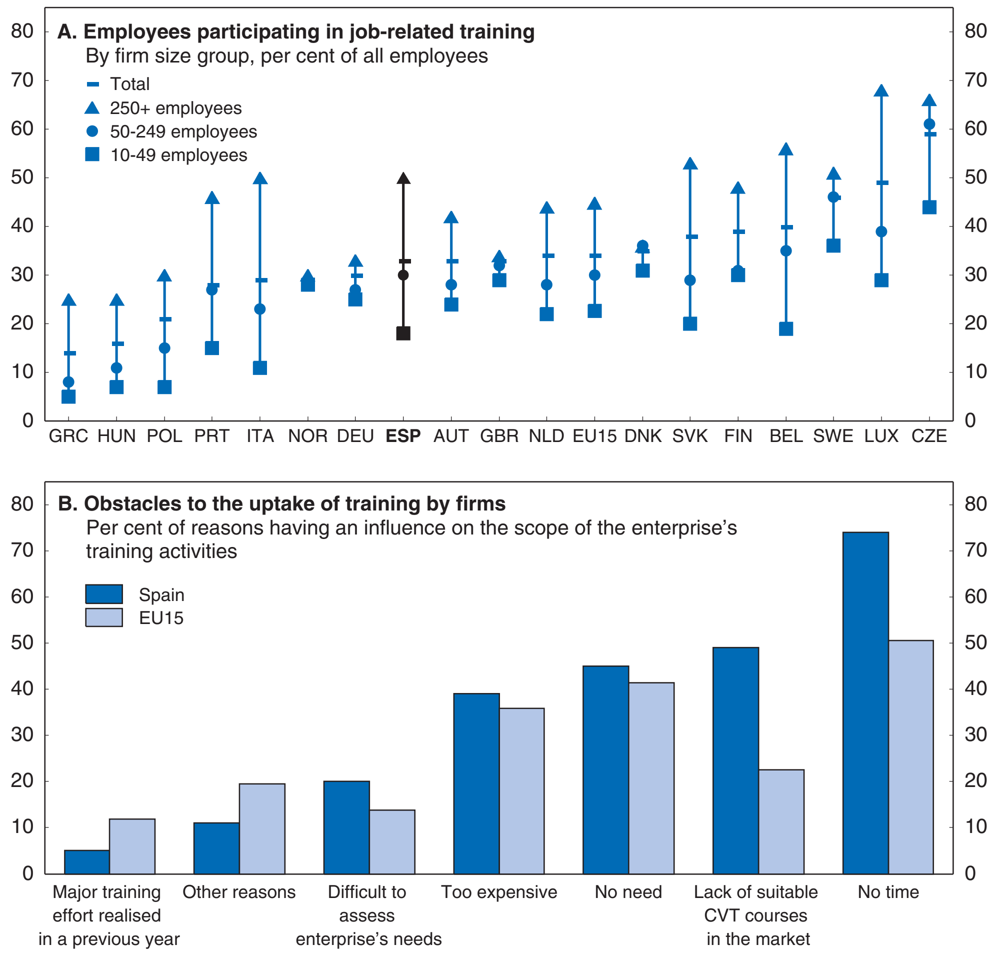
* This box draws on W. Ok and P. Tergeist (2003), "Improving Workers' Skills: Analytical Evidence and the Role of the Social Partners", *OECD Social, Employment and Migration Working Papers*, No. 10.

First, there may still be aggregate under-investment in training. The individual firm has only very little influence on the selection and may hence try to avoid going through the long, complicated and uncertain process in order to apply for public funding. *Second*, it may not reach those firms or individuals with the largest need for public support, but only those firms that are more strongly represented in collective bargaining and which – as a result of the design of the grant system – are responsible for the selection criteria of the grant applications. *Third*, social partners are not only involved in the allocation of grants, but are also responsible for the choice of training provided. As a result, it is not guaranteed that the subsidised training is the most appropriate for the particular grant receiving firm.

Figure 3.10 provides partial evidence for some of these arguments.[14] Overall, the current system seems to generate poor results while at the same time raising the tax wedge on employment for three reasons:

Figure 3.10. **Continuing vocational education**

2005[1]



1. The EU15 aggregate is an unweighted average excluding Ireland; in Panel A it also excludes France.

Source: Eurostat (2010), "Population and Social Conditions", *Eurostat Database*, May.

StatLink http://dx.doi.org/10.1787/888932363786

- *First*, in aggregate, Spanish firms invest relatively little in continuous training as compared to other European countries (Panel A). This suggests that there is still room for improvement of the training system so as to raise incentives for investment in training.
- *Second*, the training intensity is much higher in firms with more than 250 employees while it is substantially below the EU-average in firms with less than 50 employees (Panel A). This suggests that government co-funding of training investment has not reached very small firms that may be faced with substantial obstacles in financing training.

- *Third,* a very large share of firms that did not invest in training of their employees claim that lack of suitable training courses was one of the major obstacles (Panel B). This shows that selected training courses do not meet business demands for skills and training.

The government could make the system of continuous training less complicated and less stringent and facilitate the access of small firms to continuous training, as is envisaged in current government plans for reform. Firms should also have more options as to the choice of training provided in order to ensure that the training meets the actual training needs of the firms, hence rendering the subsidies more effective.

Moreover, the government may think of introducing grants to individual adults, for instance in the form of vouchers covering course fees and/or allowances to cover indirect costs such as foregone wages. Experience from other countries suggests that such schemes facilitate targeting and stimulate competition among training providers by giving individuals greater choice (Kuczera *et al.*, 2008; Rinne *et al.* 2008).[15] This could increase the matching quality between the individual and the training providers and therewith increase the effectiveness of training programs. Moreover, such a step would be especially effective as it encourages general training which is transferable across firms. It is however important that provider quality be ensured and certified. In the Austrian voucher scheme, for instance, vouchers can only be used with providers who meet strict quality standards (OECD, 2005).

Finally, the recent reform initiative within the *Ley de Economía Sostenible* to certify continuous vocational education is welcome as it reduces information costs involved in signalling acquired skills to potential employers, improving incentives to acquire such skills. Certification can provide individuals with a means to achieve a higher education degree after several years of work experience. Young people without basic skills, in particular, should be offered access to continuous training so as to obtain such a diploma or certified qualification. Certification could make voucher systems more effective by making disbursements of vouchers conditional on the successful acquisition of accredited skills.

Improving the effectiveness of the matching process

In order to improve the efficiency of the matching process, remaining disincentives, both on the side of public employment services and on the side of unemployment benefit recipients, should be addressed. This is particularly important in the view of tight fiscal and manpower constraints that make it imperative to get better value for public spending on active labour market policies (ALMPs).

The system of public employment services could be made more efficient

As was pointed out in the 2008 *Economic Survey of Spain*, the division between the financing of unemployment benefits with unemployment insurance contributions at the national level, on the one hand, and the managing and designing of the placement services at the regional level, on the other hand, may distort placement incentives for regional employment offices:

- Regions do not receive the fiscal benefits of a reduction in unemployment; in contrast, since resources are allocated across regions according to the number of unemployed, regions that succeeded in placing the unemployed receive less central government funding.
- Where regional public employment services (PES) have the autonomy to design ALMPs, there is a risk that ALMPs are not designed to promote employability but rather to place

recipients in short-term jobs that would re-qualify them for unemployment benefits paid by the central government.

Ideally, the responsibilities for funding unemployment benefits and for managing the public employment services should be assigned to the same jurisdictional level (the central government). If this is not possible, comprehensive monitoring and evaluation of placement services and ALMP implementation at regional level should be introduced, based on quantitative output indicators or targets, similar to what is done in other OECD countries, for instance in Switzerland (Box 3.7). Quantitative performance management could be combined with qualitative studies in which placement successes and impacts on job-seekers' employability are analysed by following former unemployed or job-seekers over time. Moreover, closer inter-regional and inter-institutional co-operation would encourage exchanges of best practices; for instance it could help understand why some ALMPs have worked well and some have not.

Box 3.7. **Performance management of public employment services in Switzerland***

In 2000, the federal and cantonal governments of Switzerland agreed to develop an output-oriented management approach of public employment services (PES) and to set in place a performance rating system based on indicators that measure the attainment of the agreed objectives. This system allows benchmarking of local PES with benchmarking results being collected and published annually. Four main indicators are used to monitor performance:

- Quickness of reintegration of the unemployed into the labour market, as measured by the average duration of unemployment benefit entitlement per unemployed (weighted 50%).
- Prevention of long-term unemployment as measured by the share of those remaining unemployed among those who were registered as unemployment benefit recipients 13 months before (weighted 20%).
- Prevention of benefit exhaustion as measured by the share of unemployed no longer entitled to federal unemployment benefits in the total number of unemployed (weighted 20%).
- Prevention of repeated registration for benefit as measured by the share of previous unemployed who have de-registered but apply again for unemployment benefits within four months (weighted 10%).

By setting the weights as indicated, the system puts a priority on rapid labour market integration. Furthermore, the objectives concern only the placement of unemployment benefit recipients and not long-term unemployed or social assistance recipients who are no longer entitled to unemployment benefits and are more difficult to place.

In order to take into account inter-regional differences in economic conditions for the benchmarking, data on exogenous factors that characterise the economic structure of regions are collected in addition to data on the placement activities themselves. If certain cantons perform badly repeatedly, an in-depth single performance evaluation of this canton is exercised with the aim of finding a solution to improve its performance.

* This box draws on N. Duell and P. Tergeist (2010), "Activation Policies in Switzerland", *OECD Social, Employment and Migration Working Papers*, No. 112.

Combining the monitoring and evaluation system with a reward system could help to reduce the disincentive of regional public employment services. For instance, those that performed well could be allocated temporarily additional resources or more responsibilities in the design of ALMPs.[16] The 2010 labour market reform includes some provisions in this sense as the regional public employment services could receive parts of the funds that are saved as a result of their monitoring of unemployment benefit payments.

Finally, with the surge in unemployment during the recent crisis, regional public employment services may better concentrate on the most important tasks or on particular target groups and "outsource" other activities. This could be done in two ways: *First*, all job vacancies could be advertised openly. In Spain, most vacancies are "closed", *i.e.* they are not advertised, but are offered to the job-seeker by the regional PES administrator. While direct referrals can serve important purposes, the more information is attached to a vacancy, the less need there is for a PES intervention to fill it. Hence, it is a good initiative of the Spanish government to set up a nationwide internet-based job search platform so as to provide the possibility for jobseekers to search in the vacancies of all regional PES at the same time.

Second, the reform plan as regards placement through private agencies is welcome, but still could be improved upon. The 2010 labour market reform enlarges the possibility for private agencies to provide placement services by specifying that private placement agencies no longer have to be "non-profit". However, private placement provision remains restricted as private agencies have to ask for an authorisation from the public employment services to operate and are asked to provide feedback on their activities.

Create the right incentives at the level of unemployment benefit recipients

The system of public employment services in Spain follows a mutual obligation approach where, in return for benefits, recipients are required to engage in active job search activities. Registered unemployed need to be apt for placement, undertake pro-active steps to find a job and to be ready to take up suitable work. However, in order for the Spanish mutual obligation approach to be more effective, it should be better enforced by the use of benefit sanctions. This could be achieved in the following ways:

- Entitlement to unemployment benefits should start from the initial time of registration and should no longer be paid retroactively from the registration.
- The first intensive interview should be mandatory at the time of registration. The delay in holding the first interview with a PES counsellor of up to two weeks as in the current activation strategy may result in a loss of opportunities of referral to a vacancy.
- Placement interviews could be combined with a job profiling system that would help to distinguish early on those unemployed who are easy to place from those where help is necessary. Ideally this could be linked with stronger co-operation among regional employment services as well as between schools and employment services.
- While intensive interviews between the job-seeker and an employment counsellor are held regularly, the frequency of such interviews should be increased. Studies from several countries have shown that strong job-search controls can have a considerable impact on re-employment rates (OECD, 2007a). While self-motivated unemployed will look for jobs effectively, for other types of individuals, more intensive job-search assistance and monitoring may be required to ensure that they search actively for work (Duell and Tergeist, 2010).

- The labour reform of September 2010 reduces the number of days of job search after which participation in active labour market policies is obligatory. This is a welcome step as it should help the unemployed to maintain a strong link to the labour market. In particular, as with continuous training mentioned above, training programmes within ALMPs have a double dividend of not only increasing the skill levels of people, but also avoiding them being thrown on a dense labour market with little chance of finding a job.
- The government may consider enforcing the formal requirement that the unemployed should take on a "suitable" job after one year of unemployment. While such an obligation exists in the current activation strategy, the definition of a "suitable" job is very broad. It could for instance be extended to consider also as suitable those jobs that are outside the region in which the unemployed is registered. Enforcing this obligation, however, would require regional PES exchanging information about available jobs.

The government may also consider reducing existing disincentives in the unemployment insurance system by reducing the duration of unemployment benefits, at least once the recovery is in sight. With about two years, maximum unemployment benefit entitlement is long in Spain as compared to other countries and such benefits may have adverse effects on employment. *First*, by reducing the job-search intensity of the unemployed and their willingness to accept job offers, benefits can result in longer periods of unemployment or even effective labour force withdrawal on the part of some benefit recipients.[17] *Second*, by lowering the opportunity cost of not working, they may put upward pressure on workers' wage claims and ultimately reduce labour demand (OECD, 2006).

Shortening the duration of benefits may also not hit those unemployed who would need them most. People on temporary contracts have a higher probability of job loss, yet may accumulate very few benefit entitlements, while people on permanent contracts would be entitled to generous unemployment benefits in case of a dismissal in addition to the already high severance pay. Tightening job search requirements, and requirements for unemployment benefit entitlements for those unemployed who would find a new job easily, could free up resources that could be used for those unemployed who are difficult to place.

The need for a comprehensive reform package

Linkages between different institutions within the labour market as well as between labour and product markets underline the importance of a comprehensive reform.

- Linkages between different institutional settings are particularly important as regards youth unemployment. High drop-out rates of students and limited uptake of continuous training of young people may relate to the dual labour market as well as the bargaining process as discussed above.[18] Hence, the recent reform may also help improving the employability of young and unskilled workers.
- Spain is characterised by weak inter-regional mobility of workers, a factor that may slow the speed of adjustment to the crisis and reduces incentives to invest in human capital as young people have to accept jobs for which they are over-qualified (OECD, 2008a). Geographical mobility could be enhanced through appropriate reforms of the rental housing market. This is more effective with simultaneous reform of the labour market: the uncertainty linked with the high turnover, due to the frequent use of temporary contracts, and the weak coverage through the social safety net of particular groups of workers or unemployed underline the importance of family ties and may reduce geographical mobility even in the presence of a well-functioning housing market.

- Empirical evidence points to a strong interaction effect of labour and product market policies on employment.[19] Nicoletti and Scarpetta (2005) for instance, suggest that anti-competitive regulations tend to be costlier for employment when labour market policies and institutions protect insiders increasing their bargaining power.

Box 3.8. **Recommendations**

Return to work

- Reduce subsidies for hiring the unemployed on permanent contracts which are paid over a limited period of time after a worker is hired, and replace these subsidies by targeted active labour market policies.

Reducing the duality of the labour market

- If the 2010 labour market reform does not make it significantly easier for firms to have dismissals accepted as justified further progress in easing the burden on businesses to prove that dismissals are justified may be needed. Steps to reduce the duration of judicial procedures would also help.
- It may be desirable to reduce severance pay for new permanent contracts even further. The reform would be more effective if the temporary and permanent contracts converged, for instance, by introducing a single permanent contract for new hires with severance pay that is low initially, but increases gradually with seniority. If designed like this, such a single contract could also replace the current system that distinguishes between permanent and temporary contracts.
- Avoid tightening the regulation of temporary contracts soon. As a minimum, tighten temporary contracts only once the reform succeeds in lowering dismissal pay for permanent contracts and improves hiring on such contracts markedly.
- Introduce steps to offset employers' contributions to the capital fund. The government intends to do this. This could be, for instance, funded by higher environmental taxation or a widening of the value added tax base (for instance by removing some exemptions).

Making the labour market more flexible

- Abolishing the statutory extension principle would be desirable. Such a step may however be difficult to reconcile with constitutional law. In any case, ensure that employers and workers can freely agree to opt out from collective bargaining at the firm level – as is intended in the new legislation. Alternatively, the compulsory application of wage agreements reached at higher levels could be replaced with an opt-in system that allows employers the choice of whether to adopt the wage agreement. Moreover, the system of collective bargaining could be simplified and give more room for wages and other work conditions to be decided at the firm level.
- Encourage the elimination of *ex post* inflation indexation clauses in collective bargaining.

Increasing the employability of the young

- In compulsory education, focus the conditions for granting pupils promotion to subsequent grades and access to upper secondary education more narrowly on those core competencies that are needed to follow any type of upper secondary education.

Box 3.8. **Recommendations** *(cont.)*

- Provide the most disadvantaged youth access to closely monitored early activation and job-search assistance programmes. A closer co-operation between schools and public employment services in the form of early career counselling within lower or upper secondary schools or outreach programmes could help to identify school leavers with difficulties in finding a job.
- Make the system of continuous training less complicated and less stringent and facilitate the access of small firms to continuous training. Improve the options of firms as to the choice of training provided in order to ensure that the training meets the actual training needs of the firms, hence rendering subsidies to continuous training more effective.
- Introduce training grants to individual adults, for instance in the form of vouchers covering course fees and/or allowances to cover indirect costs such as foregone wages. For such systems to be effective though, guarantee provider quality, for instance by ensuring that accredited training providers meet strict quality standards.

Improving the efficiency of the matching process

- Ideally, the responsibilities for funding of unemployment benefits and for managing the public employment services should be assigned to the same jurisdictional level (the central government). If this is not possible, introduce comprehensive monitoring and evaluation of employment services at the regional level, based on quantitative output indicators or targets. This could be combined with qualitative studies of placement successes and their impacts on job-seekers' employability following former unemployed over time.
- Benefit payment should not be paid retrospectively for the period prior to registration and the first full interview should be mandatory at the time of registration. Furthermore, increase the frequency of reporting of job search activity. Consideration should be given to reducing the duration of unemployment benefit entitlements.

Notes

1. Estimations by Bentolila and Jimeno (2003) suggest that the fall in unemployment over the period 1995-2001 is to some extent due to structural factors and driven notably by wage moderation. However, it would be risky to interpret this as if the labour market reforms that were introduced in these years had led to lower structural unemployment. Wage moderation may have reflected the lack of reactiveness of wages to changes in labour market conditions.
2. These reasons also help to explain the discrepancy between employment protection legislation (EPL), as reflected in the relatively low score of the OECD cross-country comparative EPL indicator for Spain, and the degree of employment protection that can be observed in Spain.
3. The difficulty of having dismissals justified by the courts may also explain the limited uptake of collective dismissals.
4. The progression in firing costs would already be achieved with very low, but uniform severance payment. The compensation for a dismissal is typically computed as the severance payment per year of seniority. Hence, dismissing workers with longer years of seniority would also imply the payment of higher compensation. In addition, severance payments are paid based on the last wage before the dismissal. Workers typically move to higher productivity jobs at increasing levels of seniority and hence are paid increasing wages in the course of their career.
5. In fact, Brändle and Heinbach (2010) find for Germany that the existence of opening clauses increases employment by 0.8%.
6. The existence of such clauses may result in *ex ante* lower agreed wages. The empirical evidence shows, however, that once inflation is known to be higher than expected, the wages agreed in

agreements with *ex post* indexation are typically larger than in agreements in which this clause has not been in place (Izquierdo *et al.*, 2003).

7. It is sometimes feared that deindexation may lead to deflation, a scenario which would not be desirable under the current economic circumstances. The empirical evidence does suggest that in those countries in which indexation had been abolished, inflation shrank substantially – however from very high levels. There is no empirical evidence that deindexation of wages would have led to deflation under inflationary conditions similar to the ones of Spain.
8. Opting out is particularly important as long as statutory extension is provided, but is also desirable in a bargaining system in which the extension rule was suppressed. Even if firms were participating in an agreement they may be faced *ex post* with an unexpectedly sour situation during the period for which the agreement would apply and due to external shocks that they could not have foreseen before. *Ex post* opting out could help in the renegotiation of wages or working conditions in such a situation.
9. The countries for which this study was undertaken were Austria, Belgium, Denmark, Finland, Germany, Greece, Ireland, Italy, Portugal and Spain.
10. This is related to the fact that minimum wages are already relatively low, but the wage floor negotiated in collective agreements is significantly higher than the minimum wage in most cases, and it is the negotiated wage that also acts typically as the reference wage for training contracts. For instance, the salary on a *contrato de formaçión* (which is targeted at youth with secondary-school qualifications) has been negotiated in collective agreements and could not be lower than the negotiated minimum wage. For a *contrato en prácticas* (which is targeted at tertiary education graduates) pay must be equivalent to at least 60% of the negotiated wage of the profession in the first year, increasing to 75% in the second year (OECD, 2007b).
11. Both are complementary however, and are in fact linked within the Spanish education system. The 2002 Qualifications and Vocational Training Act, on which more recent reforms are based, states that vocational training includes all training actions that provide access to employment and active participation in social, cultural and economic life and allow workers to carry out their job with the necessary skills. It includes training at the level of initial vocational training, measures for the entry or re-entry of the unemployed into the labour market, and continuous in-company training.
12. For instance, Zwick (2002) shows that for German firms, an increase in the training intensity by 1% raised productivity by 0.3%. Formal internal and external courses appear to have the highest positive productivity impact while the impact of self-induced learning is lower but still significant.
13. For instance, financial constraints and asymmetric information in financial markets may limit financing of training through small enterprises. This may be particularly important for Spain due to the large share of small enterprises. Furthermore, firms typically tend to favour training of skilled workers as the return from this investment in terms of productivity gain may be higher as compared to the one from training unskilled workers.
14. It has to be taken into account, however, that the results in these figures are for 2005 only – the most recent year available – and cover all the training efforts of firms, not only the ones that are subsidised.
15. Rinne *et al.* (2008) find that the voucher system, that was applied for the provision of public training programs within the larger labour market reforms (*Hartz*) in Germany, increased both the employment probability and earnings of the participants.
16. In a reverse sense, one could also introduce a punishment system similar to the model used in the *Instituto nacional de la seguridad* (INSS). In this case, regional offices have part of their grant withheld if the given objectives have not been reached. The INSS is in charge of sickness benefits.
17. Arellano *et al.* (1998) for instance show, based on longitudinal hazard estimations for a sample of Spanish men in 1987-94, that receipt of unemployment benefits significantly reduces the hazard of leaving unemployment.
18. In Spain, young people typically have to go through a series of temporary underpaid jobs and/or unemployment before they receive a stable job. This reduces incentives for young people to invest in their own education as the direct return from this investment is low.
19. See also Duval *et al.* (2007) as concerns the link between product and labour market rigidities and economic resilience.

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Chapter 4

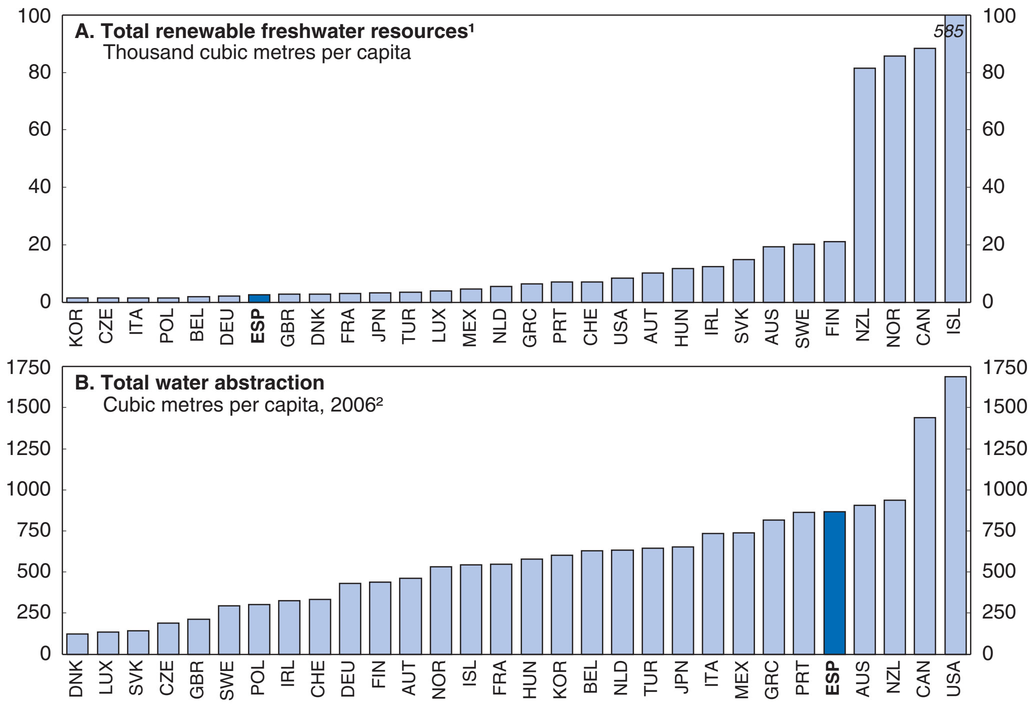
Policies towards a sustainable use of water

Spain uses its natural water resources intensively, mostly in agriculture, thanks to a highly developed dam infrastructure. The limits for extraction of natural resources have largely been reached and climate change is expected to continue lowering natural water endowments markedly in future especially in dry areas of the country. The costs of exploiting alternative supply sources on a large scale, notably desalination and recycling, remain well above water prices paid by consumers at present. The government has recognised that water policies therefore need to switch to demand management, so as to ensure that available resources are put to most efficient and priority use. Scope for water savings is substantial, especially in agriculture, where much irrigation water generates little output. The government has subsidised the use of more efficient irrigation technology at considerable budgetary cost, which has contributed to a modest reduction of water use in irrigation in recent years. Nevertheless low water prices, combined with the free allocation of water concessions, still hamper an efficient use of water resources. Water prices will need to rise further so as to reflect service provision costs in full as well as the scarcity and environmental costs of water abstractions. Steps to better take into account water scarcity should include the progressive inclusion of market instruments, such as the tendering of water concessions as well as the elimination of some barriers to the exchange of such concessions among users. Benchmark regulation of water utilities would contribute to more efficient water supply and treatment services. Further steps need to be taken to halt excessive groundwater abstractions, including through improved monitoring and the introduction of charges on abstractions from overexploited aquifers.

Water resources are intensively exploited

Seventy per cent of Spain's surface is subject to a semi-arid climate with recurring droughts and strong seasonal variability of rainfall. Its climate and the physical characteristics of its environment, such as the prominence of mountain ranges close to the coasts or soil characteristics, make natural water endowments highly unequally distributed across space and time. These characteristics have determined water policies, which used to aim at increasing supply by constructing large dams with government support. With over 1 300 dams, Spain is estimated to be the country with the 4th largest number of dams in the world (after the United States, India and China; Martínez-Cortina, 2010). Over the past century this policy increased water abstractions per inhabitant to a higher level, on average, relative to renewable resources, than in most other OECD countries (Figure 4.1), relatively low population density notwithstanding. The OECD (2004) has therefore assessed water resources to be under moderate stress.

Figure 4.1. **Water resources and abstraction**



1. Estimates of long-term annual averages of renewable freshwater resources which aggregate the quantity of water received from precipitation (net of evapotranspiration) and from inflowing rivers from neighbouring countries.
2. 2000 for Italy, Luxembourg, Portugal and United States; 1995 for Canada, Greece and Ireland.

Source: OECD (2010), *OECD Environmental Data Compendium 2006-08* and *OECD Economic Outlook: Statistics and Projections* (database), April.

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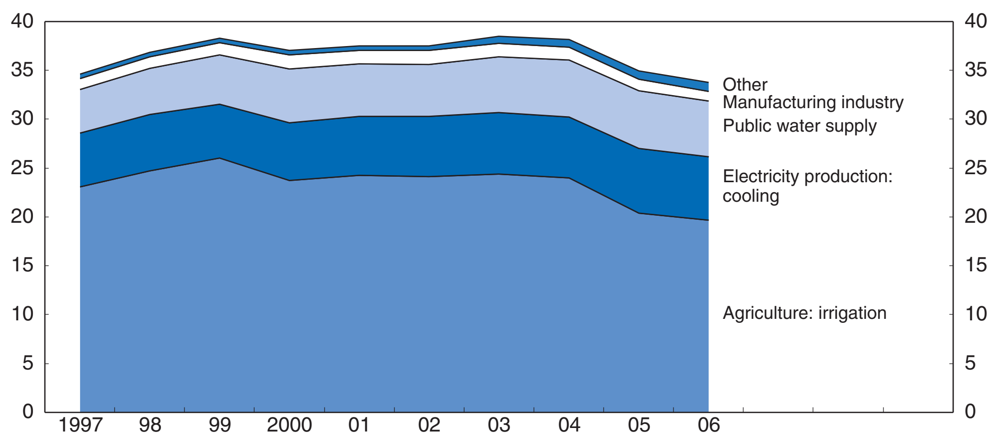
In economic terms the driving force behind the expansion of water storage has been that irrigation allows, on average, to multiply income generated by cultivated land by six (Maestu and Gómez, 2010), especially along the Mediterranean coast, where part of agricultural activity is strongly export-oriented, reflecting a number of factors that have given irrigated agriculture a comparative advantage such as long sunshine, the ample availability of soil and the proximity of markets. However, in recent decades the weight of agriculture has much diminished, with the share in economic activity dropping to 2½ per cent, a share similar to that observed in other high-income countries. The value added of related manufacturing amounts to an additional 2% of GDP. In some regions, agriculture remains an important economic factor, especially in the south east, which is also where some of the river basins most affected by water scarcity are located (see further below).

The expansion of water supply through the construction of dams has come to an end

Spain is one of the few high-income OECD countries where water abstractions continued to increase through the 1990s (OECD, 2010a), although they have levelled off in recent years (Figure 4.2). The decline in 2005 and 2006 can to some extent be attributed to a marked decline in precipitation, which reduced water supply to irrigated agriculture, reflecting the priority water legislation assigns to urban water consumption (see below). A consensus has emerged that the scope for expanding water supply through new large-scale hydraulic projects has ended. (See *e.g.* Arrojo Agudo, 2010, and the other authors in Garrido and Llamas, 2010. Moreover, according to a survey in Terceño-Gómez *et al.*, 2009, local water experts in all water basins did generally not consider extending surface water storage capacity or raising groundwater extraction as the most desirable options for coping with water scarcity.) This is in part due to the environmental impact a further increase in surface water abstractions would have, for example on river flows and dependent natural habitats. River flows have fallen substantially over past decades: for example the Ebro lost almost half of its average run-off between 1947 and 1997 and this decline may have accelerated markedly from the late 1960s. This development reflects the expansion of irrigation, reforestation and climatic change, with each of the three estimated to account for a similar share of the decline (see Barcelò, 2008, where Gallart and Llorens,

Figure 4.2. **Water abstraction by sector**

Total surface and groundwater, billion cubic metres



Source: Eurostat (2010), "Environment and Energy", *Eurostat Database*, June.

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2004, are cited). Surface water quality has improved markedly in past decades, with most river flows assessed to have attained at least satisfactory standards (MARM, 2008a).

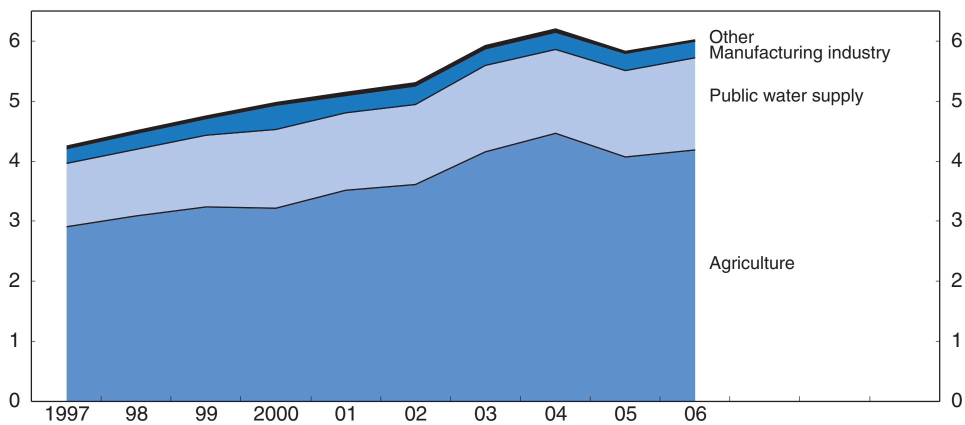
Some aquifers are overexploited

Groundwater accounts for around 20% of total extractions. Groundwater endowment levels are ample, with a storage capacity several times the size of dam capacity. Recharge rates – which determine the renewable resources available – are however typically just a small fraction of the level of reserves (Molinero *et al.*, 2008). Flows into and out of groundwater reservoirs relative to the stocks are much smaller than for surface waters, resulting in average storage of water in groundwater reservoirs of between 100 and 10 000 years (Barcelò, 2008). This characteristic makes policies to ensure sustainable use, in terms of both water quality and quantity, particularly important, as overexploitation may have little impact on available resources in the near term, but may require prolonged corrective action to revert. Furthermore, adequate groundwater levels ensure that rivers continue to flow in dry periods.

Groundwater abstractions have risen over the past decade (Figure 4.3). As in other semi-arid countries, most of the abstractions are for agricultural purposes. It is especially important for agriculture along the Mediterranean, where much of the most productive agricultural activity is located. A substantial share of groundwater resources is at risk of being overexploited (Figure 4.4).[1] Overexploitation has led to saltwater intrusion in some coastal areas (MARM, 2009a), deteriorating water quality. High salinity affects 50% of groundwater in one of the driest water basins (*Júcar*), and this share continued to rise in 2009 (OSE, 2009). The government considers that aquifer overexploitation is one of the major risks for reaching the targets of the European Union Water Framework Directive, with almost 38% of groundwater bodies being at risk of not achieving its quantitative and qualitative targets. This share may yet rise when pending assessments of groundwater bodies are published (Molinero *et al.*, 2008). Observers (such as Custodio *et al.*, 2010) have noted that a strict application of the European Water Framework Directive would lead to the cessation of a significant share of groundwater abstractions.

Figure 4.3. **Groundwater abstraction by sector**

Billion cubic metres



Source: Eurostat (2010), "Environment and Energy", *Eurostat Database*, June.

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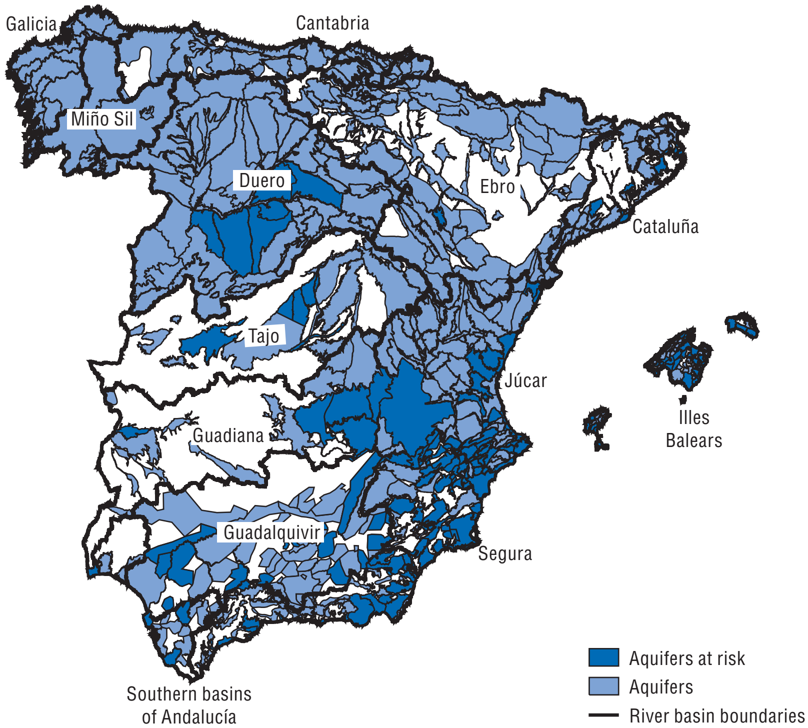
Figure 4.4. **Aquifers at risk of not attaining a quantitatively good status**[1]

2010



1. The definition "good status" follows the EU Water Framework Directive. A quantitatively good status requires that abstractions do not have a significant impact on related surface water bodies.

Source: Ministerio de Medio Ambiente y Medio Rural y Marino.

Excessive groundwater abstractions have reduced wetland areas. These wetlands and their small ponds make a very large contribution to bio-diversity in semi-arid climates. By offering breeding grounds for migratory species they also have considerable international significance. Risks have arisen even in protected National Parks, such as the *Tablas de Daimiel*, which are now fed by artificial surface water supply. Eighty-seven per cent of wetlands are, moreover, unprotected (García Novo *et al.*, 2010).

In addition to salinity, nitrate pollution has contributed significantly to groundwater degradation. While 97% of abstractions for human consumption comply with the nitrate regulations (MARM, 2008b), 25% of measuring stations reported very high concentrations of nitrates (more than 50 mg NO_3 per litre) in Spain in 2008. This share is larger than in almost all other European countries for which data are available from the European Environment Agency.[2] Nitrate pollution mostly reflects diffuse pollution from agriculture and cattle-raising, although the consumption of nitrate-based fertilisers has fallen by about 25% since its peak in 2003. Moreover, the driest river basins are much more heavily affected by such high concentrations than the national average. The consequences of such pollution for water availability in these basins is also likely to be the severest, as high nitrate concentrations limit the extent to which water reserves can be used for other purposes at low cost, such as urban water supply.

Climate change will further lower the natural supply of water

Climate change is expected to reduce precipitation and increase the frequency of droughts. (Iglesias *et al.*, 2010). The natural availability of water resources through surface run-off, aquifer recharge and rainfall has already fallen by 5% between 1985 and 2005 (MARM, 2008a). The decline in rainfall has been particularly marked in southern basins, exceeding 10% between 1947 and 1999 compared to a decline of 5.5% for Spain as a whole (see Barcelò, 2008, and references therein). According to Barcelò (2008), this observed decline in natural water availability is consistent with projections according to which climatic change causes rainfall to diminish in the Mediterranean region, and in Spain especially markedly so. Rainfall is projected to fall by a further 22-34% between 1995 and 2060 in Southern river basins.[3] These are, already today, identified as those being most strongly at risk of overuse of scarce resources. Moreover, these trends will be reinforced by the effects of higher temperatures on evapotranspiration.[4] The government is conducting a detailed sectoral assessment of impacts, vulnerability and adaptation to climate change with special attention to water resources, water demands and coping strategies with the National Plan for Adaptation to Climate Change (MARM, 2009b).

Low water prices hold back the development of unconventional supply sources

In view of declining natural water availability and the limits to raising the amount of abstracted "conventional" water resources, reused water and desalination have been playing an increasing role. In 2008, the capacity of desalination increased markedly, including with the construction of Europe's biggest plant in Murcia, in south-eastern Spain (MARM, 2008a). The expansion of desalination is a key aspect of the revised National Hydrological Plan (Plan AGUA, Box 4.1). Spain is relatively well-placed to take advantage of this resource, especially along its long Mediterranean coast where pressures on water resources are particularly strong.

Box 4.1. **The revised National Hydrological Plan (2005-08): Plan AGUA**

Actuaciones para la Gestión y la Utilización del Agua

The objective of this programme, effective since 2005, is to reorient water policies towards ensuring sustainability of use, in terms of quantity and quality, raise the efficiency in water use and minimise the cost of supply. It recognises the impact of climate change on available water resources as a result of rising temperatures and lower rainfall and aims at making supply less dependent on climatic conditions. The measures focus on the Mediterranean coastal areas where water scarcity is particularly marked. The programme provides 3.9 billion euros of funding for investment projects, of which a third is provided by the European Union. It aims at saving water resources amounting to 1 100 hm^3 (cubic hectometres) annually by fostering demand management, recycling of water and encouraging efficiency in water consumption. The emphasis is on desalination, which provides about 70% of the resources generated by the programme. Prices of desalinated water are provided at subsidised cost to agriculture. In view of the relatively high costs of desalination, the provision of desalinated water to agriculture risks generating inefficiencies and costs to public finances.

Even so, production capacity in desalination is currently limited to 2.8% of water abstractions at the national level. Unit costs are a multiple of current prices typically paid for the supply of fresh surface water even in these areas (MMA, 2007a), even though technological progress has allowed the production cost to be reduced by about 50% over the past ten years according to government estimates. Desalinated water is supplied at subsidised rates. The high energy intensity of the production process may continue to constrain its development as a large scale water resource base and the environmental consequences of the residues of desalination are not yet fully understood. It is therefore considered to be limited to a highly localised contribution to water supply (OECD, 2009).

The potential for recycled water is also relatively promising in Spain, *inter alia*, because of the proximity of densely urbanised regions to intensive agriculture in dry regions along the Mediterranean. As in the case of desalination, production costs often exceed prices, slowing further development. Recycling contributes a smaller share to water supply than desalination, and is used, for example, to supply public gardens, golf courses and selected irrigated agriculture as well as to recharge aquifers. Technological progress in quality assurance and treatment has been significant, but limitations persist, *inter alia* reflecting the difficulty of ensuring that quality is adequate in real time for each specific use so as to ensure that it poses no risk, for example, for human health when used in irrigation (Salgot and Folch, 2008). A survey of water experts' views (Terceño-Gómez *et al.*, 2009) shows that the recycling of water resources is considered the most promising option to address scarcity issues from the supply side, well ahead of desalination.[5] Although cost-reflective prices are a condition for expansion of this sector, there is a case for public research and development (R&D) support to foster its future development, once cost-reflective water prices are ensured, owing to market failures in private R&D.[6] There also appears to be a case for R&D subsidies for wastewater reuse for the purpose of electricity generation (OECD, 2006a).

Overall, the expansion of both conventional and unconventional water supply is subject to limitations, at least at current prices. Hence, effective demand management is crucial in order to make sure that water abstractions are kept within environmentally sustainable limits and made available to priority uses.

Patterns of water demand

Water use in agriculture

Most river basins identified as being particularly affected by water scarcity are characterised by intensive irrigation use.[7] Agricultural use accounts for between 80 and 90% of water abstraction in basins of the south and in the basins of rivers flowing to the Mediterranean Sea. While some of the water used by irrigated agriculture is reused by other downstream users or diverted to meet environmental needs, a large share is consumed in evapotranspiration (the share being close to the total with modern irrigation techniques). Losses also result in groundwater sources which are no longer economic to pump (OECD, 2010a). For the country as a whole, irrigation accounts for 58% of total water abstractions and for about 72% of water abstractions for consumptive water use in 2005 and 2006 (non-consumptive use includes water use for electricity generation or for cooling purposes) according to the most recent published data (see Figure 4.2). This is a bigger share than in most OECD countries behind only Greece, Turkey and Australia. The share of irrigation in total water consumption may have fallen to 65% in Spain in 2008, according to an estimate from the Ministry of the Environment, Rural and Marine Affairs. Access to water is fundamental for productivity in agriculture in most of Spain, contributing 55% to total agricultural value added.

Irrigated surface has continued to expand slowly over the past 20 years, including in recent years, by 4.8% between 2003 and 2009 (Table 4.1 and Figure 4.5). While some new irrigation projects, for example in the *Ebro* river basin, were maintained in the revised national hydrological plan (2005-08), the government does not expect further expansion. Water abstractions for irrigation remained broadly constant until 2004. These developments resulted in a 9% reduction of irrigation water application rates between 1990-92 and 2002-04. Water use in irrigation[8] declined by 12%, on average, between the period 2002-04 and 2008,

Table 4.1. **Irrigation water use in agriculture**[1]

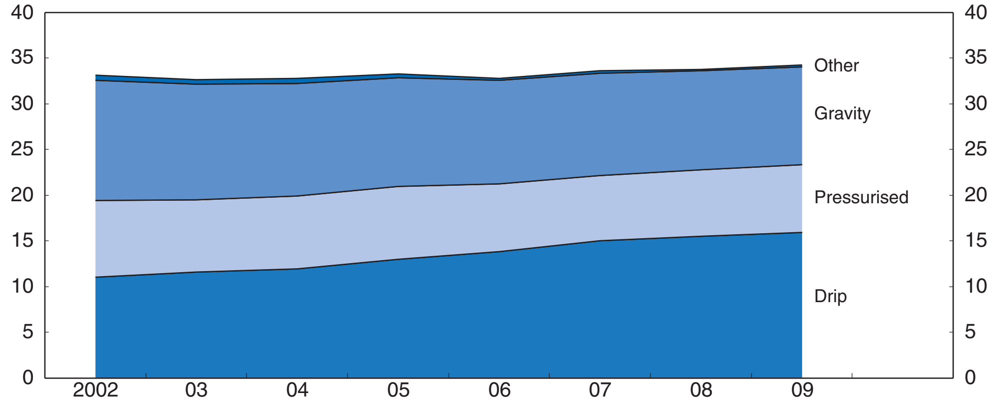
	Irrigation water use		Irrigated area[2]		Irrigation water application rates (megalitres per hectare of irrigated land)		
	Share in total water use[3] (%)	Growth (%)	Share in total agricultural area (%)	Growth (%)			
	2002-04	1990-92 to 2002-04	2002-04	1990-92 to 2002-04	1990-92	2002-04	Growth (%)
Spain	**65**	**2**	**13**	**12**	**7.0**	**6.4**	**–9**
Australia	55	–43	1	5	7.5	4.1	–45
Austria	5	64	0	0	12.5	20.5	64
Belgium	1	. .	2	6	0.5	1.5	189
Canada	9	20	2	20	3.5	3.6	1
Czech Republic	1	–24	0	–54	0.7	1.2	64
Denmark	25	–33	17	3	0.6	0.4	–35
Finland	2	100	3	0	0.3	0.6	100
France	15	3	9	24	2.3	1.9	–17
Germany	3	–29	3	1	3.3	2.4	–29
Greece	87	33	16	24	4.8	5.1	8
Hungary	3	–65	3	–22	2.3	1.0	–55
Italy	37	. .	17	0	. .	7.7	. .
Japan	65	–4	50	–8	20.6	21.4	4
Korea	58	8	46	–10	14.3	17.4	22
Mexico	74	–10	6	2	9.9	8.7	–12
Netherlands	1	–50	29	1	0.3	0.2	–51
New Zealand	. .	. .	2	14	. .	. .	. .
Poland	1	–77	1	0	3.7	0.9	–77
Portugal	61	–7	16	–4	8.9	8.6	–3
Slovak Republic	4	–69	3	–76	0.5	0.7	31
Sweden	4	–8	2	12	2.1	1.7	–19
Switzerland	. .	. .	2	0	. .	. .	. .
Turkey	87	84	13	33	4.8	6.6	39
United Kingdom	1	–44	1	3	1.0	0.6	–46
United States	40	0	5	8	9.0	8.4	–7
EU15	27	4	10	10	3.6	3.4	–6
OECD	43	6	4	8	8.0	7.5	–7

1. Periods covered vary considerably across countries as do the countries included in the zone aggregates. See Figure 2.2 of *Sustainable Management of Water Resources in Agriculture* for detailed information.
2. Covers areas with irrigation infrastructure, even if the area is not actually irrigated.
3. Total water use covers total water abstractions for public water supply, irrigation and manufacturing industry.

Source: OECD (2010), *OECD Review of Agricultural Policies: Israel 2010* and *Sustainable Management of Water Resources in Agriculture*.

Figure 4.5. **Irrigation by type of technique**

Thousand square kilometres



Source: MARM (2010), *Análisis de los Regadíos Españoles Año 2009*, Ministerio de Medio Ambiente y Medio Rural y Marino.

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reflecting modernisation of irrigation techniques as well as drought conditions in 2008, which reduce water availability especially in irrigation (see above). In 2007, when the degree to which dam reservoirs were filled was similar to long-term average levels, irrigation water use was 7% lower than between 2002 and 2004. Hence an additional reduction in trend water application rates of perhaps similar magnitude as in the period 1990-92 to 2002-04 appears to have occurred after 2004. In some other high-income countries in which the share of irrigation in cultivated land is relatively large or where irrigation accounts for a large share of water consumption (Australia, Denmark, France, Japan and the Netherlands) irrigated surfaces also expanded, although in most cases less than in Spain. Water applications fell more markedly in most of them than in Spain in the period between 1990-92 and 2002-04. In Australia, in particular, water application per square meter fell by almost 50% (Table 4.1), from a level above that observed in Spain to a level well below. This occurred without losses in output, raising the productivity of water use.

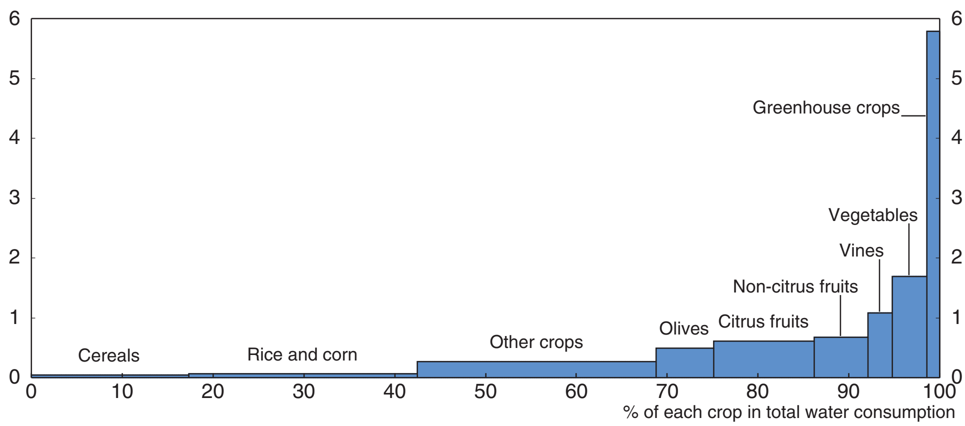
The trend decline in irrigation water input per hectare was modest and was supported by the modernisation of irrigation techniques. Flood irrigation – the least efficient technique[9] – has been declining. It accounted for 31% of irrigated surface and for 42% of water supplied (MARM, 2009c) in 2007. The more efficient drip and sprinkler irrigation covered 68% of the surface and accounted for about 58% of water supplied. The expansion of drip irrigation occurred especially in the southern half of Spain, replacing flood irrigation (MARM, 2010).

There is a risk that water savings obtained from the modernisation of irrigation are used to extend irrigated surface and to switch to more water-intensive produce, offsetting the intended impact of water-saving irrigation technology, which is to free water resources for river flows and the natural habitats they provide, as well as for non-agricultural use. These risks may be reinforced if farmers' incentives are determined by quantity constraints (set in water concessions), with little allocative role of prices. The additional water effectively supplied through more efficient irrigation provides incentives to fully use pre-existing water entitlements. The government has devoted substantial budgetary resources to irrigation modernisation. For example, the *plan de choque de regadíos*, introduced in 2006, provided around 2 billion euros of subsidies for such modernisation. While the subsidies were meant to free resources for other uses, including the environment, observers have noted that it is not clear how resulting water savings have been used (Schmidt and De Stefano, 2010). The water savings that result from the *Plan de Choque de regadíos* may however only be observed with a lag. In any case, relatively inefficient flooding techniques are still widespread in international comparison (OECD, 2010a). In the short term, subsidies for irrigation modernisation could be conditioned on reductions in the amount of water designated in concessions, to ensure water savings resulting from the modernisation can be made available to environmental or other economic use.

The differences in water productivity across crops grown in Spain are large (Figure 4.6), 75% of value added generated in irrigated agriculture consumes just 9% of irrigated water (Table 4.2). The abundant use of irrigation water for crops characterised by low value added and the resulting low productivity of irrigated water is somewhat more marked in those river basins in which water scarcity is less of an issue. However, some of the basins facing the severest scarcity also exhibit substantial water consumption to irrigate low-productivity crops.[10] In the river basins of *Segura, Ebro, Júcar, and Guadalquivir* more than a third of irrigated water generates a net operating surplus worth less than 20 cents per cubic meter. These water basins are also characterised by particularly intensive irrigation for crop-oriented production of meat and other industrial products supplying the domestic market, which the government considers appropriate, *inter alia* to maintain employment and the rural environment.

Figure 4.6. **Productivity, water use and value added of irrigated agriculture**[1]

Gross value added at market prices in euros per cubic metre of water consumed, 2001/02



1. Each rectangle area is proportional to the share of each crop in the value added of irrigated agriculture.

Source: MMA (2007), *El agua en la economía Española: situación y perspectivas, Ministerio de Medio Ambiente.*

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Groundwater-irrigated agriculture makes more productive use of water than surface water-irrigated agriculture. This can be attributed to more stable supply, allowing farmers to earn a more certain return on investments from water-saving irrigation technology, as well as to the fact that groundwater abstractions are mostly private, so farmers have to pay for the full extraction cost, which is higher than prices paid for surface water (Molinero *et al.*, 2008).

The cultivation of crops which generate low value added relative to their water needs (such as cereals) is typically characterised by low efficiency in irrigation, *i.e.* a more extensive use of irrigation techniques that supply more water to the land than the crops

Table 4.2. **Water consumption in irrigation by river basin and profitability range**

Hundred cubic metres

Net operating surplus per cubic metre[1]	< 0.02	0.02-0.2	0.2-0.4	0.4-0.6	0.6-1.0	1-3	> 3	**Total**	Water scarcity rank[2]
Southern basins of Andalucía	97	42	38	11	39	11	93	**331**	1
Segura	54	272	174	271	171	51	19	**1 013**	2
Ebro	401	1 499	768	675	45	23	0	**3 410**	3
Júcar	119	581	391	583	206	12	8	**1 900**	3
Guadalquivir	733	1 151	1 012	443	155	21	16	**3 532**	5
Tajo	299	463	16	47	24	104	0	**954**	6
Guadiana	1 001	496	78	256	62	157	0	**2 051**	7
North	1	2	0	8	0	0	0	**12**	8
Canarias	7	1	0	0	36	32	0	**76**	9
Duero	495	1 202	334	113	11	1	0	**2 158**	9
Total	**3 208**	**5 710**	**2 812**	**2 407**	**751**	**412**	**137**	**15 437**	..
% of consumption	21	37	18	16	5	3	1	100	..
% of gross value added	0	5	11	9	9	20	47	100	..

1. Gross production value net of intermediate input, labour, capital cost and taxes. Guadalquivir includes Guadalete and Barbate.
2. According to Terceño-Gomez *et al.* (2009).

Source: MMA (2007), *El agua en la economía Española: situación y perspectivas*, Ministerio de Medio Ambiente; and A. Terceño-Gomez, J.M. Brotons-Martínez and J.A. Trigueros-Pina (2009), “Evaluación de las necesidades hídricas en España” (Assessment of Water Needs in Spain), *Ingeniería hidráulica en México*, Vol. 24, No. 4, Instituto Mexicano de Tecnología del Agua.

require (such as flood techniques). For example, Maestu and Gómez (2010) show that average irrigation efficiency in the production of low value added crops is often below 70%. By contrast, cultivation of high value added crops achieves efficiency rates of 90%. This situation is also likely, to some extent, to reflect the incentives generated by quantity constraints and the limited allocative role of prices: incentives to raise the technical efficiency may therefore only be strong when the value added generated by additional water input is high. More reliance on market signals, such as cost-reflective water pricing and water trading, would help to generate incentives to use water-saving technology in all agricultural production (see below).

The European Union’s Common Agricultural Policy (CAP) has some influence on these water use patterns. Subsidies under the CAP are still provided for crops which require large volumes of water, such as cereals. Several reforms of the CAP (1992, 2003) have decoupled subsidies from production and have introduced environmental and nature protection regulation. Subsidies have also been made conditional on the adoption of good agricultural practices. Nonetheless, 25% of subsidies in Spain remain coupled to production, encouraging inefficient use of water (Aldaya *et al.*, 2010). These subsidies remain available for irrigation projects developed before 1991 – hence most area under irrigation today. These subsidies should be removed, especially in river basins subject to structural water scarcity, in the interests of more efficient agriculture and water use.

Spain exports high value added agricultural output with low virtual water content,[11] such as citrus fruits, vegetables or olive oil, while it imports water-intensive and low value added crops such as cereals, although domestic production of the latter remains significant. Spain also exports livestock products, which are characterised by a high virtual water content, but this largely reflects the use of water-intensive crops as inputs, which are tradable. Spain's agricultural sector is a net importer of virtual water flows, appropriately, for its climate, but less so than Italy, on a per capita basis.[12]

Other water uses

Households account for about two thirds of abstractions for urban public water (about 10% of the total). Urban water supply increased relatively strongly, mostly related to both increases in per capita income – for example, on account of publicly provided urban amenities, such as parks – while population growth has played a smaller role (Maestu and Gómez, 2010). These water uses stopped growing in 2002 and fell by 7% between 2004 and 2008, a development which is only in part related to drought conditions.[13] In any case, per capita urban water supply remained considerably higher than in most other European countries.[14] The urbanisation process has led to increased concentration of water demand along the Mediterranean coast, where scarcity is more marked. Indeed, within Spain, population growth has been the strongest in some of the driest water basins (MMA, 2007b). In international comparison, per capita household consumption is among the highest in the OECD (OECD, 2006b).[15] Water use by households and services is considerably higher than in most other European countries according to recent data from Eurostat. In view of the role of per capita income, urban water demand may be expected to continue rising if prices do not rise significantly in real terms.

Water demand pressures have also grown in recreational activities linked to tourism, although these are estimated to account for less than 1% of water abstractions (MMA, 2007b). The financial return on water is often higher than on many crops. The tourism industry is estimated to contribute 11% to Spanish GDP. It is geographically highly concentrated and has become a fundamental economic activity in some regions along the Mediterranean.

Gross hydropower production is estimated at about 2.5% of GDP per year (MMA, 2007b). Although its water demand is non-consumptive, it may compete with other uses of water, such as agricultural use, which is often supplied by dam reservoirs. Industrial water abstractions are relatively low per capita in comparison to other OECD countries.

Characteristics of the institutional framework

The river basin authorities (RBAs) are in charge of surface and groundwater management. Their activities are overseen and, to a considerable extent, funded by the central government for those river basin authorities covering the territory of two or more regions (Box 4.2). This institutional framework is appropriate, as most water demand must be satisfied from resources supplied within the same river basin. Cross-basin water transfers raise the cost of supply significantly and can have a substantial environmental impact (see *e.g.* Barcelò, 2009). Several cross-basin water transfers exist and fall under central government competence.

The RBAs have a high degree of autonomy and partly finance themselves through the revenues from water service fees and charges. Users play an important role, mostly through user associations, as their representatives (the *users' assembly*) directly participate in some management tasks and elect members of RBA decision-making boards, contributing a third of their members. In most RBAs, consumptive users, especially from the irrigation sector, dominate the users' representation, reflecting their large weight in consumptive water use. Representation of environmental, recreational use or of the

Box 4.2. **Assignment of responsibilities**

The constitution makes the **central government** responsible for all water policy concerning resources shared by more than one autonomous community. It hence oversees those river basin authorities (RBAs) which straddle the boundaries of two or more autonomous communities. In these cases, it funds transport and supply infrastructure, in part through the RBAs. It sets policy priorities, which are subject to EU directives, in the national hydrological plans covering multi-year periods. The latest National Hydrological Plan, from 2001, was amended in 2004 with the plan AGUA (see below).

The **National Water Council**, which represents national and regional governments as well as representatives of user associations (agriculture, local governments), scientists and environmental non-governmental organisations, provides recommendations on all policies affecting water resources nationally. Central and regional governments usually hold a majority.

River basin authorities (RBAs) (*organismos de cuenca*) manage water resources (including groundwater since 1986) and wastewater releases into natural water streams as well as public storage and long-distance transport infrastructure. They develop and monitor river basin plans and administer water resources, including by granting concessions. The RBAs have a high degree of organisational, functional and budgetary autonomy. In river basins covering the territory of more than one region a **Competent Authorities Committee** co-ordinates all water-relevant policies of the governments and the RBA.

Regional governments are in charge of natural resources, agricultural policies, subject to European Union directives and central government guidelines, as well as of land-use planning. They participate in some cases in the urban supply of water as well as the collection and treatment of wastewater. They fund transport and supply infrastructure, generally for water resources which are not shared across regions, although some recent regional constitutions specify the creation of reserves, drawn from shared river flows. They have oversight over those river basin authorities which are in charge of river flows that do not straddle regional boarders.

Local governments are responsible for the collection and treatment of wastewater and the supply of drinking water. They can offer these services either themselves or through licensed public or private enterprises.

Users are required to create **user associations** when they share a common concession or the same outlet. They can also be obliged to do so if the aquifer they exploit is declared overexploited. The associations establish norms for distribution and control, regulate the use and maintenance of shared hydraulic systems, organise the shared payments and resolve problems among members. They play an important role in the RBAs, to which they assign members in the users' assembly, which in turn elects at least a third of the members of key decision-making units in the RBAs, including the governing board.

scientific or consumer protection associations is often absent. This may create a risk of making RBAs vulnerable to regulatory capture by incumbent, dominant water users.[16] Observers have argued that the RBAs appear to lack staff trained to manage hydrological, ecological and economic issues of water, reflecting their traditional orientation towards the engineering tasks related to expanding and maintaining water supply infrastructure (see *e.g.* Varela Ortega and Hernández-Mora, 2010; Custodio *et al.*, 2010). The participatory approach in the RBAs should be widened to a wider set of stakeholders, such as scientists, representatives of institutions protecting local ecosystems and the leisure services these provide. Such steps may also help to better incorporate the European Union Water Framework's objectives, which include the establishment of a good environmental status for water bodies and require the inclusion of environmental costs of water use in pricing.

Some autonomous regions have developed statutes which claim water resources from shared river basins, which runs counter to this assignment of responsibilities. Since the statutes are approved through legislation at the central government level, there is a risk that such provisions encourage regional decisions on water use which do not take into account the impact on other regions. Generally, competences over water resources which are to a substantial extent shared across regional governments should remain clearly assigned to the central government level and the corresponding river basin authorities.[17]

Pricing of water services has important allocative and funding roles

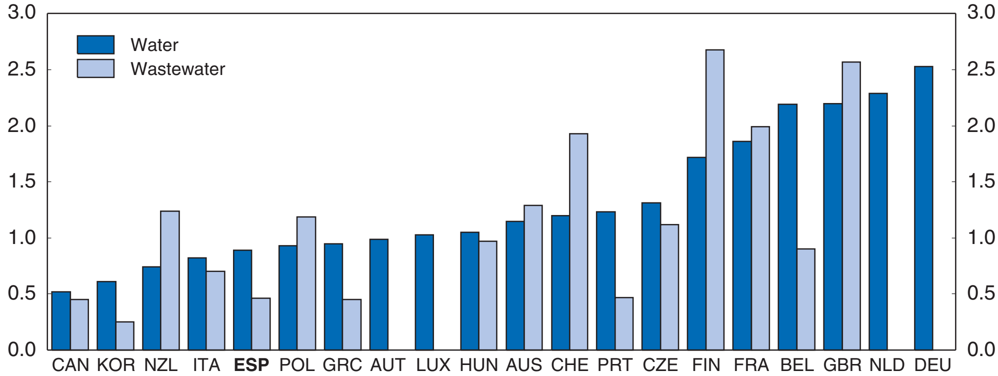
Competition for the use of water resources for human consumption, productive uses, and the support of ecosystems are a challenge for water policies throughout OECD economies. Theoretical and empirical research suggests that price instruments are more cost-effective than implementing non-price conservation programmes in managing demand and need not have more adverse consequences in terms of income redistribution (Olmstead and Stavins, 2008, provide a review of theoretical arguments and policy experience). As with the use of other scarce environmental resources, this is because prices give consumers most freedom to tailor their consumption response, achieving water savings in a way that maximises welfare gains and minimises cost. The demand for water is price-elastic, even in urban use, provided prices rise above minimal levels. For example, a study by the Ministry of Economy and Finance estimated the price elasticity of drinking water demand at –0.6 and the income elasticity at 0.4 in the Júcar River Basin. This estimate may need to be interpreted as a lower bound, as estimated water demand elasticities do not capture long-term responses in full (Garrido and Calatrava, 2009). Indeed, there is evidence that urban water consumption has grown less in those regions which have raised prices more strongly (MMA, 2007b). Concerning agricultural water use, Israel[18] offers an example where substantial increases in water prices (by 65% between 1998 and 2008; OECD, 2010b) have allowed water consumption to fall, while the quantity of crops produced remained steady. Moreover, in Spain, in view of the large water productivity differences observed across different agricultural activities, opportunities for shifting to less water-intensive crops may well arise.

Water saving incentives have been introduced in tariff structures

Progressive tariff structures, which set higher volume tariffs for higher volumes of water consumed, have become the norm in urban and industrial water use. Especially in urban use, this tariff structure creates incentives to save water while protecting basic water needs, especially for low income households. Prices for water services to households have risen modestly in real terms, by about 12%, between 2001 and 2009, although in some of the regions most strongly affected by water scarcity water prices have risen more strongly. A similar development has been observed for industrial prices. Nevertheless, water supply and sewerage service charges for households are lower than in most OECD countries (Figure 4.7). Nonetheless, researchers consider prices of water used by households to recover costs to a larger extent than prices of water used by irrigators (Garrido and Calatrava, 2010; see below).

Figure 4.7. **Unit prices of water and wastewater services to households**[1]

US dollars per cubic metre, 2008



1. Unit prices including taxes. For Belgium and the United Kingdom, data shown are averages of regional data available.

Source: OECD (2010), *Pricing Water Resources and Water and Sanitation Services.*

StatLink http://dx.doi.org/10.1787/888932363900

In agriculture, water pricing based on surface irrigated is still widespread in gravitation-based irrigation. However, in May 2009, a ministerial order introduced the obligation (to be implemented gradually), to meter all water consumption, regardless of the type of consumptive use, although the obligation may not apply to individual final consumers. The government aims to introduce two-part tariffs, with a surface component to reflect fixed infrastructure costs and a per-unit volume component in irrigation on the basis of this newly introduced obligation. Indeed, as pointed out by Garrido and Calatrava (2009), the widespread introduction of metering and volume-related charges is crucial to create incentives to use water economically in the irrigation sector. Metering and volume related charges should be widely introduced, as planned by the government. The introduction of water meters requires time and a substantial investment. The government also removed the subsidised tariffs for electricity in irrigation, leading to an increase of costs by 60%, which resulted in some irrigation being abandoned. This measure is appropriate as subsidies for energy, by reducing pumping costs, contribute to excessive extraction of water (OECD, 2009), especially in the case of groundwater, which has proven difficult for the authorities to control (see below). There has been pressure to reduce the impact of the deregulation on farmers' irrigation costs, although the share of irrigation costs to total costs in farming is often modest, especially where water productivity is relatively high. Tariffs for electricity in irrigation should reflect electricity supply costs in full, as originally intended by the government.

Current legislation prevents prices from fully reflecting the cost of supplying water

Water pricing in Spain follows complex rules, set out in national legislation, with different charges for consumptive and non-consumptive use.[19] By law, prices must cover but not exceed the operating and capital costs from the operation of government-funded supply infrastructures (transport, storage and treatment) as well as administrative costs to the extent that they are directly related to the operation of these infrastructures. Charges for industrial and residential effluents are also set in national law, graded according to the degree of pollution (Garrido and Calatrava, 2010).

While the recovery of costs that results from the scarcity of water[20] is particularly relevant for a country with a semi-arid climate, scarcity and environmental costs cannot be included in water prices over and above operating and capital costs. For example, prices for users drawing on a common water resource pool (such as users located in the same water basin) should, in principle, be priced according to the marginal cost of the costliest water supply source. This may, for example, play a role in those regions where desalination is playing an increasing role in water supply. As marginal costs exceed average costs, prices set according to efficiency principles generate scarcity rents, which current legislation does not permit. The recovery of these costs is also generally required by the EU Water Framework Directive, although it allows exceptions, and the recovery of such costs is thus far not widespread international practice. One way in which scarcity of water could be reflected in water prices would be to link them to indicators of water scarcity in the relevant river basins. Indeed, a system of such indicators that allows the development of water resources to be determined in real time has been developed with the implementation of the latest *National Hydrologic Plan*. Current legislation does not create any room for charging for environmental costs from water abstractions that result from changes in water flows, river morphology, or water quality and their impacts on human health and ecosystems, although this is required by the European Water Framework Directive. Legal limitations on water pricing which impede prices from reflecting scarcity and environmental considerations should be eliminated. Methods will have to be developed to determine valuations for the environmental impact of water abstractions. It is important to improve transparency in water charging, so as to provide information of the different costs involved in the calculation of tariffs, including environmental and scarcity costs.

While pricing mechanisms exist for point pollution to surface waters, none are in place for diffuse pollution of groundwater. One option could be to introduce a tax on the consumption of such pollutants, for example in fertilisers. However, experience with taxes on fertilisers suggests that they must form part of a general policy mix, as the tax may need to be levied at very high levels to be effective in reducing pollution. A tax on nitrogen or on phosphorus would more closely address the environmental externality. Such a tax requires each farm to keep a nutrient budget. This has been done in the Netherlands, with the tax levied on the surplus of nitrogen or phosphorus. Specific action programmes for designated areas vulnerable to nitrate contamination could complement such a measure. Since the consequences of diffuse pollution may be more severe in the driest basins, subsidies to support pollution minimising cultivation, especially in such basins, could help lower nitrate contamination.

Improvements may also need to be considered concerning the recovery of capital costs of infrastructure used in the provision of water services. The legal provisions make it difficult to recover some subsidies in water prices. Moreover, some benefits of infrastructure (such as dams) are considered to have public good characteristics, notably with respect to flood control, resulting in part of the cost not being reflected in prices (MMA, 2007a). While such public good characteristics of infrastructure justify that associated costs are not born in full by water consumers, rigorous criteria to attribute infrastructure to different uses have not been established (CICCP, 2010). In some cases, capital costs are considered to have been repaid in full by past users, so that none are imputed to current users. A government report (MMA, 2007b) points out that low prices reflect the lack of replacement investment in infrastructure in water supply and treatment. Some management costs of the river basin authorities are not included in the cost calculation (MMA, 2007a). The legislation prescribes that capital costs be calculated by applying an interest charge of 4% as well as amortisation rates to nominal historic costs of infrastructure, with only partial adjustment to past inflation.[21] An interest rate of 4% appears low if applied to nominal historic prices. Although the lifetime of such infrastructures is long, the effect of too low interest rates may not be large, in part because of the relatively modest share of upstream infrastructure capital cost in total cost in irrigation.[22]

According to an analysis by the Ministry of Environment (MMA, 2007a), cost recovery is, nonetheless, on average, close to 90% in both urban and agricultural use, albeit with significant regional and local variation. A recent study (Calatrava and Garrido, 2010) estimates that cost recovery is 45%, on account of low recovery of capital costs. A wide gap in the recovery of costs of services to supply water has also been diagnosed by the Spanish College of Infrastructure Engineers (*Colegio de Ingenieros de Caminos, Canales y Puertos,* CICCP, 2010). The discrepancies among estimates suggest that transparency of cost accounting needs to improve. In any case, the revenues generated by current prices are insufficient to fund replacement investment. The risk that needed replacement investment is not carried out is heightened by current tight budgetary policies. Pricing of water services on the basis of historic costs could also encourage stakeholders to oppose replacement investment, as such investment would lead to higher fees later on. Indeed, only a small part of spending by the river basin authorities is recovered. Their revenues from the different charges (excluding charges for effluents) do not even cover current spending on wages, goods and services and financial charges in full, leaving all capital spending uncovered.[23] The method of calculating capital costs should be reviewed and full cost recovery ensured. Consideration should be given to allow prices to generate sufficient revenue to fund replacement investment. Prices should also fully take into account administration and management costs, even if they cannot be attributed to specific infrastructure. Criteria on the attribution of costs to services with public goods characteristics, such as flood control, should be harmonised according to transparent criteria. Higher, cost-reflective prices for irrigation water would also go a long way in reducing groundwater pollution through the use of chemicals. Numerous studies have shown that more efficient water use reduces agricultural pollution (*e.g.* Calatrava and Garrido, 2010).

Data on water services and all related costs need to be accessible nationwide in order to allow an assessment of the extent to which these costs are reflected in prices of individual sources. A recent government report (MMA, 2007a) shows that access to these data needs to be improved. Such steps could help reduce disparities in the assessment of costs and improve acceptance of changes in prices by the general public.

Benchmark regulation of water services offers substantial advantages

Steps to improve the accessibility of data on water services and their costs would also help introducing the benchmarking of costs and quality of provision by water utilities. Using the costs and quality standards achieved by other service providers, in order to set regulated prices for water services of each service provider, generates incentives to improve quality and reduce costs, including through water-saving investments. These incentives are lost if price regulation is based on each provider's own costs. Benchmark regulation is especially attractive if there are numerous local service providers, as is the case, for example, for urban water supply and sewerage services.

The scope for improving the efficiency of service provision appears to be significant. For example, the Spanish College of Infrastructure Engineers has pointed out that costly, modern water treatment capacity is often poorly utilised and managed, resulting in unnecessary pollution. The long-run costs resulting from such inefficiencies are large, as, in the long run, pollution is considered to be the main factor contributing to future increases in the cost of producing drinking water, alongside climate change (OECD, 2006a).

While benchmark competition does not require privatisation of service providers,[24] it makes the provision of services by private enterprises more attractive because it can harness their profit maximisation motive for the reduction of costs and improvements of quality of service while ensuring that monopoly rents do not accrue to service providers. Thereby, it can also help mobilise private investment for water infrastructures at a time when public investment is being cut back while investment needs are large.

Benchmarking is increasingly used to raise efficiency in water services, for example in the United Kingdom and Australia, on the basis of a manageably limited list of cost and quality indicators. A system of benchmarks for water services provided by utilities has also been developed by the American Water Works Association (OECD, 2006a). Availability of data on water service provision and related costs nationwide should be ensured. Consideration should be given to use such data to benchmark costs of service providers and regulate prices and quality of service accordingly.

The concessions regime and the trading of water rights

Consumptive water use requires a government concession which can be granted for up to 75 years, provided the water is considered in the public domain, which is true for all surface waters and part of groundwater resources (see further below). They need to respect the strict priority the law assigns to urban use. Revisions of concessions are possible under some circumstances. The RBAs grant these concessions for free. For irrigation purposes the volume of water made available by these concessions depends on per-hectare quotas and available water resources and so are variable over time. The initial water allocation is hence based on the basis of historically determined water rights and irrigated surface. Economic criteria do not play an important role, although there is some limited scope for changing the initial assignment of water rights through trading (see below).

Regulation limits trading of water concessions

Markets for water entitlements cannot alone resolve environmental, economic and social issues involved in the allocation of water across different uses (OECD, 2009). Effects which are external to the trading partners occur, for example, as a result of alterations in river flows, and the relatively high cost and lack of transport infrastructure limits the scope for trade. The availability of water at different points in space and time has an impact on valuations, further increasing transaction costs (see *e.g.* Dalhuisen *et al.*, 1999). Nonetheless, comprehensive water markets, including for the transfer of long-term water rights, have developed, for example, in the south-west of the United States and in Australia where they have delivered efficiency gains worth several billion dollars (Quentin Grafton *et al.*, 2010). They have helped to allocate increasingly scarce water supplies among competing agricultural, urban, and environmental uses and have encouraged water users to make water-saving investments.

Informal trading of water is common in Spain, especially in agriculture. These trades rely on trust among farmers, are mostly temporary and are typically limited to farmers within an irrigation community, which often holds a water concession shared by its members (Box 4.1). There are virtually no permanent trades with respect to surface water – which is the predominant source – because, unlike groundwater, surface water rights are by law tied to land ownership. Formal trading of water rights beyond the users sharing one concession was allowed in 1999 but remains rare. For example, in the *Segura Basin* formal water trading between 2001 and 2005 amounted to less than 1% of total water consumption (Garrido and Calatrava, 2010). Some RBAs have also have set up *water banks* to encourage the trading of seasonal water rights during drought periods with some success, helping to avoid water rationing in such periods. In these cases RBAs tender water use rights, acting as an intermediary between potential sellers and buyers and have purchased water rights to reach environmental objectives, such as restoring downstream river flows. While such schemes may well be the most cost-effective intervention to improve water supply for environmental purposes (see *e.g.* OECD, 2008), prices paid appear very high in some cases.[25]

The trading of water rights over longer periods of time is subject to regulatory limitations that have impeded market development (Ariño Ortiz and Sastre Beceiro, 2010). For example, the Water Law generally allows owners to sell water rights for uses considered to have at least the same priority, as assigned by the Law, as their own. This provision prevents urban suppliers, for example, from selling water rights to farmers. Trades are capped to the seller's consumption in the years preceding a deal, which may prevent sale of underused concessions. The law also excludes the participation of dealers or traders in the market. Yet the experience on the Canary Islands, where the provisions of the Water Law do not apply and where water markets flourish, suggests that traders have played an important role in brokering mutually beneficial trades. The experience of the Canary Islands also suggests that regulated third party access to transport infrastructures, with regulated tolls, may also facilitate trades at the local level. At present, regulated third party access is only ensured for publicly-owned infrastructure. The binding nature of the restrictions came to the fore during the last drought period, 2005-06, when the government brokered the transfer of water rights across river basins, but had to issue specific enabling legislation in order to do so.

Water banks could be extended to other river basins and restrictions on the trade of water concessions should be eased. For example, caps on sales established on the basis of past consumption could be reviewed, the participation of dealers could be allowed and regulated third-party access to private infrastructure introduced. The requirement not to sell water to users considered to be of lower priority in the law could be reconsidered. On the other hand, owing to the environmental effects that trades may have on parties that are external to the trading partners, trades will need to remain subject to control by the RBAs. In practice, the subsidised rates at which water is made available to farmers in many cases could generate difficulties, because some farmers could be tempted to cash in the present value of the subsidy over the whole period over which a water entitlement is sold, which may be politically undesirable.

Auctioning of newly granted concessions, as well as of concessions which expire could help ensure that water is allocated to its most productive use from the outset. Tendering of water rights could also include non-price criteria in the selection process, such as the implications of water usage for water quality or other environmental impacts. Auctioning and tendering would avoid the inefficiency that results from the allocation of concessions on the basis of past use ("grandfathering") and which may be prolonged by the inherent difficulties in the trading of water rights. It would also ensure that water prices would reflect scarcity as required by the EU Water Framework directive. Moreover, as in the case of other environmental resources, such as greenhouse gas emission permits, auctions generate revenues without recourse to distortive taxation. For example, such revenues could be used to fund the purchases of water rights for environmental objectives which are currently paid for from tax revenues. Auctions could also be applied to non-consumptive uses, such as electricity generation. Hydroelectric generation benefits from rents from the free utilisation of water which could be appropriated by government.[26] Moreover, in periods of drought, local governments have purchased water rights from power generators using tax revenue. A number of water concessions for electricity generation are falling due in the near future. Consideration should be given to auctioning water rights.

Ensuring sustainable groundwater use

The management of groundwater resources in Spain faces a number of particular challenges: since most groundwater is used in agriculture, abstractions occur in a highly decentralised fashion, making their monitoring particularly difficult. In contrast to surface water, groundwater extraction costs are generally fully born by the users, at least in agriculture, as farmers develop and pay for groundwater extraction themselves. However, individual abstraction decisions generate incentives to overexploit the common resource ("tragedy of the commons"). Moreover, the gains in productivity obtained in agriculture from groundwater use are particularly large, greatly outweighing extraction costs (Custodio *et al.*, 2010), reinforcing such incentives. These incentives to overexploit resources will rise further if prices for surface water supplies are raised and the supply of water is expanded to costlier sources such as recycled or desalinated water. An appropriate governance structure for groundwater management is therefore crucial.

The legal tools to stop excessive abstractions are not sufficiently effective

The 1985 Water Law declared all groundwater to be in the public domain, so that subsequently established extractions required a concession from the relevant RBA. This allows the RBAs, in principle, to prevent excessive extractions through quantity rationing. However, owners of wells established before 1985 were given the right either to retain the private property right indefinitely, in which case the extraction characteristics (such as volume or depth of the drilling) could not be modified, or to retain the property right for 50 years, after which the right would be converted into a public concession. In any case, they were required to register their wells with the authorities. Current legislation does not allow for the introduction of a pricing mechanism to internalise the common resource externality.

In order to prevent overexploitation, the water act encourages users to establish associations. Such associations can, for example, gain representation in the decision-making bodies of the RBAs. The RBAs also have broad powers to regulate groundwater use in aquifers that are declared overexploited. For example, in such cases RBAs have to draw up management plans and determine pumping regimes. Moreover, the users of such aquifers are required to create a users' association.

While progress has been made in improving control of excessive groundwater abstractions, this framework has not been sufficiently effective to prevent overexploitation. Many aquifers subject to intensive use have not been declared overexploited (Custodio *et al.*, 2010). The declaration of overexploitation has been subject to political and social debate and the strong representation of established users may generate risks of regulatory capture of the

RBAs (López-Gunn, 2010). The authorities have improved sustainable water use by purchasing water rights in some cases, but at considerable budgetary cost.

Monitoring of abstractions has been weak (López-Gunn, 2010). Registration of groundwater abstraction rights established before 1985 is incomplete, undermining the enforcement of measures to prevent overexploitation. Several programmes were launched to remedy the situation: much progress has been made in registering abstraction rights and cancelling those which are obsolete. But observers note that many private wells remain undeclared and that illegal groundwater abstractions are still frequent (Custodio *et al.*, 2010; Molinero *et al.*, 2008).[27] Limited financial resources from the government hold back such efforts (Custodio *et al.*, 2010) and this situation is being aggravated by budget cuts, calling for increasing revenues from charges and fines. Enforcement also seems to suffer from lack of transparency in sanctioning, generating perceptions of uncertainty among groundwater users, which may reduce deterrence. The monitoring of groundwater abstractions should be reinforced. To this end the RBAs should be endowed with the necessary financial and human resources. In Australia, for example, requirements for drillers to provide well construction data for all wells drilled have been considered a useful tool to improve monitoring (ARMCAN, 1996).

Self regulation through user associations could be reinforced

The associations of aquifer users do not appear to have internalised the common resource externality associated to decentralised groundwater extractions effectively. While hundreds of such associations[28] exist, few are oriented towards the sustainable use of a common resource. Most limit their activities to the joint use of infrastructure. On the other hand, there are notable examples of successful resource managers among these associations, which have set up internal mechanisms of abstraction controls and fines, without requiring the authorities' intervention. As a result of their monitoring and maintenance activities, all associations may well have information advantages concerning water use relative to the administrative authorities. The government collaborates with the National Association of Groundwater Users (AEUAS) to promote collective management, with positive results. A representative of the association participates in the National Water Council. Some observers have noted that a better co-operation between RBAs and such user associations could make it easier for the authorities to gain access to such information (López-Gunn, 2010; Llamas and Martínez-Santos, 2005). These observers have noted that a wider participatory approach with a wide range of users (including those who can represent leisure and environmental benefits), and steps to make users better informed about requirements of sustainable use together with a less confrontational regulatory style, would improve enforcement.

Incentives of associations to co-operate and enforce sustainable groundwater resource use internally could be strengthened by introducing a charge on groundwater abstractions to users in those associations where abstractions are persistently above a sustainable level. As a result, members of such associations would have an incentive to set up effective enforcement mechanisms within their associations and to reveal information concerning illegal and unregistered water abstractions so as to avoid the introduction of such a charge. Legislation should be introduced to allow the introduction of a charge for groundwater abstractions to cover both the cost of administering and enforcing the groundwater rights as well as to internalise the common-resource externality. To create incentives for user associations to manage groundwater resources sustainably, such a charge could be introduced for those aquifers which are persistently not managed in a sustainable fashion.

Box 4.3. **Recommendations**

Ensure an efficient assignment of responsibilities

- Competencies over water resources that are shared to a significant extent across regions should remain clearly assigned to the respective river basin authorities and the central government. In order to ensure a proper co-operation between the different levels of government in the management of water resources, the constitution of the Committees of Competent Authorities should be accelerated.
- Risks of regulatory capture of regulatory authorities should be reduced by widening the participatory approach in water management to a wider set of stakeholders, such as scientists or representatives of institutions protecting local ecosystems and the leisure services these provide. This enhanced participation should take place through the appropriate institutions, including in the river basin authorities.

Adapt existing water concessions to changing conditions

- In the short term, it must be ensured that subsidies for irrigation modernisation are conditioned on reductions in the amount of water that is designated in concessions to ensure that water savings resulting from the modernisation are made available to environmental flows or other economic use.

Improve the pricing of water consumption

- Prices should more fully reflect all the costs involved in the provision of water services. The law should allow the inclusion of environmental and scarcity costs in water prices. Methods need to be developed to determine valuations for the environmental impact of water abstractions.
- The method of calculating capital costs should be reviewed and full cost recovery ensured. Consideration should be given to allow prices to generate sufficient revenue to fund replacement investment. Prices should also fully take into account administration and management costs, even if they cannot be attributed to specific infrastructure. Criteria on the attribution of costs to services with public goods characteristics, such as flood control, should be harmonised according to transparent criteria. Water pricing on the basis of volumes consumed should be extended especially in irrigation.
- Consider linking water prices to the indicators from the new hydrological indicator system.
- Improve the transparency of the costs of water provision services, making them comparable at the national level.
- Such data should be used to benchmark costs of service providers and to use benchmark regulation of the prices and quality of service.

Extend the use of economic instruments to prevent diffuse water pollution

- Consider introducing a tax on the consumption of pollutants, for example a tax on nitrogen or on phosphorus. Such a tax requires each farm to keep a nutrient budget, with the tax levied on the surplus nitrogen or phosphorus. Specific action programmes for designated areas vulnerable to nitrate contamination could complement such a measure. A tax could be accompanied by subsidies to support pollution minimising cultivation, especially in the driest water basins.

Improve the allocation of water concessions

- Water banks could be extended to more river basins. Restrictions on the trade of water concessions should be eased. For example, caps on sales established on the basis of past

Box 4.3. **Recommendations** *(cont.)*

consumption could be reviewed, the participation of dealers could be allowed and regulated third-party access to private infrastructure introduced. The requirement not to sell water to users considered to be of lower priority in the law could be reconsidered.

- Economic instruments, including tenders or auctions, should be used for the assignment of new water concessions and for the replacement of expiring concessions instead of granting them for free.

Improve the management of groundwater resources

- The monitoring of groundwater abstractions should be reinforced. To this end the river basin authorities should be endowed with the necessary financial and human resources. The sanctioning regime could be reviewed by making it more transparent for water users and by ensuring that sanctions are graded and proportionate to the offence.
- Legislation should be introduced to allow the introduction of a charge for groundwater abstractions to cover the cost of administering and enforcing the groundwater rights as well as to internalise the common-resource externality. To create incentives for user associations to manage groundwater resources sustainably, such a charge could be introduced for users of those aquifers which are persistently not managed in a sustainable fashion.

Notes

1. The "quantitatively good state of water resources" is defined as a level of extraction that does not reduce existing reserves and does not generate risks for environmental objectives concerning surface waters.
2. This is also true when the comparison is limited to large countries which report a similarly dense network of measuring stations (France, Germany).
3. Guadalquivir, where the decline is projected to amount to 34%, Cuencas del sur, Segura, Guadiana and Júcar.
4. Evapotranspiration denotes the movement of water to the air, for example from the soil (evaporation) and the loss of water through plant leaves (transpiration).
5. Cross-basin water transfers were ranked equally high as reuse, by water experts in one basin (Segura).
6. These include the prevalence of the public sector in water supply, in part reflecting natural monopoly characteristics and the inability of businesses to fully capture the gains from intellectual property. Moreover, there may be network effects which may tie private spending to existing technologies.
7. These include the Southern Andalusian basins and the Segura, Júcar, Ebro and Guadalquivir basins according to Terceño-Gómez *et al.* (2009). Conversely, most river basins characterised by intense irrigation use are affected by dryness, although the basins of the Guadiana and Duero are exceptions.
8. National data on water consumption in irrigation are available from a Survey conducted by the *Instituto Nacional de Estadística*. These are methodologically not comparable with the data on water abstractions reproduced in Figures 4.1 and 4.2.
9. However, in flood irrigation use of land-levelling techniques are increasingly being used.
10. Terceño-Gómez *et al.* (2009) note that assessments about which basins are considered subject to the most severe stress differ depending on the approach used. They therefore conducted a survey of water experts to generate a consensus view. Their survey includes information on the evolution of water reserves and water demand in recent years, as well as projections of water supply and demand. The results indicated that the river basins subject to most stress are Cuencas del Sur, Segura, Baleares, followed by Ebro, Júcar, Cataluña, Guadalquivir and Tajo.

11. Virtual water content measures the water input required for producing crops.
12. Data from 1997 to 2001 presented by Aldaya *et al.* (2010) and references therein.
13. Urban water supply also fell slightly in 2007, when dam reservoir capacity recovered.
14. In 2006, close to twice as high as in Greece or Portugal, and 50% higher than in the Netherlands.
15. OECD (2006b) shows data from around 2000.
16. Varela Ortega and Hernández-Mora (2010) mention the users' assemblies of the Ebro, Guadiana and Tagus RBAs, in which irrigators contribute at least about half of user representatives, while the other groups are hardly represented. They contrast this with the Catalonian user assemblies.
17. In the case of a few RBAs, only a small share of water resources of a basin is shared and the assignment of competencies to one regional government is not problematic (Duero and Guadalquivir).
18. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
19. A few regions (such as Catalonia), whose river basins are not shared with other regions, are not covered by national legislation and have their own pricing rules.
20. The 1999 amendment of the Water Law introduced a factor of 0.5 to 2, to be applied to tariffs reflecting financial costs, depending on whether consumption exceeds or is below reference levels. But these reference levels are likely to be determined with respect to individual concessions and do not reflect scarcity of the resource.
21. Historic prices are only revalued by the difference between a reference interest rate and 6%, provided the reference rate is above 6%. For example, this has never been the case since 1997.
22. On the other hand, Garrido and Calatrava (2009) argue that raising the imputed interest cost on past capital expenditure from 4 to 5% reduces estimated cost recovery rates substantially.
23. For example, in 2007, the RBAs' current expenditure amounted to 210 million euros, revenues, excluding charges for effluents, to about 180 million euros. Capital expenditure amounted to about 710 million euros.
24. Studies of efficiency of municipal services have not revealed efficiency advantages of private enterprises, if anything the opposite appears to be the case (Benito *et al.*, 2010).
25. Garrido and Calatrava (2010) report a purchase price of effectively 2-4 euros per cubic meter, a multiple of even the highest prices paid for water by farmers.
26. A specific tax on hydroelectric generation is applied for example in Switzerland to appropriate some of the rents associated to water use.
27. For example, authors of research on the upper *Guadiana* basin suggest that "probably a majority" of groundwater abstractions were illegal and overexploitation has entailed the drying-off of protected wetland areas (Llamas and Martínez-Santos, 2005).
28. These can be associations of private or public law.

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Glossary

ALMP	Active labour market programme
CAP	Common agricultural policy
CO_2	Carbon dioxide
CPFF	*Consejo de Política Fiscal y Financiera* (Fiscal and financial policy council)
ECB	European Central Bank
EP	*Contrato temporal de fomento del empleo* (temporary employment promotion contract)
EPL	Employment protection legislation
EU	European Union
EU15	EU members prior to enlargement in 2004
FROB	*Fondo de reestructuración ordenada bancaria* (Fund for the Orderly Restructuring of Banks)
GDP	Gross domestic product
HICP	Harmonised index of consumer prices
hm^3	Cubic hectometre (equals 1 million metres)
IMF	International Monetary Fund
IPS	Institutional systems of protection
IRR	Internal rate of return
MFP	Multifactor productivity
NPL	Non-performing loan
PEP	*Contrato de fomento de la contratación indefinida* (permanent employment promotion contract)
PES	Public employment service
PMR	Product market regulation
R&D	Research and development
RBA	River basin authority
SME	Small and medium-sized enterprises
SSC	Social security contribution
VAT	Value added tax
VET	Vocational education and training
VRR	VAT revenue ratio

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OECD PUBLISHING, 2, rue André-Pascal, 75775 PARIS CEDEX 16
(10 2010 19 1 P) ISBN 978-92-64-08996-9 – No. 57697 2010

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United States, September 2010

Please cite this publication as:

OECD (2010), *OECD Economic Surveys: Spain 2010*, OECD Publishing.
http://dx.doi.org/10.1787/eco_surveys-esp-2010-en

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Volume 2010/19
December 2010

ISSN 0376-6438
2010 SUBSCRIPTION (18 ISSUES)
ISSN 1995-3364
SUBSCRIPTION BY COUNTRY

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ISBN 978-92-64-08996-9
10 2010 19 1 P
9 789264 089969