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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 Portugal were reviewed by the Committee on 8 March 2006. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 21 March 2006.

The Secretariat's draft report was prepared for the Committee by Bénédicte Larre, Stéphanie Guichard and David Haugh under the supervision of Willi Leibfritz.

The previous Survey of Portugal was issued in November 2004.

BASIC STATISTICS OF PORTUGAL

THE LAND

Area (thousand sq. km)	91.9	Major cities, resident population in thousands (2001)	
		Greater Lisbon	1 947
		Greater Porto	1 261

THE PEOPLE

Population 2004 (thousands)	10 502	Civilian labour force (2004, thousands)	5 452
Number of inhabitants per sq. km	114	Civilian employment (2004, thousands)	5 094
Net natural increase 2003-2004 (thousands)	7.3	As a percentage of total	
Net increase 2003-2004 (thousands)	54.6	Agriculture	12.1
		Industry (including construction)	31.4
		Services	56.5

PRODUCTION

Gross domestic product, 2004 (million of euros)	142 843	Gross domestic product at factor cost by origin (2004, per cent of total)	
Gross domestic product per head, 2004 (euros)	13 940	Agriculture	3.5
Gross fixed capital formation, 2004		Industry (including construction)	26.6
Per cent of GDP	22.4	Services	70.9

THE GOVERNMENT

Public consumption, 2004, per cent of GDP	20.4	Composition of Parliament, 20 Feb. 2005	
Public investment, 2004		(Number of seats)	
per cent of GDP	3.1	Socialist Party (PS)	121
per cent of total investment	13.8	Social Democratic Party (PSD)	75
Total general government current revenue		Unitarian Democratic Coalition (CDU)	14
2004, per cent of GDP	43.0	People's Party (PP)	12
		Leftwing Block (BE)	8
		Total	230

FOREIGN TRADE

Exports of goods and services		Imports of goods and services	
2004, per cent of GDP	28.5	2004, per cent of GDP	37.1
Main exports as a percentage of commodities exports, 2004 (SITC)		Main imports as a percentage of commodities imports, 2004 (SITC)	
Transport equipment	15.6	Transport equipment	13.8
Machinery and equipment	18.5	Machinery and equipment	20.0
Textiles, leather, clothing	19.8	Textiles, leather, clothing	8.2
Other manufactured products	31.9	Other manufactured products	32.2

THE CURRENCY

Monetary unit : Euro		Currency unit per $, average of daily figures:	
		Year 2005	0.8046
		April 2006	0.8142

Executive summary

Portugal's economic performance has deteriorated markedly since 2000, with the slowdown turning out to be more severe and prolonged than in most other OECD countries. This lack of resilience reveals structural weaknesses. Meanwhile, with low growth and weak control of public expenditure, the fiscal deficit has remained at unsustainably high levels, reaching close to 6% of GDP in 2005. Despite the existence of a large output gap, the high fiscal deficit leaves no room to stimulate demand. The government has embarked on a strategy that aims at consolidating public finances and enhancing growth and it is important to strengthen these efforts. Without more wage restraint and higher productivity growth, there is a clear risk that Portugal's competitiveness continues to deteriorate and the income gap vis-à-vis *the OECD average widens further.*

Immediate and forceful implementation of the planned spending reforms is needed to put public finances on a sustainable path and improve efficiency. *The key is to carry through the structural reforms initiated to address the chronic weak control of public spending, including the public administration reform, the ambitious health reform that started under the previous government and the overhaul of the civil servants pension system. To ensure fiscal sustainability over the longer run, additional measures are needed, in particular a fundamental reform of the general pension system, the adoption of binding medium-term expenditure ceilings and more systematic cost-benefit assessment of public investment. In addition, further simplification of the tax system would help both to raise more revenue and to foster economic growth.*

Improving the educational achievements of the younger generation is a priority. *Portugal has a considerable human capital lag within the OECD, and the EU in particular. Continued action to improve and diversify education services is required, with a view to reducing the number of early school leavers who have limited competences. Efforts are needed to support the effective use by schools of their (recently devolved) autonomy as this would help adapting teaching to local needs and supporting low achievers. It would also be desirable to increase the awareness of students on the high returns to schooling.*

Modernizing the economy through tertiary education, training and innovation would raise productivity and help Portugal cope with global competition. *Portugal needs to continue shifting away from traditional labour-intensive products into higher value-added activities. The tertiary education system needs to be rationalised and diversified, and its scientific capacity strengthened. The system's financing should be reviewed to ensure a more equitable access to a broader public. The participation of adults in training activities should be stimulated, by targeting support towards needy groups, enhancing the quality of training courses and evaluating the effectiveness of existing programmes. Innovation in firms and research institutions should be enhanced by developing the links between them and by ensuring the effectiveness of tax incentives.*

Creating a more dynamic business environment, enhancing competition and facilitating labour market adjustments are also needed to achieve a higher growth path. *While the regulatory framework for doing business has improved markedly, further measures are needed to ease firm creation and facilitate the exit of poorly performing firms. Strengthening product market competition throughout the economy would raise efficiency and improve consumer welfare by reducing prices. Portugal's labour market*

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is characterized by traditionally high participation rates but a high share of short-term contracts in total employment. Easing labour market regulations would help to foster job creation on regular contracts and facilitate the reallocation of labour to its more productive use and should be accompanied by ensuring adequate job-search support and providing well-designed activation services to help transitions to employment.

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Assessment and recommendations

Following nearly two decades of strong economic growth, Portugal's performance deteriorated after 2000, and prospects remain subdued

Following a period of convergence to EU average living standards, the catching-up process has stalled since 2000. Real GDP growth averaged less than 1% between 2000 and 2005 and the on-going recovery remains fragile, with annual growth expected to remain below 2% in 2006-07. Slow growth in this decade reflects both cyclical and structural weaknesses which are mutually reinforcing. The accumulated output gap since the beginning of the slowdown is among the largest in the euro area and potential output growth is estimated to be currently about half what it was in the second half of the 1990s. Trend productivity growth in the business sector which, at 3% per year, was above average until the late 1990s has fallen to around 1% in 2004-05, constrained by the protracted period of low productive investment. Portugal's export performance has deteriorated in a global environment where competition has become harsher. Major new players in world trade with lower labour costs are competing in Portugal's traditional product markets, while new EU members are increasingly specializing in the medium- and higher-technology products, where Portugal is also developing. Thus, Portugal did not take full advantage of the opportunities created by membership in the EU and the euro area to enhance growth on a sustainable basis. Losses in export market shares have been aggravated by the appreciation of the real exchange rate (as measured by Portuguese unit labour costs relative to those in its trading partners), while a real depreciation through greater wage restraint could have been expected (and would have been desirable) in a period of large slack in demand. As a result of economic weakness and lax policies in the past, the fiscal deficit reached close to 6% of GDP in 2005, an unsustainably high level.

The key policy objective is to regain a higher growth path, which requires addressing a variety of multi-faceted issues…

In view of the large output gap, some support from macroeconomic policies would in principle be appropriate. However, given the other macroeconomic imbalances, there is no room to stimulate demand. The high fiscal deficit does not allow expansionary fiscal policy, or even letting automatic stabilisers fully operate; and short-term interest rates are set by the ECB according to conditions prevailing in the entire euro area. The only macroeconomic tool left to underpin the recovery (on which the government has, however, only limited influence as it is in the hands of social partners) is reversing the appreciation of the real exchange rate by additional wage restraint, thereby helping to crowd-in net exports, and preventing a further rise in unemployment. Experience in other countries has shown that a clear understanding of the seriousness of the situation and consensus among social partners can significantly accelerate the process of restoring competitiveness. At this critical juncture for the Portuguese economy, structural reforms to revive growth are all the more important. Consolidation of public finances is another requirement. It is not only urgent to satisfy European fiscal rules but is also desirable for its own sake, as the effects on growth should be positive over the medium and longer term, at least compared with the alternative of running high deficits which undermine confidence, lead to recurrent fiscal crises, and thereby induce instability. Consolidation would create room for automatic stabilisers to operate fully during future downturns, which would enhance resilience. Consolidation is also required to prepare for the ageing of the population. Finally, if consolidation is associated with improving cost-efficiency and the quality of public services, it would also enhance growth by contributing to a friendlier business environment.

... by acting forcefully on a broad front

Given its low level of productivity Portugal has a large potential for catching-up. Low human capital, heavy administrative burdens on firms, weak innovative performance of the business sector, restrictive labour market regulations and lack of competition in some sectors have become major impediments to productivity growth in the new international environment. Overall, Portugal must address four main challenges:

- Putting public finances on a sustainable path.
- Improving the performance of the education system, at the primary and secondary levels and in vocational training.
- Modernizing the economy to face global competition by enhancing tertiary education, training and innovation, and by continuing to give high priority to science and technology development.
- Creating a more dynamic business environment, strengthening competition and improving the functioning of the labour market.

Continuity and effective implementation of the required reform strategy are key to ensure sizeable and durable results.

The 2002-04 fiscal consolidation efforts were insufficient

Consolidation efforts in 2002-04 failed to durably reduce the fiscal deficit below the Stability and Growth Pact threshold of 3% of GDP, and Portugal was again submitted to the excessive deficit procedure with a deficit of close to 6% of GDP in 2005. New efforts are required and in an even more depressed economic environment than four years ago. The strategy followed between 2002 and 2004 combined a rise in the indirect tax rate, emergency spending cuts or freezes and one-off measures with more in-depth medium-term measures on the spending side. This strategy was appropriate to deal with the urgency of the situation while addressing Portugal's weak expenditure control with measures that typically take time to show results. However, the reliance on one-off-measures may have reduced the sense of emergency and commitment to undertake the painful structural reforms required. Implementation was too slow, in particular as concerned the much needed public administration reform. Emergency measures were able to control the wage bill over the short term but other expenditure items, especially pensions, continued to increase strongly. Taxes were lowered rapidly once the deficit was below 3%, even though the underlying situation had not improved. Despite some consolidation measures the deficit increased to close to 6% of GDP

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in 2005, partly because of the decision to stop one-off measures. The government that came to office in early 2005 is committed to bringing the deficit to below 3% of GDP by 2008. The strategy combines short-term measures to control the wage bill with tax hikes and more in-depth spending reforms. In addition, the control of budget execution is being strengthened. A major difference with the 2002-04 programme is the decision to stop relying on one-off measures in a context where Portugal has been granted more time to get its deficit under 3% of GDP.

A strong commitment to proceed with in-depth reforms on the spending side is required

Success in achieving the consolidation targets will depend heavily on progress in spending reforms. A fundamental reform of the civil servants pension system brings it gradually in line with the general pension system. Further positive steps have been taken to continue the ambitious health reform initiated under the previous administration. The government has also reengaged a reform of public administration that includes many commendable measures, such as alignment of legal conditions of employment, career and remuneration in the public administration with the private sector and a major restructuring of central administration. The reforms already approved or under preparation are going in the right direction and, if fully implemented, are likely to succeed in bringing the deficit below 3% of GDP over the next few years. Although fiscal consolidation could have a short-term cost in terms of activity, experience elsewhere shows that this cost can be minimized if consolidation is credible, which implies resolute and consistent action that delivers solid results. *Therefore it is important that the authorities remain committed to achieving the projected fiscal consolidation without slippage and that the planned structural reforms on the spending side are launched quickly and implemented forcefully.* Ongoing steps to improve statistical information on spending at all levels should continue. Consideration should also be given to improving the fiscal framework drawing from successful experiences in other OECD countries, in particular adopting medium-term expenditure ceilings that are consistent with the desired consolidation path and strengthening the role of independent economic advisors councils in the preparation of the budget and the assessment of final outcomes.

Further steps are necessary to ensure long-term fiscal sustainability…

The consolidation programme nevertheless needs to be complemented by additional reforms to strengthen expenditure control. A key pending reform is the reform of the general pension system to ensure its viability. The system is under strong pressures arising not only from the ageing population but also from its maturation and the high replacement rates granted to pensioners. Updated official simulations show that the system will likely be in deficit by 2007, and could be financed thereafter for only 7 years by the pension trust fund. Therefore action is urgent. A working group has been appointed and some of its proposals are being considered, such as introducing incentives to increase the effective retirement age. *It is important that action in this area is not delayed. more radical changes should be envisaged, such as adjusting replacement rates and/or the retirement age for changes in life expectancy and limiting the costs of transition by a relatively rapid phasing-in.*

… and on the revenue side, the priority should be to make the tax system simpler and more stable

On the revenue side, there is no room to lower taxes before the public finances have been put on a sustainable path. Nevertheless, there is ample room for further simplification of the tax regime, which is as important for competitiveness as lowering tax rates and can help to improve the efficiency of tax collection. Already, the tax administration has started to deliver results in terms of tax collection over the past two years. The abolition of some tax benefits and exemptions in the 2006 budget is also an appropriate step. However the creation of a new personal income tax bracket, with a higher marginal tax rate, complicates the system and creates additional disincentives to work. *A tax reform that really simplifies the tax system is needed. In the meantime, refraining from revising the tax legislation from one year to the next, as has happened in recent years, would make the tax system easier to manage and would facilitate long-term decision-making by economic agents. Indeed, re-establishing macroeconomic stability will be the key to ensuring that the necessary structural reforms to improve education, the labour market and the business environment can be successfully pursued.*

The performance of the education system needs to improve

Despite substantial progress in the past decades, a large share of the young leave school before completing upper secondary education and the achievements of students in PISA are among the poorest in the OECD. In addition, the education system has not been able to limit the repetition of low education from one generation to the next and to foster inter-generational mobility as fast as other countries. The factors behind the poor performance of the education system have been well identified. Below average outcomes do not result from a lack of spending on education, but from the low efficiency of the system.

The authorities strategy goes in the right direction

The authorities key objective is to reduce school failure and early drop-outs by increasing the quality and relevance of education services without endangering fiscal consolidation. *Efficiency gains are being sought by closing very small schools and making* better *use of teaching staff, but more needs to be done to rationalise the system and achieve better quality without spending more*. To reduce incentives to dropouts, the social contribution rebate for companies that hire young workers has been eliminated unless they have completed 12 years at school or are in training. New programmes have been launched to improve teachers training in core topics, modernise the curricula, strengthen vocational and technological streams and make them more attractive, and provide individualised support to low achievers. The new administration has announced its determination to go further in giving autonomy to schools ("putting schools centre stage") which is in line with the growing presumption that the devolution of responsibilities to schools brings efficiency.

… but additional measures are necessary to reap potential gains from school autonomy

The recently launched programmes rely on initiatives that should be taken at the school level to adapt curricula and teaching practices to local needs and support students at risk of school failure.

However, schools have made little use of their autonomy so far. This reflects for a large part the lack of leadership in schools that stems in particular from the way school principals are selected and trained, and the lack of incentives and information for teachers to play their new role. *More needs to be done to address these issues and ensure an effective use of recently devolved autonomy by schools and teachers. Efforts are needed to improve evaluation systems and channel the results to both the providers of educational services (teachers, school principals) and the users (children and parents).*

Better awareness of parents and students of the returns to finishing school would also contribute to raising education outcomes

The relatively low value of school for society at large is also an issue. In an economy that until recently created plenty of unskilled jobs, education was not highly valued by the labour market. And still today, although private returns to education are high, the often uneducated and poor parents and their children do not always fully appreciate potential benefits of more education. *Raising the perceived value of schooling for the students and their families is desirable. Revamped education and career guidance services could play an instrumental role by increasing awareness that more schooling can provide high long-term private returns. They could at the same time ensure a better school-to-work transition for those who decide to leave school and inform them of the possibilities to reengage in studies later on.*

To face global competition the economy needs modernizing

To enjoy durably stronger growth, Portugal needs to move away from traditional labour-intensive low value-added products and increase its specialisation in medium- and high-tech activities. This requires fostering the development of a knowledge-based economy. Improvements in initial education outcomes are not enough to meet the rising and changing demand for skills in today's global environment. Attention needs to be given to the coverage and quality of tertiary education, which are below standard, in particular as regards science and technology, and hence impede the diffusion of knowledge. Finally, Portugal lags in business R&D and innovation, including not only the creation of new products, services or processes, but also the diffusion of existing knowledge. *To facilitate the dissemination of knowledge and practices across manufacturing and service sectors and improve the innovation performance overall, specific innovation policies and, more important, framework conditions have to be improved.*

This requires providing better tertiary education to a wider public…

Considering both public and private universities and polytechnics, there is overcapacity in higher education. At the same time, access to tertiary education remains very selective. The system is not fully utilised and needs to be re-organised and rationalised, by merging or closing down some institutions and streamlining disciplines taught, in view of challenges for the future. *At the higher education level, policies should focus on increasing success rates. This should be achieved by a diversification of education streams and opportunities and quality improvements gained through enhanced scientific capacity and stronger autonomy and accountability of institutions.* While supporting higher education is a budget priority in Portugal, the low growth of the economy and the fiscal consolidation requirements clearly limit the amounts which can be spent. Adequate financing could be provided by a combination of budget resources, tuition fees and alliances with enterprises or research centres. *Raising fees for tertiary education while developing the loan system (perhaps with repayment contingent on post-graduation income) would be more equitable and raise efficiency.* Paying higher tuition fees would make students attentive to the quality and subjects being supplied, thereby putting pressure on higher-education institutions to respond to their needs. Moreover the additional resources would allow the quality of staff and research to be raised, even as coverage broadens.

… and upgrading the workforce competences through adult training…

Once they have entered active life, few adults participate in training activities. Yet returns to training appear to be large in terms of higher income and lower unemployment risk; and firms would also benefit from training workers. *There is no need to develop new services, but existing instruments should be rationalised.* A comprehensive approach to lifelong learning is desirable, making better use of existing education capacity. To ensure greater participation in lifelong learning, an important step has been accomplished with the development of the national certification system; but its application is only beginning. *Government action should focus on extending the application of the certification system, becoming more involved in quality assurance and stimulating demand for training by improving information and guidance about opportunities.The government should implement its plan to provide funding directly to the demand side, including firms and entrepreneurial associations, rather than the traditional financing of operators (supply), and should target its support to low-opportunity individuals.*

… as well as fostering innovation through more effective R&D policies

To correct the lag in innovation activity, specific policies can play a role. *To enhance their effectiveness, a more systemic approach and greater continuity in policy making are required. It would be desirable to continue to give high priority to R&D, building on the existing system of scientific centres (mostly university-based), and by fostering international partnerships in science and technology and higher education. Also, the effectiveness of spending should be regularly assessed.* To strengthen business R&D, where Portugal's weakness is the most obvious, the government provides support through the reintroduction of tax incentives and is promoting the development of the venture capital market. Provided a fair degree of stability and predictability over time is ensured, public support can have positive effects, though international experience suggests that the gains to be expected are generally limited. *It is crucial to move ahead to develop strategic cooperation between the private and public sectors as envisaged in the Technological Plan. Much progress is needed to strengthen the links between public research and industry, by facilitating the mobility of researchers, and by providing financial encouragement to the development of scientific networks and partnerships with the international business world.*

Creating a more dynamic business environment would also encourage innovation and contribute to overall productivity growth

There has been a significant improvement in reducing the burden of regulations. The cost of doing business in Portugal has come down and red tape has been cut, but other countries have made

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rapid progress as well. The benchmark for the Portuguese regulatory policy environment should now be the settings in the best-practice countries rather than those of the average EU countries, where regulations tend to remain excessive. Recent action to ease registration requirements for business creation is appropriate. *Further measures are desirable to further reduce the cost of firm creation, cut administrative overheads of running a business and facilitate the exit of poorly performing companies.* A more dynamic business environment would help Portuguese firms' competitiveness and enhance the attractiveness of the country as a location for foreign direct investment, thereby, as in the 1990s, offering opportunities for learning from international best practices.

More growth could also be obtained by further strengthening competition…

Portugal has made much progress in enhancing competition, which could be a major source for economic growth. But in a number of areas, in particular in network industries, more competition is needed. In the energy sector, the structure and regulations provide little incentive to improve efficiency and pass on lower costs to consumers, so that prices remain high by international standards. For instance, electricity prices for industry are among the highest in the EU, except for large consumers where they are at the EU average. The government has started the restructuring of the energy sector which foresees a pro-competitive re-deployment of electricity and gas assets. An agreement has been reached with all shareholders of the companies involved, including some major European energy players. *This restructuring has the potential to raise efficiency and improve consumer welfare by reducing prices and should be carried through and accompanied by appropriate measures to facilitate consumer switching.* In the telecommunications sector, where the incumbent holds a dominant position on several markets, and despite action by the sector regulator to reduce interconnection charges, more needs to be done to ensure a level playing field. *A key step to developing competition in the sector would be to separate ownership of the fixed telephony and cable networks.*

… and by easing labour market regulations that inhibit the expansion of regular employment and impede workers' mobility

Portugal's labour market is characterized by traditionally high participation, but over the past years unemployment has risen to high levels. As in many other OECD countries with relatively restrictive employment legislation, firms have favoured the use of fixed-term contracts, aggravating problems of a dual labour market, which raises equity concerns and tends to reduce incentives for firms to provide training. Although the recent changes to the labour legislation have several commendable elements, such as increasing flexibility in collective agreements at the firm level, the overall setting for employment security remains too strict and procedures are cumbersome. International experience shows that this hampers labour mobility, inhibits the creation of permanent jobs, lengthens unemployment spells and also slows the pace of innovation within firms. *More measures are needed, including easing dismissal rules and simplifying procedures for dismissals which would it make more attractive for employers to offer regular contracts and raise the dynamic efficiency of the economy. On the labour supply side, it would be desirable to review the unemployment and related benefit system – and its interaction with the tax system – to achieve the appropriate balance between providing income support for job seekers and preserving work incentives. This should involve both enhancing* *the effectiveness of active labour market policies and tightening up benefit programmes and also requires improving the performance of the Public Employment Service (PES).*

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Chapter 1

Economic performance and key challenges

Following a period of catching up between the mid-1980s and 2000, the process came to a sudden end. Output growth was weak in 2005. Although some recovery is expected in 2006, short-term prospects are subdued. At the same time the fiscal deficit remains at an unsustainably high level. To consolidate the budget and regain a higher growth path, a number of structural measures need to be taken. This chapter reviews four challenges: i) *putting public finances on a sustainable path;* ii) *improving the performance of the education system;* iii) *modernizing the economy by enhancing tertiary education, training and innovation; and* iv) *creating a more dynamic business environment through structural reforms in product and labour markets.*

The protracted period of slow growth that followed the 2001 downturn has raised concerns that the underlying forces which were driving growth over the previous 15 years or so are no longer at work. Portugal's trade specialisation, its human capital and its regulatory environment in both labour and product markets now appear to be inadequate to allow rapid adjustment to the changing international environment. Portugal finds itself at a disadvantage, in particular *vis-à-vis* new EU members and emerging economies in Asia or North Africa. At the same time, the persistent weakness of public finances, which has reached a critical point, calls for immediate correction. This chapter first provides an overview of Portugal's economic performance over the recent past and then identifies the key challenges to correct macroeconomic imbalances and regain a higher growth path.

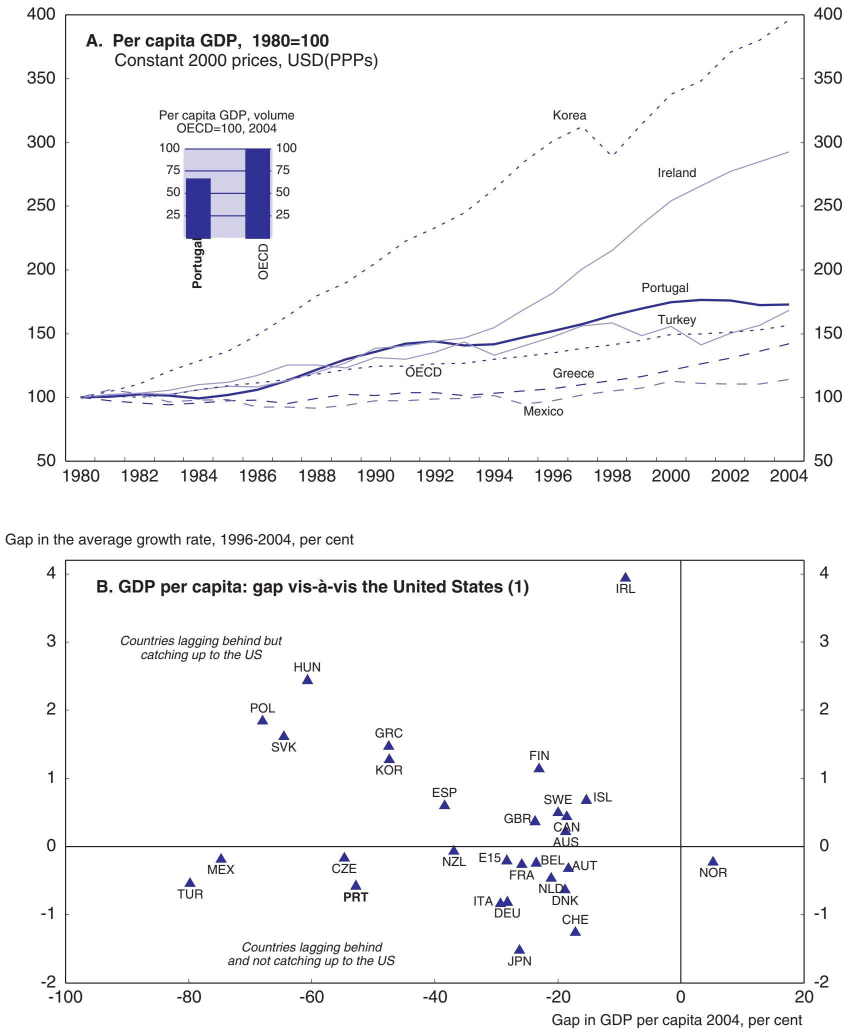
Recent performance: the catching up process has stalled

A protracted period of slow growth

The past five years have brought an abrupt change in Portugal's economic performance. GDP growth averaged 3½ per cent from the mid-1980s, when Portugal joined the European Union, until 2000, allowing some catching-up in living standards with the European Union average.[1] Portugal's per capita income, which was less than 60% of the OECD (and EU15) average in 1986, peaked at 70% in the early 2000s. Both productivity gains and higher labour inputs contributed to this growth performance. However, the economic downturn which started in 2001 turned into a protracted slow growth period and real GDP growth averaged less than 1% per year from 2000 to 2005. As a consequence, the income gap has widened relative to the OECD and EU15 averages, and in particular to high income countries such as the United States and Ireland (Figure 1.1).[2] For a large part, recent weak growth reflects cyclical factors: the output gap is estimated to have turned around from a positive 3¼ per cent of potential GDP in 2000 to a negative 3½ per cent in 2005, so that the average gap over the period is among the largest in the euro area (Figure 1.2). But structural factors have also contributed to the weak performance and average potential output growth has halved from 3% in the late 1990s to an estimated1½ per cent in 2004-05.[3]

The downturn which started after 2001 was more severe in Portugal than in the rest of the euro area, bottoming out in mid 2003; it was followed by a moderate and still fragile recovery (Figure 1.3). Thus, the degree of resilience of the Portuguese economy to shocks is now lower than in the past, and it is lower than in most other OECD countries, including in the euro area.[4] While private consumption increased steadily from mid 2003, export volumes continued to display sub-par performance, with renewed losses in export market shares. The level of private investment (including housing) declined by 15% since 2001, albeit from high levels. The unemployment rate, which was below the euro area average during most of the 1990s, rose from 4% at the end of the upswing in 2001 to nearly 8% by end 2005, approaching the euro area average. The long period of slack, together with the appreciation of the euro since 2002, has further reduced inflation, which is now close to the euro area average.

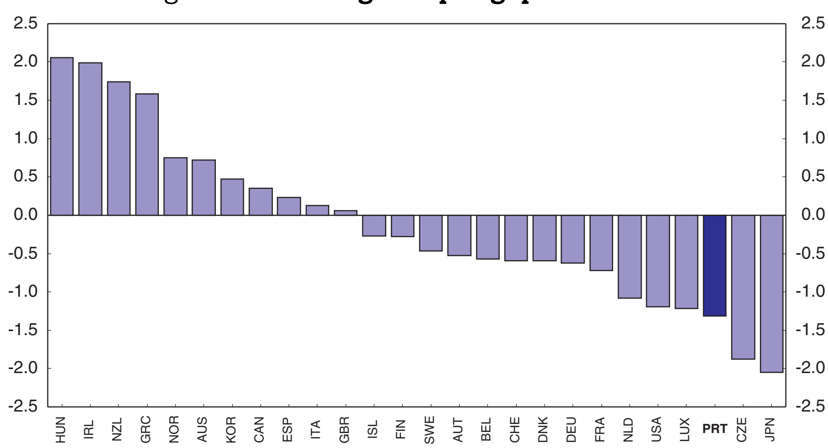
Figure 1.1. **Portugal's growth performance in comparison**



1. The average growth rate of GDP per capita is calculated on constant 2000 prices USD (PPPs) over the period 1996-2004. The level of GDP per capita is for 2004.

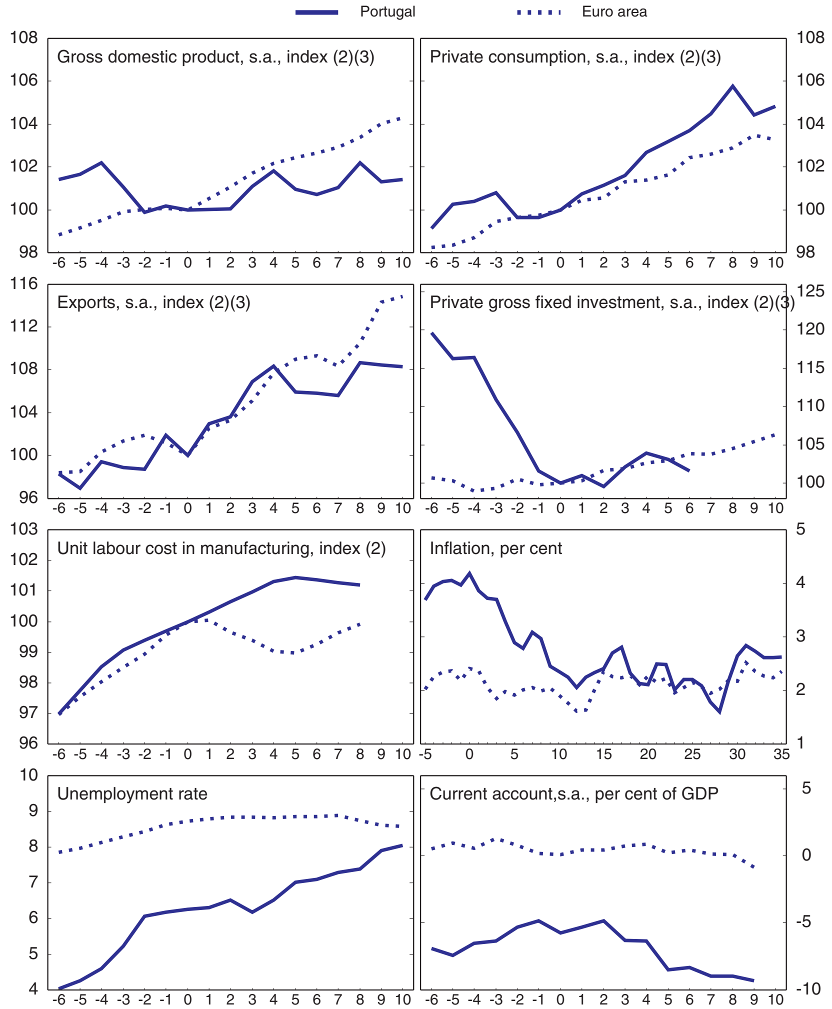
Source: OECD, Main Economic Indicators database; OECD, National Accounts database.

Figure 1.2. **Average output gaps 2001-2005**



Source: OECD, *Economic Outlook No. 78*.

Figure 1.3. **The last cycle: Portugal and the euro area**



1. 0 = cycle trough set as Q2 2003 for quarterly data and as February 2003 for monthly data.
2. Index = 100 in the trough period.
3. At 2000 prices.

Source: OECD, *Economic Outlook No. 78*; Analytical database, Main Economic Indicators database.

Portugal's weak export performance raises concern...

Portuguese exporters have been losing market shares during most of the period since the mid-1990s, except for the 2001-03 period. In the past 2 years, the cumulative losses amounted to close to 8% (Figure 1.4, Panel A). Considering the period since the mid-1990s overall, Portugal's weak export performance reflects to some extent both the inadequate specialisation of its productive sector and losses in its traditional markets. Constant market share analysis conducted on intra-community trade in the 1997-2003 period shows that the product composition of Portuguese exports contributed to the poor performance, as growth of Portugal's main markets was below average and firms were unable to reorient exports to the more dynamic markets on a sufficient scale.[5] There has been a shift in Portugal's trade specialisation for some years now, but competition has become harsher, including from new EU members which are increasingly specializing in medium- and high-technology products.[6] Portuguese firms have remained largely specialized in the production of labour-intensive and low value-added traditional goods but these markets are now more and more lost to new major players with lower labour costs, such as China. Losses in individual product markets contributed by a little more than half to the export market share loss over that period, pointing to deterioration in price/cost competitiveness *vis-à-vis* its competitors in these markets (Cabral, 2004).

… and has been aggravated by the appreciation of the real exchange rate

Labour costs in manufacturing continue to be much lower in Portugal than in higher income OECD countries, reflecting largely the lower level of productivity.[7] Yet, during the past 10 years or so, wages have increased more rapidly than productivity, including during the 2000s with stagnation in productivity associated with sticky wages, so that unit labour costs rose steadily from 1996 to 2004, outpacing rises in Portugal's main trading partners. As a result, the real exchange rate, measured by relative unit labour costs in manufacturing, appreciated steadily, causing a continuous erosion of Portugal's competitiveness since 1996 (Figure 1.4 Panel A). During the 1990s, firms were benefiting from high demand growth and the lowering of interest rates in the run-up to EMU membership, so that they were able to absorb higher costs, but over the past years firms' profit margins have been squeezed. At present, Portugal not only faces harsher competition in product markets but it is also competing with low cost countries inside and outside the EU for FDI inflows that have helped capital accumulation and technology transfers over past decades. In this new environment, the stock of inward FDI grew at a slower pace in 2003-05 than in earlier years[8].

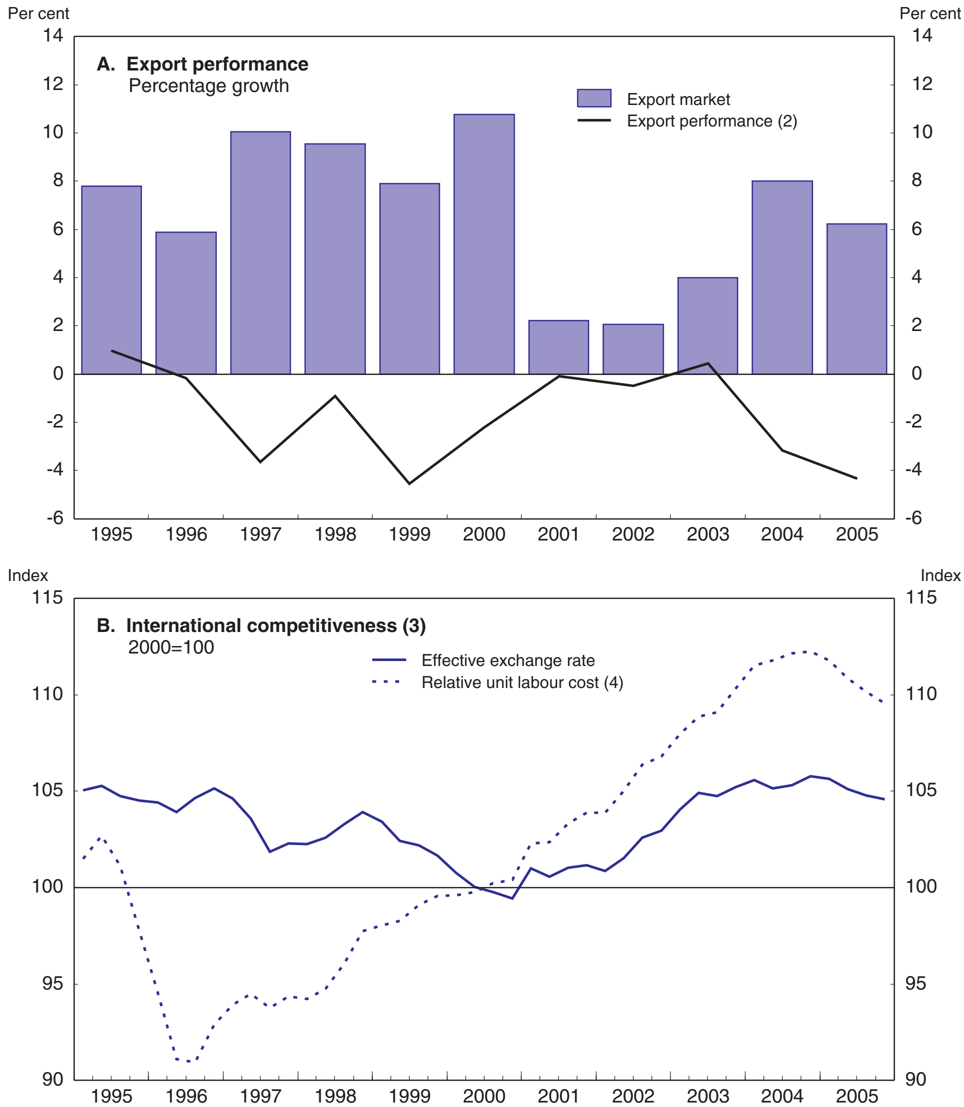
Public finances remain at risk

The pronounced weakness of the economy during the past years has put additional pressures on public finances and made the authorities' task to consolidate the budget more difficult. The fiscal deficit was not cut sufficiently during the previous boom, amounting to almost 3% of GDP (the Maastricht threshold) when the boom ended in 2000, which left no room for letting automatic stabilisers operate effectively during the subsequent downturn. In addition, the lack of continuity in fiscal consolidation efforts may have undermined confidence: spending controls in 2002-04 were accompanied by a tax reduction, but after spending slippage occurred in 2005, the VAT rate had to be raised to prevent an even higher deficit. Delays in implementing announced policies in some areas may also have lowered credibility in government. In 2005, when the incoming administration decided to stop relying on one-off revenue measures, the general government deficit had reached a new peak of close to 6% of GDP (Figure 1.5). Portugal is not alone in breaching EU fiscal rules, but its performance regarding fiscal control has long been inadequate.[9] At the same time its growth prospects are among the weakest.

Labour productivity growth declined significantly

Portugal's low growth over the past years thus appears to have been the result of various negative demand and supply shocks, which mutually reinforced one another and are therefore difficult to disentangle. Some of these were external (such as the more competitive international environment but also the oil price shock), while others (such as the real appreciation and the fact that there is no room for fiscal policy to stabilize activity in the downturn) reflected domestic factors. The decomposition of GDP per capita growth shows that the sharp deceleration of productivity growth has been a key factor in accounting for the poor output growth performance. Labour productivity came to a virtual standstill between 2000 and 2005, compared with average growth of more than 3% in the

Figure 1.4. **Export performance and competitiveness indicators**[1]



1. 2005 data are OECD estimates.
2. Volume index of Portugal's goods and services exports divided by volume index of Portugal's export market.
3. Indices in common currency. An increase indicates a loss in competitiveness.
4. Manufacturing.

second half of the 1990s (Table 1.1). While part of this slowdown was due to cyclical factors, trend productivity growth is also estimated to have declined sharply, in the business sector in particular (Figure 1.6). Productivity growth has been constrained by low investment leading to a smaller contribution from the change in the capital-labour ratio (capital deepening effect) and a smaller rate of total factor productivity growth. Output growth has also been affected by the reduction in the utilisation of labour potential (employment rate and the numbers of hours worked).

The low level of labour productivity per hour worked in Portugal, only about half that in the United States, is the main explanation for the income gap *vis-à-vis* higher income OECD countries and the European Union average (Figure 1.7). Portugal's productivity gap

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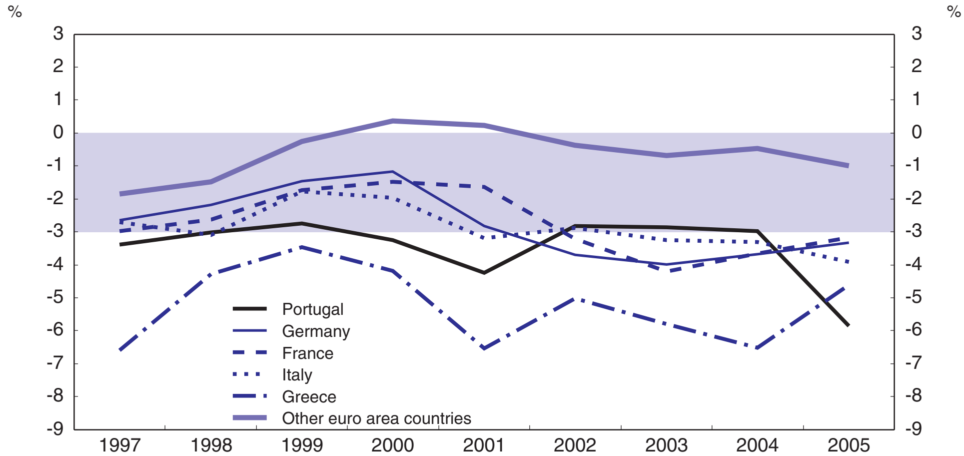
Figure 1.5. **Fiscal balances in Portugal and other euro area countries**[1]

As per cent of GDP

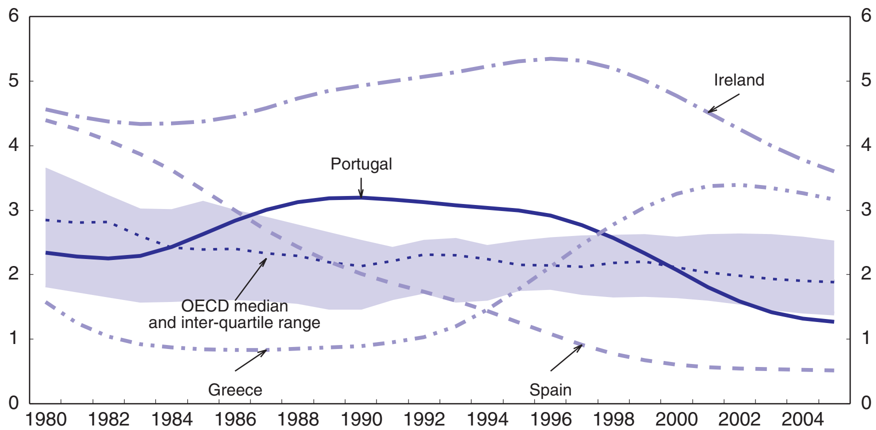


1. Excluding UMTS licence proceeds.

Source: OECD, *Economic Outlook No. 78*; Analytical database.

Figure 1.6. **Trend productivity growth**

Output per hour worked in the business sector ; percentage growth[1]



1. Adjusted for the business cycle using a Hodrick-Prescott filter with lambda 100.

Source: OECD, *Economic Outlook No. 78*; Analytical database.

can be explained to some extent by the structure of the economy with its relatively high share of relatively low-skilled labour intensive sectors. An important factor explaining why many firms remain stuck in low-productivity activities and do not adopt more widely ICT and other modern techniques is the relatively low educational level of the population at large. During the 1990s, the human capital gap did not prevent strong growth because the economy benefited from large infrastructure investment, often co-financed by EU funds, and large private investment. Overall investment rates were among the highest in the OECD. Infrastructure appears to be generally adequate in transport and communication; but as in several other OECD countries, environmental infrastructure, such as waste and

Table 1.1. **Sources of growth in real GDP per capita: selected OECD countries**[1]

Average of annual changes in per cent

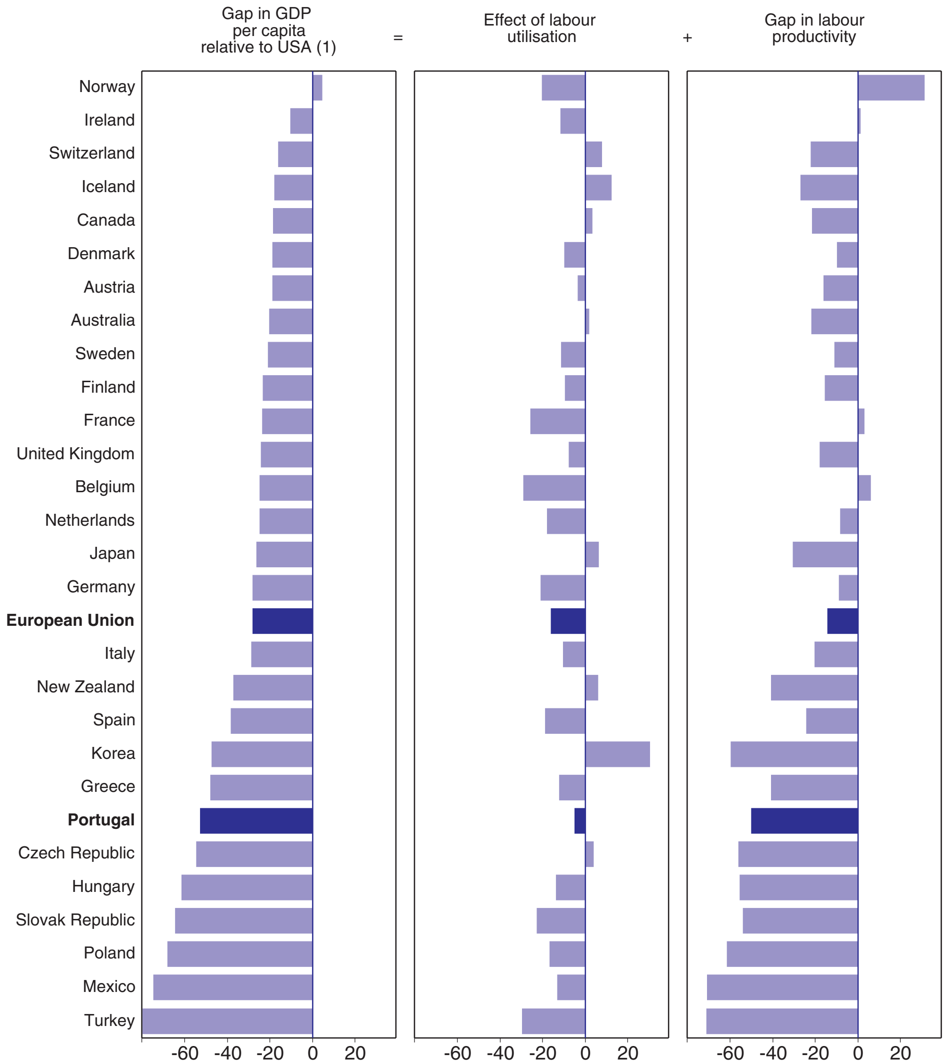
	Portugal			Greece			Ireland			Spain			Hungary		Poland		Czech Republic		Slovak Republic	
	1995/1987	2000/1995	2005/2000	1995/1987	2000/1995	2005/2000	1995/1987	2000/1995	2005/2000	1995/1987	2000/1995	2005/2000	2000/1995	2005/2000	2000/1995	2005/2000	2000/1995	2005/2000	2000/1995	2005/2000
Real GDP	3.3	4.1	0.6	1.8	3.4	4.3	5.3	9.7	5.0	2.6	4.1	3.1	4.0	4.1	5.4	3.0	1.5	3.6	3.7	4.9
Population	–0.2	0.4	0.7	0.8	0.5	0.3	0.2	1.0	1.6	0.2	0.4	1.5	–0.2	–0.2	–0.2	–0.1	–0.1	–0.1	0.1	. .
Real GDP per capita	**3.5**	**3.6**	**–0.1**	**1.0**	**2.9**	**3.9**	**5.1**	**8.6**	**3.3**	**2.4**	**3.6**	**1.6**	**4.3**	**4.4**	**5.6**	**3.0**	**1.6**	**3.7**	**3.5**	**. .**
Labour input	0.9	0.0	–0.6	0.1	0.1	0.8	0.9	2.7	–0.1	0.4	3.9	2.3	1.9	. .	–0.2	–1.2	–0.6	–0.7	–0.4	. .
Contribution from:																				
Working-age population																				
(share of total population)	0.6	–0.1	–0.0	0.0	–0.2	–0.1	0.8	0.8	0.4	0.5	0.3	0.2	0.1	. .	0.7	0.6	0.5	0.4	0.7	. .
Labour force participation																				
(share of working-age population)	0.6	0.7	0.6	0.2	0.9	0.6	0.1	1.6	0.4	0.4	1.7	1.9	0.5	0.6	–0.2	–1.2	–0.3	–0.2	0.0	–0.1
Employment																				
(share of labour force)	0.0	0.7	–0.9	–0.2	–0.6	0.3	0.7	1.8	–0.1	–0.3	1.9	0.4	0.9	–0.2	–0.6	–0.6	–1.0	0.2	–1.3	0.4
Hours worked per employed	–0.3	–1.2	–0.2	0.2	0.0	0.1	–0.6	–1.5	–0.8	–0.2	–0.0	–0.2	0.3	. .	0.0	0.0	0.3	–1.1	0.1	–1.1
Labour productivity	2.5	3.6	0.5	0.9	2.8	3.1	4.1	5.7	3.4	2.0	–0.2	–0.6	2.3	. .	5.8	4.3	2.2	4.4	4.0	5.0

1. Growth in real GDP per capita is decomposed into growth in labour input variables and growth in labour productivity. Growth in labour input (hours per population) is obtained following the identity HRs/POP = POPT/POP * LF/POPT (participation rate) * ET/LF (employment rate) * HRS; while labour productivity is defined as: GDPV/ (ET*HRS). Estimates for 2005, based on *OECD Economic Outlook No. 78* for all variables, except population, which is extrapolated from 2004.

Source: OECD, *Economic Outlook No. 78;* Analytical database.

Figure 1.7. **Breaking down the income gap**

Percentage point differences in GDP per person in USD (PPPs) relative to the United States, 2004



1. The gap in GDP per capita is equal to the sum of the three components shown. The effect of labour utilisation is based on total hours worked per capita. Productivity is measured on a per-hour basis.

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

sewage treatment facilities is insufficient, creating a risk that growth in production and consumption put excessive pressure on the environment (Annex 1.A3).

Looking ahead, economic growth is likely to lag the euro area average

Real GDP growth in Portugal was only 0.3% on average in 2005, compared with 1.4% in the euro area. Prospects are for some recovery in 2006, but only a moderate expansion overall in 2006 and 2007 Private domestic demand is expected to be the main driver of growth, with business investment in particular recovering in 2007 (Box 1.1). An important factor affecting the strength of the recovery is how the expected growth in Europe translates into demand for Portuguese exports. In the short term, this hinges on Portugal's relative real wage developments, but as important will be that the adjustment of the

Box 1.1. **The OECD's short-term projections for Portugal**

Private consumption, is expected to continue to grow, although being somewhat less buoyant than in 2004-05 because of tax hikes and the high level of households' indebtedness (Cardoso, 2005). Business investment is set to recover with a lag, but unless reforms are undertaken in labour and product markets, the increase is expected to be limited. Real export growth is expected to pick up, though falling short of export market growth, so that Portugal is expected to continue loosing market shares. As terms of trade are expected to deteriorate less than in 2005, the trade balance is likely to stop widening and the current account deficit could be around 9% of GDP, close to its 2005 level. Although narrowing, the negative output gap will still be large at end-2007 and unemployment is unlikely to start decreasing before late in 2007. As a result, the inflation rate could fall below the euro area average. Wages are gradually slowing, but greater wage restraint would be desirable to improve Portugal's competitiveness.

Because of the need for urgent and strong budget consolidation, no stimulus to growth is expected from government spending. The positive impact on confidence from reducing the deficit is expected to attenuate the possible short-term contractionary effects on aggregate demand (see Chapter 2). The public sector deficit is expected to decline from 6% of GDP in 2005 to 4½ per cent of GDP in 2007. While the economic recovery will help to reduce the deficit, most of the improvement is due to the decline in the structural deficit. The main uncertainty in the projections relates to public finances and in particular the government's ability to achieve the targeted restraint on current expenditure.

Table 1.2. **Medium-term projections for Portugal and other OECD countries**

	Annual average rates of change		
	1995-2000	2000-05	2005-2010
Portugal			
Real GDP	4.1	0.6	1.7
Population	0.4	0.7	0.3
Real GDP per capita	3.6	–0.1	1.4
Potential GDP	2.9	2.0	1.2
Potential employment	1.0	1.0	0.4
Potential labour productivity	1.9	1.1	0.9
Euro area[1]			
Real GDP	2.7	1.4	2.1
Population	0.3	0.4	0.3
Real GDP per capita	2.4	0.9	1.8
Potential GDP	2.1	2.0	1.9
Potential employment	0.8	0.8	0.4
Potential labour productivity	1.2	1.2	1.5
United States			
Real GDP	4.1	2.6	3.3
Population	1.2	1.0	0.9
Real GDP per capita	2.9	1.6	2.4
Potential GDP	3.5	2.9	3.3
Potential employment	1.4	0.8	0.9
Potential labour productivity	2.0	2.1	2.3

1. Excluding Luxembourg.

Source: OECD, *Economic Outlook No. 78;* Analytical database; and Demographic Projections.

productive structure and modernization of the economy continue. Portugal's GDP growth, estimated by the OECD at 1¾ per cent on average between 2005 and 2010, would remain below the euro area average so that the gap in living standards would widen further (Table 1.2).[10] But these projections are based on unchanged policies and on the technical assumption that the output gap will be closed at the end of the period, and they should therefore be characterised as a scenario and not as a forecast.

Further reforms to enhance productivity are required

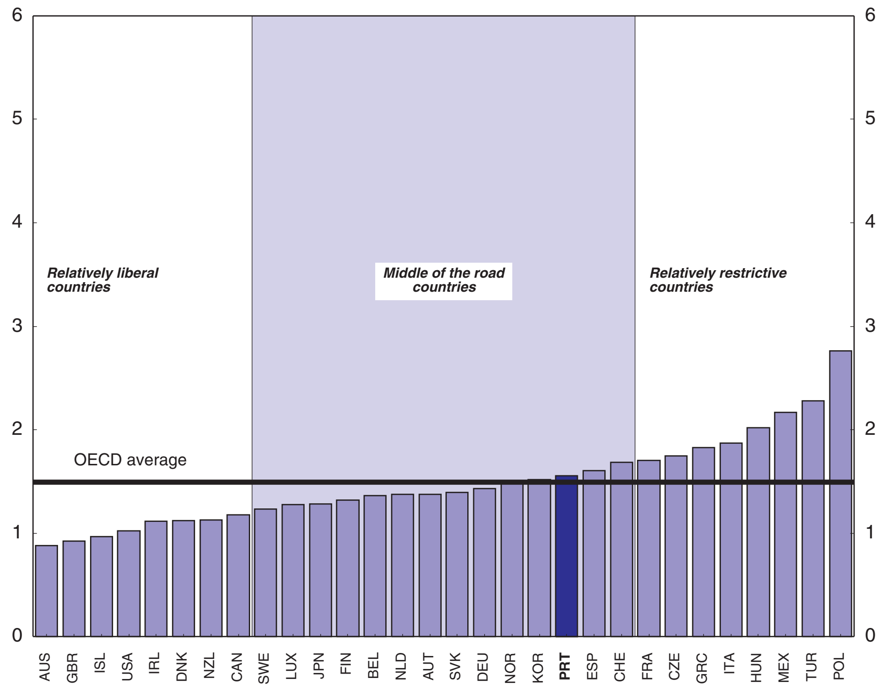
The slowdown in the economy's growth potential over the past five years is disappointing. The low level of productivity and the fact that many firms, in particular SME's, are far from the international technology frontier in their sectors offers a potential for further catching-up that should be exploited. Furthermore, Portugal has made great efforts to follow EU directives in the past, concerning privatisation and deregulation. On a number of indicators identified in the OECD's *Going for Growth* study, it has made progress and by 2003 it was in an average position in the OECD with respect to regulations in several areas.[11] Regarding the overall degree of product market regulation, it was among "middle of the road countries" (Figure 1.8). Several other OECD countries, even among EU members, might not have a lower degree of product market regulation than Portugal, but a number of them have less regulated labour markets, lower labour costs or lower average tax rates. Furthermore, Portugal does not have the advantage of geographic location that some of the new EU members from Central Europe enjoy; it no longer has the relatively low-wage advantage it used to enjoy. Therefore, in the new global environment, an average performance regarding the regulatory framework is no longer sufficient for Portugal to remain competitive and sustain a high growth path.

Portugal has a sound financial sector, which should facilitate the restructuring of the economy. However, in recent years savings have mainly been channelled to the public sector and to credit to households rather than to the restructuring of firms and venture capital. Entrepreneurial activity typically has been high, as illustrated by a high entry rate for new firms. However, Portuguese firms overall appear to find it difficult to adopt more modern production techniques and organisational practices and to market new products effectively. The deficit in competences and qualifications is likely to be slowing the modernization of the economy.

A growth rate below 2% over the period 2005-10, as foreseen by the OECD is insufficient to raise Portugal's living standards towards higher income OECD countries, and to narrow the income gap with the euro area average. Instead, under unchanged policies, Portugal's income gap with these countries is expected to widen. Portugal's main challenge is thus to implement appropriate reforms, to boost productivity and output growth on a sustained basis in order to stop and reverse the current trend of a widening income gap.

Figure 1.8. **Product market regulation**

Restrictiveness of economy-wide product market regulation, 2003
Index 0-6 scale from least to most restrictive



Source: OECD, Product Market Regulation database.

Key challenges for regaining a higher growth path

Strong policy action is required to address current macroeconomic problems and re-establish competitiveness. Portugal faces a number of challenges to strengthen the on-going recovery and allow a renewed process of catching-up. Recent developments and the medium-term outlook point to the need of pressing ahead with fiscal consolidation, while speeding up reforms to release Portugal's growth potential. In particular four specific challenges will have to be faced:

- Putting public finances on a sustainable path;
- Improving the performance of the education system;
- Modernizing the economy by enhancing tertiary education, adult training and innovation;
- Creating a more dynamic business environment through structural reforms in product and labour markets.

Putting public finances on a sustainable path

Acute fiscal problems have led to short-term oriented policy making. Fiscal consolidation has been insufficient and the protracted slowdown has exacerbated fiscal problems. Putting public finances on a sustainable path will support growth in the longer run by improving confidence and creating room for automatic stabilisers to operate fully during downturns. If it is pursued in a credible way, short-term demand costs could be limited.

The authorities are aware of the need to act rapidly. The December 2005 Stability and Growth Programme which targets a deficit of 2.6% of GDP by 2008 illustrates their commitment to fiscal consolidation. A major difference from previous fiscal policies is the decision to stop relying on one-off measures. As in other euro area countries, past use of one-off measures proved effective in reducing the deficit temporarily, but it lessened the sense of urgency for in-depth reforms. The current strategy combines short-term measures to control the public sector wage bill (wage restraint and freeze in automatic career progression) with tax hikes and more in-depth spending reforms: a reform of the overgenerous public sector pension system has already been approved; further positive steps have been taken to continue the health reform launched in 2002; and the public administration reform is gaining momentum. Some of the reforms envisaged are likely to face political resistance and technical difficulties. The authorities should not waver in their commitment to pursue consolidation. Fiscal consolidation is an immediate policy priority requiring both short-term actions and a greater focus on longer-term problems. Chapter 2 reviews fiscal policy issues overall and discusses the following points:

- Moving forward with in-depth spending reforms which have been announced, including the public administration reform, achieving spending control in social security, continuing the health care reform, strengthening control on local government and autonomous agencies.
- Taking further steps to ensure long-term fiscal sustainability: overhauling the general pension regime so as to better cope with the ageing of the population; further strengthening spending restraint and improving efficiency; simplifying the tax system and broadening the tax base.

Improving the performance of the education system

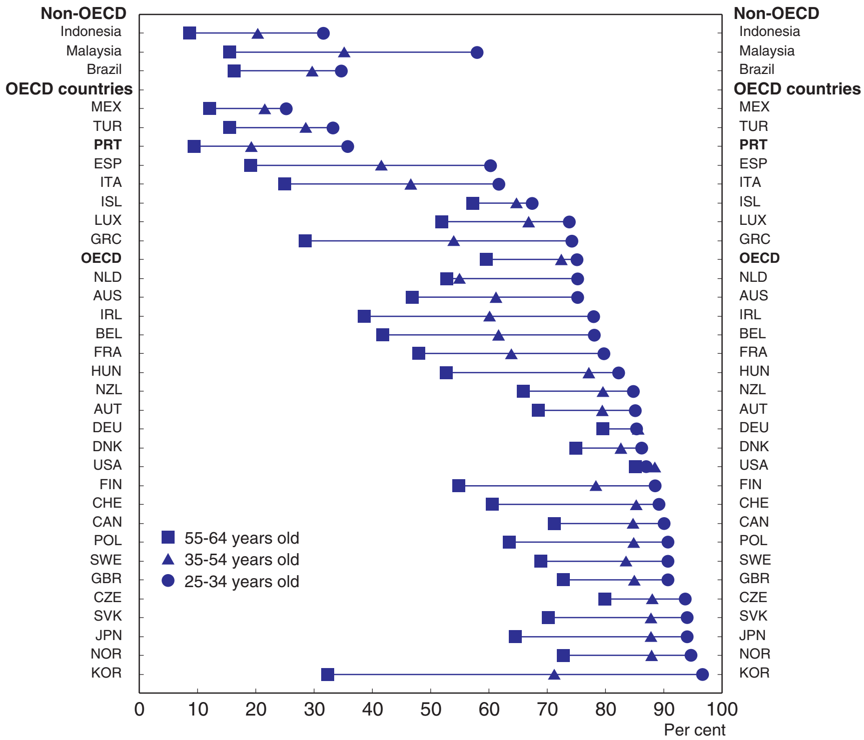
To reduce the income gap, policy makers should address the factors that are hampering productivity growth, among which the shortage in human capital is prominent. Upgrading competences is essential, even if this will inevitably take time to bear fruits. The number of years of schooling of the working-age population is among the lowest in the OECD, with Portugal ranking next to Turkey and Mexico, and there has been only limited progress between one generation and the next (in contrast with Spain, Greece or Korea) (Figure 1.9). The quality of schooling, defined as the impact of the education system on the academic, economic and social capabilities of students, is also low. The drop-out rates are among the highest in the OECD, while performance of the children who stay in school is one of the weakest, as measured by international literacy surveys. These below-average outcomes do not result from a lack of spending.

Because it takes time until the return of better education bears fruit in terms of higher economic growth, measures to improve education services should not be delayed. The problem of early drop outs has been so acute that appropriate measures to make schooling in secondary levels more attractive and relevant are likely to deliver results quickly. Current labour market slack should compound the positive impact of such measures, helping to keep children in school by reducing work opportunities. Chapter 3 reviews factors behind the current performance of the education services, assesses the on-going reforms and makes specific recommendations to address the following issues:

- Increasing further the coverage of secondary education, to ensure that students leave school with a minimum qualification, by raising awareness on the high returns to education and providing more diversified and relevant curricula.

Figure 1.9. **Educational attainment of the working-age population**

Population with at least an upper-secondary qualification, 2003[1]



1. Per cent of each age group. 2002 for Czech Republic, Iceland, Italy and Netherlands

Source: OECD, Labour Market Statistics database.

- Improving the quality of education services at all levels, making better use of already high public resources and ensuring an effective use of school autonomy.

Modernizing the economy by enhancing tertiary education, adult training and innovation

There is a growing recognition that knowledge, as opposed merely to skills, has become more important to remain competitive in modern societies. The need to strengthen Portugal's knowledge base is also reinforced by the increasing competition from new EU members and several emerging countries in skill-intensive activities. Portugal's shift in trade specialization in favour of technology and capital intensive products which started in the 1990s, largely driven by foreign direct investment projects, must continue. To gain momentum this process requires upgrading human capital. An overall better-educated population is also more able to adapt to technological change and is generally more innovative. Initial education is not enough to meet the rising and changing demand for competences. Adult education is also important to re-train the workforce; yet, in Portugal time spent on adult training is among the lowest in Europe.

The low level of R&D and innovation in Portugal should also be tackled. OECD studies demonstrate that there are clear links between human capital, R&D and productivity. With respect to R&D Portugal ranks also well below the OECD average, especially in business R&D intensity. This lag is all the more worrying as cross-country evidence has shown that spending in this sector has the most direct long-run influence on economic growth (OECD 2003).

The authorities have embarked on an ambitious strategy to enhance productivity by strengthening Portugal's position in the area of science and technology. The current strategy favours increasing the role of government, including by raising higher education outlays and providing public support to technological and scientific development. Implementation is demanding, particularly in terms of ensuring high cost-effectiveness of public resources. Chapter 4 discusses the following three main areas for improving human capital and innovation:

- Enhancing the quality and diversity of tertiary education by rationalising the system, strengthening scientific capacity, introducing more competition and setting a more equitable and efficient financing system.
- Upgrading the competences of the workforce by increasing participation in adult training and increasing the benefits from training.
- Fostering innovation in firms and research institutions, by strengthening the links between them, developing close cooperation between the private and public sectors and ensuring the effectiveness of existing tax incentives.

Creating a more dynamic business environment and improving the functioning of the labour market

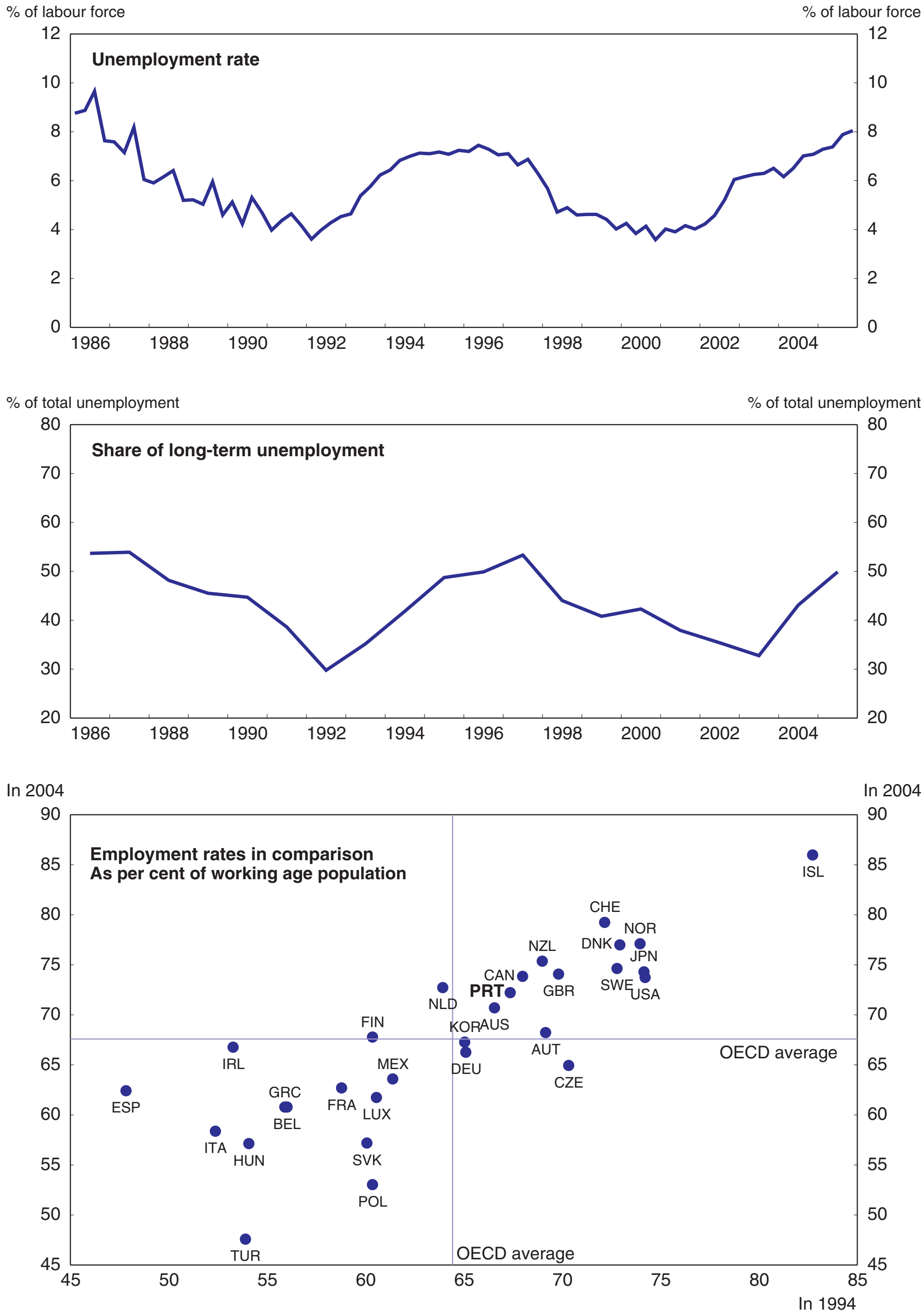
Improving framework conditions would help foster the development of more modern and innovative activities. Measures which aim at further reducing the cost of doing business can help boost productivity growth. It would foster the creation of small innovative firms and their subsequent development and the expansion of larger firms and also attract additional foreign firms.

The new international environment requires effective action to further open product and labour markets. More intense competition is the best way to strengthen innovation overall, thereby contributing to raise productivity growth. In network industries more competition would lead to a lowering of still high prices, notably in telecommunications and electricity, which would lower input costs, hence improve the business sectors' competitiveness.

Emerging problems in the labour market also call for policy action. Unemployment rates have risen to relatively high levels by Portugal's standards. In addition, not surprisingly at this point in the cycle, the share of long-term unemployed has increased (Figure 1.10). In this context and in the new low inflation environment, real wages are not responding sufficiently to lower productivity growth, in contrast with the higher degree of flexibility observed in past downturns. Employment rates continue to be high and employment is stagnant; but job creation has increasingly been concentrated on workers with temporary contracts, while the share of regular workers has been declining. These developments reflect strict employment protection legislation (EPL) for regular workers.[12] This makes entrepreneurs reluctant to hire regular workers in more uncertain periods. The existence of a dual labour market is not only a source of inefficiencies, it also tends to reduce incentives for firms to provide training and raises concerns in terms of social hardship.

Progress has been uneven in opening product and labour markets. Regarding product market regulations, where measures have allowed Portugal to maintain an overall average position within the OECD, it is important to continue with deregulation. On the labour market front, EPL – particularly restrictive for individual dismissals – was not fully tackled by the 2003 Labour Code reform. Measures are required to facilitate the reallocation of labour to its most productive use. It will be necessary to review the current legislation and

Figure 1.10. **Labour market indicators**



Source: OECD, *Main Economic Indicators* and ELS database.

overcome resistance to changes, which in the end would be beneficial both for business and workers. Chapter 5 reviews the on-going reform process in product and labour markets and proposes a number of policy measures with particular emphasis on:

- Further alleviating cumbersome regulatory and administrative burdens that impede the creation, development and extinction of firms.

- Promoting competition throughout the economy to ensure a better allocation of resources and lower prices.
- Enhancing flexibility in hiring and firing and in working conditions to reduce unemployment and foster job creation on regular contracts in the new more competitive international environment.

Conclusion

As five years have been lost in the catching-up process and medium-term prospects do not point to a clear improvement, it is urgent to implement measures which help regaining a higher growth path. OECD work on growth has illustrated the strong complementarities between reforms. For instance, if not enough progress is achieved in human capital formation, then the benefits from more open product markets and more flexible labour markets may not be realised fully. This is particularly relevant for Portugal. To revive productivity on a sustained basis, the strategy has to be broad. Portugal's recent experience also underlines the importance of continuity in policy making and effective implementation (see Annex 1.A1. Progress in structural reforms). The momentum for reform should be speeded up, including in the areas where they are expected to increase productivity growth only after some delay. But some reforms can deliver results rapidly, such as deregulation in some product markets, while others will take more time, education being a case in point. The following chapters analyse the key challenges on the reform agenda.

Notes

1. As population growth was broadly stable, per capita GDP also increased by an average 3½ per cent in 1987-2000, about 1% point above EU average per capita growth.
2. Standards of living in comparison over the past 20 years are illustrated in Annex 1. A2, Figure 1.A2.1.
3. Estimates of output gaps are subject to margins of error. Potential output is based on a production function approach, taking into account the capital stock, changes in labour supply, factor productivities and underlying "non-accelerating inflation rates of unemployment" (NAIRU) for each OECD country.
4. Indicators of resilience are measured for the period 1999-2002 based on output gaps.
5. The analysis shows that the negative impact of the product effect comes essentially from an inadequate initial structure. For details, see S. Cabral (2004).
6. A comparison of revealed comparative advantages in Portugal and four new EU members (the Czech Republic, Hungary, Poland and the Slovak Republic) shows that trade specialisation has been evolving in a similar fashion in these countries, towards higher technology goods (including road vehicles, and various machinery and equipment goods) and away from labour-intensive activities or activities based on natural resources (OECD, *Economic Survey of Portugal,* 2004).
7. Based on the US Bureau of labour Statistics, hourly labour costs for Portuguese production workers in the manufacturing sector rose from 23% to 30% of the cost in the United States between 2000 and 2004. In both years, costs in Portugal were around one fourth of the average cost in the European Union-15.
8. Inflows of FDI have been highly volatile over recent years both in Portugal and in the EU. In Portugal, FDI flows include frequent and sizeable FDI operations that are carried out by companies with head offices in the free trade zones of Madeira and Santa Maria. The central bank is now reporting flows with and without off shores.
9. The average fiscal deficit for the euro area reached 3% of GDP in 2005, while in the three major euro area countries, Germany, France and Italy, it ranged from 4 to 4½ per cent of GDP. On a cyclically-adjusted basis, Portugal's deficit was 4% of GDP in 2005.

10. Based on OECD estimates in December 2005 (OECD *Economic Outlook No. 78*).

11. Portugal took some measures over the years in tandem with other countries in a number of areas, so that its relative position has not deteriorated; it even improved in some areas between 1998 and 2003. Relevant examples are illustrated in Annex 5.A1: barriers to entrepreneurship (Figure 5.A1.1); barriers to entry, including the complexity of administrative procedures (Figure 5.A1.2); barriers to FDI (Figure 5.A1.3). On state control of business operations, Portugal remains more restrictive than the OECD average (Figure 5.A1.4). Progress achieved by Portugal over the past year in taking measures consistent with the policy priorities identified a year earlier is reported in OECD (2006), Part I, Chapter 2, country note on Portugal.

12. Detailed indicators on employment protection legislation are shown (and discussed) in Chapter 5, Figure 5.5.

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ANNEX 1.A1

Progress in structural reforms

This table reviews action taken on recommendations from previous *Surveys*. More detailed recommendations that are based on analysis in this *Survey* are listed in the relevant chapters.

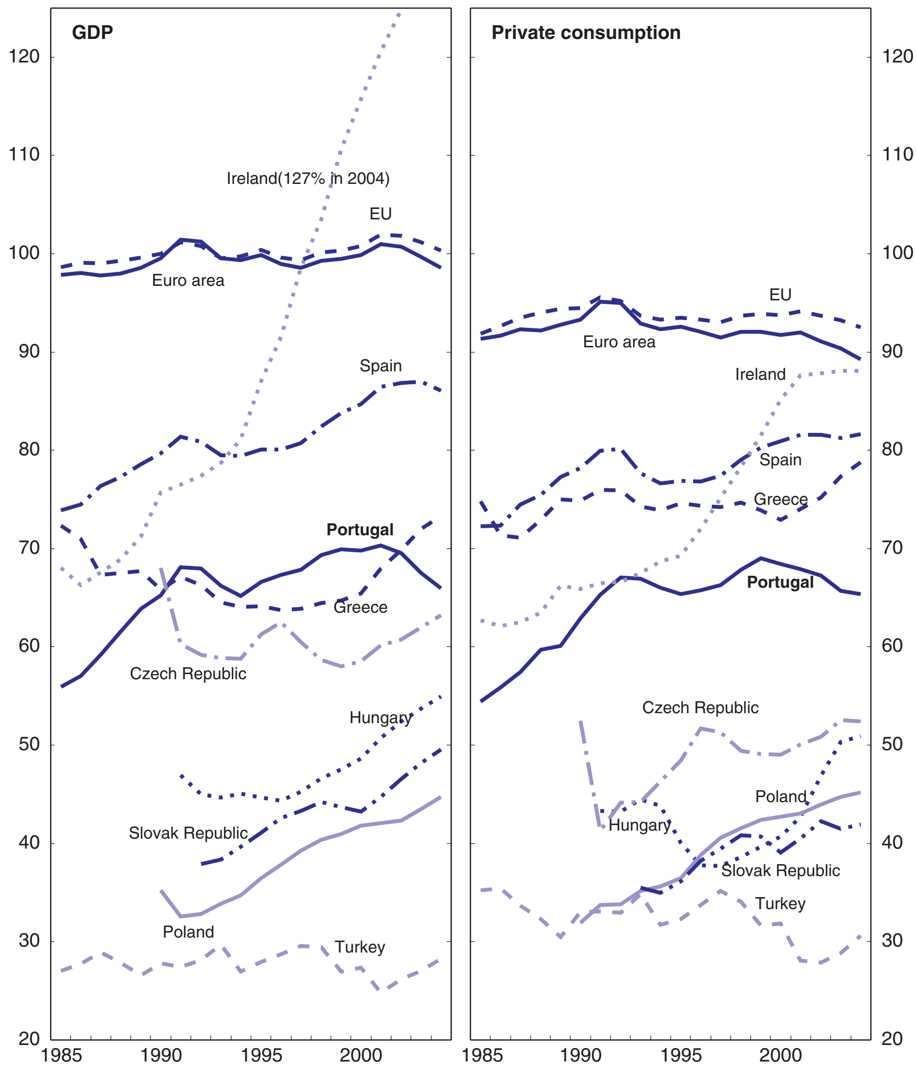
Recommendations	Action taken since the previous *Survey* (November 2004)
IMPROVE LABOUR FORCE SKILLS AND COMPETENCIES	
Raise the quality of formal education, enhancing vocational and technical programmes	
Continue broadening pre-school education	On-going
Improve primary education and increase computer equipment of schools	On-going
Implement the announced measures to revise the curricula in secondary education	Implementation started with the 10th grade in the school year 2004/05 and continued with 11th grade in 2005/06
Create more technical schools and develop professional schools	Planned
Improve the incentives faced by education professionals	
Monitor and disclose results of the ongoing evaluation of schools; reward best performers	The implementation of the evaluation of schools has lagged
Improve the incentives faced by teachers and school managers, as well as their accountability	Planned in the wider context of the public administration reform
Improve the tertiary education system	
Make progress on the evaluation and accreditation of courses/universities	On-going
Rationalise, by closing or merging courses with very few students	In progress
Facilitate access to training and support lifelong learning	
Encourage training and retraining of those already in the labour force	On-going; increasing support to demand side is planned
Extend the application of the national certification system	On-going, implementation has been slow
REFORMS TO USE THE LABOUR FORCE EFFECTIVELY	
Ease employment protection legislation, ensuring it does not constitute an obstacle to hiring on regular contracts	No action
Monitor application of the new rules governing temporary employment to avoid abuses, while maintaining flexible setting	On-going
Make active labour market programmes more efficient, by improving the job-matching capacity of public employment services	Planned
INCREASE PRODUCT-MARKET COMPETITION	
Competition Authority should continue its efforts to increase public awareness and enforce the Competition Law, imposing the adequate corrective measures and/or appropriate fines to offenders	In progress
Proceed with the liberalisation of the electricity market in preparation for MIBEL	In progress
Enhance competition in the telecommunication sector, in particular in the fixed-line long-distance services	Action taken by the sector regulator; separating ownership of fixed telephony and cable networks remains to be done
REDUCE RED TAPE AND OTHER COSTS ON DOING BUSINESS	
Promote the timely implementation of measures to reduce red tape and other costs on doing business	In progress, notably with the "on-the-spot" firm creation
Simplify tax system and broaden the income tax base	Some small progress in the 2006 budget

ANNEX 1.A2

Background information to Chapter 1

Figure 1.A2.1. **Standards of living in the OECD**

Per capita, constant 2000 prices, USD (PPPs), OECD = 100[1]



1. Excluding the Czech Republic, Hungary, Poland and the Slovak Republic.

Source: OECD, *National Accounts*.

ANNEX 1.A3

Performance and policies in selected environmental areas

Air pollution and water quality were some of the environmental issues discussed in the OECD *Economic Survey of Portugal*, 2003. In both these areas, Portugal's policy action is determined primarily by European Community legislation.

General objectives of environmental policy in Portugal

The present environmental policy has been defined in the context of European Union priorities and the relevant part of the Lisbon strategy. The Lisbon strategy, which is only indirectly concerned with environmental issues, through infrastructure and energy, recommends: *i)* expanding and improving European infrastructure, and *ii)* increasing tax and other incentives to promote sustainable energy use and boost research into energy efficiency, clean energy and renewables.

The current government's policy general objectives are: *first*, to allow environmental convergence with the rest of Europe, which implies, in particular, additional investment in water sewage and treatment of solid residuals; *second*, to promote cohesion at the national level, by increasing the share of energy that is produced from renewable sources;[1] and at the international level, by following the objectives set in the Kyoto protocol. In the following the performance and policies are assesses in the areas of air pollution, water pollution and water use, and solid waste disposal.

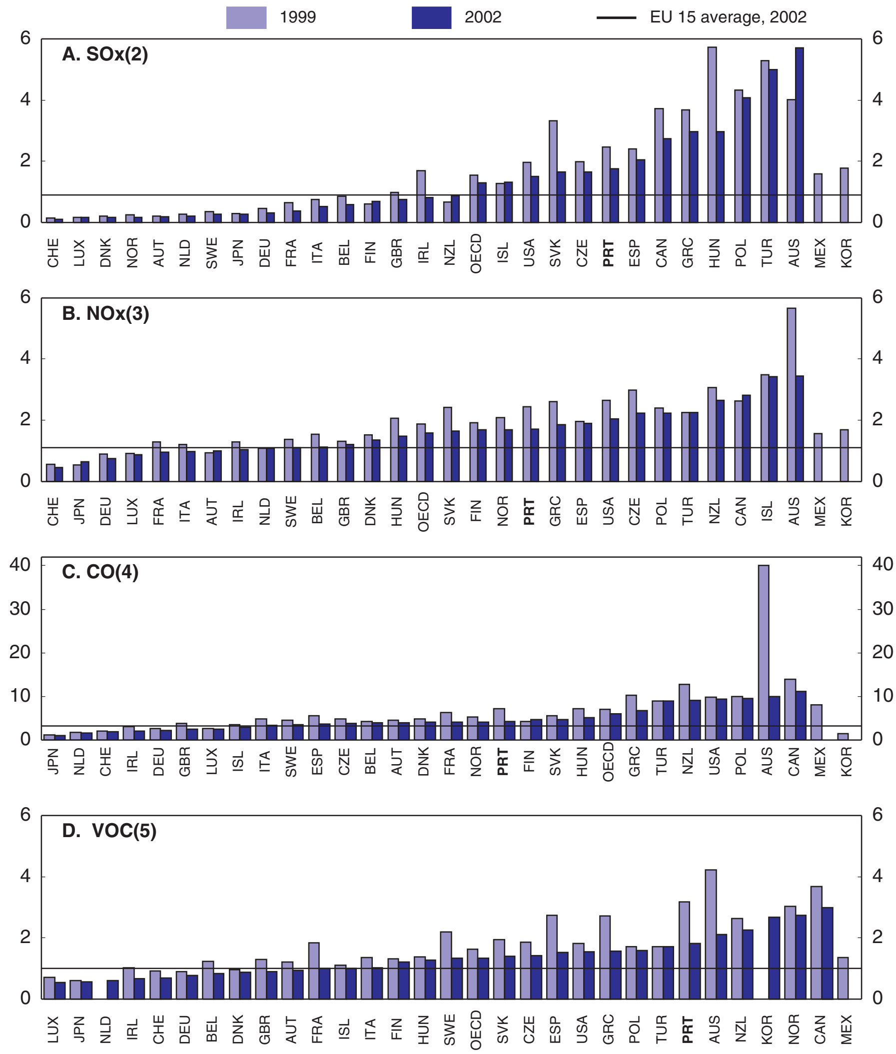
Air pollution

Recent performance

The country is committed to following Kyoto's objectives for reducing greenhouse gas emissions and some progress has been made. Regarding air pollution, because of its geographic position Portugal is a "net exporter" of atmospheric pollutants relative to emission levels. Emissions are transported inland (for about a half) or deposited in the sea. The main policy issue that has to be faced is how to correct local pollution problems and to meet the emission targets established in European legislation, without imposing excessive costs on the economy. Portugal's performance has improved with a decline of about a third in the pollution intensity of economic activity between 1998 and 2002. That intensity has come down for all traditional air pollutants, including for nitrogen oxide emissions (NO_x), which had been on a steady upward trend during the 1990s, and volatile organic compounds (VOCs), which are considered, along with NO_x to be the main precursors of

Figure 1.A3.1. **Emissions of air pollutants**[1]

Per unit of GDP (Kg per 1 000 USD)



1. Man-made emissions of traditional air pollutants.
2. Sulphur oxides, data are given as quantities of SO_2.
3. Nitogen oxides, data are given as quantities of NO_2.
4. Carbon monoxide.
5. Volatile organic compounds.

Source: OECD, Environmental Data, Compendium 2002 and 2004.

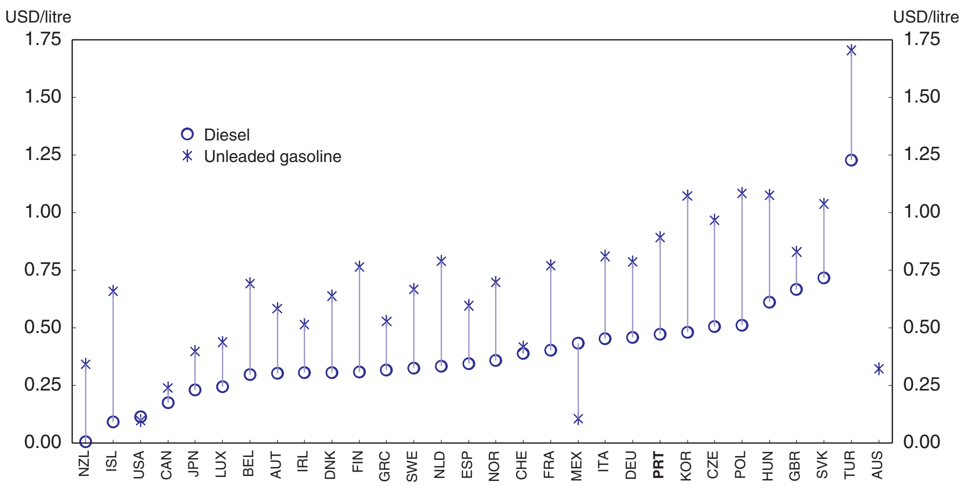
photochemical air pollution. However, emissions per unit of GDP remain significantly higher than the EU15 average (Figure 1.A3.1).

Road transportation has been one of the main factors contributing to air pollution, with tax signals providing the wrong incentives, as high vehicle license fees discourage the purchase of new vehicles, older vehicles benefit from tax reductions for the circulation tax and taxes on gasoline are higher than those on diesel (Figure 1.A3.2). The existing incentives are likely to have slowed the positive impact that was expected from stiffer fuel and emission standards at the EU level. Total road transport emissions in Portugal did not come down as much as expected on the basis of EU standards and the projected increase in the length and frequency of road trips.[2]

The continuing growth of the transport sector and its knock-on effects in terms of pollution are of concern at the EU level more generally, where road transport accounts for approximately one-quarter of total energy consumption and CO_2 emissions. The potential for reducing vehicle emissions and making energy savings is substantial. However, the technologies needed remain more expensive than conventional vehicle manufacturing technologies. Consequently, the European Commission has decided to promote the development of a new generation of vehicles which consume less energy and generate fewer pollutant emissions. The Directive provides that public bodies (State, regional and local authorities, bodies governed by public law, public undertakings and operators contracted by public bodies to supply transport services) will be obliged to allocate a minimum quota of 25% of their annual procurement (purchasing or leasing) of heavy-duty vehicles to "enhanced environmentally friendly vehicles" as defined in the European Performance Standard.

Figure 1.A3.2. **Taxes on diesel and gasoline**

2003



Source: OECD, *Environmental Indicators 2005*.

Policy instruments available to reduce air pollution

The emission permit trading scheme

Portugal is participating in the European trading of emission permits, which is a key step to fight climate change at the EU level, by trading European emissions of CO_2. Portugal passed legislation at the end of 2004 to transpose EU directives at the national level. The Portuguese registry for emission permits has been created (Portuguese Greenhouse Gases Emission Registry). Trading emission licences should allow Portuguese enterprises, like other European enterprises to meet the objectives set in the Kyoto protocol at low cost. During the initial phase, from 2005 to 2007, Portugal, like other member countries, is involved in defining the total number of emission permits that will be allocated and allocating them.

Changing tax incentives

In principle, there is room for taxes on different kinds of energy to reflect more accurately the respective environmental externalities associated with their use. Motor fuel and motor vehicle taxes account for the bulk of environmentally related taxes. The gap between diesel and gasoline taxes has remained large in Portugal as in most other OECD countries.[3] Unlike the situation in Denmark and Norway, there are no specific taxes with an environmental purpose, such as differentiated road-use taxes or higher taxes on diesel vehicles.[4] However, there is an incentive to withdraw older vehicles from the fleet, the registration tax on a new vehicle being reduced if the owner turns in his/her old car to the authorities. And the registration tax is reduced for vehicles fuelled by electricity, gas or for hybrid cars.

In 2005, the Portuguese Government initiated the first phase of a reform of the transport sector taxation, with a focus on environmental issues. The main measures already implemented are: first, a change in the present tax on motor vehicles (IA), with a decrease of the tax paid by the buyers of new "cleaner" vehicles (that generate fewer pollutant emissions) coupled with an increase in the tax levied on more polluting vehicles (*e.g.* those using diesel and generating higher CO_2 emissions); second, an exoneration of excise taxes levied on petroleum products for the development and production of bio-fuels (ethanol fuel and bio-diesel), following the EU Directive of 2003.[5] The Portuguese government is also studying the possibility of replacing the tax on motor vehicles (IA) with two new taxes: a "registration tax" (similar to the present regime, but with lower rates) and an annual "circulation tax" (levied on both old and new vehicles, with preferential tax treatment to less polluting vehicles and to the use of energy-efficient technology).

Water pollution and water use

Performance

Portugal made progress in reducing pollution of watercourses between the early 1980s and the mid 1990s through the construction of purification plants which have reduced biochemical oxygen demand (BOD).[6] However, according to indicators available until the early 2000s, the situation has not improved since the mid 1990s. According to the average for the last 3 years, 1999-2001, water quality observed in 3 selected rivers (Tejo, Douro, Guadiana)[7] was broadly similar to that observed in 1994-96, in terms of nitrates and phosphorus (after a marked deterioration in the earlier period); but on BOD, water quality stopped improving and actually deteriorated in one of the 3 rivers observed.

One of the main factors for the unsatisfactory quality of rivers and streams in Portugal is the lack of waste water treatment, which undermines the sustainability of economic development. The share of the population connected to public waste water treatment plant has risen, but it is still below average OECD standards. In the early 2000s, about one third of the population was still not connected to a sewerage network, while less than half of the population was connected to a sewage treatment plant. The availability of more advanced treatment plants, whether for secondary (biological) treatment or tertiary (chemical) treatment remains insufficient in Portugal.[8]

Water resources are used intensively, with irrigation being the main cause of freshwater abstraction. Farming activities in Portugal have become highly intensive in water, partly as a result of the common agricultural policy which has encouraged new more intensive farming practices.

Policies

Economic and financial settings should be improved to develop waste water treatment and to prevent excessive use of freshwater. Given that waste water volumes are closely related to households' gross water consumption, it would be appropriate to develop metering and charge prices according to water consumption, so as to cover operating expenses and investment costs. For the industrial enterprises that are connected to the public sewage network, monitoring of their output of pollutants and appropriate taxation would provide the right incentives and allow recovery of some of the costs of waste water collection and treatment. In agriculture, enforcement of existing rules and penalties would help to control pollution. Beyond this, changes in the economic and financial incentives are required to limit excessive use of water and related pollution. A law for water was passed in September 2005, to translate the European directive on water of 2000 into national legislation. It underlines the need to internalize costs from activities that potentially damage the quality of water or induce excessive use; the cost recovery of public services to guarantee provision of adequate quantity and quality is also envisaged. This legislation should be quickly implemented.

Solid waste disposal

Regarding solid waste disposal, where Portugal also has insufficient infrastructure, new investment is planned. At the EU level in general, infrastructure remains insufficient to absorb increases in waste associated with GDP growth. The European Waste Framework Directive, which dates from 1975, needs to be modernized and the Directive being proposed considers:

- improving the way resources are used;
- requiring national waste prevention programmes, which will have to be finalised three years after the entry into force of the directive;
- setting environmental standards that specify under which conditions certain recycled wastes are no longer considered waste with a view to improving the recycling market;
- simplifying waste legislation by clarifying definitions, streamlining provisions and integrating the directives on hazardous waste and on waste oils, the latter with a focus on collection.

Notes

1. The government has announced new subsidies for private investment in clean sources of energy, in accordance with the Lisbon strategy. In addition, a major programme for the development of wind power is being launched.
2. Based on indices for road transport emissions in Portugal, where 1995 = 100, results for 2002 indicate uneven progress. For carbon monoxide (CO), the index was 77.7, just below emissions expected in 2000, still much above the 2005 target (54). For nitrogen oxides (NO_x), the index increased to 104.7, whereas a decline to 79 was expected by 2000. For volatile organic compounds (VOCs), the index declined to 67, below the expected 2000 level, but still far above the 2005 target (54). See OECD Environmental Database for recent data and *Economic Survey of Portugal,* 2003, Table 21, for EU standards and emissions expected for Portugal.
3. See I. Joumard (2001), "Tax systems in European Union countries", OECD *Economics Department Working Paper* No. 301 and P. O'Brien and A. Vourc'h (2001), "Encouraging environmentally sustainable growth: experience in OECD countries", OECD *Economics Department Working Paper* No. 293.

4. Sweden has environmentally differentiated fairway dues, while Norway discriminates against pollution with an annual tax on diesel vehicles according to the weight, if the vehicle does not satisfy emission standards set by the EU. A 2003 study by Deloitte and Touch on fiscal instruments for environmental purposes is available in Portuguese on the portal of the Environment Institute of Portugal's Ministry of Environment: *www.iambiente.pt/portal/page?_pageid=33,1&_dad=gov_portal_ia&_schema=GOV_PORTAL_IA*.
5. It should be noted, however, that the overall benefits to be gained from bio-fuels are reduced by the energy needed to produce these fuels and the fertilisers used in producing the crops that serve as input.
6. Water quality trends in the early period must be interpreted with caution because the extensive monitoring system now in place was limited to a few more seriously affected water courses, until the early 1990s.
7. OECD environmental data show water quality by country for selected rivers which drain large watersheds; they can be used to assess trends in each country but not for international comparison because of differences in measurement methods.
8. OECD, *Environmental indicators* 2005.

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Chapter 2

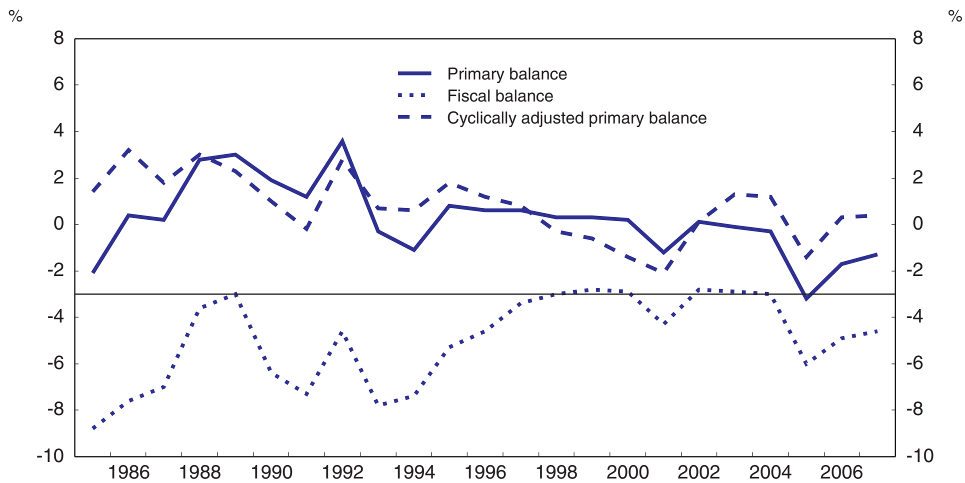
Putting public finances on a sustainable path

Fiscal policy has failed to durably reduce the deficit below the Stability and Growth Pact threshold of 3% of GDP. The 2005 consolidation programme designed to bring the fiscal deficit down from 6% to 1.5% of GDP between 2005 and 2009 is reviewed in this chapter. The consolidation efforts in the form of in-depth spending reforms go in the right direction but implementation of these reforms remains a challenge. Moreover, announced measures should be supplemented by additional steps with a view to long-term fiscal sustainability, including a reform of the general pension system. Other measures that should be considered include the adoption of binding medium-term expenditure ceilings in major spending areas, and more systematic cost-benefit assessment of public investment. In addition, a simplification of the tax system – and less frequent changes – would help to both raise more revenue and economic growth.

Over the past two decades Portugal's fiscal policy has had a bumpy ride (Figure 2.1). High deficits (often above 5% of GDP) were recorded till the mid-1990s. Then, the general government deficit was reduced progressively to below 3% in 1999-2000, helped by the fall in interest rates in the context of the euro accession process and by high tax revenue spurred by strong economic growth. The consolidation process was, however, temporarily interrupted in 2001 when the deficit increased to around 4¼ per cent of GDP, but resumed between 2002 and 2004. During that period, the deficit was contained at 3% of GDP or slightly below. However, the underlying situation remained weak: the consolidation programme included one-off measures amounting to 2% of GDP a year on average, while expenditure was still growing fast. In 2005, when reliance on one-off revenue measures was abandoned and both structural and conjunctural pressures on spending increased, the deficit rose to a new peak of close to 6%. Portugal was then faced with the same challenge as in 2002, but in an even weaker economic situation. In the fall of 2005, for the second time since 2002, Portugal has been put under the European excessive fiscal deficit procedure (Box 2.1).

Figure 2.1. **Fiscal balances in Portugal**

As per cent of GDP



Source: OECD, *Economic Outlook No. 78.*

Box 2.1. **Portugal's Stability and Growth Programmes and the excessive deficit procedure**

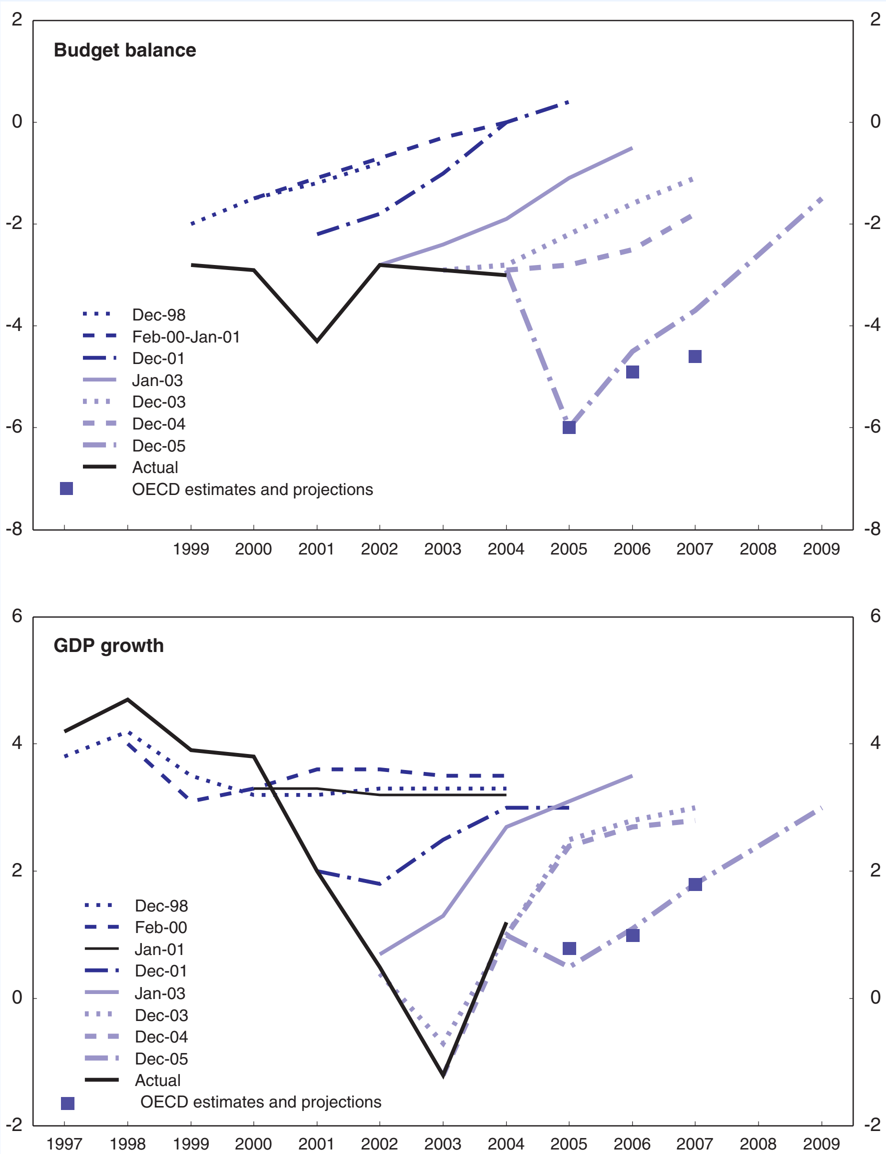
The main objective of Portugal's successive Stability and Growth Programmes (SGP) has always been to reduce the overall deficit and to sustain a primary surplus over the medium term. For instance, the four programmes submitted between end 1998 and end 2001 laid down a consolidation path which – if adhered to – would by now have achieved budget balance. However, the starting position of each of these programmes turned out to be weaker than originally assumed[1] (and the speed of consolidation was generally less than planned; as a result, medium-term fiscal targets were never met (Figure 2.2, upper panel).[2] One reason for the fiscal slippages against the Stability and Growth Programmes since 2000 has been the systematic overestimation of future economic growth (Figure 2.2, lower panel). In particular, the 2001-05 downturn turned out to be longer than expected and growth did not resume its earlier medium-term path of 3%, as assumed in the SGPs. By examining the fiscal positions and the underlying economic assumptions in Stability Programmes of EU countries, Milesi-Ferretti *et al.* (2004) find some evidence that deficits remain higher if governments base their programmes on optimistic economic assumptions. In particular, such programmes bear the risk that governments are less inclined to engage in structural reforms and end up with more difficult fiscal situations than countries with more realistic growth forecasts. As discussed below, the other main reason for fiscal slippages has been the inability to meet the medium-term targets for primary spending, as a percentage of GDP.

Since joining the EMU, Portugal has been submitted twice to the excessive deficit procedure. First, following the rapid deterioration of the fiscal balance in 2001 (to above 4% of GDP), in October 2002, Portugal was the first EU member country to be submitted to the excessive deficit procedure by the European Commission, a decision confirmed by the Council in November 2002. In response, the Stability and Growth Programme presented by the authorities at end-December 2002 included a package of measures aimed at containing expenditures on a durable basis. The European Commission and the Council approved these measures as complying with recommendations to take effective action with a view to end the excessive deficit situation. The Stability Programme for 2004-07 was also approved by the European Commission and the Council. In spring 2004, the Commission and the Council decided to abrogate the excessive deficit procedure for Portugal, after concluding that the Portuguese authorities had complied with recommendations to put an end to the excessive deficit situation as rapidly as possible.

On 22 June 2005, when it became clear that the 3% of GDP deficit ceiling would be missed by a large margin, the Commission initiated the second excessive deficit procedure against Portugal. It issued a recommendation on 20 July 2005, urging Portugal to improve the fiscal position in the short term and correct the excessive deficit by the end of 2008 at the latest, through structural measures. Council recognized the existence of an excessive deficit in September 2005 and confirmed the Commission recommendations. In particular, it confirmed the existence of special circumstances allowing for an extension of the deadline for the correction of the excessive deficit to 2008, considering that too large an effort over a short period could prove economically costly considering Portugal's cyclical weakness. It recommended a reduction of 1.5 percentage points of GDP of the structural deficit in 2006, followed by a significant decrease of, at least ¾ percentage points of GDP every year until the excessive deficit is corrected. In addition, the Council asked the Portuguese authorities to ensure that budgetary consolidation to achieve close to balance or a surplus be sustained over the medium term through a reduction in the cyclically-adjusted deficit, net of one-offs and other temporary measures, by at least 0.5 percentage points of GDP per year after the correction of the excessive deficit.

Box 2.1. **Portugal's Stability and Growth Programmes and the excessive deficit procedure** *(cont.)*

Figure 2.2. **Portugal's stability and growth programmes**



Source: National authorities and OECD, *Economic Outlook No. 78*.

1. The current year was often seen as better than it really was. In addition, methodological changes in fiscal statistics, have contributed to *ex-post* increases in the deficit.
2. Portugal is of course not the only country in this situation (see *OECD Economic Outlook* No. 78, Figure 1.10 for a chart of the successive vintages of the Stability Programmes for the euro area as a whole).

If prolonged, the cyclically-adjusted primary deficit (of 1½ per cent of GDP) would lead to a continuous increase in the debt-to-GDP ratio and further damage private sector confidence. Portugal also runs the risk that long-term interest rates, which are currently low internationally, increase again and/or that continued high deficits lead to a risk premium for government bonds, which would further aggravate its fiscal situation.[1] On the other hand, sound public finances would support growth in the long term by allowing automatic stabilisers to operate fully during downturns, putting the public sector in a better position to respond to the long-term development needs of Portugal and contributing to a friendlier business environment by improving the efficiency of public services. The authorities are fully aware of the worrying situation of the public finances and committed to redress it. This chapter reviews the reasons why the 2002-04 consolidation strategy failed. It assesses the current consolidation strategy and recommends additional steps to ensure fiscal sustainability.

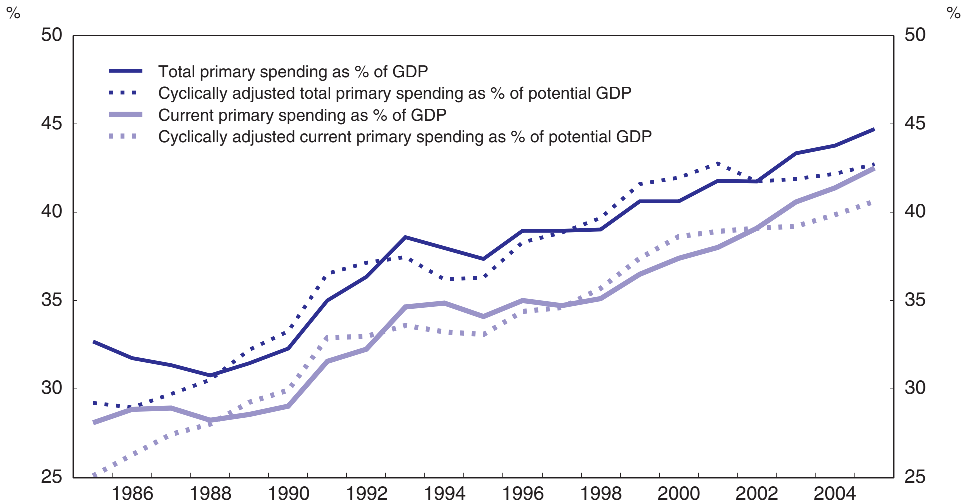
Why was the 2002-2004 deficit reduction short-lived?

The overall strategy was appropriate

The strategy designed in 2002 to rein in the budget deficit and comply with the requirements of the Stability and Growth Pact was two-pronged: achieving the quick results required by the excessive deficit procedure through an increase in the VAT rate, emergency cuts and freezes of spending, and one-off measures, while preparing and launching necessary in-depth measures to curb expenditure in the medium term. The latter included the closure of some government agencies, steps towards a comprehensive health care reform, launching a public administration reform, the rationalisation of education services, and the approval of a budgetary stability law to better control expenditure.

This strategy was appropriate to deal with both the urgency of the situation and the need to address Portugals weak public finance situation with structural measures that typically take time to implement and to show results. As stressed in the 2003 *OECD Economic Survey of Portugal*, the roots of the persistent weakness of public finances lie on the spending side. Primary spending has been on an upward trend over the past 15 years. Cyclically-adjusted primary spending increased sharply and with only a few interruptions between the end of the 1980s and the beginning of the 2000s (Figure 2.3). The windfall gains from lower interest rates in the 1990s (reducing government net interest payments by around 5½ percentage points of GDP) were spent to finance higher primary current expenditure instead of restoring fiscal soundness. In particular, spending was pro-cyclical during the periods of positive output gaps, as in 1989-92 and 1997-2000. Indeed, if the surplus of around 3% in the cyclically-adjusted primary balance recorded in the late 1980s had been maintained, the overall budget would now be close to balance. Instead, spending continued to increase, and revenues had to be raised to prevent even larger fiscal imbalances. The two items that account for the largest part of the upward trend in public expenditure are compensation of public employees and social transfers. Compensation of employees (which includes both the wage bill that increased until 2002 and transfers and contribution to the civil servant social security system) increased by 3.1% of GDP over the past 15 years and social benefits to households by 5.5% of GDP. When breaking down the increase in government expenditure by functional classification, social protection shows the largest increase over that period (5.7% of GDP, mainly on old age pensions) followed by health (3.1% of GDP) and education (1.8% of GDP). In addition, the quality of public services has not increased in line with spending, pointing to some efficiency issues. This is the case in particular in education, as shown in the next chapter, and in health care (see Guichard, 2004).

Figure 2.3. **Primary government spending in Portugal**



Source: OECD, *Economic Outlook No. 78.*

Implementation of the structural reforms has been patchy and in some cases too slow

The consolidation efforts in 2002-04 were not able to reverse the progression of current primary spending. Cyclically-adjusted current primary spending as a percentage of potential GDP slowed in 2002-04 then accelerated in 2005 (Figure 2.3). Several factors explain the ongoing upward pressure on spending.

- One-off measures, by allowing quick results on the headline deficit, reduced the sense of emergency and commitment to move ahead with painful structural reforms. Although they were supposed to be phased-out, they were increased to compensate for the lack of progress on the reform front.
- Keeping emergency measures across the board on wages, automatic career progressions and hiring was politically difficult; and the stance was relaxed at the beginning of 2005 ahead of the parliamentary elections. But public administration reform had lagged and could not generate the savings expected initially: only a few public institutions were closed and the planned reorganisation of central administration stalled; the employment pool created to encourage mobility of civil servants was barely used; the evaluation of civil servants, although legislated in 2004, could not be applied on a systematic basis; the new status for managers, imposing performance requirements and reinforcing managerial autonomy and accountability, and the new career and remuneration system for public servants could not be approved.
- The "big bang" reform in the health sector reform slowed down the expenditure trend, although it did not actually reduce the level of spending in a context of unsatisfied demand for health care. The reform remains nevertheless one of the major achievements of the consolidation efforts. In particular, this reform has allowed a better

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monitoring of hospital spending (compared with a previous situation where deficits were passively covered *ex post* by the general budget).[2] One of the key differences between this reform and others that were launched at the same time is the comprehensive and radical approach chosen by the authorities.[3]

- The earlier structural reform programme neglected the problem of the general pension system. A reform of this system was initiated in 2001 with the definition of a new benefit formula for disability and old-age pensions; but it foresaw a very long transition period and had only a minor short-term impact on spending. No additional steps were taken in 2002-04, while the convergence of minimum pensions to the minimum wage was accelerated, putting additional pressure on spending in 2004-06.[4] Overall, spending on pensions for both private sector and public sector employees continued to increase rapidly through 2002-05.
- The 2001 Framework Law for the State Budget and the 2002 Budgetary Stability Law, which were major steps forward because they introduced multi-annual spending programmes and tried to strengthen financial coordination between all entities of the general government, were not fully implemented.
- Tax rates were lowered too quickly (with a corporate income tax rate cut of 5 percentage points in 2004), once the deficit was below 3%, although the underlying situation had not improved. A noticeable achievement on the tax front nonetheless has been the increase in the efficiency of tax collection (the impact of which is estimated at about 0.6% of GDP in 2005).

The doubling of the deficit from 3% to close to 6% between 2004 and 2005 occurred despite some consolidation measures and is to a large degree (about 2 percentage points) explained by the decision to stop the reliance on one-off measure to reduce the deficit, in line with earlier OECD recommendations. It also reflects: *i)* lower growth in 2005 than in 2004 (the cyclical impact can be estimated at ½ per cent of GDP); and *ii)* a deterioration of the structural deficit (½ per cent of GDP). The increase in cyclically-adjusted primary expenditure was only partly compensated by higher cyclically-adjusted tax revenues, thanks to better tax administration and the decision to increase the VAT rate in July 2005 (after an audit commissioned by the then in-coming government revealed that on current policies the deficit was likely to reach 6.8% of GDP).[5]

Maximising the chances of success of the new programme

The current consolidation programme is set out in the June 2005 and December 2005 updates of the Stability and Growth programme (see Annex Table). Faced with the urgent need to show some restraint in the short term, as the previous programme, it mixes emergency measures to contain the wage bill in the short term and tax hikes included in the 2005 supplementary budget and the 2006 budget (Box 2.2) with in-depth reforms designed to fix the chronic weaknesses in public spending and ensure fiscal sustainability. A key difference with the 2002-04 policy is the decision to end the reliance on one-off measures. This has only been possible because, under the second excessive deficit procedure it faced, Portugal was given an extended period to get its deficit under 3% of GDP (Box 2.1). The target, approved by the European authorities, is to bring the deficit below 3% of GDP in 2008 (2.6% of GDP) and reduce it to 1.5% of GDP in 2009. The planned consolidation efforts, as measured by the reduction of the deficit corrected for the cycle, is on average of about 0.9% point of potential GDP a year.[6] However, the macroeconomic scenario underlying this programme could again be on the optimistic side, with growth expected to gain momentum progressively to 3% in 2009. With an estimated output gap of 3½ per cent in 2005 (OECD estimate) and estimated potential output growth slightly below 1½ per cent, this projection implies that the gap would be closed by 2009.

In the short run, an important share of the adjustment comes from the revenue side. Putting more of short-term consolidation efforts on the spending side would have been preferable, but higher taxation appeared as a "necessary evil" given the current Portuguese fiscal situation. Some measures are nevertheless unwelcome. The creation of a new tax bracket with a higher marginal tax rate for high incomes further complicates the tax system and creates additional disincentives to work. In recent years, other EU countries have moved in the opposite direction and reduced the number of tax brackets. In the context of higher tax rates, continued efforts to fight tax evasion will be all the more important for increasing revenue.

Box 2.2. **Measures announced in 2005 to reduce the deficit in the short term**

Temporary measures to control the wage bill

Public sector automatic career progressions have been frozen. The increase in public wages has been limited to 1.5% in 2006 (below the expected inflation rate).

In order to reduce of the number of civil servants, only 1 out of 2 retiring agents will be replaced.

The 2006 budget law also imposes a zero increase in payroll spending by the local authorities.

Raising taxes

The standard VAT rate was increased from 19 to 21% in July 2005, a rate much higher than in neighbouring Spain (16%) and among the highest in the EU.

The tax rate on tobacco is increased by 15% each year between 2006 and 2009.

The tax rate on oil products (ISP) is increased by 7.5 cents per litre in three steps (2.5 cents/litre each) at the beginning of 2006, 2007 and 2008. This is on top of the regular increase in line with inflation.

A new tax bracket for the personal income tax has been created. Annual incomes above over 60 000 euros face a 42% marginal tax rate (40% before this bracket was created).

The taxation of pension income has been increased and it is planned that it will eventually reach that of wages.

Some special schemes and tax benefits have been cut, although others have been created, for instance on savings for pensions.

Moving forward with in-depth reforms to ensure fiscal sustainability

The direct impact of the recent reform measures is expected to represent a net saving of 2.6% of GDP for the budget by 2009, while higher taxes bring 2.1% of extra revenue (Figure 2.4).[7] Overall the strategy goes in the right direction. However, the objective of the government to reduce the deficit ratio by around 4½ percentage points from 2005 to 2009

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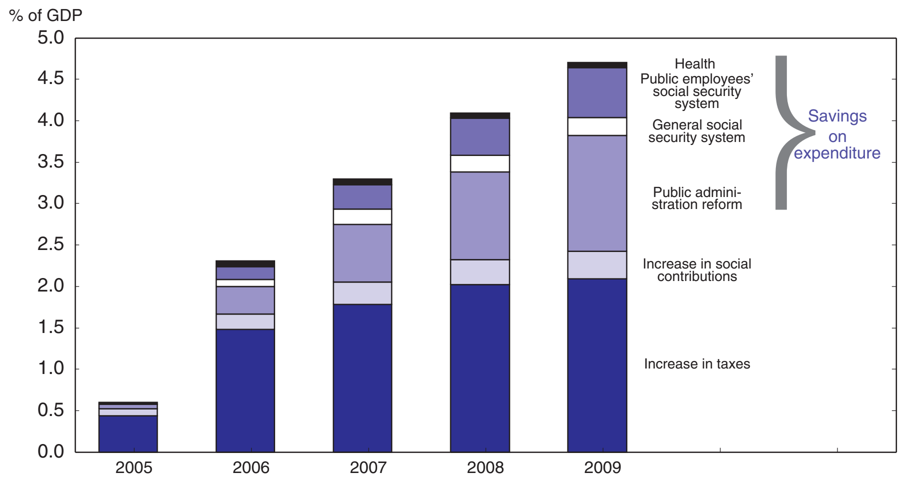
(which implies an improvement of the cyclically-adjusted primary balance amounting to 3.7% of potential GDP) appears ambitious given the recent fiscal slippage and the difficulties that Portugal has had in moving forward on structural spending reforms. Implementation thus remains a challenge. There is a risk that some key reforms, on which preparatory work has just started, will lag behind. *Where legislation has already been approved, it has to be implemented with no delay. Where the process is just at the stage of intentions, these have to be translated quickly into concrete proposals, and then legislative changes and effective implementation.* The structural reforms are concentrated in four areas: public administration; social security; health; and local government and autonomous funds and services spending.[8]

Figure 2.4. **Expected impact of the main consolidation measures**



Source: Stability and Growth Programme, December 2005.

Accelerating public administration reform

Public administration reform, which should improve public spending efficiency and effectiveness, plays a central role in the consolidation strategy. More than half of the savings (1.4% of GDP by 2009) is expected to result from this reform and significant savings are expected as early as in 2006. It shows some welcome continuity with the previous reform attempt, but it is more ambitious. In particular, in order to accelerate implementation, a broader approach than in the past has been adopted. It involves all the ministries at the same time, which seems more effective than progressing area by area. The reform is organised around five key complementary lines of actions.

- First, a major restructuring of central administration is planned with a new organisation for each ministry expected to be defined by June 2006. The goal is to review and rationalise the functions of the central administration. Some will be left to the private sector, others transferred to regions or decentralised to local governments. A financial controller will be appointed in each ministry to help prepare the budget and control its execution under the double responsibility of the Ministry of Finance and the ministry concerned.
- Second, legal conditions of employment, career and remuneration in the public administration are to be brought in line with private sector rules, with a view to

increasing efficiency and promoting mobility of civil servants towards the private sector. Plans to be implemented in early 2007 include in particular streamlining of the number of careers, linking pay and promotion to performance and ensuring suitable rewards for highly qualified positions.

- Third, the employment pool created by the previous administration, but which has only been used marginally, will be reformed. While the restructuring of the central administration is expected to result in closure and merger of services implying important transfers of civil servants to the pool, new rules are being designed to give them incentives for training and for mobility within the public sector or to the private sector. The details of the reform are not ready yet, but possible incentives for mobility could include, for instance, cuts in salary when civil servants remain in the pool for some time.
- Fourth, the law on public servant evaluation (adopted under the previous administration but only partly implemented) will be reviewed by end 2006 and adapted to specific groups (teachers, doctors, army forces), with a view to generalising the evaluation system to the whole public administration by 2007.
- Finally, budgeting is also being changed progressively: the 2006 Budget Law contains a multi-year programme for expenditure reduction. A second planned step is to revise and apply fully the 2001 Framework Budget Law (in particular multi-year expenditure ceilings).

Containing spending on social security

Under the current system pressures on pension spending are already high and set to increase at an unsustainable pace. A courageous reform of the generous public sector employee pension system was approved in 2005 (Box 2.3). This subsystem was closed for new public employees (who will be affiliated to the general system) and will gradually converge to the (less generous) conditions prevailing in the general social security system. Not only should this reform help reducing spending pressure, but it should also facilitate the mobility of public employees to the private sector. A working group has been appointed to design a reform of the general pension system. In the meantime, the focus is on creating incentives to raise the effective age of retirement by imposing strong penalties on early retirement (before the legal age of 65) and suspending or cancelling some early retirement schemes. Progress was also made in slightly increasing the taxation of pensions (which remains well below that of wages) as recommended in the 2004 *OECD Economic Survey of Portugal*.[9] But this might not be sufficient to reduce incentives to early retirement, even with stronger penalties than in the past. Social security contributions by the self-employed have also been increased.[10]

Regarding other areas of social security not linked to pensions, several measures are being adopted to close the generous health subsystem for new public servants and reform the even more generous special public regimes for health care.

Continuing the health care reform

The authorities are committed to continue the comprehensive reform of the health care sector launched in 2002. In particular, given the overall favourable impact on management, on the evaluation and control culture and on transparency of the transformation of a third of the public hospitals into corporations, all the hospitals

Box 2.3. **Public sector pension reform**

CGA (*Caixa Geral de Aposentações*, the public sector employee pension system) was "closed" as a subsystem at the end of 2005. There will be no new entrants and this subsystem will gradually converge to the conditions prevailing in the private sector social security system. This implies that:

- All public servants hired after 1 January 2006 will fall within the scope of the general social security system and contributions will be in line with the general system, both for the employee and for employer (whether the latter is classified in the general government sector or not).
- The legal retirement age for public servants will rise in stages from 60 to 65 during the period 2006-15 on the basis of six months a year.
- The number of years of service needed to receive a full pension will be extended in stages from 36 to 40 years during the period 2006-13, on the basis of six months a year.
- The formula used to calculate retirement pensions for public servants hired before 1993 will be changed to be based on the weighted average of the pension they would have received under the current formula (CGA) and the pension calculated applying the formula of the private sector social security system, with the weighting ascertained by the proportion of the contributory period up to the end of 2005 (CGA) and after 2005 (private sector system).

According to simulations by the authorities this reform should result in annual savings equivalent to 0.4% of GDP by 2025 and 0.6% of GDP by 2050, limiting to some extent the increase in the CGAs deficit, although this is still projected to increase from 1.3% of GDP in 2005 to 3.9% of GDP in 2050.

including the largest ones will be progressively turned into corporations, by 2009.[11] At that time, they will all have the same status of public enterprises, EPE (*Entidades Públicas Empresarias*), which is slightly different from the SA status designed by the previous administration. The main differences are that the capital of EPE hospitals cannot be privatised, they fall under the EPE law of 1999 instead of the commercial code, and their accounts are controlled by a single supervisor appointed by the Ministry of Health. These entities will be able to create enterprises with a majority of public capital for outsourced activities (laboratories, catering, etc.). The rationalisation of the NHS is continuing with the merger and closure of some hospitals. A restructuring of the health care centres is under preparation. Besides, in line with OECD 2004 recommendations, additional steps have been taken to improve the drug reimbursement policy. Measures have also been taken to discourage the excessive use of hospital emergency care units for non-emergency treatments. In the medium term, a complete review of the financing of health care in Portugal is planned that could lead to higher private cost sharing and the development of complementary insurance schemes, which are incipient in Portugal.

Reinforcing control on local government and Autonomous Funds and Services

The Local and Regional Finance Laws are set to be revised, with a view to ensuring that all levels of public administration participate in the efforts of budgetary consolidation by setting systematic rules of fiscal discipline.[12] In the meantime, instead of applying the existing formulas to calculate transfers to autonomous regions and local governments, these transfers have been frozen in the 2006 Budget at their 2005 value, and the Budget of the State for 2006 also stipulates that the expenditures for the staff of local governments should not exceed their 2005 value. The reporting on the evolution of the financial situation of local governments and the Autonomous Funds and Services (FSA) (incorporated hospitals and other health units, universities and supervision agencies) will be strengthened. Any FSA running a deficit will lose its autonomy as a way to complement the 2001 law that required FSAs to have balanced accounts but did not detail the sanctions.

The planned consolidation in comparison

While consolidation is urgent, reducing the budget deficit could have a short-term cost in terms of foregone activity at a time when it is already weak. Indeed, according to some structural macro models, the negative effect of a cut in government spending could be significant. However, this does not rule out the possibility that fiscal consolidation can induce non-Keynesian mechanisms that at least partially offset the immediate negative impact of fiscal consolidation (Box 2.4). Two channels through which the on-going fiscal consolidation may support growth can be envisaged in Portugal. First, positive effects on growth can come from the supply side: fiscal consolidation should result in lower public wages that, through their links with private sector wage developments, could lead to general wage moderation and improve business profitability and competitiveness. Second, fiscal consolidation may improve the confidence of private agents and thereby boost private spending. It is difficult to assess the potential strength of these channels and also the timing of the various effects. Even if activity could be dampened by consolidation measures in the short run, the effects on growth should be positive over the medium and longer term, at least as compared to the alternative of running unsustainable deficits which would undermine confidence and finally increase the risk premium. But in order to maximize the positive effect of consolidation, it is important that the authorities commitment to it is fully credible. This underlines the need to launch structural consolidation measures quickly and implement them forcefully.

Although this does not minimise the challenge faced by the authorities, experience in other OECD countries are encouraging. Similar and even larger consolidation efforts have been made in the past in a number of OECD countries, including Portugal in the 1980s. And a third of the countries listed in Table 2.1 also started fiscal consolidation during a downturn with a large output gap, which is the current situation of Portugal. In the twenty cases reported in the table, the pace of consolidation was on average 1% of GDP per year over 5 years. In 30% of these consolidation episodes (including Portugal after 2001), the improvements in fiscal balances were fully or mostly achieved by higher revenues.[13] In half of the episodes, consolidation was mainly achieved by spending cuts which in three countries were so large that taxes could be reduced at the same time. In the cases where consolidation was achieved exclusively or partially by large spending cuts, these affected both current spending and capital spending. In the remaining 20% of the episodes (including Portugal in the first half of the 1980s), consolidation was achieved more or less equally by a combination of spending cuts and revenue increases. However, the main difficulty has been to maintain fiscal discipline after large cuts in deficits, and six of the nineteen countries listed in table, including Portugal, are faced with deficits currently over 3% of GDP.

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Box 2.4. **Non-Keynesian effects of fiscal consolidation**

There are two competing views about the effects of fiscal policy on economic activity. According to the Keynesian view output can be increased by fiscal expansion (at least in case of a negative output gap) while fiscal consolidation reduces output. This view is reflected in structural macro models. For Portugal, the IMF model finds that a cut in public spending by 1% of GDP reduces output in the first year by 0.83%. This is similar to the temporary spending multiplier of the EU QUEST model for Portugal (in the first year 0.58) which finds, however, a much lower (first year) multiplier if the change in spending is perceived as permanent (0.12). Tax multipliers are quite different between these models as according to the IMF model a tax increase by 1% of GDP reduces output by 0.5% of GDP while the EU model shows no effect on output.

Proponents of the non-Keynesian view argue that fiscal effects on output are generally very small or have even opposite signs, so that fiscal expansion would not (or only little) increase output while fiscal consolidation would not harm output or even improve it. Non-Keynesian effects of fiscal consolidation could work through various channels: Assuming a fixed money supply a fiscal consolidation reduces interest rates which crowds in private spending, with the overall effect depending on how much interest rates decline and how interest-sensitive private spending is. In an open economy the fall in domestic interest rates relative to foreign interest rates leads to capital outflows and – with flexible exchange rates – to a depreciation of the currency (Mundell-Fleming model) which crowds in exports. However, for Portugal all these transmission channels for crowding-in effects appear to be currently not very relevant. As a member of EMU short-term interest rates are set by the ECB according to conditions across the entire euro area and long-term interest rates could only be expected to decline if Portugal had a significant risk premium which is currently not the case.

There are two other channels of non-Keynesian effects which are based on the neo-classical theory. First it is suggested that with flexible prices and wages the effect of fiscal policy on output are small (in the extreme case with full flexibility the effects are zero). With fiscal consolidation prices and wages would then fall in response to lower nominal demand and stabilize output and employment. As domestic costs and prices fall relative to those of competitors the real exchange rate would depreciate and crowd in exports and reduce imports, even in a country like Portugal without a domestic currency. The question is, however, how flexible wages and prices are. Portugal's persisting output gap and the fact that despite the large slack the real exchange rate did not depreciate as could have been expected with more flexible wages and prices but rather appreciated, indicates that wages and prices may not be flexible enough to immediately compensate the negative demand effects from fiscal consolidation. However, as consolidation measures also include public wage restraint, some positive effects including a real depreciation effect could, perhaps, be expected.

Another channel much emphasized by the neoclassical theory is Ricardian equivalence. This assumes that households are forward-looking in the sense that they adjust their consumption to their expected long-term (lifetime) income and not to temporary changes of their current income. With fiscal consolidation which reduces current income but not expected lifetime income, as future taxes are expected to be lower, private households will reduce current savings in order to smooth their consumption. (A corollary would be that if the government continues running unsustainable deficits, private households would increase their savings as they would expect higher taxes and lower incomes in the future.) The Ricardian effect obviously implies that households are not myopic and are also not liquidity constrained. These seem to strong assumptions in the case of Portugal where a relatively large number of low-income households – even if they were not myopic – may be liquidity constrained.

Box 2.4. **Non-Keynesian effects of fiscal consolidation** *(cont.)*

This does not mean, however, that no effects could be expected from this channel as consolidation may reduce uncertainty and boost confidence. For example, the OECD estimated from pooled cross-country and time-series data for 16 OECD countries including Portugal a partial but significant private saving offset of fiscal consolidation (0.5 in the short-term and 0.7 in the longer term) (OECD (2004) and De Mello et al. (2004)). It also found some co-movement between the decline in Portugal's cyclically-adjusted fiscal deficit during the consolidation period 1991-1997 and a decline in private saving.

There are a number of studies which examine the fiscal effects by using autoregressive models which do not impose any economic theory but only the order of shocks.* Arcangelis and Lamartina (2003) find Keynesian effects of fiscal shocks for four OECD countries (Germany, France, Italy and the United States) but which have relatively small multipliers and are not long lasting. By contrast, Alesina et al. (2002) find that increases in public wages tend to spill over to private wages so that profits and investment are reduced and they conclude that cuts in public spending, particularly public sector wages and transfers is expansionary. Guidice et al. (2003) also find episodes of expansionary fiscal contractions in the EU countries with more over half of them undertaken without a decline in real interest rates. They suggest that consolidations which began during cyclical weakness and were based on expenditure cuts are more likely to be followed by higher growth.

For Portugal, the IMF (2005) finds with a structural VAR model Keynesian demand effects of government spending while (in contrast to the finding with its above-mentioned macro structural model) changes in taxes had no significant effects. According to the IMF because of the lack of data and the short sample period the results of this analysis should be interpreted with caution and it argues that given the initial poor fiscal conditions with a credible consolidation programme several non-Keynesian effects could partly offset the negative short-term demand effects of lower spending. Tondl (2005) examines the effects of fiscal consolidation for Eastern European countries and a control group of four other countries including Portugal and finds for most countries including Portugal that fiscal consolidation increases growth if this is pursued through cuts in general government current spending while growth is reduced if consolidation is based on raising taxes

* See Giudice, Turrini and Veld (2003) and Capet (2004) for recent surveys of the literature on non-Keynesian effects of fiscal consolidation.

Further necessary steps towards fiscal sustainability

While the measures taken or under preparation are going in the right direction and, if fully implemented, are likely to succeed in bringing the deficit below 3%, the consolidation programme needs to be complemented by additional reforms so as to ensure medium term fiscal sustainability.

Facing pressure from ageing population

After the recent reform of the public sector pension system, a key pending reform is the reform of the pay-as-you go general pension system. A working group has been appointed and is currently analysing alternative policy measures to achieve a comprehensive reform of the pension system. It is important that action in this area is not delayed as the system is under strong pressures arising not only from the ageing population but also from its maturation and the high replacement rates granted to

Table 2.1. **Fiscal consolidation episodes in OECD countries**

		Change in primary balance[1]	Change in spending[2]			Change in tax and non-tax receipts[3]	Output gap at the beginning of the consolidation episodes[4]
			Total	Current	Net capital		
Australia							
	1993-1999	4.9	–0.9	–0.1	–0.7	4.0	–4.1
Austria							
	1995-1997	3.5	–2.3	–1.9	–0.5	0.9	–0.7
Belgium							
	1992-1998	4.7	–0.3	–0.6	0.2	3.8	–0.2
Canada							
	1992-1999	7.9	–7.0	–6.6	–0.4	0.1	–4.1
Denmark							
	1995-1999	3.0	–1.7	–1.5	–0.2	0.6	–0.1
Finland							
	1992-2000	9.7	–7.1	–6.3	–0.9	–1.0	–9.5
France							
	1993-1997	3.7	–1.1	–0.4	–0.7	2.2	–1.7
Greece							
	1989-1994	12.4	–3.9	–3.2	–0.7	8.9	1.7
Iceland							
	1989-1992	4.4	–3.7	–1.6	–2.0	1.3	0.7
Ireland							
	1985-1989	6.6	–8.2	–5.9	–2.4	–3.1	–2.7
Italy							
	1989-1997	9.6	–2.3	–0.5	–1.9	7.3	0.7
Netherlands							
	1990-1996	5.6	–6.1	–5.3	–0.8	–1.6	3.2
New Zealand							
	1999-2003	4.6	–5.6	–4.0	–1.7	–5.1	0.1
Norway							
	1992-1997	6.0	–3.3	–3.0	–0.3	0.6	–4.7
Portugal							
	1980-1984	**8.8**	**–4.4**	**–2.9**	**–1.4**	**4.6**	**1.9**
	2001-2004	**3.3**	**–0.3**	**1.3**	**–1.5**	**2.9**	**2.4**
Spain							
	1991-1997	6.0	–6.4	–2.4	–4.0	–1.3	2.9
Sweden							
	1993-1998	10.7	–7.4	–3.9	–3.5	1.0	–7.6
United Kingdom							
	1993-1999	7.5	–4.8	–3.3	–1.5	2.6	–3.3
United States							
	1992-1998	5.1	–2.6	–2.3	–0.3	2.3	–1.7

1. Cyclically-adjusted as % of potential GDP.
2. As % of potential GDP. Current spending is cyclically-adjusted.
3. As % of GDP.
4. Deviations of actual GDP from potential GDP as % of potential GDP

Note: As changes in revenues are expressed as % of GDP and changes in spending as % of potential GDP, the difference is not equal to the change in the primary balance which is expressed as % of potential GDP. Fiscal consolidation episodes are defined as improvements in the cyclically-adjusted primary balance of more than 3% of GDP in consecutive years.

Source: Calculations based on *OECD Economic Outlook, No. 78*.

pensioners. According to updated national estimates presented in the 2006 Budget, under unchanged policies, pension expenditure would increase by 4% of GDP by 2050 (from 7.5% in 2005 to 11.4% in 2050) while revenues are expected to increase from 7.8% of GDP to 8.2%.[14] As a result, the system would run a deficit as from 2007 onwards, and the reserve fund would have a zero balance in 2014.[15]

Measures already taken to enhance the sustainability of the pension system include implementing a plan to reduce fraud and contribution evasion and increasing the social contributions of the self-employed. Other measures include the 2002 change to the pension benefit formula, which will now take the entire contributory career into account rather than using the best 10 out of the last 15 contributory years as was previously the case. The improvement from this change will be slow to materialise because of grandfather clauses that protect acquired rights. There has also been a change to the pension accrual rate, which now increases progressively over a range of 2 to 2.3% for those that have contributed for more than 20 years. These changes increase the incentives for older workers to remain in the workforce for longer.

There has also been an emphasis on reducing early effective retirement. These efforts should continue but they will only have a limited impact, as the effective retirement age (at 63.7 years old) is already close to the legal age and the second highest in the EU. The Budget 2006 evaluates the impact of three options:

- an increase of the legal retirement age to 67, which would reduce the deficit by 0.2% of GDP by 2050;
- a ceiling on pensions set at 5 times the minimum wage, which would reduce the deficit by 0.1% of GDP; and
- a faster transition to the new formula adopted in 2002, which would reduce the deficit by 0.2% of GDP.

More radical changes should be envisaged, such as adjusting replacement rates and/ or retirement age for changes in life expectancy of pension cohorts. In addition, some distortions have to be addressed: for instance, under the current system workers are entitled to the minimum pension whether they have worked 30 or 40 years, which reduces incentive to work (in the formal sector) more than 30 years.

In addition, financial education and awareness programmes could help the government to explain to the public the need for reform in the general pension system as well as the importance of individual private savings to supplement the public pension. Other OECD countries have used media campaigns for these purposes. For instance, the Slovak government conducted a ten-month-long media campaign beginning in the fall of 2004 to educate the public about the need for pension reform. The Irish Pensions Board has organised pension awareness campaigns over the past several years with the result that over 70% of the population is now aware of personal retirement savings accounts.

Further steps to control public expenditure and improve efficiency

An important element in successful durable fiscal consolidation in other OECD countries has been improvements in the budget process. Portugal has already taken several important steps including: *i)* improving the quality of public finance data;[16] *ii)* introducing new monthly financial reporting requirements for the health and social security systems, and for all levels of government from 2006 onwards, with penalties for non-compliance;

and *iii)* engaging financial controllers to monitor expenditure and report trends that pose a risk to fiscal consolidation.

Another measure taken by many countries to improve the budget process is to introduce or strengthen fiscal rules, although practices differ across countries. Applying and enforcing fiscal frameworks is a difficult task and it is not only a technical issue of fixing appropriate rules but requires a clear political commitment and is therefore also a political-economy issue (see Joumard *et al.*, 2004). In the literature, several (more or less radical) proposals have been made for improving national fiscal policy frameworks. This could, for example, be done by adopting clear long-run fiscal policy objectives and also specifying appropriate procedures when governments violate their own commitments; and by strengthening the role of independent economic advisory councils in the preparation of the budget and the assessment of final outcomes. For example, in case of fiscal slippage the government could be required to give a formal explanation to the parliament or have public hearings with the finance minister and outside experts (CESifo 2005). The Netherlands illustrate a case where multi-year expenditure agreements have had some success, and, although they did not prevent fiscal degradation during the first half of the 2000s, they were instrumental in redressing the fiscal situation quickly (Box 2.5). In Portugal, multi-annual budgeting was announced in 2001 but has not yet been implemented; moreover, the budgetary law still does not include binding ceilings on expenditure. Progress in this area would help to secure the gains of the ongoing consolidation efforts.

Box 2.5. **Multi-year expenditure agreements and consolidation: the Netherlands case**

The Netherlands achieved a major fiscal consolidation in 2004-05. Besides external favourable effects linked to the higher price of natural gas, this process has owed a lot to the medium-term framework adopted by the authorities 10 years before. The framework, introduced in 1994, is based on an agreement between political parties participating in the coalition governments and consists of ceilings on expenditure in each major budget sector (the central government budget; social security; and labour market and health expenditure) established for the duration of the legislature. The ceilings are set in real terms and are adjusted each year for inflation. They are based on cautious macroeconomic projections produced by the independent Netherlands Bureau for Economic Policy Analysis (CPB). Overspending for a specific item in a given sector has to be compensated by lower expenditure on other items within the same sector. Automatic stabilisers are allowed to work fully on the revenue side, except if the deficit comes close to the Maastricht Treaty's 3% ceiling which would require discretionary fiscal tightening on either the revenue or the expenditure side. Windfalls may be spent only to the extent that they do not result from better-than-expected cyclical conditions and should not be used for new policies. For more details see the *2006 OECD Economic Survey of the Netherlands*.

In addition, there is a need to develop cost-benefit analysis for public investment on a more systematic basis. This is also essential in the case of public-private partnerships which are increasingly relied upon in Portugal (as in many other EU countries).[17] Under these schemes, the government can, for instance, instead of buying an asset and operating it, buy the services from a private entity that invests and owns the asset (at least partly and at least during the period of exploitation). It thereby substitutes future payments for these services for current investment costs. This approach has been chosen in the particular cases of several new National Health Service (NHS) hospitals. If not carefully assessed, these projects can create important contingent liabilities for the government.[18]

Simplifying the tax system and broadening its base

Indirect tax rates are being raised well above neighbouring Spain and most other EU countries and the corporate income tax is still above Eastern European countries that compete fiercely with Portugal for exports and FDI. It would not be wise, however, to lower them before public finances have been put on a sustainable path. On the other hand, there is ample room for simplification of the tax regime which is as important for competitiveness as lowering tax rates and can help improve tax collection efficiency. An informative measure of the complexity of the tax system and its administration is the resource cost of collecting taxes. In international comparison Portugal belongs to the countries with relatively high costs per unit of collected revenues and also has relatively

Table 2.2. **Indicators of administrative costs in tax revenue collection and tax arrears**

	Administrative costs as a % of collected revenue	Number of citizens per full-time staff	Number of labour force per full-time staff	Reported gross tax arrears as a % of net tax collections
	2002	2003	2003	2002
Australia	1.19	1 016	512	9.3
Austria	0.72	929	450	9.6
Belgium	1.00	476	207	14.6
Canada	1.20	810	425	8.4
Czech Republic	2.08	700	351	49.7
Denmark	0.73	651	348	4.9
Finland	0.67[1]	820	415	6.6
France	1.44	788	358	16.1
Germany		665	324	2.6
Hungary	1.35	768	309	
Ireland	0.95[1]	625	282	4.5
Italy		1 202	510	
Japan	1.62	2 260	1 199	
Korea	0.85	2 804	1 359	3.0
Netherlands	1.76[1]	629	320	
New Zealand	1.17	853	425	4.0
Norway	0.59[1]	716	374	4.0
Poland	1.32	751	339	8.6
Portugal	**1.68**	**778**	**402**	**43.5**
Slovak Republic	1.46	929	458	39.7
Spain	0.78	1 680	745	5.9 (2001)
Sweden	0.42[1]	985	494	1.9
UK	1.15[1, 2]	730[3]	3603	17.2[2]
USA	0.52[1]	2 261	1 445	16.1

1. Revenue base includes social contributions.
2. IRD.
3. IRD and C&E.

Source: Tax Administration in OECD Countries: Comparative Information Series (2004), OECD Centre for Tax Policy and Administration.

Table 2.3. **Value-added tax**

A. VAT in international comparison, 2003

	Value-added tax revenue	Standard rate[1]	Effective VAT rate[2]
	In per cent of GDP	Per cent	
Portugal	8.5	19.0	11.4
Canada	3.4	7.0	4.8
Denmark	9.7	25.0	15.1
France	7.1	19.6	9.9
Germany	6.4	16.0	9.0
Greece	7.8	18.0	10.3
Ireland	7.3	21.0	13.6
Italy	6.1	20.0	8.3
Japan	2.4	5.0	3.4
Spain	6.0	16.0	9.0
United Kingdom	7.0	17.5	8.9
OECD average	7.1	17.7	10.1
EU15 average	7.5	19.6	11.1

B. Effective VAT in per cent of standard rate

	1990	1995	2000	2003
Portugal	46.0	59.0	66.5	59.7
Canada	46.2	44.4	49.2	68.1
Denmark	53.0	57.2	58.3	60.3
France	61.1	50.4	53.0	50.7
Germany	63.8	63.4	59.0	56.3
Greece	50.6	48.7	53.0	57.3
Ireland	43.6	51.9	58.2	64.6
Italy	41.7	42.2	42.7	41.4
Japan	68.2	73.0	73.7	67.5
Spain	60.1	44.8	49.7	56.5
United Kingdom	53.1	50.6	50.1	50.8
Average of above countries	53.4	53.2	55.8	57.6

1. Position as of 1 January 2003. In January 2006, the standard rate was 21% in Portugal and 19% in Greece (the other rates had not changed).
2. Effective VAT rate is VAT revenue divided by base (*i.e* consumption exclusive of VAT).

Source: OECD, *Revenue Statistics and Consumption Tax Trends.*

high tax arrears (Table 2.2). The decline of the average effective tax rate of the VAT relative to the standard rate between 2000 and 2003 might also point to increasing loopholes (Table 2.3). Tables 2.2 and 2.3, however, do not reflect the above-mentioned recent progress on the efficiency of the tax administration.

Tax incentives for the business sector complicate tax administration and increase economic costs. Tax administrations have difficulties in verifying if all the deducted items are effectively connected to the firms activity, and rather than being associated with tax evasion practices. In Portugal large amounts of inadmissible losses are generally presented for tax purposes, reducing fiscal revenues. Bronchi and Gomes-Santos (2001) pointed to the very small number of corporations paying the bulk of corporation tax receipts and the need to further streamline incentives and deductions in order to broaden the base and to harmonise the corporate income tax rate at a single relatively low rate.[19] In addition, over the last years there have been constant changes in tax benefits and incentives which have complicated even more their administration and have made long-term decisions by economic agents more difficult. In the 2006 Budget, some action has been taken to simplify the system such as the abolition of some tax benefits and exemptions. However, the creation of a new tax bracket for the personal income tax has gone in the opposite direction. There is a working group on tax simplification but there is no concrete reform plan yet. Progress is needed in this area. Before and after such reform is launched, refraining from revising the tax legislation from one year to the next would make the tax system simpler to deal with and more stable.

Notes

1. The December 2005 update of the Stability Programmes presents some simulation of the impact of higher (short and long term) rates on the macroeconomic scenario, including the fiscal position.
2. In the past, the annual general budget used to establish a ceiling for total NHS spending, usually on a historical basis. This initial allocation was almost never been respected and supplementary budgets had become the norm. From 1993 to 2002 spending always exceeded the initial budget by an average of 7.5% (with highest overruns in 1999 and 2002, 10.8% and 19.6%).
3. This “Big Bang” health care reform came after a succession of attempts of more gradual reforms launched in the late 1990s and early 2000s that did not survive the political cycle and were never fully implemented.
4. Some 60% of private pensioners receive only the minimum pension.
5. Cyclically-adjusted primary expenditure increased by ¾ per cent of GDP in 2005, cyclically-adjusted tax revenues by 0.3% of GDP.
6. Efforts are larger at the beginning of the period while the consolidation in more growth driven in the lasts years. (The planned reduction in the cyclically-adjusted deficit is of 1½ per cent of potential GDP in 2006, ¾ per cent in 2007 and in 2008 and ½ per cent in 2009).
7. This estimate by the authorities only includes measures that are either already legislated or included in the 2006 budget as a multi-annual current expenditure reduction programme.
8. The implementation as of end-2005 is detailed in the December 2005 update of the Stability and Growth Programme.
9. The implicit tax rate on continuing work after the age of 60 was estimated at 14.4% in 2003 (see Duval, 2003), which is still low compared to OECD countries.
10. The wage reference to determine minimum contributions to social security of the self-employed is raised from 1 to 1.5 minimum wages. This will reduce the bias in favour of this work form. It is a first step forward in the direction of levying social security charges for the self-employed as a proportional share of the net earnings recommended in the 2001 *OECD Economic Survey of Portugal*.
11. This new status did not go without some problems: there were cases of hidden deficit; some bad managers had to be dismissed. Moreover, human resource management is complicated by the fact that part of the staff is under private contract, part has a public employee status. There was no evidence of cream skimming as was feared when the reform was launched.
12. The details of the reform are due in March 2006.
13. In the case of Portugal, after 2001, higher revenues represent mainly 5% of GDP of exceptional revenues from one-off operations. For instance in 2003 the recording as government revenue of the transfer of unfunded pension obligations from postal services (CTT) to the General Government (0.9% of GDP) and the sale of non-performing tax and social security claims to a private financial institution at close to 15% of face value (amounting to 1.4% of GDP). In 2004, one-off revenues worth almost 2.3% of GDP were received in exchange for the takeover by the government sector of the pension liabilities of four state-owned enterprises (the banking group *Caixa Geral de Depósitos* and three smaller enterprises).
14. The main differences with previous projections are due to the use of more realistic assumptions on productivity, GDP and population growth – although the assumed growth rate of GDP of 2% year remains on the optimistic side as it assumes average annual labour productivity growth of 2.1% – as well as the integration of the new public employees to the scheme.

15. This social security reserve fund (*Fundo de Estabilização Financeira da Segurança Social*, FEFSS) is supposed to receive 2 to 4 percentage points of the employees contribution, as well as any general regime surpluses and capital gains. In 2004 its assets represented 4.3% of GDP.
16. An agreement was signed at the start of 2006 between the three Portuguese institutions involved in public accounts statistics, the National Statistical Institute (INE), the Bank of Portugal and the Ministry of Finance. By clarifying responsibilities of each institution and the information exchange requirements, this agreement should result in the reporting of better-quality public finance data.
17. See Koen and van den Noord (2005).
18. See for example Joumard *et al.* (2004) and Box 2.1 in the OECD *Economic Survey of Korea*, November 2005.
19. Currently the statutory corporate tax rate is 25% and including local taxes 27.5%.

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ANNEX 2.A1

Background information to Chapter 2

Table 2.A1.1. **Status of the main budgetary consolidation measures**

	Impact from	Legislation stage*	Implementation progress
REVENUE			
Taxes on income and wealth			
i) Measures tackling tax evasion and improving the efficiency of Tax Administration	2005	Several administrative measures.	
ii) Tax benefits	2006		
Reduction in IRS specific deductions for the highest pensions income			
Tax breaks for restructuring companies (DL 404/90)		Article 53 of CIRS (art. 43 of 60A/2005 of 30 December – Budget 2006 – Chapter IV). The Law was abrogated	Implemented
Imposition of constraints within the scope of article 69 of IRC Code		Law 50/2005 of 30 August and Resolution (*despacho*) No. 79/2005-XVII of 15 April	Implemented
Shortening of discretionary decision on clause 4 of article 33-A of the tax benefit statute for offshore zones		Article 33-A (art. 55 of Law 60-A/2005 of 30 December – 2006 – Chapter X).	Implemented
iii) Creation of an additional IRS tax bracket with a marginal rate of 42% to be applied to annual incomes above 60 thousand euros	2006	Article 68. of CIRC (art. 43 of Law 60-A/2005 of 30 December – Budget 2006 – Chapter IV).	Implemented
VAT		Several administrative measures: *i)* Article 45. No. 3 of Law 60-A/2005 of 30 December – Chapter VII Budget 2006-Legislative authorization; *ii)* special provisions in the VAT rules for recyclable waste sector.	
i) Tackling tax evasion	2005		
ii) Increasing standard rate from 19 to 21%	2005		
iii) Tax benefits	2005		
Revision of the VAT exempt regime in the case of restructuring financial holdings			
Revision the rules for partial deduction of VAT		Law 39/2005 of 24 June Several administrative measures. Several administrative measures.	Implemented implemented implemented
ISP – tax on oil products (on top of the annual update to compensate inflation, including 2005) An increase in ISP of 7.5 cents *per* liter to come into effect in three steps ([euro] 0.025/litre each) at the beginning of 2006, 2007 and 2008	2006	Article 49 of Special Consumption Tax Code (art. 49 of Law 60A/2005 of 30 December – Budget 2006 – Chapter VII).	Implemented (Regulation (*portaria*) 75-A/2006 18 January 2006.
Tax on tobacco			
A nominal annual 15% rise in the tax levied per packet of cigarettes for each year between 2006 and 2009	2006	Article 83. of Consumption Special Tax Code (art. 48 of 60-A/2005 of 30 December – Budget 2006 – Chapter VII).	Implemented
Social security contributions			
i) A rise in the wage reference to determine minimum contributions to social security of the self-employed from 1 to 1.5 minimum wages.	2005	Decree Law 119/2005, 22 July.	In place since July 2005.
ii) Measures to tackle evasion and fraud	2006		Legislation on fraud and penalties revised, change in contributions rate and regularization of debts to occur in 2006.

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Table 2.A1.1. **Status of the main budgetary consolidation measures** *(cont.)*

	Impact from	Legislation stage*	Implementation progress
		EXPENDITURE	
Control of social security expenditure			
Private sector			
Unemployment benefits		New framework for unemployment benefits.	To be reviewed until the end of 2006.
Early retirement	2006	Decree Law No. 125/2005, 3 August, suspending and abrogating some of the early retirement schemes.	
Public service	2006	Law No. 60/2005, 29 December, establishes new rules for public service retirement. Special regimes of retirement within public administration were also revised to assure convergence with the general security system by the Decree law No. 229/2005, 29 December. The employers social contribution to CGA was increased to 13%. Law 60-A/2005, 30 December – Budget 2006.	
Savings on medicine subsidies	2005		
Wage moderation in the public service			
i) Wage scale update of 1.5% per year	2006	1.5% in 2006	
ii) Reduction in the wage drift (*i.e.* the average wage increase beyond the wage scale update), through:	2006	Automatic progression in careers freeze until December 2006 (Law 43/2005, 29 August 2005).	
New public service wages and careers structure from 1 January 2007 onwards	2007		Preparatory works in progress. Target date December 2006.
Freeze on automatic career progressions until New career and remuneration system comes into force	2006		Implemented see *ii)*
Constraints on promotions until New career and remuneration system comes into force	2006	The special regimes for military and police forces and judicial bodies revised to assure convergence with general rules for public servants medical assistance. Decree Law No. 67/2005 23 September; No. 158/2005 20 September; No. 212/2005 9 December.	Implemented see *ii)*
Slower growth of public servants, imputed social contributions	2006		
Effective Public servants placement on Surplus Staff Exchange	2006		
Revision of the rules on extra-time compensation for doctors	2006		Legislation to be revised.
Elimination of compensation for students on education trainee work	2005		
Reduction in the number of public servants (relative to a 0% change benchmark), and better human resources management			
i) Partial replacement of public servants who retire	2006	Art. 16 of the 2006 budget Law. Public servants hiring is subject to the Minister of finance authorization. The rule is to hire one person for two leaving public administration (retirement or any other reason).	Under implementation.
ii) Revision on teaching profession career code, to decrease the number of schoolteachers with reduced or zero classroom hours	2005		Negotiations to review teaching careers with the intervening parties have been scheduled for 2006.
iii) Workers who move from the Public Employment Pool to the private sector	2006		
iv) Limitation on admission of new public servants in regional and local government	2006	Art. 17 of the 2006 budget Law. The compensation of employees in local governments should be kept at the 2005 level.	None

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Chapter 3

Improving the performance of the education system

This chapter discusses the performance of primary and secondary education services and shows that improvements are needed to narrow the significant human capital gap with other OECD countries. Despite progress in the past decades, Portuguese children spend comparatively few years in formal education, and they do not perform as well as children from other OECD countries. This situation does not stem from a lack of resources devoted to education but from inefficiencies and misallocation of spending and weaknesses in the training of teachers and school principals that compound the low starting point of Portugal regarding education. There is also a gap between the autonomy that schools have received and the operations in practice. Besides, there is no tradition of systematic evaluation of reforms and the use of student and school assessments to improve the system is very recent and has not yet been put in practice. The ongoing efforts of the authorities go in the right direction but implementation remains a challenge. More should be done in some specific areas such as career guidance services to students, the performance of school principals and the effective use of autonomy by schools.

Narrowing the human capital gap *vis-à-vis* other OECD countries is essential for Portugal to improve its productivity and resume catching-up (see Chapter 1). A fundamental challenge lies in primary and secondary education. Despite progress over the past decades, there is still an important share of the young leaving school before completing upper secondary education and the achievements of students measured by PISA are among the weakest in the OECD. As a result, the gap in human capital development *vis-à-vis* other OECD countries remains large and represents a major obstacle to faster productivity growth. Improving the education system has been a policy priority for the past 30 years; however political instability (with 27 Education Ministers in the past 30 years) has meant a lack of continuity of action and has slowed progress. Hence, improving the performance of primary and secondary education so that children benefit more from school and leave it with a minimum skill level remains a major challenge.

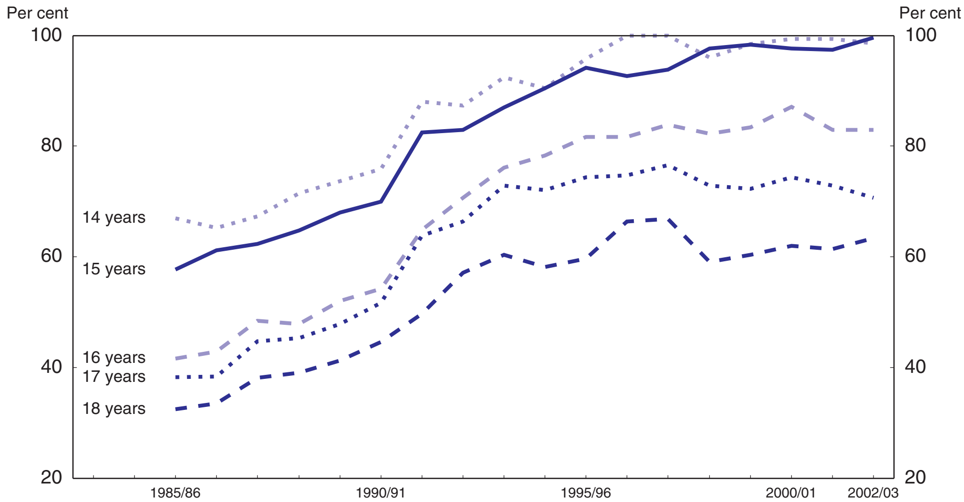
This chapter first presents a broad overview of the systems performance, stressing the areas where improvements are needed. Then, it discusses in more detail the specific problems and ways to address them. Specific recommendations are summarised in Box 3.2 at the end of the chapter. Tertiary education issues and labour force training are discussed in the following chapter.

Overview of the system performance

Coverage has increased…

A major handicap for Portugal has been the very low starting point in terms of education attainment and literacy of its population. A fifth of all 15-64 year-olds were illiterate in the mid-1970s and less than 5% had completed upper secondary education. This made it difficult to find qualified teachers when the education system expanded. The low educational attainment of parents has also limited the potential achievements of children. Nevertheless, efforts to ensure access to education for all Portuguese resulted in a rapid expansion of enrolment. Figure 3.1 presents trends in enrolment by age since the mid-1980s when the 1986 Education Law lengthened compulsory schooling from 6 to 9 years to include lower secondary education.[1] Lower secondary is now nearly universal with 99% of 15 year-olds attending school.[2] The coverage of preschool has also increased rapidly: more than 90% of 5 year-olds, and more than 70% of 3-4 year-olds, were enrolled in the system in 2004/05.

Figure 3.1. **Enrolment rate for 14 to 18 year-olds**



Source: Ministry of Education.

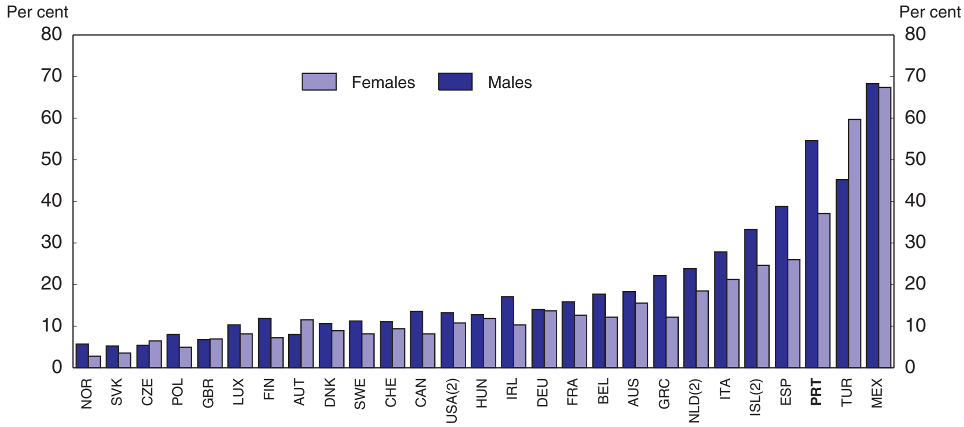
... but children still leave school too early...

Despite success in keeping children at school for longer, the high share of students leaving the education system too early with low skills remains a major problem. The share of students who drop out without completing upper secondary education is well above the OECD average. The early dropout rate (measured by the percentage of young adults who have completed lower secondary only, and who are not in training or education) has decreased from 63.7% in 1991 to 39.4% in 2004. This is still more than twice the EU average rate (15.9%) and among the highest rates in the EU and in the OECD (Figure 3.2). In addition, the participation of young adults in recurrent education (*i.e.* second-chance education programmes for those who dropped out) remains insufficient. So far, these early dropouts have not directly affected labour market outcomes as much as they have in other OECD countries: as shown by Figure 3.3, in Portugal, most of the early school leavers were employed in 2003 (60% in low-skilled jobs and 40% in skilled jobs, OECD (2005b)). Unlike in most other OECD countries, workers who did not complete upper secondary education have not so far faced much higher unemployment and the non-completion of upper secondary education has not necessarily been a factor in social exclusion.

Nevertheless, the issue of early dropouts from school is of major importance. First, young people with low skills are set to remain in the labour market for a long time, which might slow Portugal's needed adjustment towards higher value-added products. Second, low achievement in basic and upper secondary education explains to a large extent Portugal's low enrolment rate and poor achievements in tertiary education. It also contributes to lower potential gains from in-firm training. The pressure to overcome this problem has increased with the European Lisbon agenda which has set a target of 10% for the early dropout rate by 2010 for the EU average. Achieving the EU average rate in Portugal would imply a reduction by almost 30 percentage points over the next four years, which seems clearly unachievable. For this reason, the target defined by the National Action Plan for Employment is to reduce the share of early school leavers in the 18-24 year old group to 30% by 2008 and 25% by 2010.

Figure 3.2. **Early school leavers in OECD countries**

Share of 20-24 year olds who have not completed upper secondary and are no longer in education, 2003

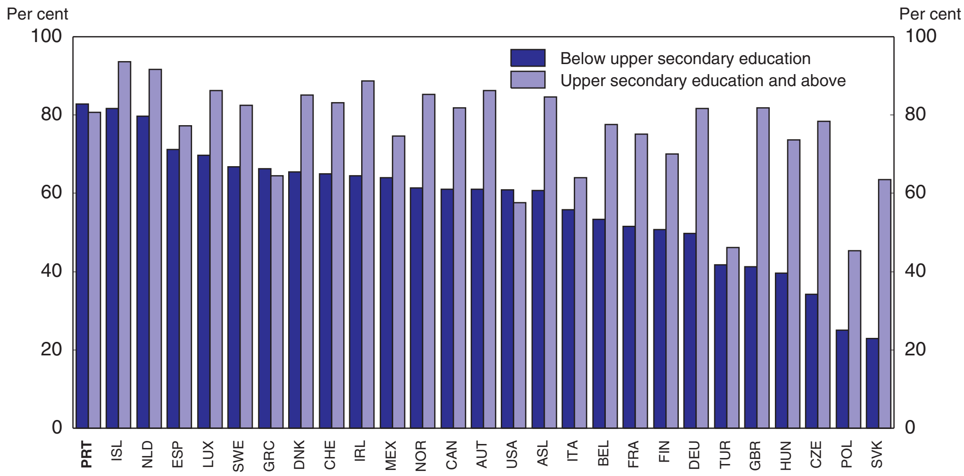


1. Data are ranked in ascending order of the total of the 20-24 year-olds.
2. Year of reference 2002.

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

Figure 3.3. **Employment rates of 20-24 year-olds**

Share of 20-24-year-olds no longer in education, 2003



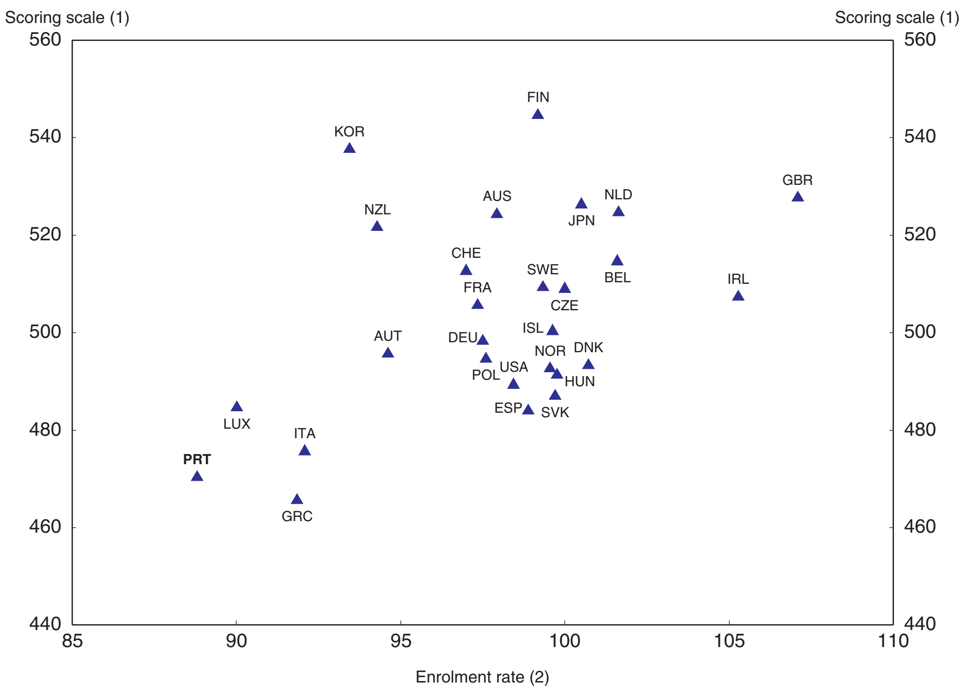
Source: OECD, *Education at a Glance* (2005).

The high proportion of early school leavers results from the combination of several factors. A prominent one is the relatively low appreciation of schooling by large groups of the population. The traditional bias of upper secondary towards general education – intended to lead to tertiary education – has lowered the added value of completing upper secondary education for those who did not want to go on to university and did not find training opportunities matching their needs. Moreover, although measured returns to upper secondary education are in line with the rest of the EU, in an economy that until recently created enough unskilled jobs, education was not highly valued by the labour market at the beginning of the career. Some surveys show that completing upper secondary would not have necessarily helped young workers to get better jobs right after they left school.[3] On the other hand, returns to education tend to increase over the professional career as a better initial education gives better chances of career progression, notably via a strong ability to benefit from on-the-job training.[4] The often uneducated and poor parents and their children might be short-sighted and not be fully aware of all the long-term benefits to continuing education and focus only on the easy entrance in the labour market. They might not fully appreciate either the potential benefits of more education or the likelihood that, in the new global environment, labour prospects for the less educated in Portugal will deteriorate significantly in coming years. Overall, future returns are perceived as insufficient to compensate for both direct costs of education (despite social support to families with children at school)[5] and its important opportunity costs *vis-à-vis* starting work, and this contributes to the low participation in upper secondary education. Liquidity constraints might contribute to this phenomenon, but easing these constraints would not suffice to boost school participation unless the perceived value of schooling increases.

... partly as a result of low quality of education

The high dropout rate in secondary education also reflects a lack of quality of the education in the two primary cycles. Furthermore, the achievements of students measured by the results of the 15 year-olds at PISA are well below the OECD and EU average (Figure 3.4).[6] Among the 15 year-olds, 30% scored below, or at, level 1 in maths and 22% in reading, implying that they have acquired only very basic skills. Only 5.2% of students

Figure 3.4. **Student performance and enrolment rate at age 15**



1. Average performance across the combined reading, mathematical and scientific literacy scales in 2003 (for the United Kingdom data is from 2000).
2. Net enrolment rate at age 15. Public and private institutions. Net enrolment rates are calculated by dividing the number of students of a particular age group enrolled in all levels of education by the number of people in the population in that age group. Data differ from those computed by the Portuguese Ministry of Education presented in Figure 3.1, largely due to the still preliminary status of the data.

Source: OECD, *Literacy Skills for the World of Tomorrow: First Results from Pisa 2003* (2004) and *Education at a Glance* (2005).

scored among the best performing students (*i.e.* at level 5 or 6) in maths and 3.8% in reading (a much lower share than the OECD average). National tests also reveal insufficient performance in core topics (Portuguese and Mathematics).

Low educational attainment still repeats itself from one generation to the next

A major source of social inequity in most countries is the unequal education level of the parents: children with low-educated parents tend to leave school early, have lower educational attainments and a lower probability of accessing higher socio-economic status. The low initial education level of the Portuguese population (as reflected by the very small share of the older generations, including the 35-54 year-olds, having completed upper secondary education) has been a major obstacle to progress in educational attainment. In 2003, 62.8% of the 15 year-olds surveyed by PISA had a mother who had not completed upper secondary education (25.7% in the OECD). PISA results also show that socioeconomic variables (occupational status of parents, education level of parents, etc.) account for 21% of the variance in student performance, one of the largest shares in the OECD. Once corrected by the education of parents, the results of the Portuguese students in PISA rank relatively well.[7] The low initial education level of the Portuguese population represents also a limit on the cost efficiency of resources since, for the same input, students achievements are lower when parents are less educated.

An education system that works well should nevertheless be able to limit the repetition of low education from one generation to the next and foster inter-generational mobility from lower to higher socioeconomic status. If not, the system is not able to fully capitalise on the skill potential of students from disadvantaged backgrounds. This still represents a major challenge for Portugal. It is all the more important because education will play a crucial role in the integration of the increasing number of children of immigrant parents. Several countries, such as Spain and Korea, have succeeded in breaking the negative cycle of inter-generational low achievement. The fact that Portugal started from a less favourable situation means that greater efforts must be made. Success is possible, however, since there is important room for improvement in the quality of education services, which would accelerate the education of successive Portuguese generations.

How to improve the performance of the education system?

Spending better

Below-average outcomes do not result from a lack of spending (Figure 3.5). Public spending per student is close to the European average and above what countries with a similar level of development typically spend. Measures of some key inputs, such as the number of teachers and schools per student, also show a relative abundance in comparison to other OECD countries. With much lower spending per student, most eastern European countries achieve the same or better results at PISA (Figure 3.6).[8] Even after adjusting PISA results by cumulative expenditure per student, Portugal remains at the bottom of the OECD rankings. This might be due to the fact that recent reforms have not yet delivered their full benefits, but it also points to efficiency issues. Afonso and St Aubyn (2005) estimated more formally the efficiency of expenditure in education provision in OECD countries by comparing PISA results (output) to resources employed (teachers per student, time spent at school); and Portugal appeared as one of the least efficient countries in the OECD, confirming the results of previous comparable analyses.[9]

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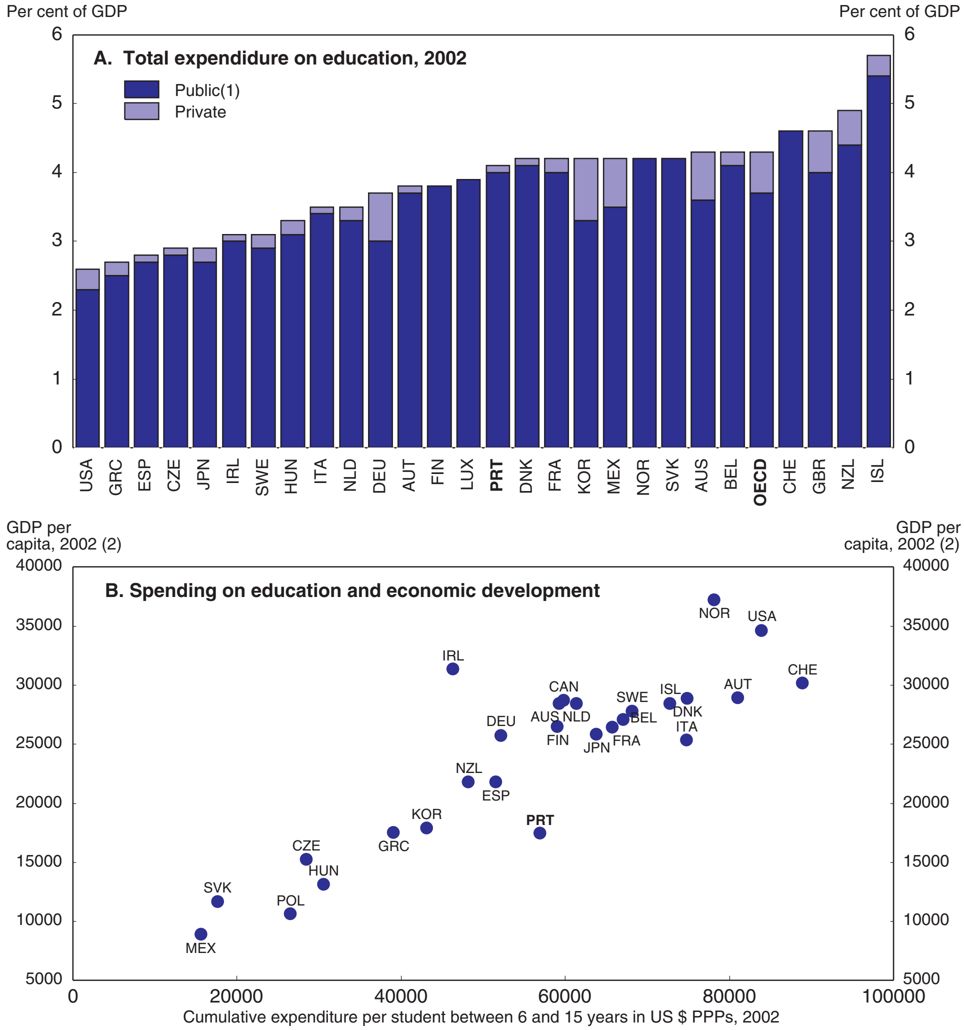
Figure 3.5. **Spending on education**

Primary, secondary and post-secondary non-tertiary education

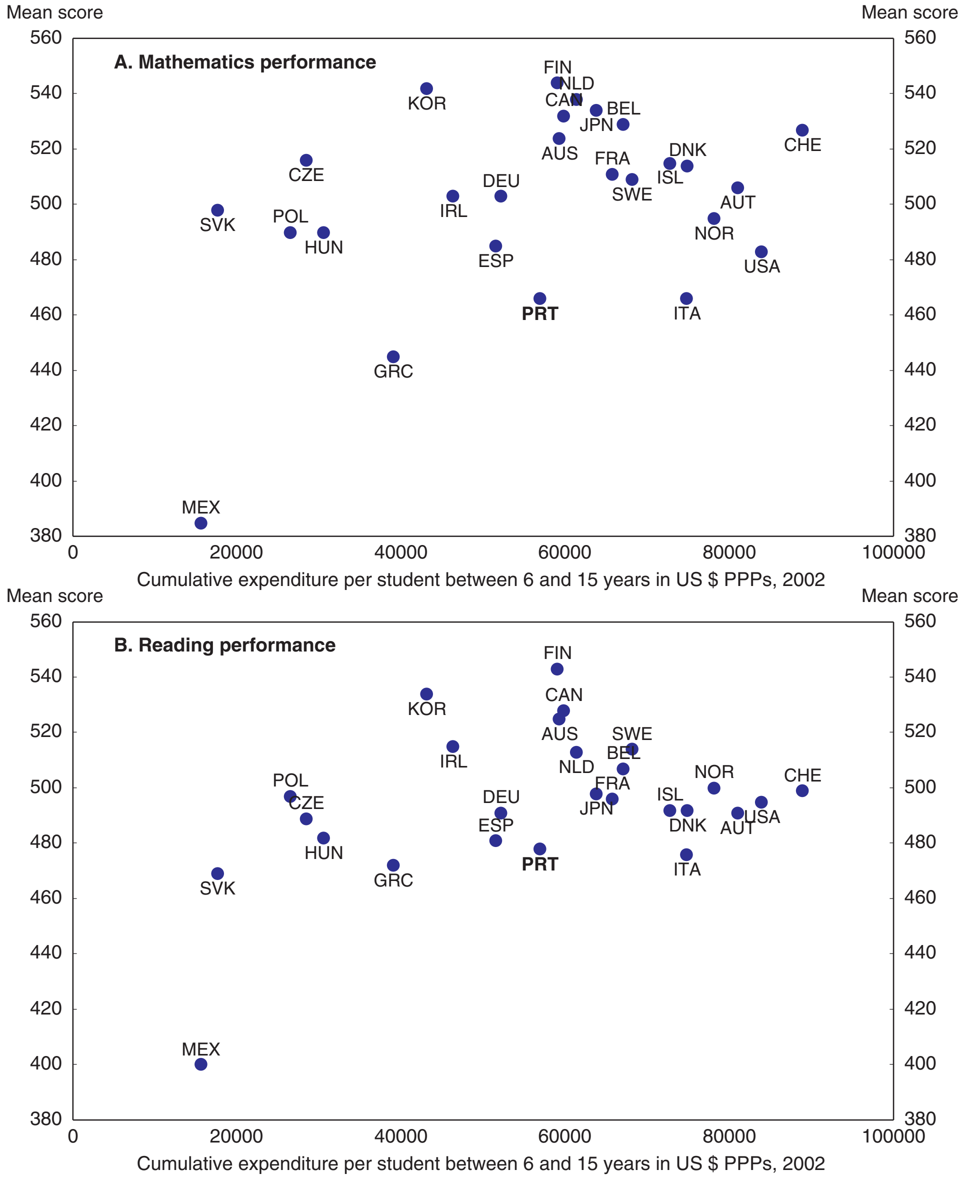


1. Public expenditure includes public subsidies to households for living costs, which are not spent on educational institutions.
2. In US$ at constant prices and at 2000 PPPs.

Source: OECD, *Education at a Glance*, various issues.

There are obvious examples of inefficient use of resources. The most striking comes from the school network which is very dense and has not evolved with internal migration. It therefore comprises a large number of small and very small schools (less than 10 children), which are costly while not providing students with adequate teaching and learning conditions.[10] This large number of small schools reflects notably the fact that local authorities are only responsible for the maintenance of school buildings and local school transport, and do not bear the high wage costs of schools which falls under the central government budget.[11] Therefore, they have little incentive to close their schools and merge local schools into larger and less costly units when the school-age population shrinks. Nevertheless, these small schools have to be closed both for financial and pedagogical reasons, and solutions have to be found at the local level on providing transportation for children from isolated areas who will have to attend schools further away from where they live.

Figure 3.6. **Spending per student up to 15 and PISA results in 2003**

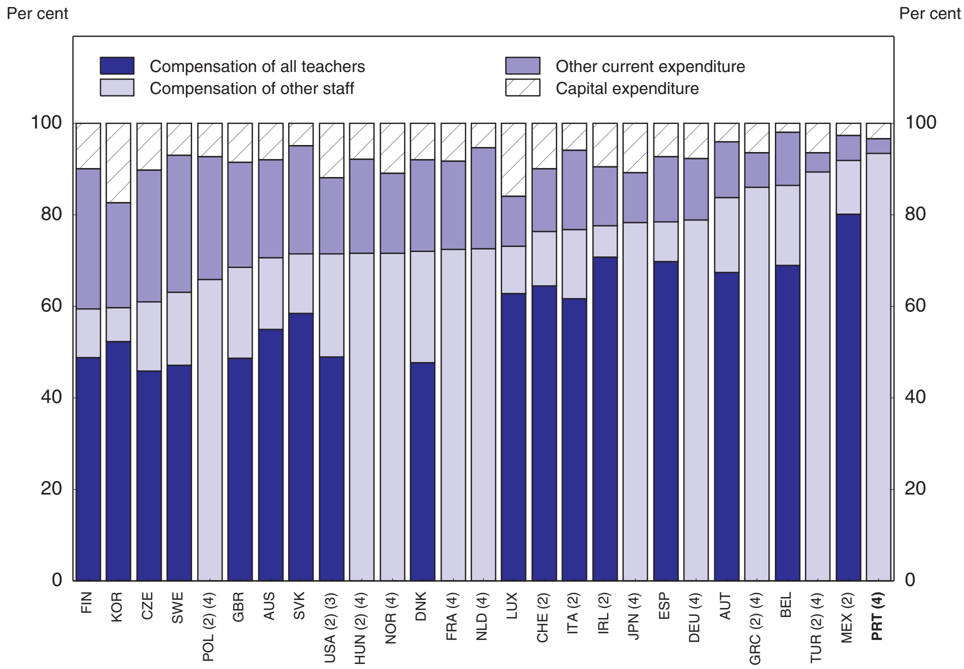


Source: OECD, *Learning for Tomorrow's World: First Results from PISA 2003*; OECD, *Education at a Glance* (2005).

The overall allocation of resources is not optimal. Although the total level of spending for primary and secondary education is in line with other OECD countries, a noticeable feature of education spending in Portugal is that most of it goes to current spending, and most current spending at primary and secondary levels goes to teachers salaries. The wage bill represents 93.4% of total spending (compared with 74.4% on average in the OECD) (Figure 3.7). As a result, other spending items that are essential to the quality of teaching are well below the OECD average. Non-wage current spending accounts for only 3.2% of total spending (against an OECD average of 17.4%), and capital spending accounts for only 3.4% of total spending (against an OECD average of 8.2%). Hence, many schools do not have laboratories, lack teaching material and performing computers and sometimes face poor learning conditions (no heating for instance).[12] Two factors contribute to the importance of the wage bill. The number of students per teacher is below the OECD average.[13] Moreover, while teachers starting salaries (measured in purchasing power parity terms) are below the OECD average, they increase rapidly with experience to levels above the average (Figure 3.8). Overall, as a multiple of per capita income, salaries are 9% above the average for other OECD countries.

Figure 3.7. **Distribution of total and current expenditure on educational institutions**[1]

By resource category in primary, secondary and post secondary non-tertiary education

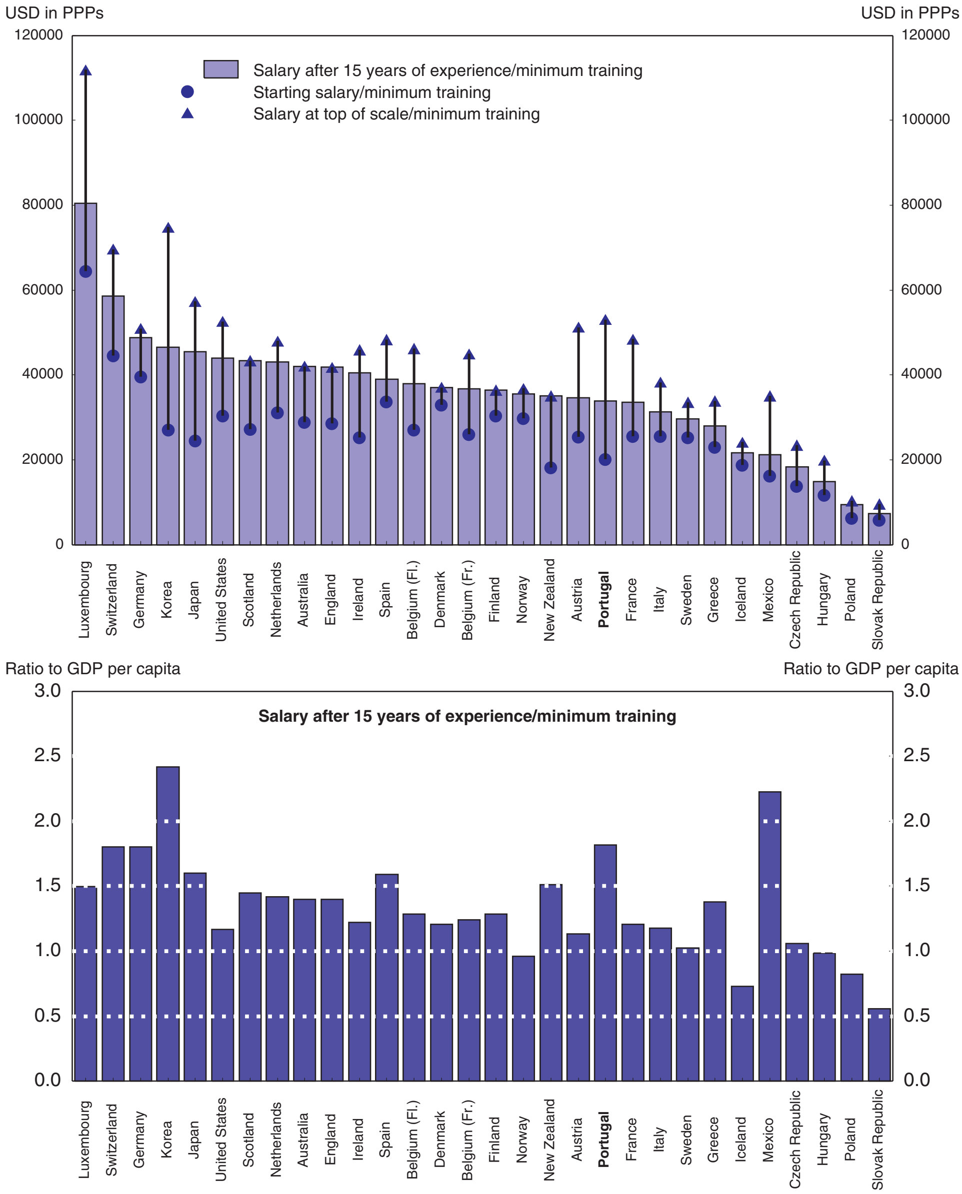


1. 2002.
2. Public institutions only.
3. Excludes post-secondary non-tertiary.
4. Compensation of teachers and compensation of other staff.

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

Efficiency issues have become the focus of recent policies as, in the context of fiscal consolidation, education has been subjected to spending limits.[14] Moreover, the education system is now oversized given demographic trends: between 1991 and 2001, the number of 6-to-17 year-olds decreased by 23%. Against this background, considerable efforts have been put in to the rationalisation of supply of education services, with a view to making better use of existing resources and achieving better quality without spending more. Some progress has been made in the regrouping and closing of schools in less populated areas, but more needs to be done.[15] The current policy to replace only 1 out of 2 retiring civil servants should help to progressively reduce the number of teachers, especially in primary education where teachers are older and cohorts are expected to shrink faster. The government is also trying to make a more efficient use of the teaching staff already in the system, for instance by reducing the number of teachers with reduced or no teaching time[16] and increasing the effective number of hours teachers spend in school; this is supposed to free up some resources to provide support classes to low achievers and facilitate the replacement of absent teachers, while reducing the need to hire new teachers. Further efforts to make a more efficient use of existing teaching staff could include retraining teachers, from primary and lower secondary school in particular, so that they can teach at different levels of education, according to needs, or even provide basic adult training. Incentive schemes to facilitate such career changes should be envisaged.

Figure 3.8. **Teachers salaries in lower secondary education (2003)**



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

Radically changing the structure of expenditure is difficult in the short term, since under their current status teachers cannot be dismissed. In the longer run, a way to ensure that more financing is allocated in priority to non-wage expenditure, at least in upper secondary education, will be to take advantage of changes in enrolment patterns. When fewer students drop out and more attend upper secondary education, it would be efficient to let the students per teacher ratio increase, since it is relatively low compared with the OECD average; it would then be possible to have better teaching material and equipment without raising the cost per student. To reduce the wage bill markedly and free up resources for other spending, more radical measures would be necessary. They include changing the system of wage increases and promotion in the education system, and relocating teachers outside the education system. Those can be defined within the framework of the public administration reform (discussed in Chapter 2).

Develop vocational and technical education

A specific feature of the Portuguese education system has been the traditional bias in favour of general programmes aimed at preparing for tertiary education rather than work. Despite previous policies to diversify upper secondary education, in 2004/05, 68% of the students in upper secondary (excluding recurrent education) were enrolled in general programmes, 20% in technological programmes and 12% in vocational programmes.[17] The official goal is to reduce the share of general schooling to 50% by the end of the decade and create more bridges between general education and vocational streams. This requires further developing vocational education: vocational courses (provided by the "professional schools") usually have higher success rates and better employment rates than general education for those who do not enter tertiary education. Yet, the supply of vocational courses, though increasing, is still insufficient. According to the Ministry of Education (2004), less than half the demand for vocational courses was met in 2002/03. The ongoing strategy consists in expanding the supply with a focus on double qualification (general and professional) schemes. It is also necessary to reform technological courses, which have been characterised so far by high failure rates and relatively high unemployment rates of graduates. As a response, the strengthening of technological education is part of the more general reform of upper secondary schooling meant to reduce dropouts and increase the employability of those who decide not to continue to higher education. The goal is to increase interactions with the labour market, notably via a compulsory period of practical training. Most measures in this area are under the programme *Novas Oportunidades* being implemented in collaboration with the Ministry of Labour (Box 3.1).

The focus put on vocational training and technological schools is appropriate and should enable Portugal to benefit from closer relationships between schools and the business community so as to ensure that the skills and competencies provided better match the needs of the labour market. It can play an important role in reducing the early dropout problem. Besides, the current strategy of double certification and of creating bridges between the three streams (general, technical and professional) is welcome. It should help strike a good balance between technical skills and general knowledge, which is necessary for workers to adjust to new work practices and organisational structures, and for the economy to innovate. While the network of vocational training and technological schools expands it will be necessary to better coordinate the supply at the local level and closely monitor the relevance of the training proposed and the labour market needs. It is also important to ensure an adequate supply of teachers and this has to be taken into account by the teachers schools. In the future, the financing of some vocational programmes in the regions that have lost EU structural funds might also become an issue. So far there has been on average little contribution of the business sector to the financing of professional schools but better interactions could make it possible.

Box 3.1. *Novas Oportunidades* (New Opportunities)

This initiative aims at overcoming the low levels of education of the labour force. It targets both school-age children and adults. (see also: *www.novasoportunidades.gov.pt/*).

For school-age children, the goal is to increase school enrolment via the diversification of the education streams, and have half of the upper secondary students enrolled in professional or technological education by 2010. The main lines of actions are to:

- Implement the plan to reduce learning failure in basic education so as to increase the number of young reaching upper secondary education.
- Create alternative streams for pupils of basic education who are at risk of repetitive failure (the educational and vocational courses, *cursos de educacaõ e formacaõ*).
- Increase the supply of professional courses.
- Move all the initial vocational training courses towards double certification (general and professional).
- Develop the system of information and career guidance to facilitate students decisions.
- Improve and coordinate the management of supply by the Ministry of the Education, the Ministry of Labour and Social Security and private entities, so as to increase equity in coverage and efficiency.
- Review and harmonize the curriculum and hours provided in the different secondary education programmes offered by the Ministry of the Education, the Ministry of Labour and Social Security and private entities so as to ensure the coherence of supply.
- Reduce incentives to enter the labour market for those under 22 years who have not concluded upper secondary education.
- Review the financing model for professional schools to ensure equitable access and eliminate distortions.
- Develop a system of quality certification.

For adults, the government aims to have 1 million people certified through adult education schemes over the next five years *via* two main mechanisms: the development of the system of recognition, validation and certification of non-formal experience and an increase in enrolment in adult training of adults over 18 with low education and professional qualification levels. The main actions are to:

- Increase the supply of educational and vocational courses for adults. These courses have been developed since the beginning of the decade to facilitate the participation of the adult population in education; they target adults over 18 with low education and professional qualification levels, and mix basic training and qualifying training.
- Expand the network of Centres of Recognition, Validation and Certification of Competences (CRVCC).
- Increase the supply of basic training for all adults.
- Facilitate access to training for workers by adapting the organisation of training courses and the financing of training costs so that the current and future competitiveness of the companies is not affected, while the individual right to training is ensured.
- Promote the integrated management of the supply and the network of establishments and courses so as to guarantee the effectiveness in covering the whole country and an adequate monitoring.
- Implement a system of quality certification.

While the supply is being diversified, it is essential to develop and strengthen students information and career guidance services, including at the basic education levels and in professional programmes where, as in many other OECD countries, they tend to be underdeveloped. This implies in particular a need to review the functioning of these services and the training of the people in charge of counselling students, so as to converge towards the most effective systems adopted in other OECD countries.[18] These services can potentially play an instrumental role in making children and their parents aware of the possibilities offered, but also of the high private returns of remaining at school, even in vocational upper secondary streams.

Continuing the modernisation of general curricula and the organisation of cycles

In recent years, several reforms have been launched to upgrade the curricula of the different levels of basic and upper secondary education. The goal was to broaden and modernise the range of courses, with the objective of reducing dropout rates and increasing quality. Nevertheless, low achievement of students who continue their studies (as reflected by most national tests) and failure of the others suggest that more needs to be done to strengthen core areas of the curricula (in particular Portuguese and mathematics), and to develop the experimental teaching of science, which is lacking in Portugal.

In basic education, new programmes and new schoolbooks are progressively being introduced, with the process due to be completed by 2007.[19] The most recent initiative is the introduction of English in the first cycle of primary education (3rd and 4th year).[20] Portugal was indeed one of the EU countries where English was taught the least. A persisting problem in basic education has been the weakness of its 3rd cycle (lower secondary). Strengthening this 3rd cycle of basic education is also a priority, notably by increasing the focus on technical, technological and vocational classes.[21] A reform of upper secondary education was approved in May 2004, and several initiatives have already been taken with a view to reducing dropouts and strengthening the teaching of maths and science.[22] Beside the modernisation of the curricula and the better integration with the previous and next cycles, the reform includes: *i)* administrative reorganisation and rationalisation of the supply of education services to address inefficiencies; and *ii)* implementation of school evaluations. Implementation of the reform started with the 10th grade in the school year 2004/05 and continued with 11th grade in 2005/06. Concerning the promotion of science, the programme *ciênca viva* (launched in 1996) also plays a role in supporting practical activities in schools, in partnership with research institutions and scientific associations. Overall, ongoing efforts seem to go in the right direction and need to continue. Their implementation and outcomes should be monitored closely.

At all levels, important advances have been made in boosting technical courses and giving greater emphasis to information and communication technology. Since the beginning of 2002, all schools have been connected to the Internet. Courses in ICT became compulsory at the secondary level (9th grade) in 2004. The challenge is now to increase the quality of the equipment and services available, ensure adequate maintenance and reduce the ratio of pupils per Internet-connected PC.[23]

Reducing school failure

Supporting students at risk of school failure…

Preventing low achievers from being left behind is key for improving the system performance in terms of both efficiency and equity. School failure and repetition are a source of inefficiency *via* the costs associated with pupils dropping out without completing a cycle or taking one or more years longer to complete it.[24] Furthermore, as they affect more the children from low-income backgrounds, they also raise equity concerns. Beside the general policy to strengthen the quality of education services and to diversify the provision of secondary education, more specific policies are thus called for.

Regarding repetition, the countries that perform best at PISA (in particular, the top performer Finland) are those which devote most efforts to not leaving under-performing students behind. In Portugal, the official position of the Ministry of Education is that repetition usually does not help to improve the students future achievement and should be used only as a last resort. However, in practice, repetition is frequent and still considered as the main tool to correct learning lags and ensure future success. The Ministry is fully aware of the situation and is trying to promote alternatives to repetition. Already in 1996, a programme setting up classes with special curricula for children in situations of repetitive failure was launched. Evaluations have shown some success in enabling such children to complete compulsory education. The authorities are now promoting individualised support and new curricula for low achievers.[25] A measure was introduced recently, obliging schools to identify students at risk and either provide repair courses or reorient them to another stream. Teachers have been asked to stay in school for longer hours in order to tutor weak students. And schools have in theory the autonomy to adapt official curricula to specific needs. It is, however, uncertain whether the current system has the ability to detect potential learning problems early enough. The main factors for the persistence of repetition as the main tool for overcoming learning deficiencies, despite official national guidelines against it, seem to be weaknesses in the training of teachers and in school organisation, and perhaps inefficient communication between the central government and schools. All these issues have to be addressed.

The decision to eliminate the social contribution rebate for companies that hire young workers unless they have completed 12 years at school or are in training is very welcome. Suppressing this *de facto* subsidy to school dropout should reduce incentives for firms to hire early school leavers. Better information and career guidance in schools would be a good complement in order to help students understand the usefulness of continuing their studies (and at least complete upper secondary education), find a programme matching their preferences/abilities and, if they really want to leave school, ensure a smooth school-to-work transition and inform them of the possibilities to reengage in studies later on if they change their mind.

The government has announced its intention to have all children attending school or training until they are 18. To achieve this goal, framework conditions have to be improved. It would not be appropriate to simply lengthen compulsory secondary education. Only a small number of OECD countries have 12 years of compulsory schooling.[26] The most important is to further diversify and strengthen upper secondary education, with improved vocational and technological education in particular, as recognised in the current strategy. If on-going measures deliver the expected benefits and relevant education is provided to the 15-to-18-year olds, children may well stay at school for as long as in other OECD countries.

A key policy to reduce dropouts and repetition by giving better chances to students from low-income backgrounds has been the development of preschool, in particular with the expansion of coverage for 5 year-olds. The government now targets a full coverage of 5 year-olds by 2009 and an expansion of coverage for younger children. However, according to the OECD PISA survey, and contrary to most other OECD countries experiences, in Portugal attendance of preschool has not made an obvious difference in outcomes, especially when the mother has a low level of education.[27] The explanation is probably that preschool education that was provided 10 years ago tended to be too loosely structured, play-oriented and geared toward care and social aims.[28] Curricula and organisation reforms since then are likely to have made preschool more relevant.[29] In order to ensure that this is the case a detailed evaluation of the impact of these reforms is necessary.

Some factors that tend to anchor inequities linked to social background have not been addressed and are not on the policy agenda. The 2003 *OECD Economic Survey of Portugal* expressed some concerns about inequity and risks of social segregation resulting from the fact that private schools receive much less public financing than public ones and charge high fees. Payment of school fees entitles parents to a capped tax credit.[30] The unequal distribution of students across schools based on their parents occupation is the largest in the EU after Greece.[31] Public facilities take a greater share of the children from low-income families and with special needs. With the allocation of students to schools based solely on residence criteria, only the most advantaged groups have the choice to either put their children in a good private school or to buy/rent a home near a good public school. Some OECD countries have allowed parental choice of school, while letting public funding follow the students as a type of voucher, thereby allowing public and private schools to compete. In addition to limiting segregation, these instruments can increase efficiency by putting competitive pressures on schools. However, evidence of the impact of voucher systems on education outcomes is mixed.[32] To ensure a level playing field between private and public school and to avoid social segregation, Sweden and the Netherlands provide private schools with the same level of public funding as public schools. Sweden also prevents private schools from charging tuition fees, while in the Netherlands market competition is sufficient to prevent private schools from charging fees. In the case of Portugal, given the low educational level of a large share of parents for whom it would be difficult to take well-informed decisions, a voucher system might not be a solution, at least in the short term.

… and attracting the ones who have dropped out back into school

Recent curricular reforms also include measures to strengthen and modernise "recurrent education" (*Ensino Recorrente*) *i.e.* formal education provided to those who left school without completing compulsory or upper secondary education. The number of adults participating in those programmes remains limited (*i.e.* about 85 000 people in total in 2004/05), reflecting a mismatch between training supply and needs. The modernisation strategy is based on the diversification of training supply, in particular by offering programmes combining academic training with qualifying training leading to a double – academic and professional – certification. Professional schools and general secondary schools will in particular be asked to develop programmes not only for upper secondary but also lower secondary classes. It is also planned to make the supply more flexible to meet the needs and constraints of the individuals concerned (who have full time jobs), especially the young adults who are meant to remain for a longer period in the labour force. At the same time, the system of validation of prior learning and experience is being strengthened.

Further improve training of teachers

The quality of teachers is an issue. There is a consensus that a share of the teaching staff, especially the staff hired when the system was expanding rapidly, received poor initial education and training and therefore lack a good knowledge of either the subject taught or of pedagogy or both. The progressive development and strengthening of teachers colleges over the past decades has partly solved this issue for the younger generation. However, the supply has not fully evolved in line with the modernisation and diversification of the curricula, and some teachers, especially in professional programmes, are still hired directly from among young university graduates with no pedagogical training (whether general or linked to the subject they teach). There is a lack of teachers in professional paths in particular, as initial teacher education programmes focus on general education. It is important to ensure a better matching between the anticipated needs of the education system and the supply of initial education by teachers colleges. When specialised teachers have to be hired from outside these colleges, a minimum initial pedagogic education should be compulsory before taking up a position. Pedagogical certification is now required for professionals who provide vocational training courses financed by public funds. It is important that the increasing demand for vocational courses be met not only by an expansion of supply but also improved preparation of trainers so that they do provide high quality courses.

The issue of weak initial education is compounded by poor on-the-job training and an inadequate evaluation system of teachers. Both need to be reformed. The system of evaluation and promotion of teachers is not based on the quality of the teaching in the classroom but on whether or not teachers attend training. At the same time, training is mainly supply driven and often unrelated with schools' and teachers' needs. Whether the training received was relevant or not to the topic taught or to the teachers or schools needs has not so far been taken into account in evaluations. And teachers who are willing to improve their skills often do not find appropriate courses. Overall, teachers, although on average quite young and therefore presumably adaptable to new curricula and teaching techniques, are not really given the chance to improve, and a large part of the resources spent on teacher training so far appears to have been wasted. To raise both the quality of teaching and spending efficiency, there is therefore an urgent need to rationalise and improve teachers' on-the job training and bring it more into line with needs.[33] Schools have a role to play in helping to identify the type of training that is needed, so as to make the system more demand driven As a very first step, the new administration has decided to impose that half the training taken into account for career advancement is related to the subjects taught. More specific actions are also required in areas where there are clear weaknesses. For instance, a key area where teachers' skills are deficient is mathematics. As a response, the government recently launched a programme to retrain teachers in the first cycle of basic education (elementary cycle) in mathematics. It also aims at providing these teachers with training in teaching Portuguese and teaching experimental science. In addition, besides training, a good evaluation and feedback system is important for teachers' professional development. This is linked to the needed change in teachers' evaluation and promotion discussed below.

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Fostering evaluations and improving incentives

Focusing on outcomes and putting in place good evaluation and accountability systems is essential to efficiency. Evaluations of schools were developed in recent years so as to help improve quality.[34] In July 2002, a new law for the creation of a comprehensive system of evaluation of all non-tertiary schools was approved, promoting self-evaluation and external evaluation of schools; public disclosure and certification of results; and rewarding best performers. However, although in line with good practices on paper, this reform has not yet been fully implemented. There are now two national exams: one at the end of compulsory education in maths and Portuguese (which is used to decide on passing to next grade) and one at the end of upper secondary. In addition, 25% of students are tested at the end of the first two cycles of basic education. So far these evaluations have not been used to identify areas for improvement, or to promote changes in schools, or even to design policies. A very important step is the recent decision to really start using evaluation results to design policies and improve the system. For instance, the results of the maths test at the end of the 9th grade have been analysed so as to improve teaching in maths. More systematic efforts in this direction are needed to improve evaluation systems and channel the results to those who deliver educational services (teachers, school principals), manage them and use them (children and parents) and to ensure that evaluation results are used to influence policy decisions, school management and users choice.

The system of teacher's evaluation has to be reformed to take into account what they do in the classroom and how they contribute to improve practices in schools. This would also make teachers feel that their work is important and valued and would be instrumental in identifying priorities for professional development. The new assessment procedure of teachers is being reviewed in the context of the public administration reform scheduled for 2006 (Chapter 2). Then, schemes that relate promotions and pay to performance will be defined so as to give better incentives to teachers.[35] Research in this area has shown that group and school-based performance incentive schemes have been more promising than "merit pay" systems that provide individual teachers with higher pay based on student performance on standardised tests and classroom observation (see OECD 2005c). Such schemes would be particularly relevant for strengthening pedagogical teams in Portugal where, as described below, teachers are quite isolated from each other and school leadership is weak.

A systematic evaluation of reforms and programmes is lacking. The reform process could be improved by identifying the reasons why some reforms failed or were not implemented and by expanding the successful ones. The government is planning to put in place an information system to monitor starting in 2006 what is occurring in the schools following the most recent changes in the curricula. This is a good step and has to be implemented and generalised. To strengthen the reform process, it is indeed essential to further develop systematic evaluation of policies and programmes.

Giving effective autonomy to school and teachers

Recent programmes in Portugal have devolved more autonomy to schools. A large part of the policy to reduce dropout rates, support low achievers and improve quality is based on individual initiatives to be taken at the school level. The Ministry of Education defines the curricula, but schools can adapt their organisation to local conditions. For instance, primary schools are free to decide on the allocation of half of their teaching time. The new administration has announced its determination to go further in putting schools at the centre while continuing the rationalisation of the network. The medium-term objective is to limit the role of the Ministry of Education to the functions of financing and regulation of the system, curricular design and development, evaluation and control. Regions would be given more autonomy in educational planning and the management of the physical and human resources other than teachers, and schools would get more autonomy and responsibilities in strategic, pedagogical, administrative, financial and organisational decisions. Thus, the recently approved lengthening of the 1st cycle timetable and the teaching of English in primary education are to be implemented following a decentralised and flexible model involving schools, groups of schools, local authorities and parents associations. At the same time, schools would face stronger evaluations of results and development. This decentralisation process will rely on autonomy contracts signed between schools and the government and will start with a few pilot cases.[36] This approach is in line with the growing presumption that the devolution of responsibilities to local authorities and schools brings efficiency (see OECD 2004b, and 2005a). Although there is no common model concerning the degree of decentralisation, local authorities and schools have substantial autonomy to adapt educational content and/or allocate and manage resources in most countries that performed well in PISA surveys (this is the case in England, Korea, Finland, Japan, the Netherlands for instance; Australia, on the other hand, had above average PISA performance with very little devolution of responsibilities to schools).[37]

A key obstacle to this strategy is that, so far, many schools in Portugal have not been using the autonomy they already have. Very few are trying to adapt the curricula, develop special support for low achievers or adopt innovative practices. In practice, the system remains too rigid and centralised to respond adequately to the heterogeneity of students backgrounds and the problems that it poses. Several factors might play a role. In an environment where everything used to come from the Ministry of Education, the appointment of school principals who are elected for three years among the teaching staff (by all teaching and non-teaching school staff, representatives of parents and students) to deal mainly with administrative tasks, does not prepare them to take initiatives and responsibilities. No prior or in-service training is required to be a principal. Such a gap between the new responsibilities and the training received by school principals exists in many OECD countries, but it seems more pronounced in Portugal. It is essential to identify more precisely (by surveys for instance) the factors behind the existing gap and to address the problems. Several types of action should be considered.

- It is first essential to review the role of principals and their careers and strengthen their selection and training process. Teachers seeking a career change should be encouraged to take up these responsibilities. Efficient systems of school principals training leading to effective school leadership can be found in the UK and Australia.[38] At a later stage, the principals responsibilities could be enhanced, for instance by giving them a voice in the teacher selection process so as to ensure that new teachers match the specific needs of their schools. They have already been selecting, together with local authorities, the new English teachers for elementary education. The new framework for evaluations remuneration and career should consider financial rewards for performing school principals.
- Teachers have to be better prepared for this new environment and their evaluation and promotion system should take into account initiative and effective use of autonomy.

- Pedagogical teams have to be strengthened. In the current environment, teachers tend to be isolated and schools pedagogical councils are largely underused. The high mobility of teachers, especially in the first years of their careers (overall about a third of teachers change schools every year) makes it difficult to build strong pedagogical teams within schools. Recent legislation limits turnover by imposing a three- to four- year minimum assignment in the same school. This should help strengthening school teams. Promoting collective activities by groups of teachers working together on a project would be another step in that direction. Redefining the tasks of the pedagogical councils could also help; Spain is an interesting example of how to involve teachers in schools via such councils (OECD 2005c).
- It is also important that education reforms be clearly explained and implemented. Indeed, the gap between the framework and its effective use at the school level also reflects the lack of continuity and weak implementation of policies at the central level, which does not help spreading changes across the system.
- Lastly, better informing parents of the possibilities offered to schools so that they put pressure on schools to use them could also play a role.[39]

Conclusions

Overall, the key problems in the education system have been identified by the authorities, although a more systematic evaluation of past policies and results could help fine tune the diagnosis. The series of measures and reforms that have been launched recently or are under consideration form a consistent package that seems to go in the right direction with some welcome continuity with the policies envisaged by the previous administration. The strategy includes both programmes that should have positive results in the medium term (for instance the strengthening of elementary schools, the expansion of pre-school, better detection and care of low achievers) and measures with a potential favourable short-term impact (diversification of upper secondary education, strengthening of vocational and technological streams, removal of the social contribution rebate for enterprises that hire young workers who have dropped out from school). Nevertheless, the implementation of reforms once they have been decided continues to be a challenge at the central, the regional and the school levels. It is important that current programmes be fully implemented. A larger involvement of all actors in the reform process could help (Chile and Italy have for instance been able to involve teachers in education reforms).[40] It is also essential to: *i*) develop the education and career guidance services to students so as to make them more aware of the value of school, ensuring a better transition from school to work, and informing them of the possibilities to reengage in studies later on; *ii*) redefine the role of school principals and adapt their selection and training; *iii*) identify and address the factors behind the gap between official school autonomy and the way the system works; and *iv*) within the public administration reform framework, review the evaluation of teachers and principals and set up some reward schemes providing effective incentives to relevant training and to better performance. Specific recommendations to improve the cost efficiency of education spending and the overall performance of the education system are summarised in Box 3.2.

Box 3.2. **Summing up of the main recommendations in education**

Ensure better value for money

- Continue the rationalisation of the school network.
- Find a better balance between wage and non-wage expenditure.
- Envisage more radical measures to cut the wage bill so as to spend more on non-wage items (teaching material, schools equipment and maintenance, career guidance services, etc).
- Continue to strengthen teachers initial and on-the–job training. Ensure better matching between the anticipated needs of the education system and the supply of initial training by teachers schools. Provide a minimum initial pedagogic training to those hired outside these schools. Rationalise teachers on-the job training and make it more in line with needs.

Continue to improve the relevance and quality of curricula

- Develop vocational and technical education while coordinating the supply at the local level, ensuring a good matching with labour market needs and improving the information available to students.
- Continue to modernise curricula at all levels and monitor closely the implementation and impact of changes.
- Develop and strengthen education and career counselling services for students.

Improve evaluation systems at all levels

- Reform the teachers' evaluation system and use it for promotions.
- Develop further systematic evaluation of effectiveness of policies and programmes.
- Ensure that evaluation results are used to influence policy decisions, school management and users choice.

Support poor achievers and students at risk, and prevent drop out

- Ensure that repetition ceases to be the preferred tool to deal with low achievers.
- Develop tools to identify students at risk of school failure.
- Consider further solutions to reduce segregation of students by social economic background.

Ensure that schools and teachers have the ability to use autonomy and receive incentives to do so

- Improve the selection, training and tasks of school principals.
- Reward the use of autonomy in promotions of teachers and principals.
- Train teachers better to take initiative and make effective use of their autonomy in the classroom and in school projects.
- Revamp school pedagogical councils and promote collective activities by teachers.
- Inform parents of the possibilities offered to schools so as they can put pressure on schools to use them.

Notes

1. Compulsory schooling (*ensino básico*) covers three consecutive cycles (two primary cycles and a secondary cycle) followed by three years of non-compulsory upper secondary education (*ensino secundário*) (see synopsis of the education system in Annex 3.A1). As in most OECD countries, non-tertiary education is mainly provided by the public sector. Private institutions account for slightly more than 10% of student enrolment in basic education and close to 20% in upper secondary education. As in the United States, Mexico and Japan and contrary to most EU countries, private schools are independent from the government. Private institutions account for almost half of preschool institutions.
2. In 1991, 12.5% of 10-15 year-olds had left school without completing compulsory education; this share had fallen to 2.7% in 2001.
3. See OECD (2005b). This does not mean that it does not affect their career prospects later on.
4. Although private returns to education are high on average, they are smaller early in the career (see *2003 OECD Economic Survey of Portugal* Annex for some estimates).
5. Low-income families receive social support in the form of support for meal costs, for students lodging when in boarding schools and for the purchase of textbooks and of other educational materials up to close to 200 euros per child a month depending on the grade and family income. Such assistance benefits about 27% of the students in primary and secondary education.
6. The 2003 survey shows nevertheless some modest progress for the weakest students in mathematics.
7. See OECD (2004a) Table 2.6.
8. This lower spending per student in eastern European may also partly reflect a lower relative price of education services due to the Balassa/Samuelson and Baumol effects.
9. See for instance Afonso and St. Aubyn (2004), Khury, Herweijerand Heesakker (2004), Clements (1999). According to Afonso and St Aubyn (2005), the low education level of parents explains to a large extent the lower efficiency than in other OECD countries. Still, even children with a mother who has completed upper secondary education or tertiary education score only near the OECD average for all students in reading and slightly below in maths and science.
10. Students test show that these small schools have a worse performance than larger ones reflecting both the size effect (there are too few students for profitable interaction and stimulation to take place) and a high turnover of teachers.
11. The education system in Portugal is very centralised. Although some responsibilities have been devolved to schools (regarding mainly pedagogical issues) the State has retained the main ones, especially in the financing and allocation of staff. In the autonomous regions of Madeira and the Azores education is under the responsibilities of the regional governments.
12. These lacks are to some extent reflected in Portuguese 15-year-olds answers to PISA questionnaires about their schools. (See PISA database for more details).
13. For instance, according to EU data, the ratio of pupils to teachers is the second lowest in the EU for primary and lower education and the lowest for upper secondary education.
14. For instance, after years of rapid expansion, the budgets for 2003 and 2004 set a 1.6% increase limit to the primary and secondary education budget.
15. In 2001/2002 nearly 60% of public schools had fewer than 30 students, and 20% had fewer than 10 students. Despite progress (the total number of public schools has decreased by 13% between 2001/02 and 2004/05 following the closure of some small schools), in 2004/2005 still more than half of the schools had fewer than 30 students, and 17% had fewer than 10 students.
16. There are various situations in which teachers can be without teaching assignment: incapacitating illness, pre-retirement (or due to retire during the school year), school management activity, involvement in other educational activity such as support to the library, laboratories or other areas, involvement in trade union activities. Teachers that are supposed to retire during the year will be given teaching duties until their retirement date. The number of authorisations to take up other activities without a wage loss will be reduced in order to maximise the human resources available for teaching.
17. The same bias exists in recurrent education (with more than 75% of enrolments in purely general programmes).

18. See for instance OECD/European Communities (2004) Career Guidance – a handbook for policy makers which notably presents examples of successful systems.
19. Following the curricular revisions of the 1st and 2nd cycles already in place, the 3rd cycle revision started in 2002/3. Among the main measures: the same disciplines are taught in the 3 years; a second foreign language and a new discipline of "Technological Education" has become compulsory; classes are organised in 90 minutes periods; a new compulsory discipline of "Introduction to ICT", and national final exams of Mathematics and Portuguese language have been introduced in the 9th grade.
20. The school day, which was typically of only 4 or 5 hours, has been lengthened to include English classes as well as sports and arts.
21. According to the previous administration, the unity of teaching in basic education, from primary to lower secondary, does not leave room for the flexibility needed for lower secondary education and it was planned to reorganise education cycles into 6 years of primary education (first two cycles of basic education) and 6 years of secondary (lower and upper secondary education). The Framework Law that included this measure was not passed. The new administration has decided not to change the organisation of the system.
22. The previous reform (2001) was cancelled a year later and was less focused on ensuring interactions with the labour market.
23. The State also financially supports the purchase of low-price computers by students.
24. According to the Ministry of Education, in 2003 the repetition rate was 13% in basic education and 33.7% in upper secondary education.
25. Special efforts are also devoted to facilitate the integration of immigrant children, notably via the Board for Multicultural Education (*Entreculturas*) created in 1991 In particular the Intercultural Education Project (PEI) (covering 50 schools) has succeeded in improving non native childrens academic results and social integration and has helped develop new curricula. The authorities are in the process of specifying guidelines to teach the Portuguese language as a second language in basic and upper secondary education. Despite progress a key issue remains the training of school staff for dealing with multicultural students.
26. In most EU countries school is compulsory up to the age of 16, and in some others till the age of 15, as now in Portugal. School is compulsory until the age of 18 in only Belgium, Germany, Netherlands, Hungary and Poland. Mexico, on the other hand, has chosen to extend compulsory schooling to the first grade of preschool (for 3 year-olds) (Guichard 2005).
27. Chagas Lopez, Medeiros and Pinto (2005) "Does school improve equity? Some key findings from Portuguese data" also show that preschool attendance (in the 1990s) does not have a significant impact on preventing class repetition for the cohort of students now enrolled in secondary education.
28. A key policy change is the 1997 Framework Law which co-ordinates the until-then diverse provision for young children education, and includes preschool in Basic Education. See OECD (2000) Early Childhood Education and Care - Portugal: Country Note.
29. The key elements of successful policy promoting equitable access to quality preschool have been identified by the OECD (2001) as including a systemic and integrated approach to policy development and implementation, a strong and equal partnership with the education system, a universal approach to access, with particular attention to children in need of special support, substantial public investment in services and the infrastructure, a participatory approach to quality improvement and assurance, appropriate training and working conditions for staff in all forms of provision, a stable framework and long-term agenda for research and evaluation.
30. The introduction of a tax credit in 1999, in replacement of the earlier tax allowance system regime, was an improvement in terms of redistributive impact, although Reis (2000) estimates that the redistributive impact appears as very small.
31. See European Group of Research on Equity of the Educational Systems (2003).
32. See Ladd (2002) and OECD (2002).
33. According to OECD (2005c), successful programmes involve teachers in learning activities that are similar to ones they will use with their students and encourage the development of teachers learning communities.
34. See Ministry of Education (2004).

35. The fact that 40% of teachers have already reached the last two grades of the teachers careers will be an additional difficulty.

36. The possibility of autonomy contracts between schools and the Ministry of Education exists already in the law but so far only one contract has been made formal.

37. In the case of Korea and to some extent also in Japan the good PISA performance has also been attributed to the extensive private tutoring which supplements public education.

38. See OECD (2005c). In Portugal, prior training in school management is not even required to become a principal.

39. Other OECD country experience shows that special attention should be given to schools in low socio-economic neighbourhoods to assist parents in playing an active role in schools.

40. See OECD (2005c) *op; cit.*

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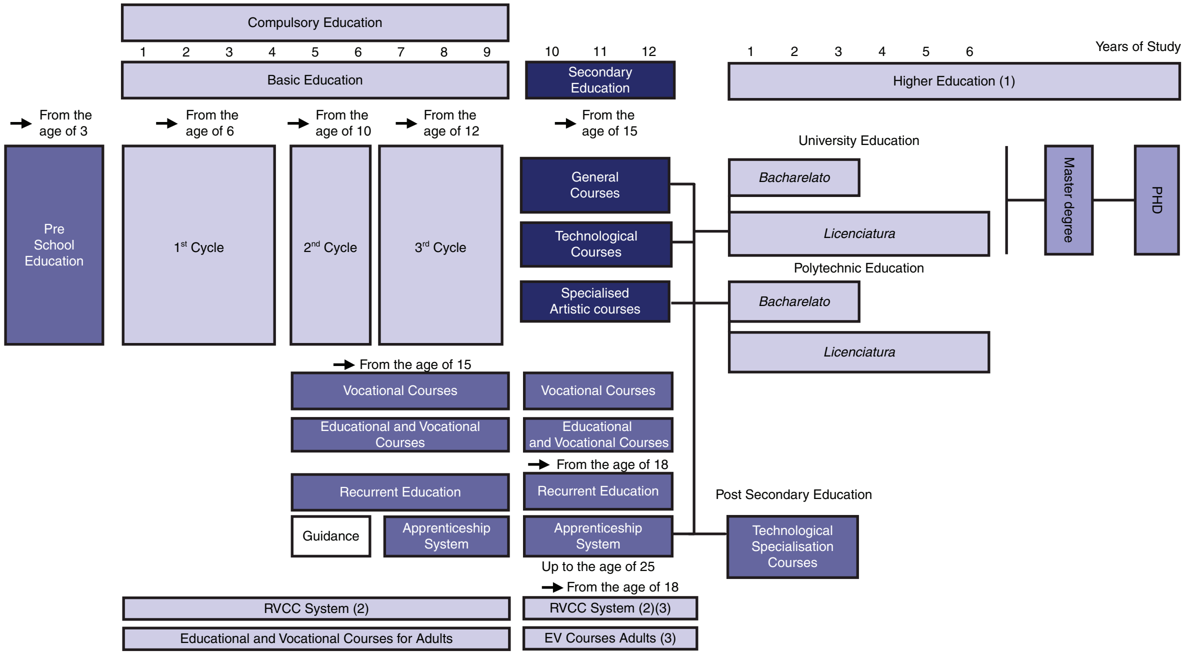
ANNEX 3.A1

Synopsis of the education and training system



1. *Licenciatura* corresponds to a bachelor degree; the *Bacharelato* which is part of the cycle is awarded after 3 years. Under the European harmonised system, introduced as from 2006-07, the first cycle *(Licenciatura)* will last 3 years, the Master degree *(Mestrado)* an additionnal 1 or 2 years, followed by a third cycle for Doctorate (see Chapter 4).
2. RVCC: Recognition, Validation and Certification of Competences.
3. At the secondary level, these modalities will be functioning as from the 2nd quarter of 2006.

Source: Ministry of Education.

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Chapter 4

Modernizing the economy by enhancing tertiary education, adult training and innovation

This chapter examines tertiary education, adult training and research and development which are – besides primary and secondary education – essential for modernizing Portugal's economy and increasing living standards. As returns on investment in these areas can be very high, private financing should be enhanced. The tertiary education system also needs in-depth reorganisation and rationalisation. Important synergy effects can be expected from reforms in these areas as increasing human capital of the workforce and the population at large facilitates the creation and diffusion of innovation and the use of information and communication technology. The chapter also examines the recent government plan to stimulate innovation and argues that policies should focus on ensuring the effectiveness of the existing tax incentives, strengthening the links between business and public research institutions and creating a competitive environment which is a main driver for the development of innovative firms.

There is a growing recognition that a better-educated population may be generally more innovative and better able to adapt to technological change, a prerequisite for Portugal to remain competitive and to catch-up to higher productivity levels. The need to strengthen Portugals knowledge base is also reinforced by the increasing competition from emerging countries in both low-skill and more skill-intensive activities. Improving primary and secondary education is necessary, but it will not be enough to meet the rising and changing demand for competences. The coverage and quality of tertiary education will also need to be improved, with a particular focus on science and technology. Furthermore, because of the very large deficit in qualifications of the workforce and the usual lags in improving outcomes in education, lifelong learning needs to be revamped. Finally, enhancing innovation activities of firms and research institutions and strengthening their linkages can also help to increase Portugal's growth potential. Other important framework conditions for improving innovation and growth include further deregulation of labour and product markets, which are discussed in Chapter 5.

Providing better tertiary education to a broader public

Access to tertiary education remains too limited and selective despite relatively high returns

Tertiary education has been characterised by the doubling of students' enrolment over the 10 years to 2002-03, an increase also observed in Korea, Mexico and new EU members for instance. Nevertheless, the level of tertiary education as measured by the attainment of the population, even in the 25-34 age group, remains among the lowest in the OECD (Figure 4.1). Important factors of still limited participation in tertiary education are deficiencies in the Portuguese secondary schooling (see Chapter 3) and the low educational level of many parents. As in all countries, the socio-economic background largely determines whether or not the young commence higher education; but in Portugal, the selectivity of access is more severe than in many other countries and the participation of students from low socio-economic backgrounds remains particularly low.[1]

Until the early 2000s, many unskilled jobs were still created, labour market participation of less-educated workers was close to that of prime-age men and the difference in unemployment rates between different levels of schooling was not very large. But the situation has been changing. Furthermore, competences such as scientists and engineers, as well as managers well-trained in marketing, would help the modernization of the economy and its adaptation to global competition. Yet these competences are lacking.[2] Evidence on the return to higher education is that they are high in terms of earnings. Cardoso (2004) finds no support for the prevailing scepticism over investing in higher education: the earning premium for people with tertiary education relative to those with only secondary education is high and has been increasing – by 1 point per year on average in the late 1990s – broadly in line with the increase in other OECD countries. These results are in line with OECD estimates of private rates of return to tertiary education (OECD, *Economic Survey of Portugal,* 2003). Furthermore, the proportion of graduates working

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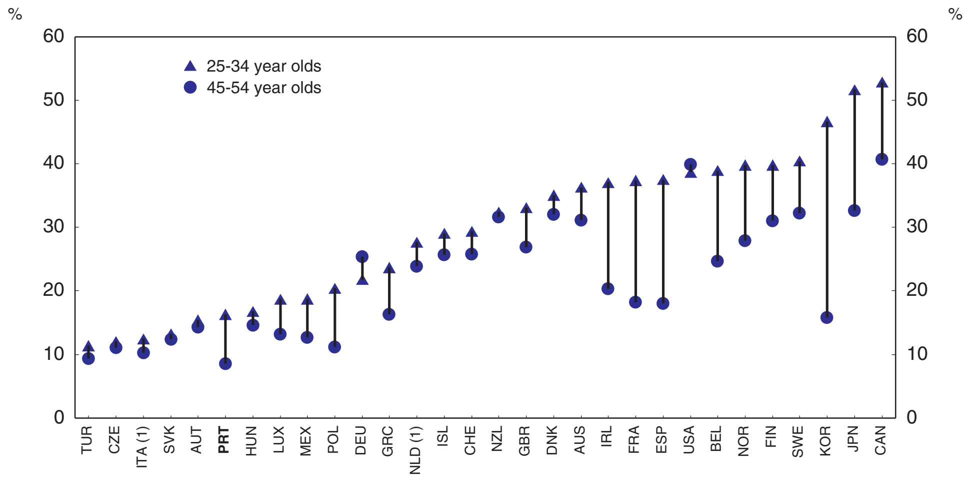
in jobs below their education level (*i.e.* not requiring a university degree) has been falling. The results are consistent with the idea that skill-biased technological progress in some sectors raises the productivity of workers with higher schooling levels.

Figure 4.1. **Tertiary education attainment, 2003**

As per cent of age group population



1. Data for 2002.

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

While enrolment in tertiary education has increased, completion has increased much less, pointing to very high drop out and failure rates. As a result there is a lack of scientists and engineers despite high rates of return on such education. These poor results can be related to the (short-term) opportunity costs of staying in tertiary education and the low efficiency of some higher education institutions. Poor performance of students in higher education also reflects low competences of those entering, *i.e.* students having just completed upper secondary schooling.[3]

The higher education system needs to be rationalised and to attract a new public

Most of the expansion in tertiary education is accounted for by the development of non-university institutions, *i.e.* polytechnic schools, which by 2001 represented more than 40% of all students. Today, with 30 universities and 130 polytechnic schools, there is overcapacity in tertiary education with probably too many institutions.[4] To meet fast rising demand, low-cost programmes were developed, particularly in the private sector, so that there is some concern about the quality and diversity of supply relative to labour market needs. As the number of potential students is now declining (because of demographic developments),[5] institutions are heavily competing for students, and private institutions are in a more difficult position, since they charge higher fees and offer in general lower quality education – although there are examples of private institutions offering high-quality teaching. The quality of scientific teaching, in particular, needs to be strengthened. The students' often insufficient secondary-level education in mathematics and science makes the task difficult. Another factor in the weakness of scientific teaching in some higher education institutions is that these programmes are more costly to run and institutions may be unwilling or unable to spend the adequate amounts.

The performance of tertiary education varies across institutions. Universities are more selective than polytechnics and typically provide better quality teaching. Public universities have been selecting students and charging moderate fees. They therefore tend to have the best students, who often come from more affluent/more educated families, because of the opportunity cost of continuing studies and because they were those performing the best in secondary schooling. The number of PhDs hired in higher education institutions has increased considerably (in public universities they now account for slightly more than half the staff) and the capacity of universities to offer PhD programmes has also increased. On the other hand, polytechnic schools face problems of low quality, in some cases, and unclear objectives in terms of their role within the overall higher education system. Enrolment has been declining for some years and, now that selection rules for access to higher education have been tightened, the decline is likely to become more marked.

The tertiary education system should undergo in-depth reorganisation and rationalisation, which will necessarily imply reducing the number of institutions through mergers or even shut-downs and streamlining disciplines taught in view of requirements for the future. While the average student/teaching staff ratio was around 12 in public universities (13 in public polytechnics) in 2002, there are some institutions with no students enrolled and within institutions there are some disciplines with few or no students, and some teachers holding multiple teaching positions. The 2003 Law establishes that the Ministry can close down programmes with low enrolment or programmes and institutions which obtain poor results in the accreditation system (see below), and the new government has stated its intention to rationalise the higher education system. But accreditation has not yet started and the details and timing of the intended reorganisation remain unknown. In response to the decline in the number of potential students in polytechnics, these institutions should seek to attract a new public, *i.e.* adults in need of upskilling.

Enhancing quality and diversity by clearer objectives and better evaluation…

The higher education system should be diversified and specialized, to respond to the changing needs of the economy and society as a whole and to provide students with the ability to learn new competences after they graduate and throughout their working life. The objectives of the various institutions should be clearly defined. Universities should be in charge of teaching and research, *i.e.* the accumulation of knowledge and creation of new ideas in the various fields, working in cooperation with companies when appropriate. The government is right to be concerned about strengthening international links and establishing international research networks, to guarantee the quality of programmes.

In the overall tertiary education system, polytechnics should play a complementary role to universities and some specialisation would be desirable. Polytechnics should become more responsive to the market and industry's needs. Given their wide dispersion across the country, they should also be involved in the development of lifelong learning. The on-going changes to create more flexibility for part-time study and to recognize acquired competencies in the admission system could facilitate enrolment of working students. Polytechnics are well placed to develop better partnerships with secondary education, and could also be better linked with universities. The authorities are stressing the importance of establishing “knowledge networks” involving the various education sub-systems and research institutions. This will require setting clear objectives for the different subs-systems.[6]

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Policies should focus on ensuring quality improvements and a more equal access to tertiary education. The objective should be to increase success rates and reduce drop outs in universities and polytechnics, particularly in the initial years of education. Pre-entry selection rules were changed several times; following a period of selective access to tertiary education, entrance conditions were loosened in the late 1980s. Then, starting in 1998, the national examination at the end of secondary schooling was re-introduced as a pre-requisite for entering higher education. There is a generalized *numerus clausus* that establishes quantitative limitations to the admission for all courses in all higher education institutions, whether public or private, university or polytechnic.[7] The 2003 Law regulating higher education stipulates that students finishing upper secondary with below-average results on only two pre-defined basic disciplines for each programme would be denied access to the *numerus clausus* system, with application of this rule as from 2005-06.[8] Institutions will be able to raise the threshold for admission, hence be more selective; but they will not be allowed to lower it. The impact of the measure is likely to affect the limited number of institutions which have tended to accept less qualified students.

Systematic evaluation of tertiary education, which would contribute to enhancing quality of education services, has yet to start. Procedures to evaluate study programmes were established several years ago; evaluations, both internal and external were to be conducted every 5 years. The 2003 Law in addition established a system of accreditation to ensure that institutions meet quality criteria in particular fields of study.[9] However, in practice, evaluations have not been systematic and accreditation was not implemented. It is important that an accreditation system be designed, regulated and implemented, following practices already prevailing internationally, including at the European level. With entrance conditions for students now tightened and quality standards for higher education institutions being established, it would be desirable to abolish the generalized *numerus clausus*. Quantitative limitations are an inefficient tool to regulate admission in higher education, because they distort the signals associated with the returns to education that are provided by the labour market. These signals should influence students' decisions on where to invest.

The government has launched several projects to implement an overall evaluation of the higher education system: *first*, a system evaluation is to be carried out by the OECD in 2006; *second*, an assessment of accreditation and evaluation practices has been commissioned to the European Network for Quality Assessment (ENQA); *third*, a voluntary system of institutional evaluations has been commissioned from the European University Association. In practice, however, the higher education system reorganisation is unlikely to start before the results of the on-going international studies become available. To ensure speed of implementation, steps should be taken in the meantime to review the existing evaluation law and to establish the appropriate legal framework.

… and by introducing more competition

Some degree of competition is desirable in tertiary education at various levels: *i*) among universities, which requires that students have access to sufficient information; *ii*) among teachers, which requires that they are better evaluated; and *iii*) among students, which requires that they have to meet appropriate admission standards. There are already some elements of competition in Portugal's tertiary education system as in many other European countries: students do compete for vacancies in the *numerus clausus* system; institutions are increasingly competing for students because capacity is abundant while the student cohorts are shrinking; academic staff compete for research funds provided by the Foundation for Science and Technology (FCT) and other funding agencies. The authorities are also seeking to enhance effective competition by introducing performance indicators in the funding formula (see below). And, although they are yet to be applied, regulations foresee that only universities with a positive quality assessment will be allowed to provide PhD programmes.

However, there is no general system for individual assessment of academic staff. As in many other OECD countries, it is difficult to get reliable and relevant information on academic quality. Students typically choose institutions close to their homes. Regarding teaching methods in Portugal as elsewhere in Europe, there is an increasing concern to move away from a system fostering the transmission of specific knowledge (likely to become obsolete in the future) towards competence building, *i.e.* developing the ability to learn new skills in the future (learning how to learn). The government intends to implement the Bologna process and higher education institutions are beginning to implement the process, which should be completed by 2010 according to EU guidelines (See Annex 4.A1).

More flexibility in teachers' careers is required, so as to permit promotions on merit rather than on seniority. This will be difficult to implement without increasing the overall wage bill. Another way to enhance teaching standards would be to review mobility practices and to disclose competences. Establishing minimum marks for students admission procedures, as was recently introduced, or limiting the number of class repetitions for poorly performing students, can also contribute to improving the quality of education.

Universities autonomy is limited, even though each institution is free to organise its internal structure by department and by faculty. The government continues to give authorisation for large investments, establish the number of positions of academic and non-academic staff and determine the *numerus clausus*. The current government has announced its intention to revise the University Autonomy Law, with a view to provide more autonomy to the different types of institutions, while increasing their level of accountability. In exchange for more autonomy in their organisation and management, institutions will have to adjust their governance to be able to meet the requirements of being more responsible and accountable. It remains unclear whether institutions will be given enough freedom in setting tuition fees.[10] Opening institutions to the outside society and for instance allowing greater participation of external shareholders in governance bodies, as intended in the government's strategy, would be appropriate.

Reforming tertiary education financing

There is no obvious over-spending in tertiary education

Total spending on tertiary education has expanded in tandem with enrolment. Spending per student remains relatively low (excluding R&D activities), both by OECD standards and *vis-à-vis* other levels of education (Figures 4.2 and 4.3). Taxpayers pay for 90% of national expenditure on higher education.[11] Supporting higher education (and innovation) is a budget priority in Portugal. However, the low growth of the economy and the restrictive fiscal policy stance limit the amounts which can be spent in this area.

Although there is no obvious over-spending in tertiary education, important efficiency gains could probably be achieved through rationalising the supply of services (re-allocating

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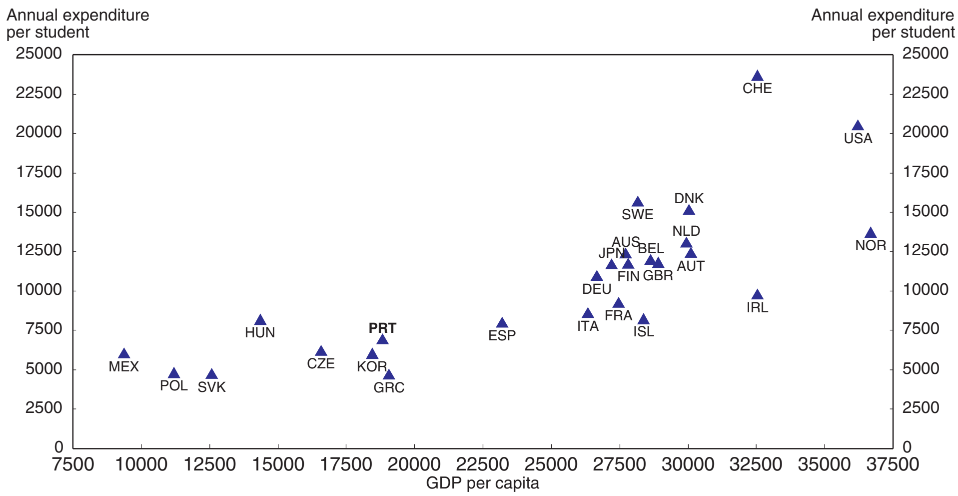
resources across areas, closing up programmes with small number of students, etc).[12] Merging of some universities or polytechnics and the creation of "knowledge networks" could also help to achieve economies of scale and improve quality. For the time being, enrolment is declining and the 2006 budget for higher education has allowed an increase in spending per student – of about 3% relative to 2005. In the longer run, however, the impact of demographic trends could be offset by current policies aimed at promoting wider access, improving completion of secondary schooling and attracting a new public in lifelong learning. The government's strategy, if it is successful, is expected to induce a wider proportion of the youth and adults to enrol in higher education. The state will not have the budget resources required to provide good quality education for all – nor should it. In general, public money may be better spent on early childhood and compulsory schooling, which are the main determinants of equity in educational attainment (Carneiro and Heckman, 2003).

Figure 4.2. **Expenditure in tertiary education relative to GDP per capita**

2002, USD (PPPs)



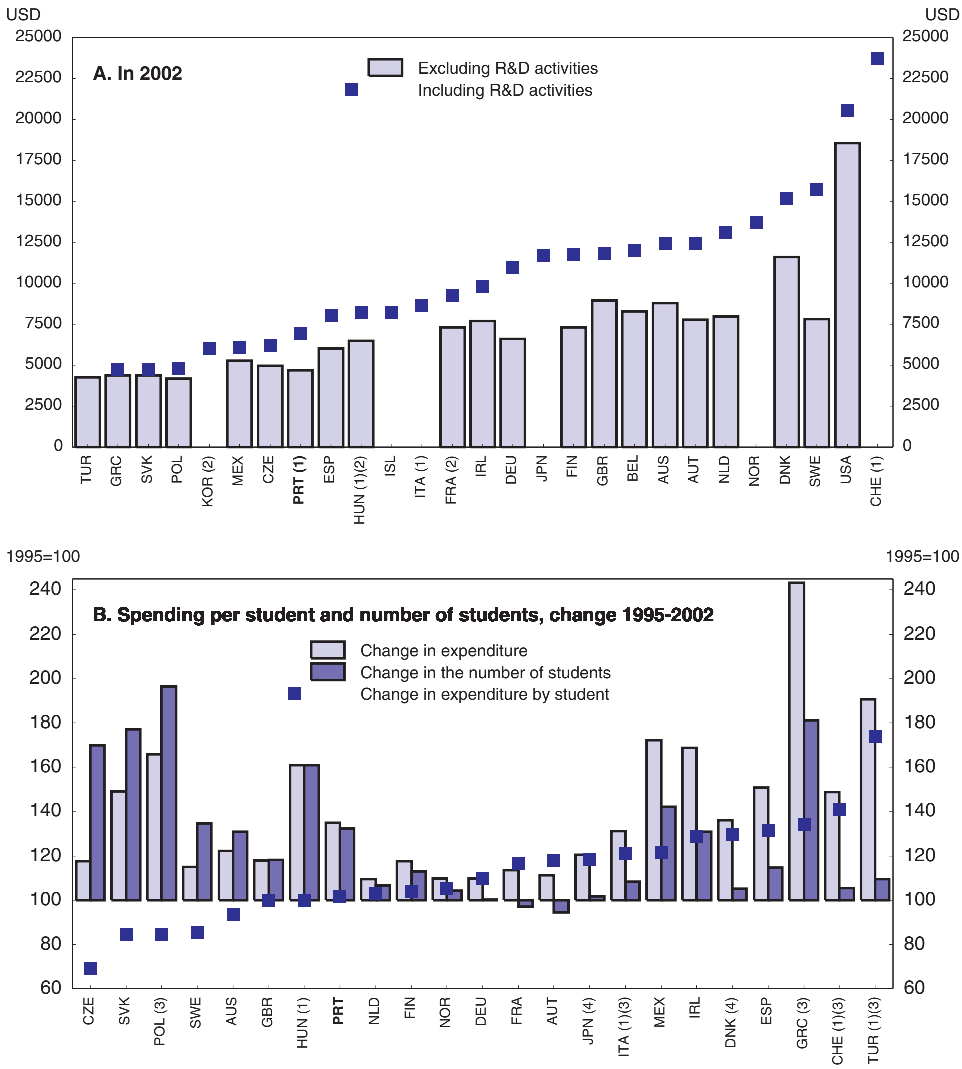
Source: OECD, *Education at a Glance* 2005.

Public funding of higher education is debatable on equity grounds, since a large amount of spending benefits a small share of the population which tends to be relatively wealthy. Public support is, however, justified to facilitate access to the less affluent, through student loans (equivalent to deferred fees) and scholarships – which should be granted to the needy rather than just on merit. About one fourth of Portuguese students receive state assistance.[13] The average monthly assistance received by a student is, however, very small in Portugal and the social component is low. The government is introducing a new formula for social support and scholarships in tertiary education, which aims to create more social fairness.

The financing of tertiary education should be changed along the following lines: *First*, the public funding system of higher education institutions needs to be clarified. In this context, a new formula is being established to allocate public funds. *Second*, budget funds should be complemented by other sources of financing. A wider use of students' fees, in combination with a well designed loan system and some state assistance to poorer students, would contribute to the financing and would be more equitable. *Third*, alliances between business and universities should be further developed. There are various options, as illustrated by experience in many other OECD countries, which have taken steps to foster industry-science relationships (OECD, 2006).[14]

Figure 4.3. **Annual expenditure per student in tertiary education**

USD (PPPs), based on full-time equivalents



1. Public institutions only.
2. Research and development expenditure at the tertiary level and thus total expenditure including R&D are underestimated.
3. Public expenditure only.
4. Post-secondary non-tertiary included.

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

The public funding system is being revised to include performance incentives

The public funding system should be more predictable and should be used to foster performance. Performancee based systems for funding universities are already used in a number of OECD countries, notably in Australia, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States, including both input-related and output-oriented indicators (OECD, 2005b, Box 4.6). The Portuguese authorities are now also introducing performance-related funding of public higher education institutions, with a view to addressing quality concerns.

The new funding formula, approved with the 2006 budget, includes two main "quality" factors. *First*, the funding formula favours higher education institutions that show better teaching performance as measured by the number of students finishing with a bachelors degree (universities or polytechnics) and by the number of masters and PhD degrees awarded in universities. One risk with this formula, however, is that it could create incentives for institutions to be more lenient and award more degrees. The government intends to limit this risk by introducing a credible quality control and evaluation system. *Second*, the formula rewards institutions which are hiring more qualified teachers.[15] This could, however, lead to more demand for funds. The authorities expect that the intended reorganisation of institutions will lead to efficiency gains and ease budgetary constraints. Nevertheless, financing from private sources will have to be increased to offer good quality tertiary education to the wider public that is expected to enrol.

Higher tuition fees should be combined with well-designed students loans

Adequate financing could be provided by a combination of budget resources, tuition fees - provided a well-designed system of support for needy students is in place – and alliances with enterprises or research centres. Private institutions, which are free to determine tuition fees, charge fees which represent the cost of the programme. This is not the case in public institutions, where tuition fees are relatively low, while the wage premium for students with a university degree is high. The partial deregulation of public institutions fees in 2003 was expected to create competition among institutions, with better quality institutions charging higher fees, while the others would maintain lower fees to attract more students. But the gap between the minimum and maximum fees which can be charged is narrow and institutions cannot determine the number of students they admit since the state determines the annual *numerus clausus*.

There are many ways to finance tertiary education: the small number of OECD countries which charge significant tuition fees have introduced loans or grants to mitigate adverse effects on low-income students (Box 4.1). The Portuguese system should be carefully designed to adapt to the conditions in the country. The current government announced its intention to develop student loans, available to all students and charging subsidized interest rates.[16] The use of subsidized interest rate which is envisaged is doubtful, however, since it would benefit all students, including those whose income is likely to be higher in the future than the average Portuguese taxpayer's income. In some countries, repayment of loans is scaled according to income earned in working life to incorporate some element of fairness.

Developing the use of higher tuition fees would not only be more equitable but also more efficient (Joumard *et al.*, 2004). It would make students more attentive to the quality of teaching, with subsequent effects on their efforts to acquire knowledge. Fees also give incentives to the students to take the courses with higher returns – and to the institutions to supply them. The additional resources would allow the quality of staff and research to be raised. Difficulties of implementation should, however, not be underestimated. If income testing is used for fees or loan reimbursements, careful control will be needed to limit the risk of under-reporting of income – particularly high in a country such as Portugal

Box 4.1. **OECD countries experience in funding tertiary education**

In the context of growing constraints on public finances, tuition fees have been raised considerably in some OECD countries to increase spending on tertiary education. Tuition fees are also justified from an economic and equity point of view, since individuals endowed with tertiary education draw large personal benefits from it, making it unfair to use general public funding on a very large scale as is done in many OECD countries. A limited number of OECD countries (the English-speaking countries plus Japan and Korea) charge significant tuition fees complemented by loans and/or grants for students from low-income families, with no evidence of adverse participation or equity effects (Blöndal *et al.*, 2002). Among these countries a few (*e.g.* Australia, New Zealand and the United Kingdom) also make the repayment of the student loans contingent on post-graduation income, thereby providing insurance against students inability to repay. In the United States, where the repayment is not income-contingent, the default rate is quite high.

The case for providing grants or below-market interest rates on loans appears to be weaker: although some students may be poor today, they may become more affluent over their lifetime.* The alternative of making fees contingent on means-testing – or granting allowances to students from low-income families – is also less attractive, because the incentive for the would-be student is lost and it raises marginal effective tax rates on parents, exacerbating risks of under-reporting of income.

In New Zealand, the fee and loan system has led to an expansion in the resources available to the sector and to a large increase in participation, including by students from traditional ethnical minorities and poorer socio-economic backgrounds. Key reasons for this expansion were the fact that loans were available for any approved tertiary institution.

Some countries differentiate fees across subjects and/or universities. Fees are typically lower in arts, higher in medicine with science and law courses falling in between, in line with the actual costs of these courses and earnings that can be expected after graduation.

* For more details, see World Bank (2005).

where self-employment income is prevalent and tax compliance is weak (Bronchi and Gomes-Santos, 2001). Also, if a loan scheme is introduced, consideration should be given to the availability of information exchange systems across countries, so that people who go to work in other countries actually repay the loan in Portugal, otherwise there is a risk that the more educated move abroad in order to avoid repayment.

In sum, improvements in quality, developing further the accreditation system and designing appropriate financing schemes would contribute to increase overall demand in tertiary education and enhance human capital formation. It is important, however, that the arrival of a new public in higher education is not accompanied by a decline in average quality of the provision and that programmes that are in high demand are those that improve employability in the future. A clearer "division of labour" between the two different subsystems, universities and polytechnic schools, and their specialisation would help. In order to provide adequate services to a wider range of public it is important that there is enough diversity, with a choice of long- vs. short-cycle studies, research vs. early entry in the labour market, education for those coming out of secondary school vs. working students or adults.

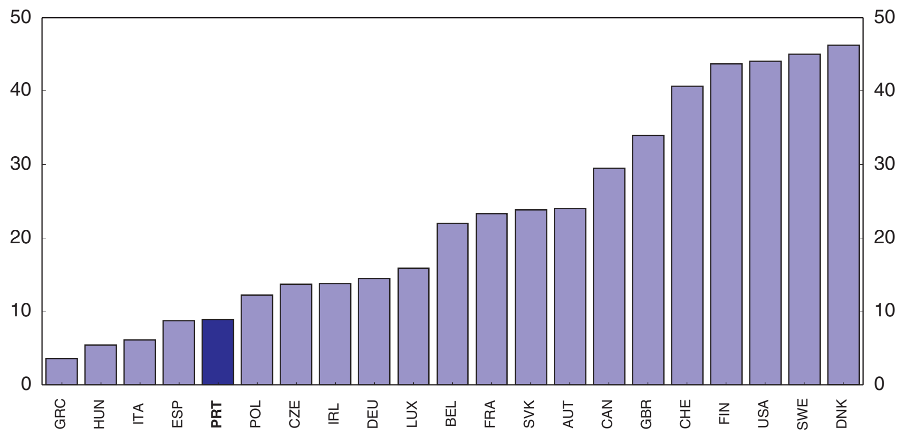
Upgrading the competences of the labour force through adult training

Participation in training programmes is low, while returns are high

Because of the large share of the population with low educational achievements and the lags involved in improving the competence level of the workforce, adult training is important to provide opportunities to current workers to acquire new qualifications. Adult training activities vary a lot across OECD countries with, on the one extreme, a limited number of OECD countries (Denmark, Finland, Sweden, Switzerland and the United States) having more than 40% of the labour force taking part in job-related education and training each year. At the other extreme, Portugal, like Greece, Hungary, Italy and Spain, have a low training culture: less that than 10% of Portuguese employees are involved in adult training, most often among the younger, more qualified workers and employees of larger firms (Figure 4.4). Older generations, on the other hand, which are more in need (and often functionally illiterate) participate the least in post-school education and training. They have been able to find jobs, but in a changing environment, the risk is that they are less adaptable and restrain future growth. Typically, training has been mostly remedial in Portugal, rather than preventive. Policies to widen access to training would raise Portugal's growth potential, at the same time as addressing equity concerns.

Figure 4.4. **Participation in continuing education and training**[1]

2003



1. Participation of the labour force (25-64 year-olds) in non-formal job related training within a 12-month period.

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

Returns to adult training appear to be large and significant.There are important differences in returns across categories of workers. Workers with low qualifications and long professional experience appear to earn larger returns.[17] Some activities are more profitable than others: training to improve current skills and on-the-job training attract largest returns. Based on European and national panel data for the late 1990s, the wage premium for participating in education and training was among the highest.[18] Both workers and firms benefit from training. Trained workers not only receive a wage premium they also enjoy better re-employment chances after lay-offs,[19] and firms benefit through increases in productivity.

Several steps have been taken to foster participation of workers in training

Portugals adult training system has the objective of both providing initial qualifications and upgrading competences throughout the working life. Supply of the first type of training has been developed extensively over the past, using European Social Fund (ESF) resources in particular. However, according to results from monitoring funds, implementation has been inadequate. The cost effectiveness of the programmes co-financed by the ESF needs to be significantly enhanced and there needs to be an improvement in labour market and vocational training opportunities. There is no need to develop new instruments but existing instruments should be rationalised.[20] OECD country experience suggests that a gradual approach is appropriate when rationalising training instruments. Improvements could also be made by defining targets better, strengthening evaluation and using results to adjust programmes.

The other type of adult training, aimed at upgrading competences throughout the work life is more recent. Potentially, it could concern the 3 million workers who did not complete secondary schooling and have for the most part only 4 years of schooling. An important first step has been achieved with the development of the System of Recognition, Validation and Certification of Competences for Professionals, which serves for the recognition and transferability of competences, even those acquired through non-formal training. Now that the validation system is largely established, it is desirable to speed up its application and expand its scope, which will require developing the scale of operators, improving monitoring and mobilizing demand.[21]

The Technological Plan, presented by the government at the end of 2005, includes measures aimed at increasing the average skill level of the Portuguese population and promoting life-long learning, as well as incentives to increase employment of workers with higher competences, with a special focus on scientific competences.[22] The Plan's comprehensive approach also identifies several measures aimed at facilitating business operations (see Chapter 5).

The 2002 Labour Code set an obligation for companies to provide a minimum number of training hours to their employees (35 hours per year by 2006). The measure was introduced with the objective of raising awareness, particularly in SMEs where the lack of training is the most severe. There has not yet been clear evidence of an increase in the take up of training courses in SMEs, where workers continue to report the unavailability of time as an obstacle to pursuing continuing education. Forcing firms to fulfil the 35 hours obligation might not be a very effective way to stimulate demand for training, notably because it would be difficult to evaluate that implementation is effective and the training provided is useful. Smaller firms will find ways to bypass the rule in order to minimize the cost and disruption it creates. Larger firms will provide training even if it is not compulsory, as illustrated by the training programme organized jointly by a group of large foreign investors that includes Siemens, Volkswagen and Bosch.

Improving the effectiveness of training while stimulating demand

Improving the availability of information, strengthening communication with entrepreneurs or associations and promotional campaigns, including *via* public television, would contribute to raising awareness and motivation of the less qualified, older workers. As many other OECD countries, Portugal has set up an electronic learning data base; but this is not sufficient, in particular it does not reach the low-skilled individuals who are often unable to use a computer. Personal support is necessary to provide information and guidance.[23] Until now public support for training, including European funding, went to operators (supply) rather than to trainees. The authorities have announced their intention to provide funding directly to the demand side, considering direct funding to companies and to trainees. The reorientation of spending should also help to stimulate demand.[24]

The key issue in all training is how to ensure that training provided is efficient, *i.e.* meets labour market needs and thereby improves trainees' working prospects. Effectiveness of training is related to incentives, target groups, the content, duration and mode of training, the system of recognition and certification. Short-duration training modules should be further developed to facilitate attendance for working adults. Also important are the pedagogical qualifications of those who provide training. Progress has been made in creating links between the careers of school teachers and training providers, which used to be distinct. A common training framework should allow mobility from one career to the other. Evaluations should be strengthened, with a focus on follow up based on longitudinal evidence, to assess the impact of training events on earnings and employment advantage over several years. To stimulate demand, the government's priority should be to improve information about training opportunities, ensure portability of acquired skills and provide guidance while public support to training should be limited and targeted to "low-opportunity" individuals.

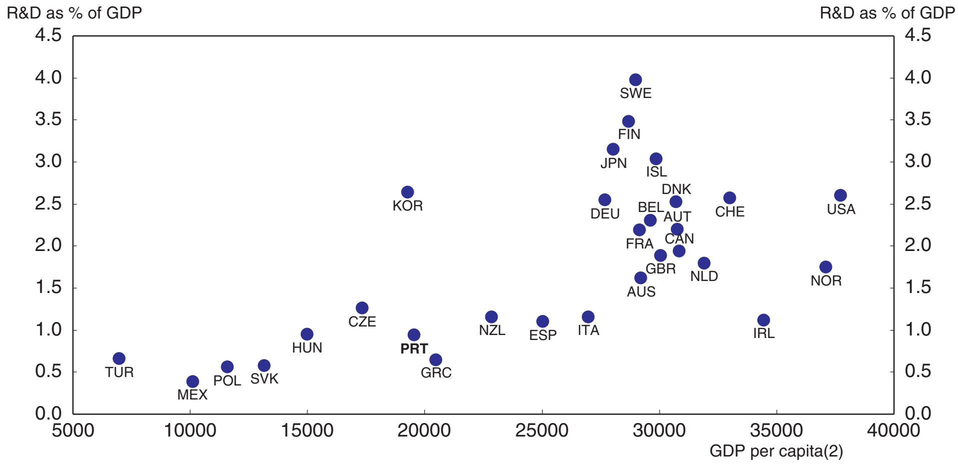
Making innovation policy more efficient

Despite some improvements innovation activity remains low

Portugal's growth over the past two decades was largely based on investment increases (capital deepening), including large-scale foreign direct investment, and on increases in labour supply (Chapter 1). To regain competitiveness in light of increased competition from the new EU members and emerging economies in Asia or North Africa and to initiate a new catching-up process, Portugal needs to move away from traditional labour-intensive low value-added products.[25] This will require more innovation, broadly defined to include not only the creation of new products, services or processes, but also the diffusion of existing knowledge.

Although there was a significant improvement in scientific performance in the late 1990s, as suggested by several indicators (the production of Portuguese scientific publications and their citation, the number of PhD graduates and total funding for research and development), allowing some catch-up with the European averages, the innovation performance of Portugal remains weak on average.[26] Spending on R&D is one of the lowest in the OECD (Figure 4.5). This is a rough measure of performance, but it provides some indication of a country's commitment to the creation of knowledge.[27] Private R&D is among the lowest in the OECD, while public spending is not far from the OECD average, with some 0.5% of GDP in Portugal compared with 0.7% for the OECD (Figure 4.6). The low business R&D intensity is all the more worrying as cross-country evidence has shown that private R&D spending has the most direct long-run influence on economic growth.[28]

Figure 4.5. **R&D spending and income levels, 2003**[1]

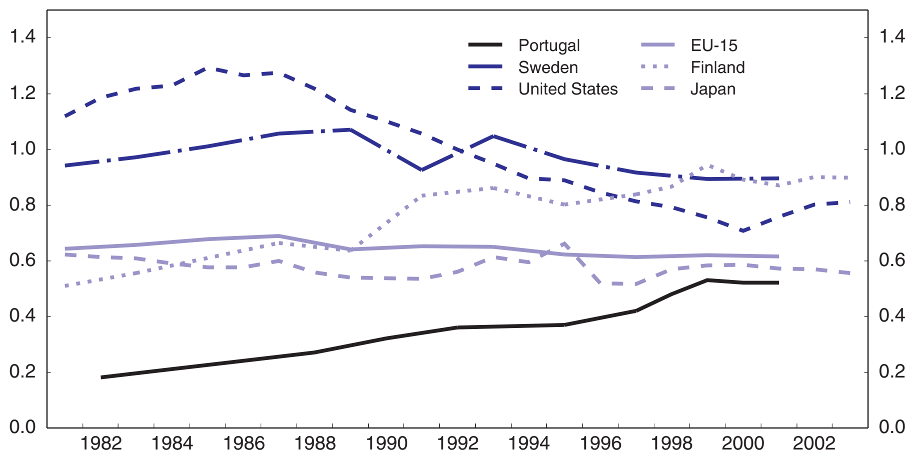


1. Or latest year available.
2. In USD (PPPs).

Source: OECD, *Main Science and Technology Indicators* (2005).

Figure 4.6. **Public funding of R&D**

As per cent of GDP



Source: OECD, *Main Science and Technology Indicators* (2005).

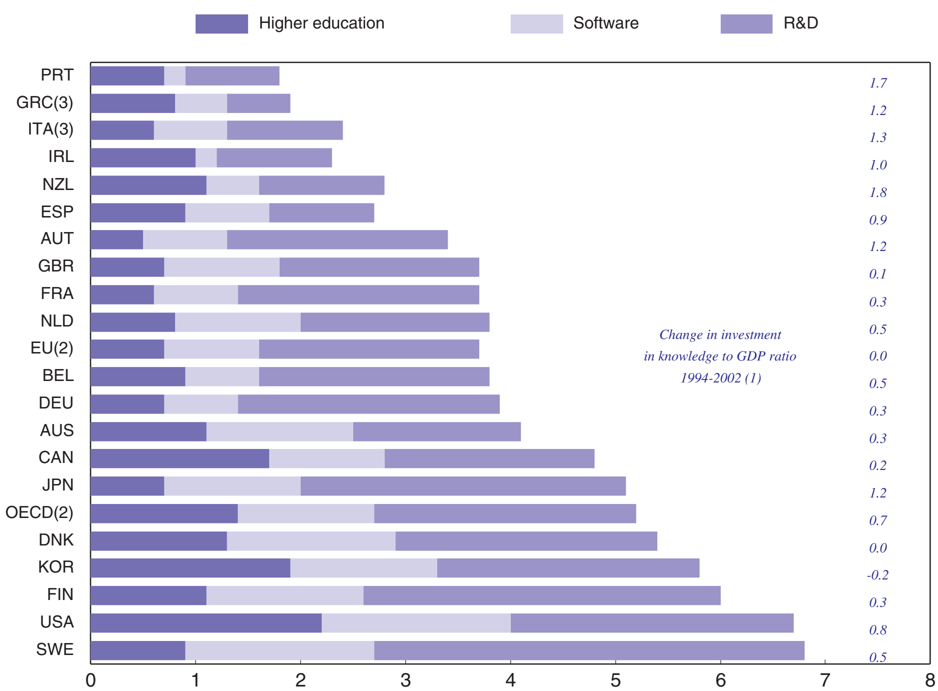
... survey results point to the existence of many innovative firms

As expected in a country which is not at the technological frontier, most Portuguese firms do not introduce radical innovation so that patent applications are very low. However, as Portugal is far from technological leadership in many markets it can accelerate catching-up by enhancing the transfer of new products and processes and knowledge developed abroad. The Portuguese private sector has demonstrated strong innovative performance in some areas as shown in the European Community Innovation Survey, for instance, in implementation of innovation, as measured by the proportion of enterprises that are successful innovators, and the high share of new products in companies' turnover.[29] There have been several recent success cases of technology adoption in Portugal (*e.g.* the electronic tolls *via verde*), and interesting cases of advanced technology incorporated into specific industries (*e.g.* the shoes and mould industries). On the other hand, Portugal is typically weak in design and marketing innovation.

Survey results show that a significant proportion of Portuguese firms, even small-size enterprises, have introduced new or significantly improved goods, services and processes.[30] Innovating firms appear to have considerably higher productivity levels than non-innovating firms (Faria, 2004, Conceição and Heitor, 2005). Survey evidence also shows that Portuguese companies performing R&D activity are growing faster and have higher productivity. However the positive performance of innovative firms is hardly reflected in the overall business sector R&D performance. The weak average innovation and technology performance reflects to some extent the structure of the Portuguese enterprise sector, which is characterized by rather dynamic enterprise creation (20 000-30 000 firms each year), including small high-tech firms, and a few larger medium and high-tech firms, but a clear predominance of low-tech and low-skill intensive firms. Furthermore, the duality between innovative and non-innovative firms is very marked in comparison with other countries, including Spain. Non-innovative firms have considerably lower education intensity and capital intensity in Portugal than in Spain.[31] In sum, the wide variety of R&D performance suggests that while the seeds for scientific and technological innovation exist, the low overall investment in R&D, software and higher education, together with inadequate framework conditions, have acted as obstacles to a more broad-based innovation performance (Figure 4.7).

Figure 4.7. **Investment in knowledge**

As per cent of GDP, 2002



1. 1994-2001 for Greece and Italy. 1995-2002 for Korea. EU data exclude Belgium, Greece and Italy. OECD data exclude Belgium, Greece, Italy and New Zealand.
2. Excluding Greece and Italy
3. 2001 data.

Source: OECD, *Science, Technology and Industry Scoreboard* (2005).

Improving conditions for innovation in the business sector is a key policy objective

The development of innovation in the business sector is shaped to some extent by innovation-specific policies (public R&D, public support for business R&D and fostering links between business and academics). The scarcity of highly qualified human resources, discussed above, can explain part of the Portuguese lag *vis-à-vis* many other countries in business R&D intensity.[32] Other framework conditions also play a role. Cross-country analysis of innovation in the business sector shows that framework conditions, notably the legal and regulatory environment for business, contribute as much to Portugal's innovation lag as specific policies; furthermore, the improvement in business R&D intensity over the 1990s appears to have been entirely attributable to improvements in framework conditions (Jaumotte and Pain, 2005a and b).

Fostering the creation of high-skill intensive firms is a priority of the new government and there is growing awareness in the country of the need to catch up with the rest of the EU countries (helped by increased use of – and communications about – the European Innovation Scoreboard (EIS) indicators). In the past, the policy process has not been very effective, reflecting the absence of a systemic approach and the lack of continuity. For instance, changes in government, which have been frequent over the recent years, were accompanied by changes in innovation policy design, while implementation of past initiatives was patchy. Furthermore the weak economic climate over the recent years has meant that companies have been driven by short-term considerations rather than longer-term views.

The previous government stressed the importance of innovation for Portugal's competitiveness and growth. Specific policies to foster innovation activity were launched, including the revision of the two main programmes co-financed by the EU,[33] and a "strategic initiative on knowledge and innovation" was announced in January 2004. In that period, fiscal incentives were suspended, and replaced by different instruments aimed at supporting investment in R&D.[34] Some financial incentives in the form of loans were introduced under tight eligibility conditions, with the subsidy component of loans being conditional on *ex post* evaluation. But the demand for financial incentives was scarce, the business sector finding the scheme unattractive and, perhaps, too complex.

The government, which came in office in spring 2005, has undertaken an evaluation of the "Bases for a national innovation plan" proposed by its predecessor to meet the Lisbon target in the field of innovation. In the revised policy strategy, the role of the government is considered to be an important lever to ensure technological and scientific development. Ambitious objectives have been set:

- stimulating innovation;
- increasing the number of researchers in Portugal;
- increasing investment in R&D in the public and private sectors and stimulating the creation of scientific jobs in both sectors;
- consolidating the scientific and technological culture.

The government's objective to foster innovation is commendable given Portugal's low ranking in R&D spending and innovation activity. Public support for business R&D is often justified by the existence of positive spill-overs for the rest of the economy, which are not taken into account in private agents' decisions. There is some evidence that across-the-board tax incentives are preferable to subsidies targeted at potential "winners", although well-designed direct support is seen as a promising approach in some well-performing countries. The cost effectiveness of all public support must, however, be carefully assessed, especially given the tight budget constraint. Over the period 2000-03, Portugal was among the OECD countries with a combination of relatively high tax incentives and low subsidies. At the same time it recorded the lowest business R&D intensity in the sample of countries included in the comparison (Figure 4.8 Panel IV). Re-introducing tax incentives and other public support implies additional budget financing.[35] Careful consideration should be given to the risk that raising the revenues needed to finance this support can create distortions in the rest of the economy and reduce growth.

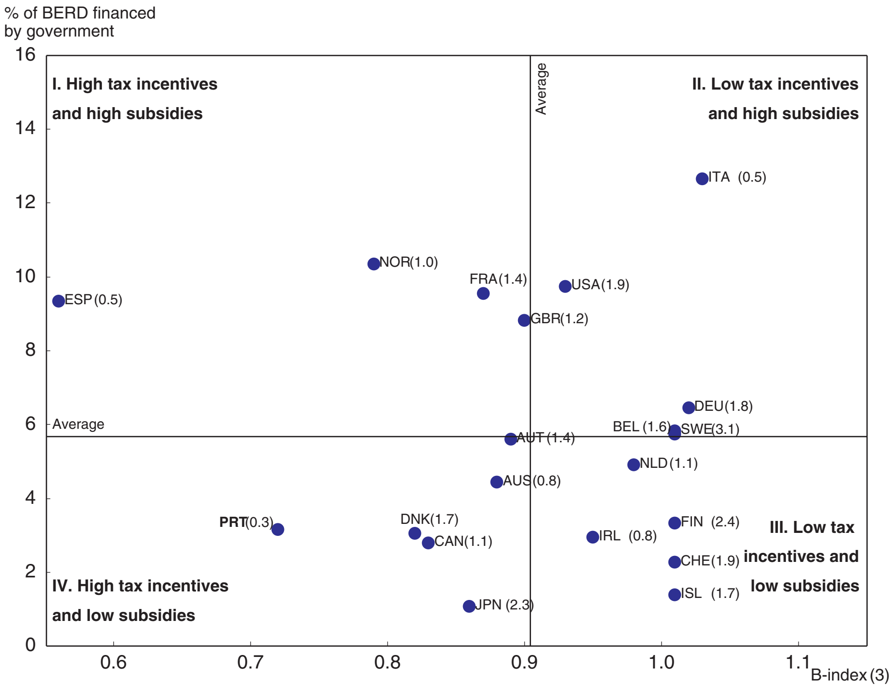
It should also be noted that, although the effects of public support for business R&D are generally positive, they are small compared with the potential impact of other policies, such as improving framework conditions. To strengthen business R&D in particular, where Portugal's weakness is the most obvious, promising directions would also be to:

i) develop strategic co-operation between the private and public sectors: because of their small size, many companies are not able to pursue their own R&D or absorb existing knowledge and would benefit from cooperative research centres.[36]

ii) create conditions that are more favourable to business R&D.

Figure 4.8. **The state of tax and subsidisation policies**[1]

Average per annum, 2000-03[2]



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

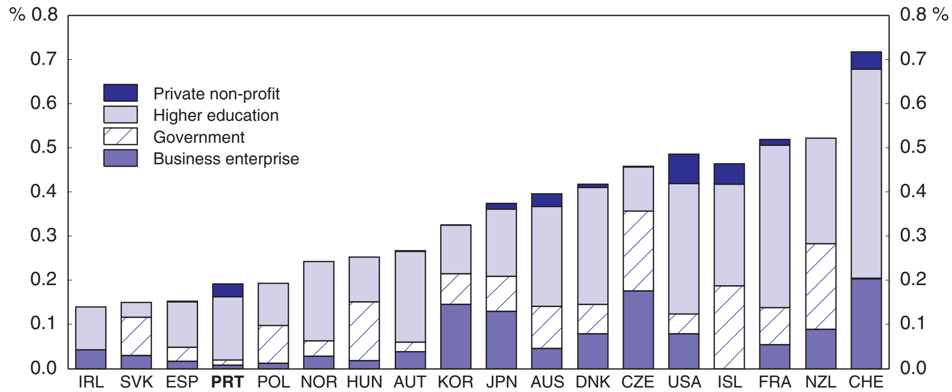
Source: OECD, *Main Science and Technology Indicators*, May 2005 and *Science, Technology and Industry Scoreboard* (2005).

Strengthening the links between business and public research and improving financing

In Portugal, most public funding is allocated to basic research undertaken in universities and research institutes, while the involvement of the business sector is negligible (Figure 4.9). Given the structure of Portuguese industry where most firms are small and often family owned, links between firms and with universities have generally been weak. Hence more efforts are needed to strengthen the links among the main players in innovation and science, *i.e.* business and public research. All higher education institutions are free to contract with enterprises and there have been links with large companies abroad. International experience shows that partnerships can also be built between small innovative companies.

Figure 4.9. **Basic research by sector of performance**

As a percentage of GDP, 2001[1]



1. 2002 for Czech Republic, Hungary, Iceland, Slovak Republic and United States; 2000 for Australia, Ireland and Switzerland; 1998 for Austria.

Source: US National Science Foundation, Science and Engineering Indicators 2004 and OECD, RDS database, May 2005.

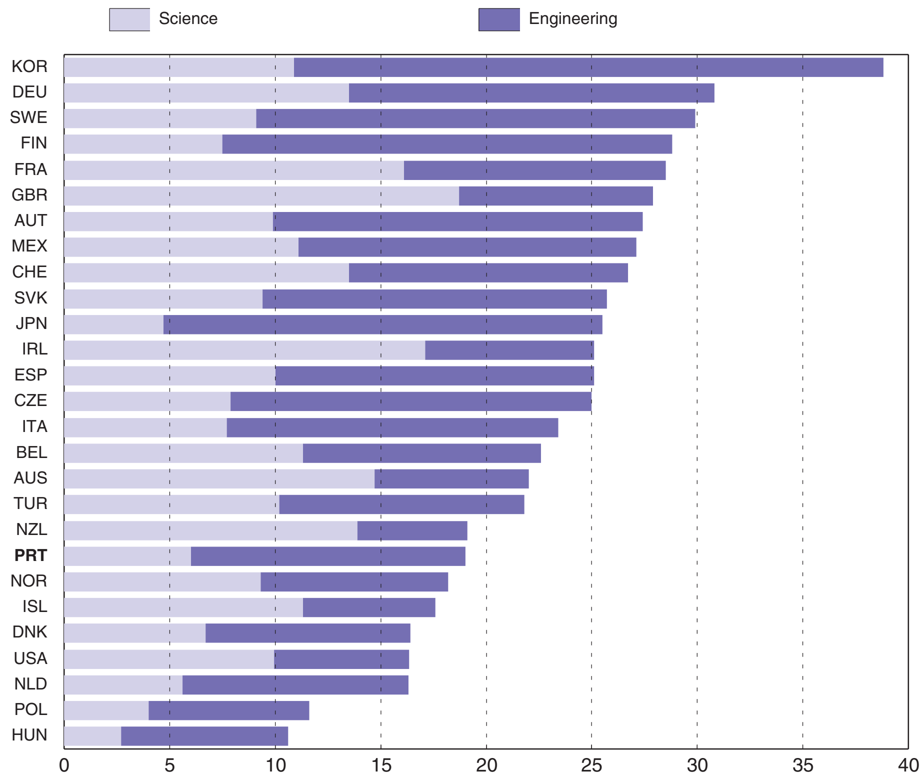
Supportive financial conditions are needed to ensure that even small and very small firms have access to financing for investment. Regarding bank loans, a major source of financing in Portugal, there are problems of access for smaller-size firms and those involved in innovative activity. In this context, the lack of experienced evaluators of innovative projects has been reported as a problem in Portugal (EC Enterprise DG). For smaller innovative firms which cannot obtain bank finance, venture capital is typically a major source of external financing. The availability of such funds has been very limited in Portugal. To reduce funding constraints, in early 2006 the government established a new framework for SME access to finance. The first initiative (FINICIA) aims at improving access to finance for small firms in the early stages of the business life cycle. The programme combines: *i)* a public counter-guarantee fund in partnership with mutual guarantee schemes, to improve the access of very small firms to bank loans; and *ii)* a public risk-sharing fund in partnership with venture capital, to provide small amounts of capital to start-up activities, and to innovative investment projects.

Having human resources with science, technology and engineering qualifications

Human capital is an essential input into the innovation process. About 50% of R&D spending consists of the wage costs of R&D personnel, which includes researchers, technicians and support staff. Availability of domestic scientists and engineers is a requirement for an economy to absorb inventions made in other countries. In that sense, the main impediment to innovation activity in Portugal is probably the lack of highly qualified human resources. Despite some increase in the number of science and engineering graduates, the overall supply of such graduates continues to be low (Figure 4.10). Graduates (PhDs) in the fields of science and engineering generally find employment in higher education institutions in Portugal; only a small share is employed in private firms (less than 20% in 2000). Brain drain has not been a problem in Portugal until now, but this could change in the future with more intense international competition for skilled people.

Figure 4.10. **Science and engineering university degrees**

As a percentage of total new university degrees, 2003



Source: Calculations based on OECD Education database, October 2005.

It is thus important to create favourable conditions for researchers in Portugal. The share of researchers in total employment is only 3.5 per thousand, compared with 6 per thousand on average in EU15. Increasing their number would help to promote links between university units or between university and companies or state laboratories (at the national and international levels). The development of scientific-based networks can help overcome difficulties resulting from the small size of research units and contribute to the diffusion of knowledge in small size enterprises. To this purpose, the authorities consider that it is necessary to restructure the university faculty career system and create enough flexibility to allow merit advancement for young researchers, irrespective of vacancies. Yet, as seen above, the size of student cohorts is declining and no new positions are expected to be created in the faculty staff. In this context, it could be difficult to introduce flexibility in the career system.

Conclusion: preparing for the future

Modernizing the Portuguese economy requires a broad reform which increases human capital at all levels and improves framework conditions for researchers and innovative firms. The key recommendations discussed above are summarised in Box 4.2.

Box 4.2. **Recommendations to modernize the economy and recoup competitiveness**

Higher education

- Streamline programmes and reorganise the system, *via* mergers or closing down institutions; build up knowledge networks which associate universities and polytechnics.
- Increase relevance and quality, strengthening science and engineering programmes.
- Improve relations between teaching units and related research centres in higher education systems.
- Foster international partnerships with wellrecognized institutions.
- Give more autonomy to universities, while increasing their level of accountability.
- Involve polytechnic schools in lifelong learning.
- Develop systematic evaluation at all levels (institutions, programmes and teachers). Provide feedback to improve management and outcomes.
- Increase tuition fees in public institutions, backed by a well-designed loan scheme, to widen access and ensure adequate funding.

Adult training

- Develop the assessment of the effectiveness of training, in terms of responsiveness to labour market needs; strengthen follow-up on outcomes; use evaluation results to influence policy design.
- Consolidate the Recognition, Validation and Skills Certification System, to stimulate demand. Speed up its implementation, extend the certification of participants in (formal and non-formal) training.
- Refocus the financing of training on the demand side by using available European transfers to directly support companies, SMEs in particular and trainees.
- Improve supply by raising the pedagogical qualification of trainers and develop more flexible timetables and short-duration training modules to facilitate access by working adults.
- Increase awareness by providing adequate information and promote communication on training offers and on returns to training. This would help to create a more demand-driven training system.

Science, technology and innovation

- Continue to put high priority on public R&D, building on the existing system with appropriate international linkages, and regularly assess the effectiveness of spending.
- Assess the effectiveness of tax incentives for R&D expenditure in firms, including SMEs, and ensure a fair degree of stability and predictability over time.
- Strengthen collaboration between public research institutes and industry, by facilitating the mobility of researchers, providing financial encouragement to the development of scientific networks and partnerships with the international business world.

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Fostering innovation and competitiveness requires in addition developing a culture of entrepreneurship which allows undertaking risky activities, increasing effective competition in product markets and improving the functioning of the labour market. These points will be reviewed in the following chapter.

Notes

1. In Portugal, the proportion of higher education students' fathers who have achieved higher education themselves is 29% compared with 5% for the proportion of men of corresponding age in the general population (a factor of almost 6 to 1). In Germany and France, the factor is around 2 to 1.
2. According to opinion surveys (IMD, 2004), Portugal lacks qualified engineers, while OECD indicators suggest that Portugal is weak regarding PhDs in Science.
3. In Portugal, very few students (19%) already have work experience or have completed vocational training before starting tertiary education, compared with almost two-thirds in Germany (Eurostudent Report, 2005).
4. The private (and cooperative) sector is made up of 14 universities, a number of institutes and more than 100 polytechnic schools. The public sector comprises 15 universities, some of which very big, with several campuses, and over 30 polytechnics. Enrolment in private institutions, which expanded until the mid-1990s, amounts to one fourth of the total. There is also a large catholic university.
5. The number of 15-19 year old persons, close to 600 000 in 2005, is projected to decline to 559 000 in 10 years from now, while the number of the 20-24 year olds is expected to decline from 721 500 to 561 400.
6. Several OECD countries are witnessing a development of strategic alliances, networks and partnerships that involve different institutions, both domestically and internationally – a development which has been brought about by the new context of more intense competition in the higher education system. For details, see OECD (2005a).
7. Conditions have very much changed since the times when the *numerus clausus* was introduced to regulate fast rising demand. For some years now, students' demand is no longer larger than institutional supply. More recently, the *numerus clausus* has been used to regulate access in a few areas – medicine and architecture – where students' demand is larger than institutional supply, and to regulate the geographic distribution of admissions to make the best use of available physical capacity throughout the country (for the polytechnic system in particular).
8. Completion of upper secondary schooling is based on a final mark established by each school based on a student's results during the last two years of upper secondary schooling in that school.
9. The National Council for the Evaluation of Higher Education (CNAVES) was set up in the 1990s to establish guidelines for the evaluation procedures. Under the legislation introduced in 2003, accreditation is a requirement for the creation of a new institution, or new departments in existing institutions, and the Ministry in charge of higher education intends to use results to close down institutions or programmes.
10. Tuition fees for undergraduate studies (*licenciatura* or 1st cycle as redefined in the Bologna process) are constrained to be of a marginal amount by a constitutional amendment. They have to be situated within a range, the minimum annual fee being equal to 1.3 monthly minimum wages and the maximum set at 900 euros (the 1 942 fee updated for inflation). Graduate studies at the master level (*mestrado*, or 2nd cycle as redefined in the Bologna process) are under no constraints, except when the master level is compulsory for the practice of a profession (then fees are under the same constraint as for undergraduate studies). For doctorate studies, institutions set the fees freely.
11. Cf. OECD *Education at a Glance*, 2005. Considering transfers to institutions in the public education system and social support to students foreseen in the 2006 budget and including expected financing from student fees, spending per student is estimated to rise to about 8 200 euros (PPPs), excluding investment and financing of research, which is fairly low by OECD standards.
12. A. Afonso and M. Santos (2005), using data envelopment analysis on 2003 data, imply that the allocation of scarce public financial resources available for public universities could be improved. They are able to separate public universities that might qualify as "performing well" from others where some improvements in terms of efficiency can be made.

13. This proportion is low by comparison with record proportions of 62 to 85% in the Netherlands, Finland and the UK. Some Nordic countries also provide loans to student to finance the cost of living, while tertiary education is practically free.

14. There are a variety of options for strengthening industry-science linkages, including: *i)* public-private partnerships for innovation (see OECD, 2005c); *ii)* active collaboration between firms and universities, based on cost sharing (see Adams *et al.*, 2003); *iii)* using specialised funds to support commercialisation of university research, as done in Canada and the United Kingdom; *iv)* firm-financing of university chairs and industry-focussed research centres; and *v)* giving publicly-funded research organisations ownership of intellectual property arising from their research. Careful consideration should be given to the incentives researchers will face in any particular scheme and, in particular, whether the public good aspects of fundamental research is preserved.

15. The formula for direct public funding to institutions includes: *i)* The overall number of students (in all courses approved for funding); *ii)* Cost factors allowing for specificities (ratio of teacher/non-academic staff; reference costs); *iii)* Quality indicators – covering both input indicators (share of academic staff with PhDs) and output indicators, *i.e.* graduation efficiency (bachelors' degrees) and post-graduation efficiency for universities (number of Masters' and PhD degrees awarded). Besides, public funding also covers contractual funding of institutions; direct funding to students and indirect funding to students.

16. There exists a very small-scale loan system, entirely based on the private banking system. The legal basis for having a government-funded loan system is in place, and the 2006 budget foresees funding for launching a public loan system to students on an experimental basis.

17. Budria *et al.* (2004) used pooled data from 1998 to 2000. While the impact on future earnings is large, the analysis shows little impact of training on the probability of entering and leaving unemployment. The results are consistent with the fact that in the late 1990s there was still a significant proportion of low skill jobs being created. More recently, as unemployment rates (and long-term unemployment) of low-skilled labour increased, training would presumably be showing more impact on the risk of unemployment.

18. OECD, *Promoting Adult Learning*, 2005, Box 2.1. OECD, *Employment Outlook*, Chapter 4, “Improving skills for more and better jobs: does training make a difference?”

19. Evaluation of the European-funded “Employment, Training and Social development Programme” shows a positive impact of training on the probability of leaving unemployment, especially for the younger groups. The national Employment and Vocational Training Institute Survey conducted in the first half of 2004 shows that more than one third of unemployed found jobs after 3 months after training, the proportion rising to 60 % nine months after training.

20. Some instruments, should be abandoned notably those which do not guarantee double certification, *i.e.* recognition of competences obtained through training for the professional life and for formal education.

21. By end 2005, only about 50 000 participants had been covered in the certification system. The objective of the Ministries of Labour and Education is to supply training, through the Employment Institute and the network of schools and private vocational training institutions. They also intend to provide full recognition of acquired skills to 1 million workers, a yet more ambitious task. The programme *Novas Oportunidades* set up with the Education Ministry includes most measures of the government's strategy to overcome the low education level of the population. See *www.novasoportunidades.gov.pt*, and Box 3.1 in Chapter 3.

22. Two particular programmes are focused on enhancing training in companies: InovJovem, an existing programme promoting the employment of young graduates in businesses; InovContacto, which extends an existing programme combining training with temporary placement of young graduates in companies abroad. The programme GERIR, introduced in 2002, aims at improving managerial capacity and competitiveness of micro and small enterprises through the provision of a mix of training and consultancy services.

23. The recently introduced S@BER+ Clubs (“knowing more” clubs) work in that direction at the local level.

24. In several other OECD countries, there has also been such a shift in policy from direct subsidization of external providers (public or private) of training services to co-financing schemes (where employers and employees bear some of the costs), which can be designed to increase incentives for employers, for individuals or for both to invest in training. Bassanini and Ok (2004) look at evidence of under-provision of training, focusing on continuous vocational training (provided or paid for at least partially by firms); they discuss policy approaches and assess how

different policy instruments are needed to address obstacles to training suffered by different groups.

25. In the late 1990s, companies with the highest percentage of exports were not the most innovative, contrary to the situation in other European countries: only a quarter of innovative firms were high exporters, compared with more than 60% in EU15 (Source is CIS Survey).
26. Portugal's persistent lag when compared with many other EU countries is partly explained by the accumulated neglect of science and knowledge, which persisted until the seventies. For a more detailed analysis of the dynamics of innovation in Portugal and in an international comparison, see P. Conceição and M.V. Heitor (2005).
27. Spending on R&D does not reflect other activities which are also relevant, such as buying high-technology equipment and training. In particular, small firms and those in the service sector might contribute to the innovation performance, while their effort would not be measured in R&D spending. *Cf.* OECD (2006) and Jaumotte and Pain (2005b).
28. OECD (2003), *The Sources of Economic Growth in OECD Countries*.
29. In the European Community Innovation Survey (CIS III), in which firms indicate if they introduced new or significantly improved goods, services or processes and if they did so before their competitors, Portugal ranks as on of the top OECD countries in the sample (14 and 12 countries in the sample, respectively). *Cf.* Jaumotte and Pain (2005a).
30. The proportion of enterprises introducing product innovation on their market is around 13%, about 16% introduced process innovation and about 15% introduced both products and processes, their competitive advantage being in introducing these innovations before their competitors. (CIS III Survey).
31. The gap in tertiary-education intensity between innovative and non-innovative firms is much greater in Portugal than in Spain. For small firms, which make up the bulk of industry, the ratio (high-skilled employment/total) is three times greater in innovative firms, while in Spain in it is only double. For physical investment per worker, the difference between innovative and non-innovative firms is again more marked in Portugal.
32. As shown above section, despite recent progress (an increase in the number of science and engineering graduates), Portugal ranks very poorly on skilled human resources and secondary education in particular human resources with high qualifications in Science, technology and engineering are lacking; the issue of the brain drain is not yet substantial, but it could become so in the future; already some Portuguese PhDs get a scholarship to go abroad and stay to work there.
33. The programmes were reformulated in light of recommendations done in the mid-term evaluation of the Community Support Framework III (CSF III, 2000-06). Under CSF III, 23.8 billion are provided to Portugal, equivalent to about 3% of GDP per year. Special attention is given to the development of information and communication technology (ICT). A large share of investment projects co-financed by CSIII funds are earmarked for transport infrastructure. For more details on the two main programmes, Operational Programme on Science and Innovation 2010 (POCI) and the Operational Programme on Knowledge Society (POSC), see European Commission, Enterprise DG "Annual innovation policy for Portugal", 2004, a publication from the Innovation/SMEs Programme.
34. In particular, a fiscal reserve of investment was introduced. It was to be used within two years, either for initial investment in tangible fixed assets (not for replacement investment) or for innovation and development investment; otherwise, it had to be paid back with a penalty.
35. Besides tax incentives, financing support include: first, an incentive system for companies developing R&D teams in house; second, support for companies hiring masters and PhDs.
36. A successful example is the cooperative research centre in the shoe industry. Polytechnic schools should contribute to the cooperative research centres, and it might be appropriate that they get more involved in applied R&D.

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ANNEX 4.A1

Background information to Chapter 4

Moving ahead in European harmonisation

The government has stated its intentions to move ahead in implementing the Bologna process which aims to establish a European Higher Education Area (comprising 40 countries). It involves: mobility of students and teachers; convergence towards a common framework of qualifications and cycles of study; and measures to encourage lifelong learning by 2010. Several legal changes have already been made in Portugal to create the European Higher Education Area (Box 4.A1.1).

Box 4.A1.1. **Ongoing changes in the legal framework**

Redefining the structure of courses in higher education institutions

The harmonised structure will include two cycles – Bachelor and Master – followed (in universities only) by a third cycle, Doctorate.The legal framework, published in August 2005, will be implemented gradually by higher institutions, starting in 2005-06.

The two-cycle structure will correspond to the *Licenciatura 3-4 years /Mestrado (1-2 years)* in the current Portuguese education system. The new structure is to be introduced starting in 2006-07. The current higher education system (before the change) is divided as follows: a first cycle *Licenciatura* (4-6 years in universities, or 4-5 years in polytechnics), starting with the *Bacharelato* degree awarded after 3 years of studies. Universities offer post-graduate studies leading to the Masters' degree, *mestrado* (3 to 4 semesters) and the Doctors' degree (*cf*. Synopsis of the education system in Annex 3.A1, Chapter 3).

Introducing the European standardised credit system (ECTS)

The legal framework was published in February 2005; institutions are progressively implementing the credit system.

The European Credit Transfer and Accumulation System (ECTS) was used on a pilot basis in two universities in 2004-05. The new system aims at facilitating student mobility from one country to another, while until now credit systems are generally used to accredit courses at the national level.

Issuing the Diploma Supplement (in Portuguese and English)

It describes students' qualifications to facilitate recognition in Europe. It is being progressively implemented by higher education institutions.

Box 4.A1.1. **Ongoing changes in the legal framework** *(cont.)*

Opening access to higher education institutions for people in the labour force over the normal reference age (23 years)

This opportunity will mainly concern polytechnics but also universities. Legislation for this is currently in progress.

Providing technology specialisation programmes at the post-secondary education level

This aims to provide new ways to qualify the population and new opportunities for accessing higher education. Legislation for this is also currently in progress.

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Chapter 5

Creating a more dynamic business environment and improving the functioning of the labour market

This chapter discusses structural reforms in product and labour markets that can help boost productivity growth and facilitate Portugal's adjustment to the new, more competitive, international environment. The business sector would benefit from a further reduction of regulatory and administrative burdens, which would encourage entry of innovative firms and exit of poorly performing ones, while attracting foreign direct investors. Further action to promote competition throughout the economy would also contribute to raising productivity growth by ensuring a better allocation of resources, encouraging managerial efforts and stimulating innovation. Network industries, especially electricity and telecommunications need pro-competitive measures to increase efficiency and put downward pressure on prices. Finally, measures that facilitate labour mobility and job creation are required to allow the reallocation of labour to its most productive use and ensure an appropriate return on human capital formation.

Portugal has undertaken a number of reforms over the years to improve productivity and growth, but its competitiveness in the new global environment is under question and its growth performance has deteriorated (Chapter 1). To recoup competitiveness and regain a higher growth path over the medium term, further reforms are needed. Human capital development at all levels and conditions that foster innovation activities are important for the modernization of the economy (Chapters 3 and 4). Despite progress made in regulatory reform in several areas, further measures are needed to ease regulations in product and labour markets.[1] A dynamic business environment contributes to overall productivity growth. Further measures that reduce the cost of firm creation and the growth of productive firms and facilitate the exit of poorly performing firms are desirable. Such measures, which are discussed in the first section, would also enhance the attractiveness of Portugal for foreign direct investment. The second section discusses ways to strengthen competition in a number of sectors, in particular network industries, in order to reduce rents and contribute to a more favourable business environment. Another important area for reform is the labour market, as its functioning has deteriorated markedly over recent years (Chapter 1). Easing restrictive employment protection for workers with permanent contracts would reduce the duality of the labour market, improve workers mobility, be conducive to innovation in areas of technology and managerial skills and would raise the demand for more skilled labour. The chapter ends with a set of recommendations summarized in Box 5.2.

Alleviating regulatory and administrative burdens

Portugal has a large number of very small firms, many owned and run by families and generally oriented to the domestic market. It also has a relatively small number of large firms, including major exporters. Entrepreneurial activity is generally high as illustrated by firm level data on market entry and exit rates which have typically been high by international comparison (Scarpetta *et al.*, 2002). In manufacturing, in particular, the process of creative destruction (*i.e.* exit of low productivity firms) contributed to labour productivity growth in a significant way over the 1990s, as it did in the United States. In Portugal as in other countries for which data are available, productivity growth within individual firms also made a major contribution to overall labour productivity growth. As in many other European countries, in Portugal, entering firms are generally small, and unlike the United States, newly created firms which are successful generally remain small. Hence, in a country such as Portugal where there are many micro and small enterprises, the issue is not so much the lack of entrepreneurship, but the lack of innovative firms because of insufficient skills, "old style" management, or poor access to financing. Cross-country panel data analysis based on the European Community Innovation Survey (CIS3), which covers 16 countries over the period 1998-2000, shows that the degree of innovativeness increases with firm size, irrespective of the criteria used to measure innovation performance. The proportion of successful innovators appears to be twice as high in large firms as in small firms (Jaumotte and Pain, 2005). There is a large share of

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self-employment and pervasive informal activities in many sectors. The scale of informal activities, which creates distortions in the economy, suggests the existence of strict or cumbersome regulations and taxes (or social security contributions) perceived as too costly. Measures alleviating administrative burdens would help small businesses in particular and in combination with enforced controls and sanctions they would contribute to the fight against informality.

In 2003, Portugal was among countries where the cost of doing business was close to the OECD average, although higher than in fast-growing Ireland. Steps have been taken to simplify rules and procedures and to reduce the complexity of the licence and permit system, notably through the development of "one-stop shops" and the development of on-line public services, but processes for creation and licensing remained fairly complex and time consuming. To keep up with other countries which are reducing the costs of doing business, Portugal has to act broadly and swiftly in cutting red tape. This would enhance the competitiveness of the private sector and improve the relative attractiveness of Portugal as a location for FDI.

The recently initiated programme by the Ministry of Justice to ease registration requirements for the creation of enterprises is appropriate. The main objective is to limit the number of acts by public officers and remove unnecessary controls. The programme started with the measure to facilitate firm creation by the "on-the-spot firm" (*empresa na hora*) initiative launched in July 2005. By February 2006, a network of local centres ("attention points") specialised in the process had been created and several thousand enterprises had benefited from this fast-track creation process.[2] The next step is to complete the network of these centres (due to be finished in the first half of 2006). It is intended to broaden the scope of the programme to facilitate as well the exit of unproductive enterprises, through a similar "on-the-spot dissolution" process. In addition, under a new system introduced by the Ministry of Justice at the start of 2006, enterprises are no longer required to publish statements for their registration or closure in the Official Gazette (*Diario da Republica*) but instead can publish these on a special web site. Such initiatives, by reducing the cost of starting, running and closing a private business, contribute to enhance firms dynamism. Several parts of the government are involved in the joint effort. The effectiveness of the strategy hinges on the speed of implementation across the various ministries involved – notably the Ministry of Economy, Ministry of Finance and Ministry of Labour and Social Security – and the coordination among them. The easing of firms entry and exit should also help shifting activity from the informal to the formal sector, thereby contributing to widening the tax base and bringing more workers into the social security net, provided it is accompanied by an adequate tax (and social security) administration and effective compliance enforcement.

Promoting effective competition

International evidence suggests that low competition tends to increase prices and lower growth and employment. Ensuring a pro-competitive environment is essential in Portugal to create conditions where the private sector invests and innovates more. There has been considerable progress over the past decade or so in the approach to competition and in the deregulation of individual sectors. A pro-competition culture has started to develop and the general public is becoming more aware of the potential benefits of competition. In certain sectors, however, including private services, competition is hampered by entry controls and licensing restrictions. In network industries, the market power of incumbents is still high and further reforms are needed to ensure effective competition.

The strengthening of the institutional setting for competition policy is showing first results

The institutional setting has been strengthened with the creation of the independent and financially autonomous Competition Authority, which started operating in March 2003. Financial resources of the Competition Authority at this stage appear to be broadly adequate, and the number of qualified staff is on a par with that of competition agencies in most other countries of a similar size.[3] In the short period since it started to operate, the Competition Authority has had notable results in its main tasks of reviewing mergers, investigating restrictive practice cases and issuing recommendations to the government and public bodies. It has also undertaken several economic and market studies in important sectors. Some of its most visible results have been: *i*) an enforcement action against hard-core conduct, including fines, against a cartel of major US and European pharmaceutical companies[4]; *ii*) the enquiry into anticompetitive practices by the incumbent in telecommunications; and *iii*) decisions (still under appeal) regarding price fixing in professional associations (veterinarians, dentist services). In 2005, the Authority started studying the pharmacy sector and began monitoring some public tenders in the public works sector, with the objective of identifying potential anticompetitive practices. The Authority's recommendations to the government and public bodies have influenced policies and regulations in still other cases, making tendering mandatory in the acquisition of communication services by the government, for instance, and removing entry barriers to allow supermarkets to sell petrol.

After just two years in operation, the Competition Authority launched a pilot project in cooperation with the OECD to assess and improve its management and internal efficiency. The first evaluation was completed by mid-2005 and its results were included in the Authorities' 2006-08 business plan. This initiative by a young public agency to launch an assessment and improvement plan could serve as an example for other public entities in Portugal.

The momentum of pro-competition action should be maintained

Although the development of a competition culture is still insufficient in Portugal, the Competition Authority has been effective in raising the awareness of economic agents of how important competition is.[5] It is of paramount importance to maintain the course of action irrespective of political changes and pressure from lobby groups. To increase the effectiveness of the Authority's action it is necessary to improve the judicial system. Because of the rise in the number of proceedings, courts are now the bottleneck, mainly due to the lack of specialised judges. To address this weakness, training courses and seminars have been developed for judges as well as for prosecutors and other legal staff. If the bottleneck at the judicial level can be eased, an increase in the authority's resources could be considered to ensure that there is an adequate number of qualified staff to carry out the tasks.

At present, the Portuguese Competition Authority's resources come mostly from charges collected by sector regulators and, as in many other countries, from fees collected on merger control and other activities. Part of the receipts from fines also accrues to the Authority, although these are not included in the Authority's budget planning and they usually end up being transferred to the Treasury. The Authority's financing arrangements should be

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improved towards ensuring a stable source of funding. The Competition Authority should continue to rely for its funding on sector regulators contributions and fees collected on merger control and other activities. Financing an agency through the fines it imposes is not, however, good practice. It can create at least the appearance of an improper influence on the Authority's decision making. Hence all the proceeds from imposing fines should accrue to the government budget. To the extent that there is some financing coming from budget transfers, it should be established on a pluriannual basis, to ensure stability.

Insufficient competition results in high energy and telecommunication prices

In non-manufacturing industries, despite regulatory reforms, relatively high restrictions continue to exist.[6] Much remains to be done to open network industries, in particular, energy and telecommunications, to competition. *In the electricity sector*, Portugal had some of the highest prices in the OECD for industry users in 2004, broadly the same relative position as in 2000 (Figure 5.1). In July 2005, its pre-tax prices for large industrial users were on a par with the EU15 average, but still notably higher than the European average for small and medium users, and higher than in neighbouring Spain, hurting the competitiveness of smaller firms which represent an overwhelming share of the productive structure (Table 5.1). Gas prices also were still relatively high in 2004 (Figure 5.1, Panel B).

Table 5.1. **Pre-tax electricity prices in Europe**

In euro cents per kilowatt hour (kWh), 1 July 2005[1]

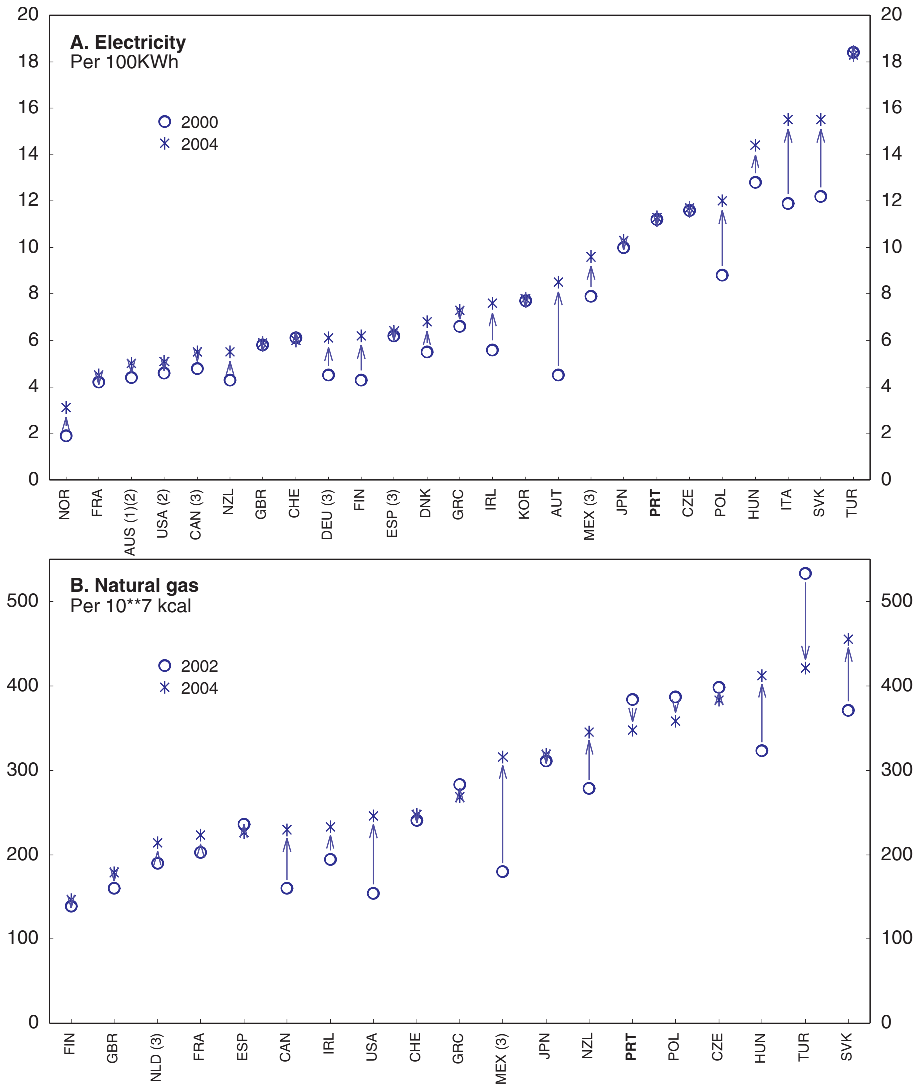
	Industrial consumers			Domestic consumers	
	Small	Medium	Large	Small	Large
Portugal	**11.8**	**7.4**	**5.3**	**13.1**	**8.5**
Austria	9.4	6.0	4.4	9.5	6.9
Belgium	11.6	7.5	5.6	11.0	7.5
Czech Republic	8.1	5.8	4.3	7.3	4.5
Denmark	7.6	6.5	. .	9.6	8.1
Finland	6.1	5.0	3.9	7.8	4.8
France	. .	5.3	. .	9.1	. .
Germany	16.8	8.1	7.0	13.5	7.6
Greece	9.5	6.5	4.5	6.4	5.5
Hungary	11.2	7.5	5.1	9.0	7.2
Ireland	14.5	9.0	6.9	12.0	7.5
Italy	11.5	9.1	7.4	15.1	. .
Luxembourg[2]	16.0	7.0	3.9	13.1	7.8
Netherlands	11.0	8.1	5.3	11.1	7.1
Norway	6.7	5.5	3.5	11.8	6.5
Poland	8.0	5.0	4.1	7.2	4.4
Slovak Republic	10.5	6.9	. .	11.2	6.6
Spain	10.4	6.9	5.3	9.0	5.9
Sweden	7.0	5.4	4.5	8.1	6.5
United Kingdom	7.7	6.4	4.8	8.8	5.7
Unweighted average					
EU15	10.8	6.9	5.3	10.5	6.9
Liberalised markets[3]	7.0	5.8	4.2	9.2	6.3

1. 1 January 2005 for France; 1 July 2004 for industrial consumers in Luxembourg. The level of consumption is based on an annual rate of 30, 2 000 and 70 000 MWh for industrial consumers, 3 500 and 20 000 kWh for domestic consumers.
2. Fifty per cent power reduction during hours of heavy loading for industrial consumers.
3. Nordic countries and the United Kingdom.

Source: Eurostat database, November 2005.

Figure 5.1. **Energy prices in industry**

In USD (PPPs)



1. Data for 2002.
2. Excluding taxes.
3. Data for 2003.

Source: IEA, *Energy Prices and Taxes*.

Unlike the few European countries where energy markets have been fully liberalised (Nordic countries and the UK), Portugal is still in the process of finalizing the liberalization of the electricity market and is initiating the liberalization of the gas market. The Portuguese Competition Authority, in association with its Spanish counterpart,[7] the European Commission (EC) and the European Competition Association (ECA), prepared a report on the progress to date in the construction of the EU internal energy market. In line with its findings, further steps are being taken for the effective implementation of the Iberian Electricity Market (MIBEL), including the harmonization of the regulatory frameworks for the electricity sector in Portugal and Spain, the continuing investment in inter-connection capacity between both countries, and the generalization of consumer selection of electricity supplier. In addition, the ongoing licensing by the government of additional electricity generating capacity will provide an opportunity for the entry of new producers into the market.

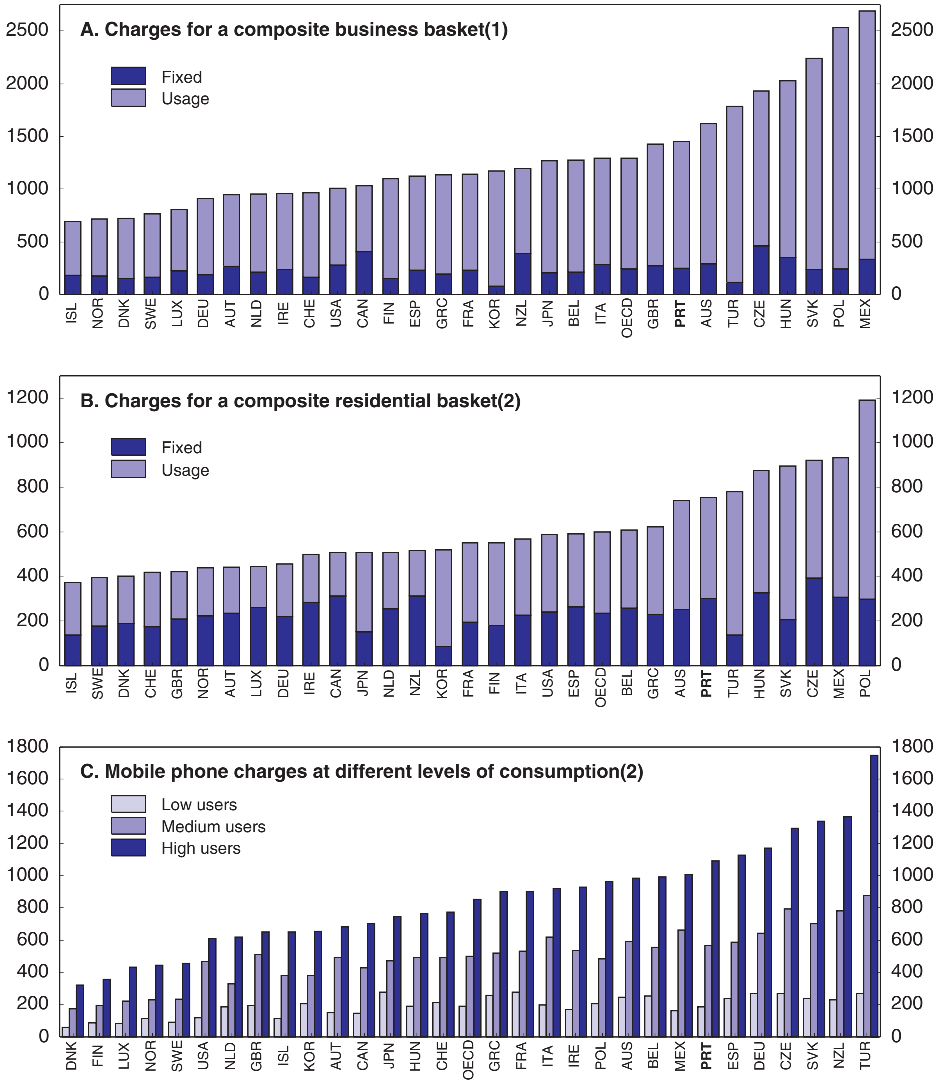
The restructuring of the energy sector has started, with the pro-competitive redeployment of electricity and gas assets. An agreement was reached at the end of 2005 between the government and the other shareholders of the companies involved, including major European energy players, such as the Italian firm ENI. According to the project, two large energy players are expected to compete in the domestic market, whereas the transport and storage segments of the industry (high pressure gas distribution, electricity transmission, and gas storage) would be held by a separate company under a concession contract. Appropriate third-party access clauses would be incorporated into the contract, which will be subject to regulatory oversight. To bring about the expected benefits in terms of improved efficiency and gains in consumer welfare, the process will need to be accompanied by policies targeted at facilitating consumer switching. Portugal is thus moving ahead in the liberalisation of the electricity markets, in line with EU directives. As regards the opening of the Portuguese gas market, implementation of the EU directives benefits from derogation until 2007. However, in view of the introduction of natural gas supply in Portugal and the foreseen creation of MIBEL, the government has started to take steps to open up.

In the *telecommunication sector*, telephone charges have declined towards the OECD average over the past years in the highly-used mobile phone sector;[8] but in the fixed line sector charges for business remain above average (Figure 5.2). Portuguese consumers, while having access to some of the most advanced telecommunication services according to an evaluation (commissioned in 2004 by the Portuguese Competition Authority), pay more than consumers in most other European countries, pointing to insufficient competition in the sector.[9]

The incumbent owns the public switch telephone network as well as the only cable television network with national coverage. In addition, it is the sole provider of subscription television services through satellite, and it holds a strong position in contents. Moreover, the two fixed networks that can potentially compete for the provision of fixed telephony services are owned by the incumbent. As a result, the incumbent holds a dominant position in fixed telecommunications and in subscription television. Regarding access to broadband, following a very rapid increase in penetration during 2005, Portugal is now at average European levels and ahead of countries such as Spain, Italy or Germany.[10] The sectoral regulator ANACOM has continued to take action to reduce interconnection charges in telecommunications and put all operators on a level playing field. Its interventions in 2004-05 have covered: *i*) the retail market (narrowband); *ii*) the wholesale market for call origination and call termination; *iii*) the mobile phone market[11]; and *iv*) the broadband markets. Potential gains from further opening would be substantial, bringing down prices that are still high for specific services or users to more competitive levels relative to other OECD countries. To develop competition in the telecommunication sector, a key step is to separate ownership of the fixed telephony and cable networks.

Figure 5.2. **Telephone charges in the OECD**

In USD (PPPs), August 2005



1. Excluding VAT.
2. Including VAT.

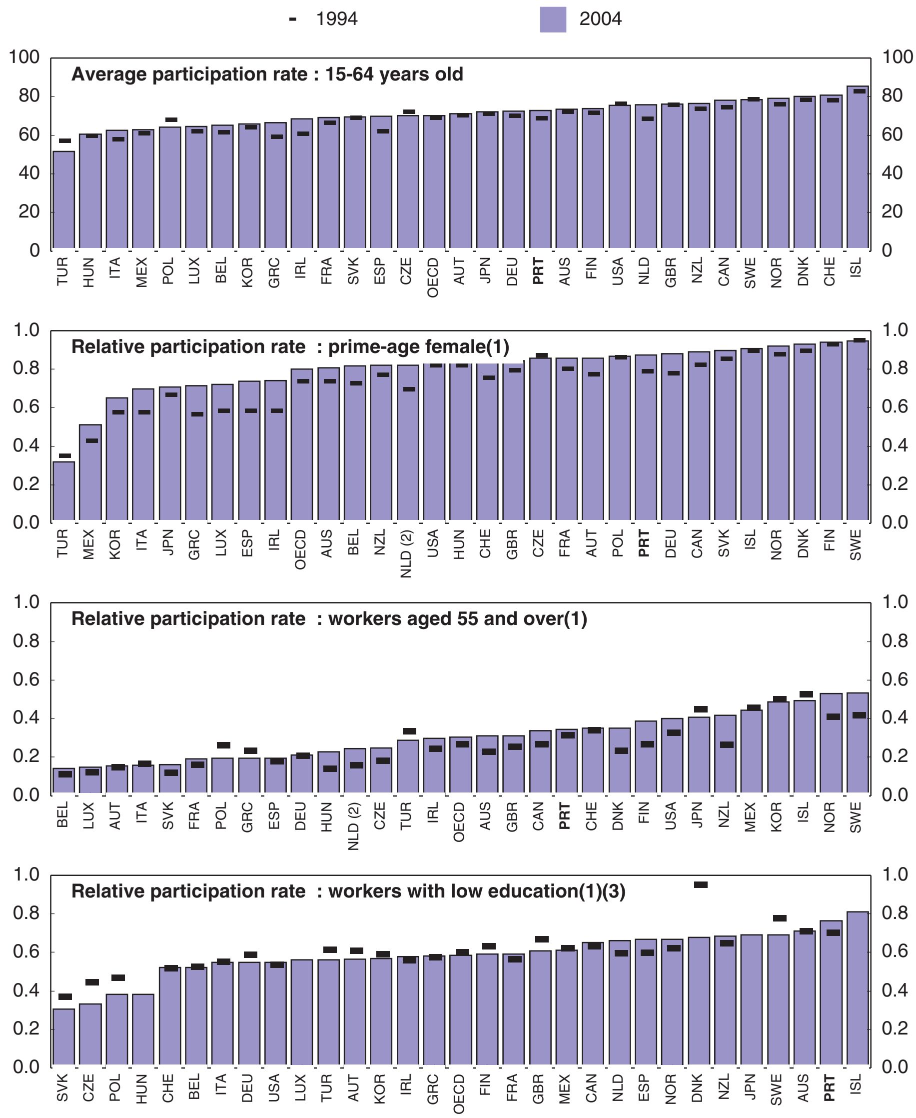
Source: OECD, Communications Outlook database.

Reforming labour market regulations to enhance mobility and job creation

Portugal's labour market performance has deteriorated

For many years, the labour market was characterized by lower unemployment and higher participation than the OECD average. The protracted slowdown that started in 2001, however, has induced a steady rise in the unemployment rate – to 8% of the labour force by the end of 2005, high by OECD, even EU, standards (see Chapter 1). Participation rates have remained relatively high, especially for particular groups – workers with low education and older workers – who in most countries tend to have much greater difficulties in the job market than prime-age men (Figure 5.3).[12]

Figure 5.3. **Participation rates, 1994-2004**



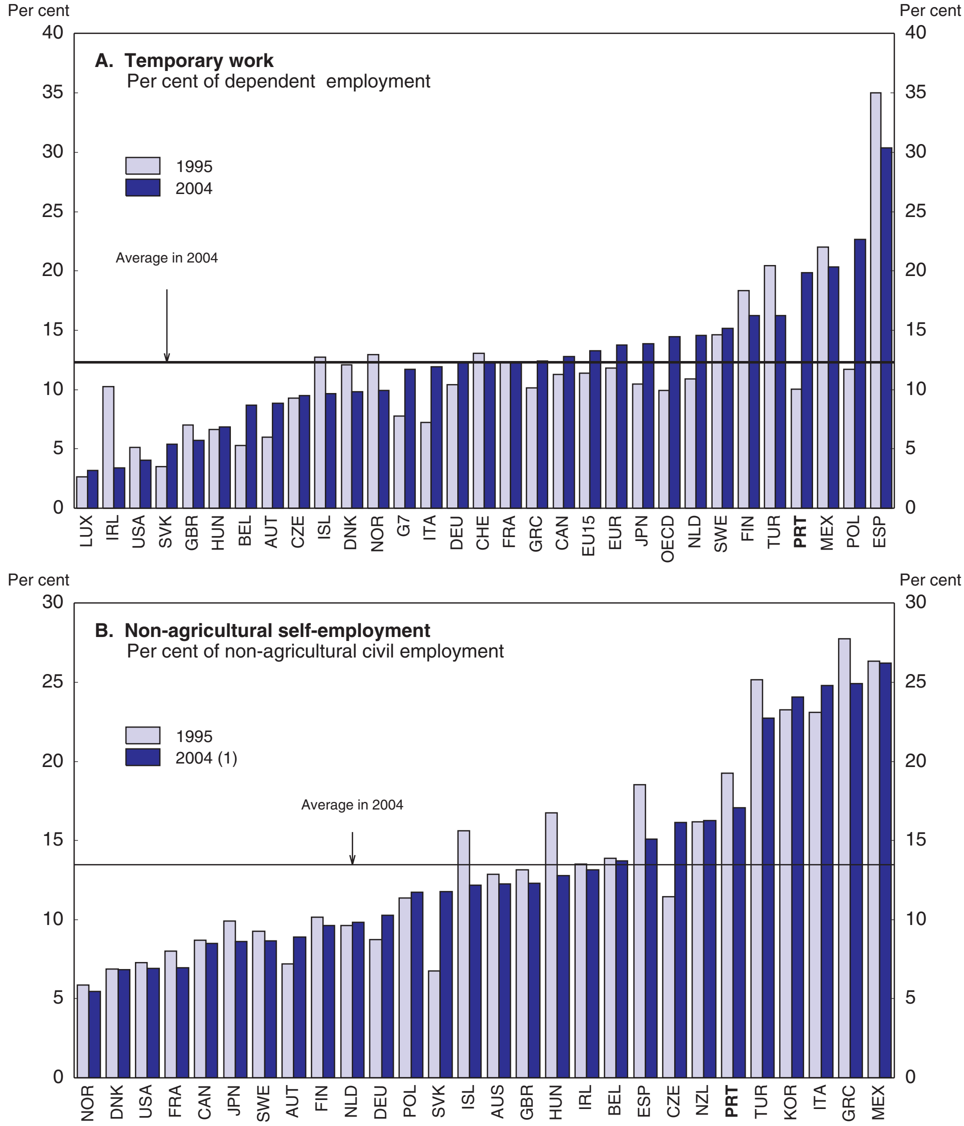
1. Relative to prime-age male participation ratio.
2. 2003 for Netherlands.
3. Lower upper secondary level of education (ISCED level 0/1/2). 1995 for France, Korea, Mexico, Poland, Slovak Republic and United Kingdom and 2002 for Iceland, Italy and Netherlands.

Source: OECD, *Labour Force Statistics.*

The share of temporary employment (*i.e.* short-term contracts) in total employment has grown considerably over the past 10 years, more so than in any other OECD country (Figure 5.4). Such an evolution typically aggravates problems of a dual labour market, raising concerns related to insecurity and precariousness of work and reducing opportunities for training. However, as observed in Portugal, temporary jobs can have positive effects. First, the rise of the number of short-term contracts over the years in Portugal has been accompanied by an increase in employment rates. Second, there is evidence that in past years these jobs have often served as a first step towards more permanent positions. About 40% of employees on temporary employment in 2000 were in

Figure 5.4. **Types of employment**

Per cent



1. 1999 for Belgium.

Source: OECD, *Employment Outlook*, 2005; OECD, *Annual Labour Force Statistics*.

permanent jobs one year later, suggesting a relatively high rate of mobility into permanent employment at the time by European standards.[13]

Wage flexibility, employment protection legislation and labour demand

Now that the public sector has stopped creating jobs on a significant scale, Portugal's employment growth relies essentially on the dynamism of hiring in the private sector. Besides macroeconomic developments, institutional settings and regulations have contributed to the mixed performance of the labour market in recent years. Labour demand is influenced by (direct and indirect) labour costs, including the cost of adjusting the workforce which is related to employment protection legislation (EPL). The statutory minimum wage, which has fallen as a fraction of the median wage since the early 1990s, is now close to the OECD average and the average labour tax wedge is just below average. On the other hand, the incidence of sickness absences was typically high in Portugal, contributing to raising non-wage labour costs, though measures were taken recently to fight absenteeism and fraudulent sick leave.

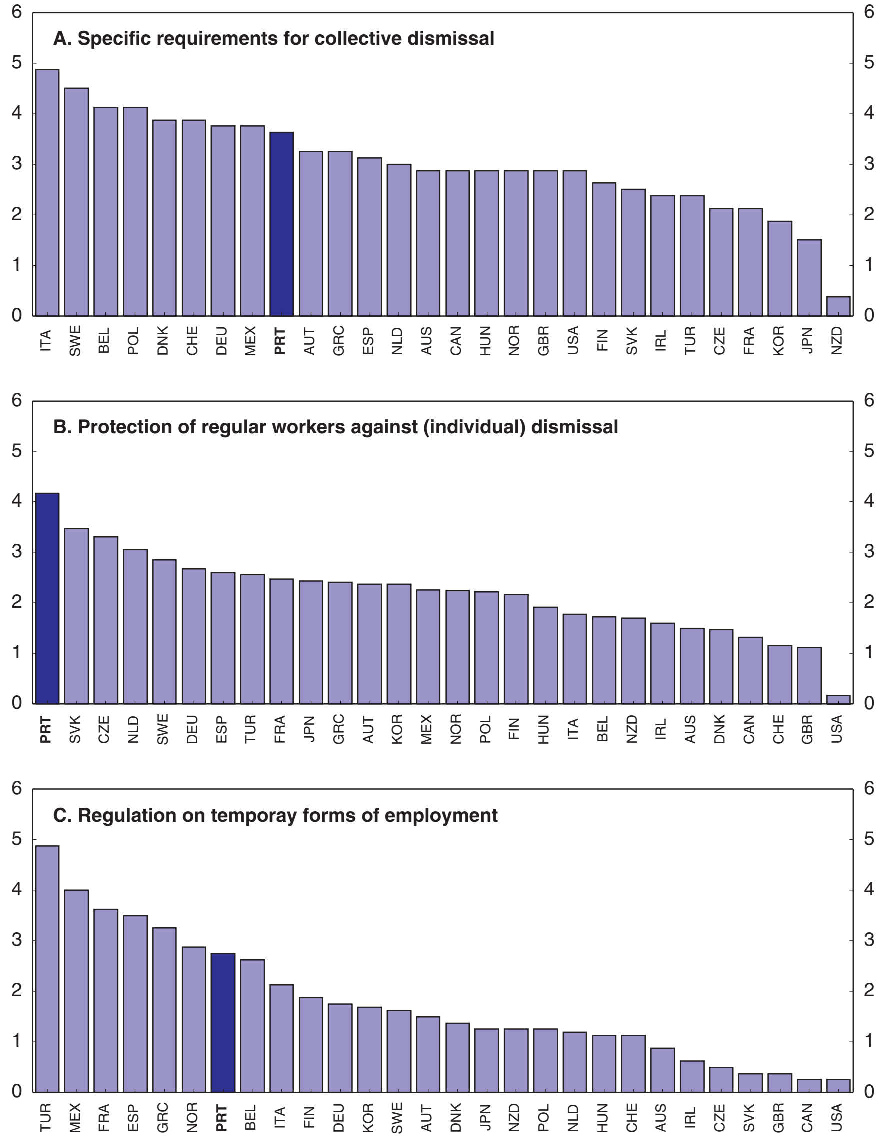
Real wages, which in earlier periods were relatively flexible, did not respond quickly to the last economic downturn. In the past, part of the wage adjustment came from an adjustment of the wage drift: since firms generally granted increases above those set in agreements, they could compress these in case of an economic weakness. These results are compatible with other empirical evidence suggesting that the sensitivity of real wages has been particularly high in the case of new hires, but moderate for workers who stayed in the same firm.[14] In the more recent downturn, with a low inflation environment, real wage adjustments have become more difficult. The traditional cushion created by the wage drift may also be shrinking, which would tend to reduce wage flexibility. As a result, relatively high wage increases continued to be recorded, while unemployment was rising to high levels. Part of the wage stickiness in the private sector may have been influenced by wage increases in the public sector and also by some special factors (such as the euro football cup in the first half of 2004 which created high economic expectations), while in 2006 more wage moderation is expected (Chapter 1).

Firms, which are now confronted with more difficult wage adjustments, continue to bear the costs of restrictive employment protection legislation. Employment protection legislation (EPL) appears as relatively stringent in 2003 according to the broad indicators developed by the OECD for that period, especially for individual dismissals of regular workers (Figure 5.5). The conditions that can be invoked to dismiss an individual worker with a permanent contract are broad enough to include economic, technological or structural reasons, but procedures are rather cumbersome. In practice, employers have found ways to avoid the regulations and procedures for dismissals. In line with practices observed in other OECD countries with restrictive employment legislation, fixed-term contracts have been increasingly used; and informal agreements for "friendly" dismissals have taken place at the firm level. Nonetheless, the adjustment to a negative shock is more likely to translate into higher unemployment than in the past, new hiring is likely to be delayed and, when there is job creation, short-term contracts and self employment are more likely to be used.

A new labour code came into force in December 2003. Although the changes to the labour legislation did not address the need to ease conditions for entry, exit and contracting, it had several commendable elements and its approval has been a decisive step. Among other measures, it provides better tools to control absenteeism; it increases the allowed duration of fixed-term contracts; it eases the collective dismissal procedure by reducing the period of time for taking procedural steps and eliminating the priority given to trade union representatives and members of workers councils; and some margin was created to increase flexibility in collective agreements at the firm level (Box 5.1).At this stage, based on the scarce information available on the content of collective agreements, there is no evidence of major changes: some of the agreements signed in 2004 include new working time arrangements and some include provisions relating to training.[15] Close monitoring of developments in collective bargaining will be useful to assess the extent to which the new labour code is translated into practice and whether it enhances flexibility in hiring and firing and in working conditions.

Figure 5.5. **Employment protection legislation strictness: main components**[1]

Index 0-6 scale from least to most restrictive, 2003



1. The indicators for EPL developed by the OECD refer to the settings in place in 2003; hence they do not reflect the changes introduced in December 2003, which have eased somewhat specific requirements for collective dismissal.

Source: OECD, ELS database.

Unemployment benefits and the incentive to find a job

Portugal's benefit system has become increasingly generous over the years, starting from a very low level in the early 1980s. Although this development was justified to meet concerns about poverty, by the early 2000s the system was overly generous in the sense that incentives for re-employment had become much weaker. The summary measures for unemployment benefit entitlements show that at the start of the 2000s, Portugal's benefit system was comparable to generous systems in several Nordic Countries or the

Box 5.1. **Employment protection legislation, before and after the 2003 reform**

Before the 2003 legislation reform

The OECD aggregate indicator of the relative strictness of employment protection legislation reflects:

i) excessive stringency of rules on individual dismissals;

ii) moderate stringency of regulations on fixed-term contracts;

iii) close-to-average stringency in the requirements for collective dismissals.

In particular, the degree of stringency regarding collective dismissals to a large extent reflects the fact that collective dismissals in Portugal apply to situations with 2 workers or more in small-size firms (5 workers or more in firms with 50 employees or more), whereas in most other OECD countries, the rules on collective dismissals apply to cases with 10 workers or more. Because collective dismissal regulations were generally less stringent than individual ones, this particular feature might have actually made labour market adjustments easier in Portugal.

Furthermore, agreements at the firm level have been used to facilitate collective dismissals, typically easier to apply than individual ones.

In practice, firms (especially Portuguese firms, and in some cases foreign ones) have tended to avoid using collective dismissal procedures, preferring to reach agreement with workers – reducing wages and hours of work – rather than firing workers. In the same way, informal agreements have been used to dismiss workers rather than using the legal procedure.

After the 2003 reform

The new labour code, applied as from December 2003, provides more flexibility in the use of fixed-term contracts, increasing the allowed duration of such contracts.

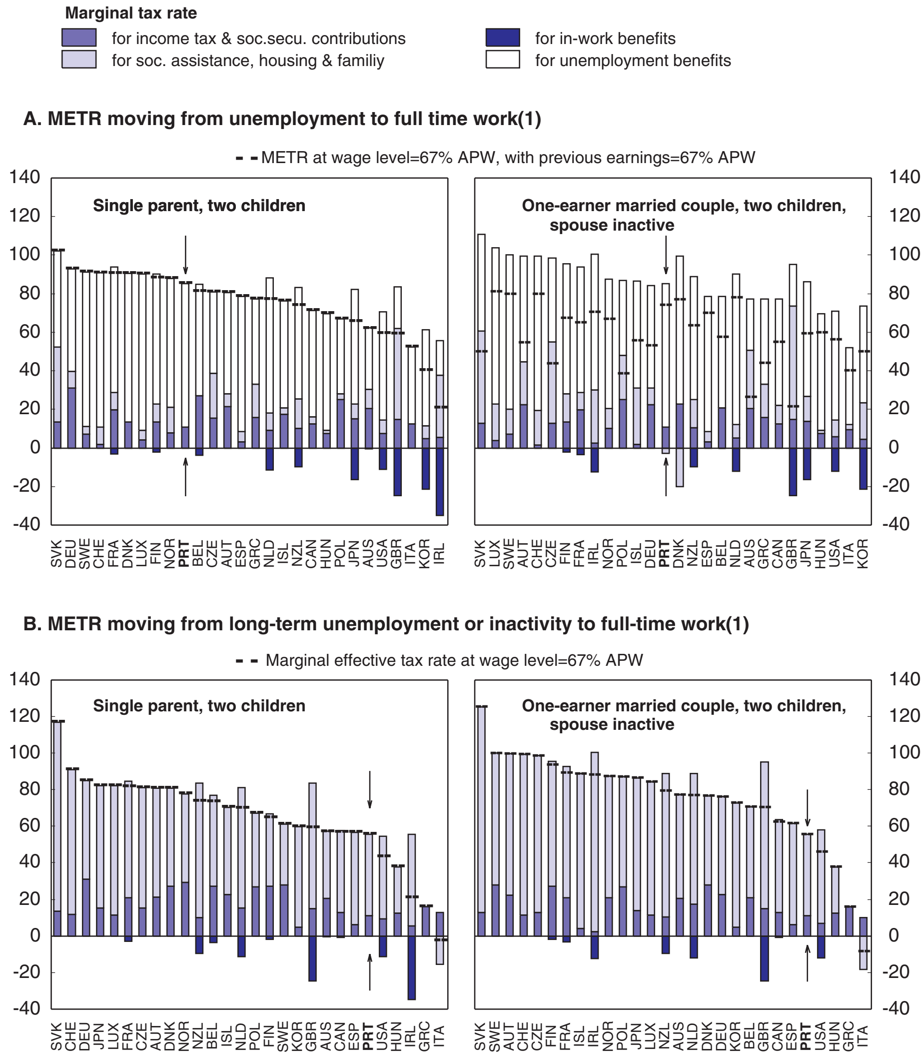
There is more leeway to introduce flexibility in collective agreements at the firm level regarding dismissal rules and rules on fixed-term contracting.

Changes were made easing somewhat settings for collective dismissal: deadlines for initiating negotiations and taking the final decision were shortened; the priority given to trade union representatives and members of workers councils has been eliminated.

But overall, procedures remain cumbersome.

Netherlands.[16] On the other hand, Portugal has some way to go to improve the effectiveness of its employment services and of active labour market programmes (ALMP), to bring them in line with best practices, namely those developed in Nordic countries as part of a comprehensive "activation" strategy. In the Portuguese context, where coordination between ALMP and benefit administration is weak and employment services performance does not compare with that in best performing countries, the increasingly generous benefit system is likely to have weakened incentives for rapid re-employment. This setting, in combination with the protracted period of slow growth, has tended to raise long-term unemployment.

Figure 5.6. **Financial returns to work for unemployed or inactive individuals**



1. These marginal effective tax rates (METRs) indicate how much of the wages earned is taken away in the form of taxes and lower welfare benefits following a move to work : A) from unemployment (Panel A); B) from long-term unemployment or inactivity (Panel B). For example, a METR of 100 indicates that moving to work leads to no additional net income.

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

Many countries, notably in Europe, have found it politically difficult to reform relatively generous benefit systems, despite increased evidence of a positive relationship between unemployment and benefit generosity. The proposal made by the previous government of Portugal to tighten the unemployment benefit system, by reducing the duration and amount of unemployment benefits in an attempt to combat fraud and to enhance incentives to return to work, was not approved by the legislature. Hence the benefit system remains to be reformed to adapt it to current labour market conditions, as is currently under discussion with social partners (see below). Based on a comprehensive measure which combines financial benefits for workers and taxes, it can be shown that Portugal's tax and social benefit system creates in some cases overall effective marginal tax rates (METR) of above 80%, thereby discouraging moving from unemployment to full

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time work (Figure 5.6 Panel A). When a long-term unemployed person no longer qualifying for unemployment benefits qualifies for other forms of social assistance, the METR associated with his returning to work is smaller - and also smaller than in the majority of OECD countries – but it is still close to 60% (Figure 5.6 Panel B).

More needs to be done to improve the functioning of the labour market

Measures to reform the labour code, including further easing dismissal rules and alleviating procedures, are still needed to make it more attractive for employers to hire workers on permanent contracts in the formal sector. Easing regulations for permanent employment would also help make wages more responsive to labour market slack. The current more flexible settings for short-duration contracts are appropriate to enhance the adaptability of the workforce, but it is not sufficient. On the labour supply side, a comprehensive reform is needed. Measures should take into account the interactions between unemployment benefits and other social protection benefits and taxes, reduce METRs where these are particularly high and tighten the unemployment benefit system.

The unemployment benefit system is currently under review. The objective is to allow some beneficiaries to leave unemployment and move into the labour market, by combining active labour market measures to improve their employability with measures to reduce fraudulent use of benefits. Overall, the government's proposals to reform the unemployment benefit system, which are currently under discussion with social partners, include commendable features, such as tightening eligibility conditions by increasing the qualifying period and linking the duration of the benefits to the contribution period.[17] The measures aimed at promoting greater job-seeking efforts by beneficiaries in combination with providing increased assistance for job seeking by employment services and the planned increase in sanctions against employers and workers for fraudulent use of benefits are also appropriate. The government intends to limit the possibility for workers to access unemployment benefits when they have become unemployed following mutual agreement with their employer, with a view to reducing the improper use of unemployment benefits. At the same time, because resignations under mutual agreement are recognized to be an important mechanism to provide flexibility to the labour market, special consideration will be given to small and medium-sized firms and access to unemployment benefits will be kept in such cases. In the current setting, introducing limitations is not appropriate. By making informal agreements more costly to firms and workers, it would close a loophole, which provides *de facto* flexibility in a context of too rigid and cumbersome EPL. It would be preferable to ease EPL and facilitate administrative and judicial procedures before making the existing adjustment channels unattractive. Nonetheless the reform being discussed for the unemployment benefit system goes some way towards developing an activation strategy which reconciles social protection and high employment rates. More emphasis needs to be put on ALMPs, with a view to increasing the effectiveness of active programmes rather than increasing spending *per se*. OECD experience shows that close coordination of ALMPs with the administration of unemployment benefits and well performing placement services is a key ingredient for effectiveness of these active programmes.[18]

Summing up

Portugal has made important advances over the past decade to improve the business environment and create a more competitive climate, encouraging firms to adopt better technology or managerial best practices. But in the new, more competitive, international environment this is not sufficient and effective measures are required to further open product markets and making labour markets more flexible. The approach should be broad. While areas of reform are not new, what is needed is to speed up the momentum of reform and to ensure continuity and effective implementation. The priorities are: to improve framework conditions by reducing administrative procedures; to continue to deregulate and foster competition in services, energy and telecommunications notably; to increase flexibility for employing regular workers, which is necessary to facilitate the restructuring of the economy. Detailed recommendations are presented in Box 5.2.

Box 5.2. **Summary of recommendations to create a more dynamic business environment and improve the functioning of the labour market**

Reducing administrative costs for business and investment

- Broaden the scope of the reform aimed at facilitating start ups, including the use of one-stop shops and simplified public registration.
- Ensure that the required regulations can be met at minimal costs, especially by small- and medium-sized enterprises – strict regulations and simple and stable tax regimes tend to be associated with better compliance.

Continuing actions to impose effective competition

- Keep the momentum of actions to promote competition, continuing close coordination between the Competition Authority, the sector regulators, government and the judicial system.
- Ease bottlenecks by enhancing training of specialized judges.

Improving the functioning of the labour market

- Monitor the implementation of the new labour code introduced in 2003, to ensure that it delivers results in controlling absenteeism and enhancing flexibility for hiring and firing.
- Maintain the current, more flexible, set up for short-duration contracts, with a view to allowing the adaptability of the workforce.
- Ease legislation on permanent contracts, with a view to facilitating labour market adjustments and rebalancing job creation towards long-term contracts rather than temporary employment.
- Advance the reform of the unemployment benefit system, striking a balance between income support for jobseekers and fostering re-integration into employment, through tightening of benefit programmes and effective ALMP.

Notes

1. Annex Figures 5.A1.1 to 5.A1.4 illustrate the position of Portugal relative to other OECD countries on a number of structural policy indicators. For details on these indicators, see Chapter 4 of OECD (2005); Conway, P., V. Janod and G. Nicoletti (2005); and *www.oecd.org/eco/pmr*.

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2. Ministry of Justice registration data indicate that more than 3 500 enterprises had been created in the period from July 2005 to the end of February 2006 a large share being in the construction and real estate sector. In January and February 2006, it is estimated that over 40 % of enterprise creation were "on-the-spot firms".
3. The Portuguese Competition Authority staffing level is about 75, in line with the staffing levels in competition agencies in other small OECD countries. Although agencies in a few similar-sized or smaller countries, such as Hungary, New Zealand and Norway, have higher staffing levels, the level in Portugal is about the same as in Denmark and Finland, and it is higher than in Belgium and Austria.
4. The Competition Authority investigation followed a complaint by a public hospital in the context of tenders for the supply of a specific medication.
5. The Portuguese Competition Authority communication and diffusion strategy includes a monthly newsletter distributed on its web site, seminars, joint projects with international networks, discussions on competition issues in Parliament.
6. See Annex Figure 5.A1.5 which shows sectoral indicators of regulation in a range of non-manufacturing sectors (air, rail, road, telecoms, post, gas, and electricity) for 2003 and 1998 in OECD countries.
7. In Spain, the Directorate-General for Competition (Competition Service), which is responsible for launching cases, is part of the government.
8. The Competition Authority addressed a recommendation to the government on the transparency of prices for mobile telecommunication services and made proposals to facilitate tariff choice by consumers and promote price competition between providers.
9. Expressed in US dollars (purchasing power parity) as shown in Figure 5.2, in the fixed line sector, Portugal4s prices for business are higher than the OECD average and they are higher than in neighbouring Spain in particular. Expressed in US dollars, Portugal's prices for business are just below the OECD average, but still higher than in neighbouring Spain. For the residential composite basket, Portugal's prices are higher than the OECD average, both in US dollars and in US dollars (PPPs).
10. The incumbent group companies operating in the broadband market were identified by the telecommunication sector regulator, ANACOM, as holding significant market positions and specific obligations were imposed.
11. A reduction in prices for mobile termination rates has been established for the period to December 2006. It should bring mobile termination rates down from some of the highest levels in the OECD to levels similar to those in most other EU countries. This will allow increased competition both within the mobile industry, and between mobile and fixed operators, at the same time reducing the scope for anticompetitive behaviour by big players.
12. *Cf. OECD Employment Outlook,* 2006 (forthcoming).
13. For more details on Portugal, cf. Pedro Portugal and John T. Addison (2003), "Six ways to leave unemployment", IZA Discussion Papers No. 954, December.
14. For more details, see Carneiro, A and Portugal, P. (2004); Cardoso, A.R. and Portugal P. (2005). A study of the dispersion of wage changes over the period 1992-2000 for employees remaining in the same firm for 2 consecutive years shows the following pattern: a high peak in the distribution of wage changes at zero revealing resistance to a nominal decline in wages; another peak in the distribution at the expected inflation rate revealing real wage rigidity (Banco de Portugal, 2004, *Annual Report*, Box 2.5).
15. The collective bargaining process stalled in 2004, and the number of employees covered by these agreements dropped to half the previous years' average (600 000 employees vs. 1.4 million in 2000-03). A limited number of agreements contained clauses about training (*e.g.* the selection of workers to be involved in training and the recognition of qualifications. Some agreements introduced the regulation of flexible weekly working time. Source: *European industrial relations observatory on line* (December 2005).
16. The *summary measure of gross unemployment benefit replacement rates* (based on averages of several earning levels, family situations and unemployment spell durations) reached more than 40% in 2001 in Portugal, above those in most other OECD countries and just below replacement rates in Denmark, Norway, and the Netherlands. The Portugal system is also comparable to the generous systems of several Nordic countries or the Netherlands when considering the *initial net replacement rate (post tax)* and *maximum benefit duration. Cf. OECD Employment Outlook,* 2006 (forthcoming).

17. Measures under consideration include changing the way benefits are calculated to avoid situations where benefits are higher than the net reference wage.
18. For details on the impact of active labour market programmes, see *Employment Outlook*, 2005, Chapter 4. Background work on ALMPs, conducted for OECD, *Employment Outlook*, 2006 (forthcoming), suggests that ALMP spending, if programmes are well designed and managed, can reduce the increase in unemployment associated with generous unemployment benefits and negative shocks.

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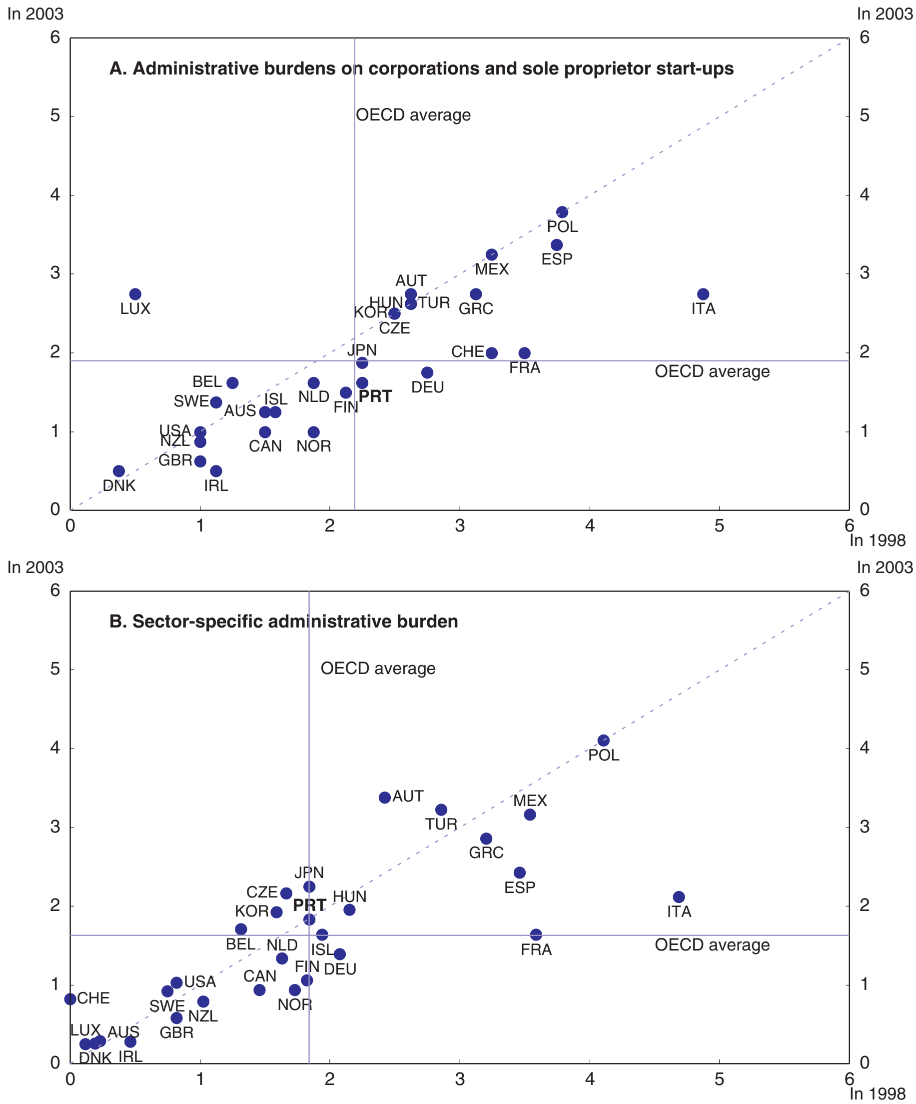
ANNEX 5.A1

Background information to Chapter 5

Figure 5.A1.1. **Barriers to entrepreneurship**

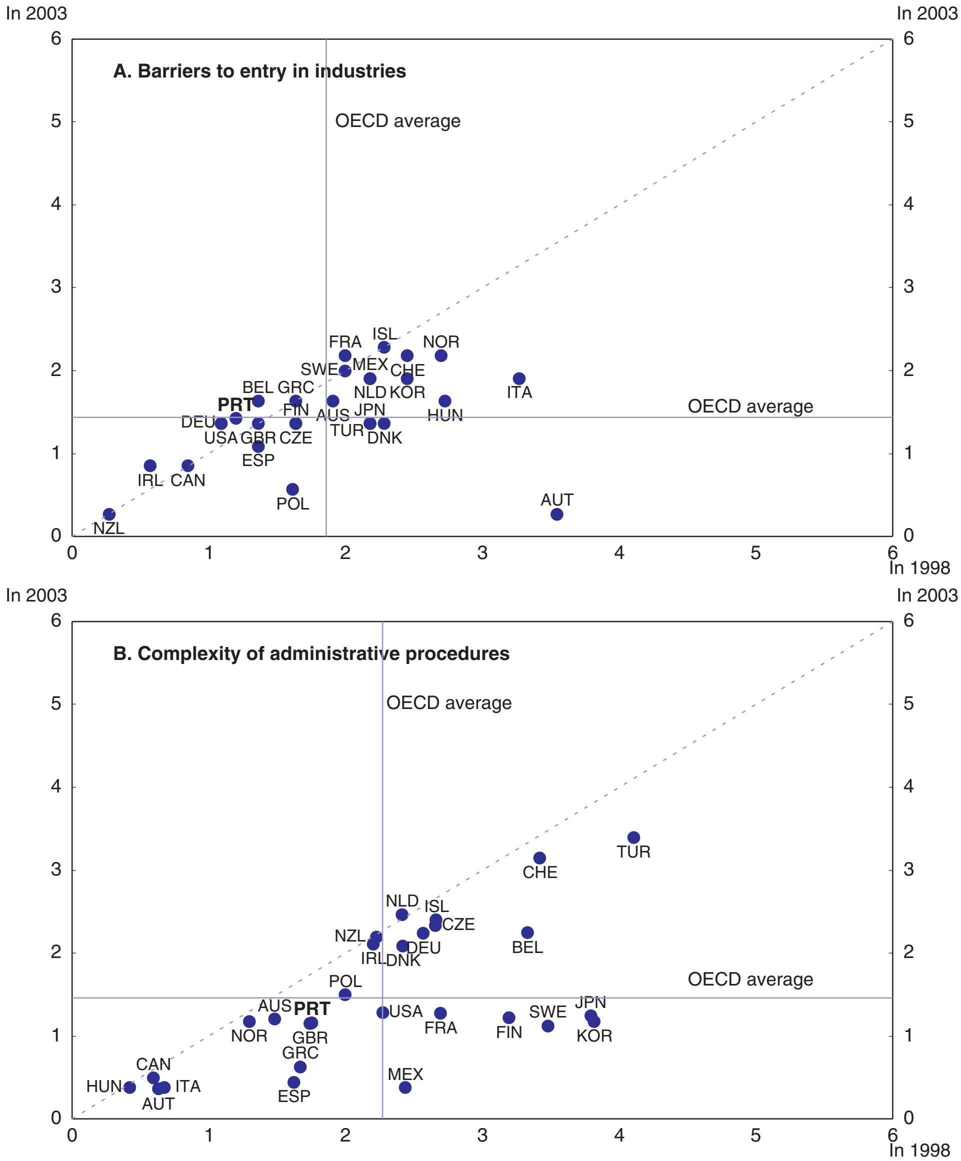
Index 0-6 scale from least to most restrictive



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

Figure 5.A1.2. **Barriers to entry**

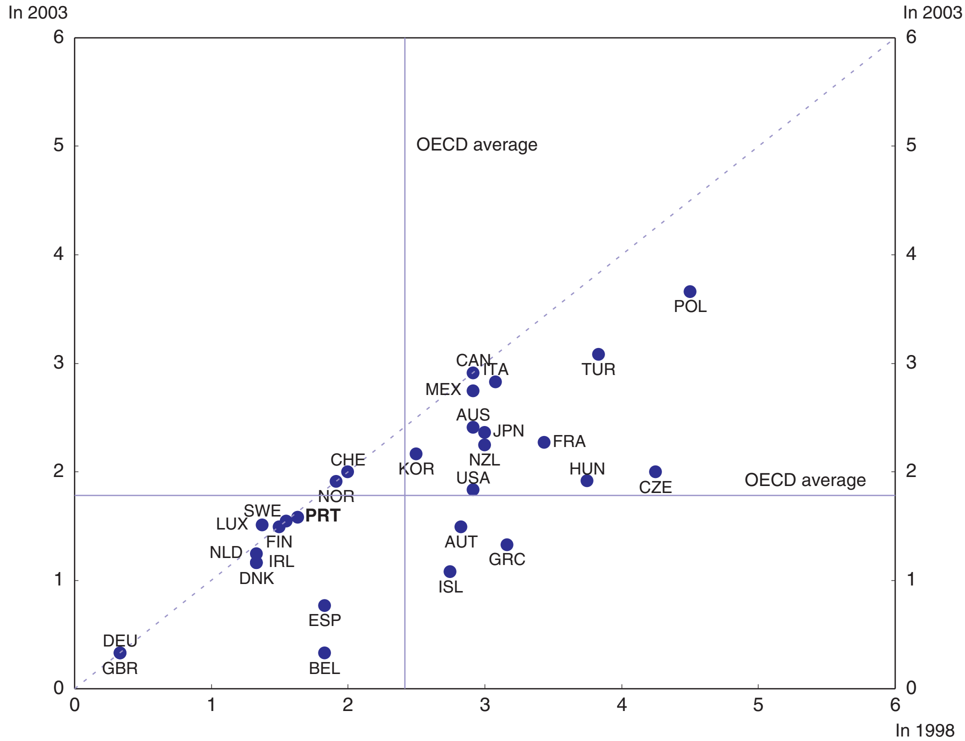
Index 0-6 scale from least to most restrictive



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

Figure 5.A1.3. **Barriers to foreign direct investment**[1]

Index 0-6 scale from least to most restrictive

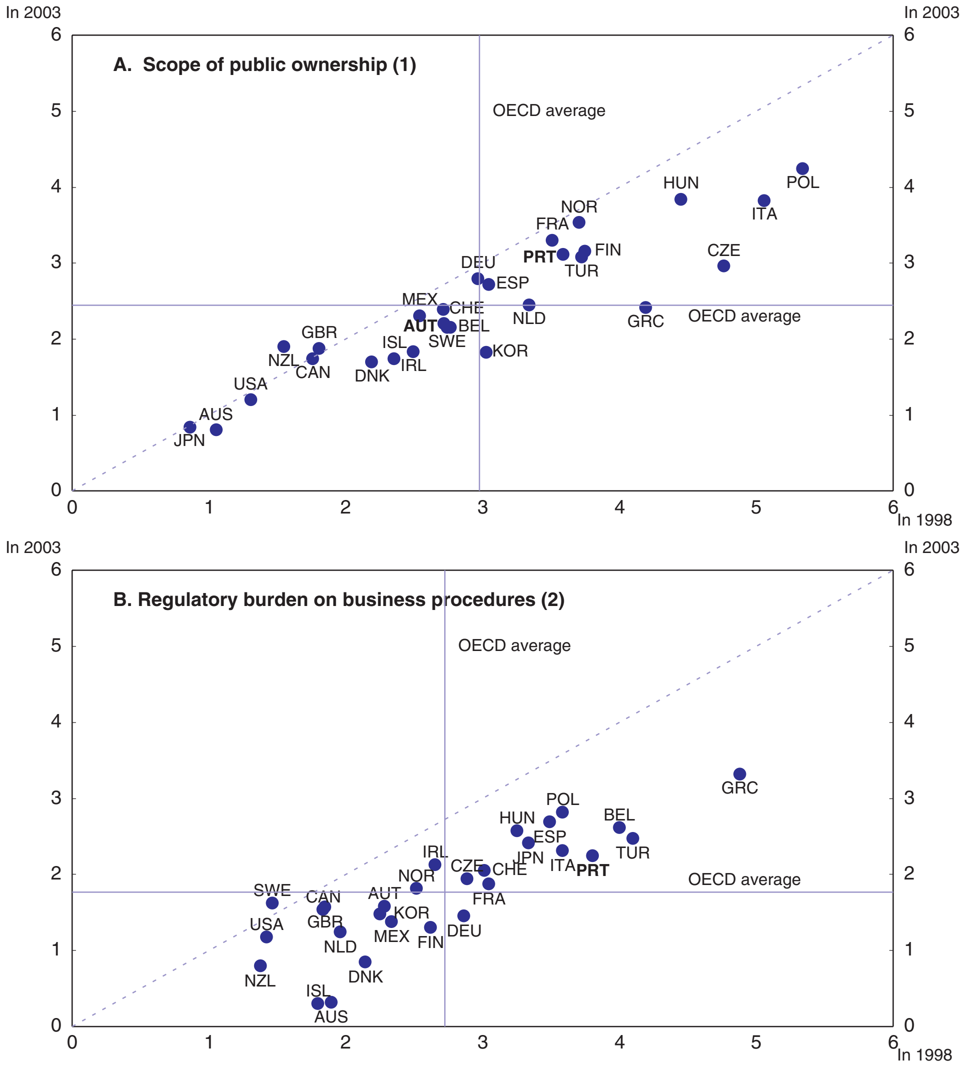


1. Barriers to foreign ownership.

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

Figure 5.A1.4. **State control of business operations**

Index 0-6 scale from least to most restrictive

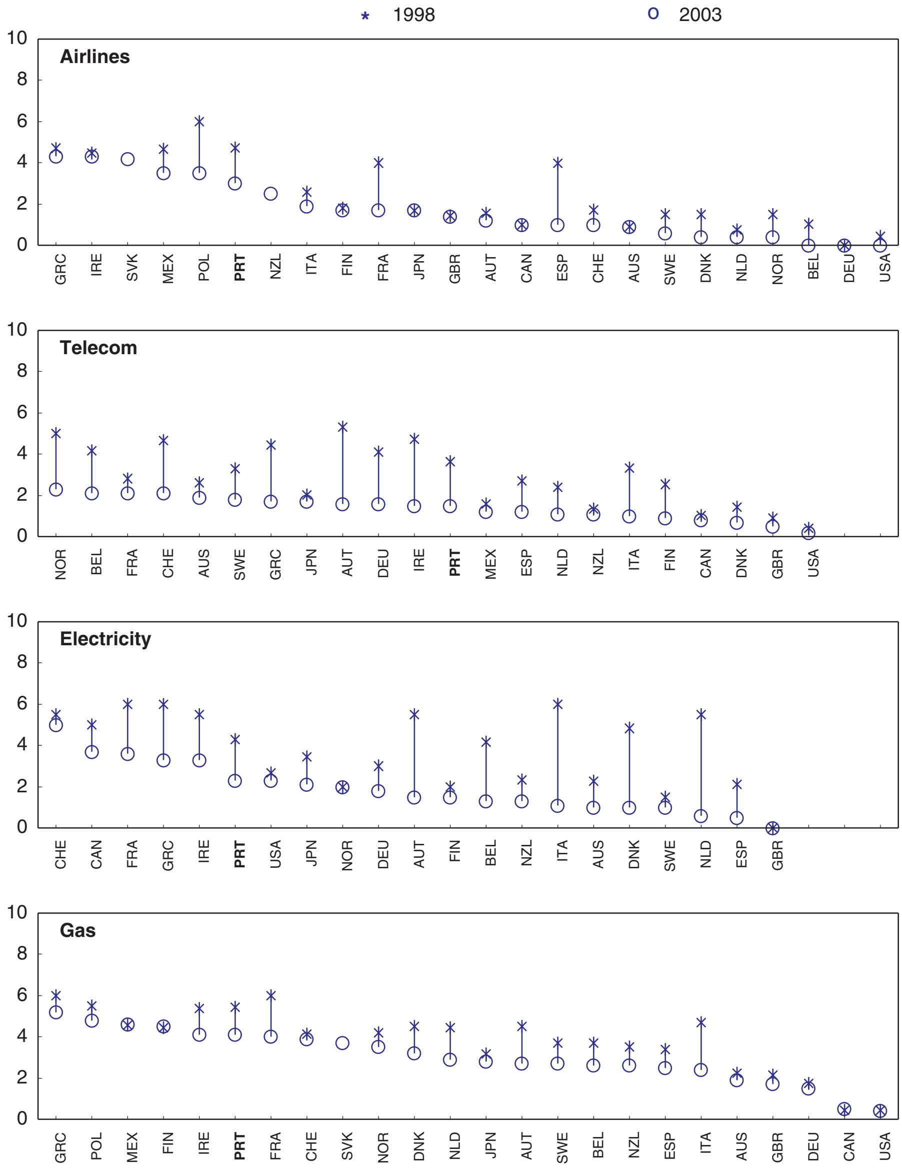


1. Covers scope and size of public enterprise as well as the direct state control over business enterprise (via voting rights or legislative bodies).
2. Concerns the involvement of the state in business operations via price controls or the use of command and control regulation.

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

Figure 5.A1.5. **Regulatory reform in non-manufacturing industries, 1998-2003**

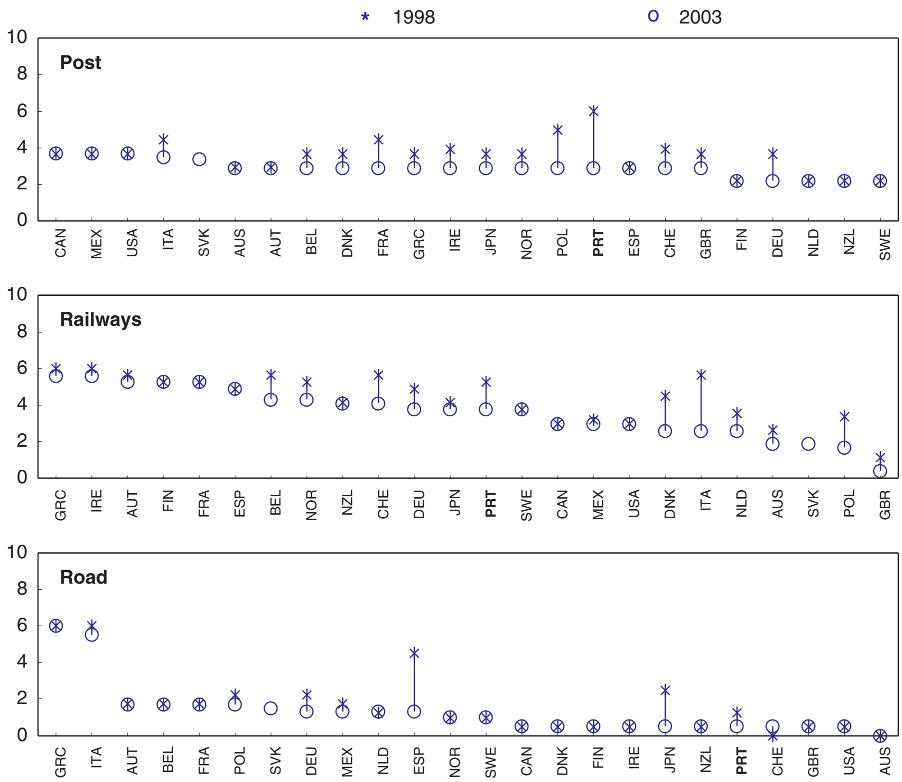
From most to least restrictive



Source: OECD, Indicators of Product Market Regulation database.

Figure 5.A1.5. **Regulatory reform in non-manufacturing industries, 1998-2003** *(cont.)*

From most to least restrictive



Source: OECD, Indicators of Product Market Regulation database.

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