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# Towards a Less Distortive and More Efficient Tax System in Portugal

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**TOWARDS A LESS DISTORTIVE AND MORE EFFICIENT  
TAX SYSTEM IN PORTUGAL**

**ECONOMICS DEPARTMENT WORKING PAPER N°814**

**By Álvaro Pina**

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## ABSTRACT / RÉSUMÉ

**Towards a less distortive and more efficient tax system in Portugal**

The process of fiscal consolidation and the need to step up the poor long term economic performance provide an opportunity to implement tax measures to improve efficiency and rebalance the economy. As consolidation progresses, switching taxes from labour to consumption and property offers an avenue to regain eroded competitiveness and to achieve employment gains, especially if the largest reductions of the labour tax wedge are targeted on low-wage workers. As the consumption tax base is particularly large in Portugal, such a shift could allow a sizeable cut in the tax wedge while still raising revenue, if needed. Productivity and welfare can be increased by simplifying the tax system, thus reducing the high compliance costs it imposes, especially on small and medium sized firms. Also, the tax system could be more environment-friendly by using it to further address transport-sector externalities, which are of particular concern in metropolitan areas. At the same time, the current tight budgetary pressures call for increased efficiency in tax collection. There is ample scope for base broadening through reduced tax expenditures in the major direct and indirect taxes, as well as in property taxation. This Working Paper relates to the 2010 OECD Economic Survey of Portugal ([www.oecd.org/eco/surveys/portugal](http://www.oecd.org/eco/surveys/portugal)).

*JEL classification:* H20; H21; H23; H24; H25; H26; J32; J38

*Keywords:* Portugal; tax and growth; VAT; personal income tax; corporate income tax; property taxes; social security contributions; environmental taxes; labour tax wedge; tax expenditures; tax compliance costs.

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**Vers un système fiscal plus efficient et moins générateur de distorsions au Portugal**

Le processus d'assainissement des finances publiques et la nécessité de renforcer la mauvaise performance économique à long terme permettent de mettre en œuvre des mesures fiscales pour améliorer l'efficacité et remettre l'économie sur une trajectoire de croissance. Au fur et à mesure que la consolidation fiscale progresse, le transfert de l'imposition des revenus du travail vers les impôts sur la consommation et sur le patrimoine offre un moyen de regagner la compétitivité perdue et de créer des emplois, surtout si les réductions du coin fiscal sur le travail se concentrent sur les titulaires de bas salaires. L'assiette des impôts sur la consommation étant particulièrement large au Portugal, ce transfert pourrait induire une baisse considérable du coin fiscal tout en augmentant les recettes, le cas échéant. La productivité et le bien-être peuvent être améliorés en simplifiant le système fiscal, réduisant ainsi les coûts de discipline élevés, en particulier vis-à-vis des petites et moyennes entreprises. De même, le système fiscal pourrait être plus favorable à l'environnement en s'attaquant aux externalités générées par les transports, qui sont particulièrement préoccupantes en zone urbaine. Parallèlement, les pressions budgétaires considérables exigent des gains d'efficacité dans le recouvrement des impôts. Il existe de nombreuses possibilités d'élargir l'assiette en réduisant les dépenses fiscales pour les principaux impôts directs et indirects, ainsi que pour la fiscalité immobilière. Ce document de travail se rapporte à l'Étude économique du Portugal de 2010 ([www.oecd.org/eco/surveys/portugal](http://www.oecd.org/eco/surveys/portugal)).

*Classification JEL :* H20; H21; H23; H24; H25; H26; J32; J38

*Mots clés :* Portugal, croissance et fiscalité, TVA, impôt sur le revenu des personnes physiques, impôt sur les bénéfices des sociétés, impôts sur le patrimoine, cotisations de sécurité sociale, impôt sur l'environnement, coin fiscal sur le travail, dépenses fiscales, coûts liés au respect de la réglementation.

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## TABLE OF CONTENTS

<b>Abstract / résumé</b> .....	2
<b>Towards a less distortive and more efficient tax system in Portugal</b> .....	5
Main challenges of the Portuguese tax system .....	5
Making the tax system more supportive to growth and competitiveness .....	12
Avenues for raising the efficiency of tax collection .....	21
<b>Bibliography</b> .....	31
<i>Annex A1. Main transport externalities in Portugal</i> .....	34
 <b>Boxes</b>	
1. Major tax reforms since 2000 and the tax structure in more detail .....	7
2. Decomposing the relative importance of consumption taxes.....	9
3. Tax Reform in Times of Crisis .....	13
4. Administrative costs of tax collection.....	23
5. Summary of recommendations on reforming the tax system.....	30
A1.1 Key elasticities applied in the simulations .....	37
 <b>Tables</b>	
1. The Portuguese tax structure in more detail .....	7
2. Accounting for the importance of consumption taxes .....	10
3. Labour costs per employee per sector .....	15
4. Simulation of changes in transport sector taxation .....	17
 <b>Figures</b>	
1. Total tax revenue .....	6
2. Structure of tax revenues in Portugal.....	6
3. Structure of tax revenue in the OECD .....	8
4. Labour tax wedge .....	9
5. Property taxes .....	11
6. Local government tax revenue .....	12
7. Transport fuel taxes in EU countries .....	17
8. Hours spent preparing, filing and paying taxes .....	19
9. Number of tax payments.....	19
10. Personal income tax credits .....	25
11. Owner occupation rates in EU countries .....	25
12. Statutory and effective corporate tax rates .....	28
13. Value added tax .....	29
A1.1. Road network utilisation.....	35
A1.2. Toll revenues .....	36



## TOWARDS A LESS DISTORTIVE AND MORE EFFICIENT TAX SYSTEM IN PORTUGAL

By Álvaro Pina<sup>1</sup>

Taxes have far-reaching economic and social consequences. They finance public expenditure, play a role in income distribution and have short-term impacts on aggregate demand. The tax system can also be used to internalize environmental externalities, and therefore to encourage a shift towards green growth. Further, taxes span a full range of impacts on potential growth, since they are important determinants of both labour utilisation and labour productivity, which can be regarded as the two drivers of GDP per capita in the long run (Johansson *et al.*, 2008). Taxes on labour income and on consumption create a wedge between firms' real labour costs and workers' real net consumption wage, and therefore tend to exert a negative impact on labour utilisation, both at the extensive and intensive margins (employment and hours, respectively). Taxes on labour income, especially when strongly progressive, may also hamper the accumulation of human capital, whereas taxes on corporate and capital income deter investment in physical capital. The latter group of taxes are also the most detrimental to total factor productivity, which is further affected by a high degree of tax complexity. Taxes can also influence international competitiveness, through labour costs or foreign direct investment (FDI) attractiveness.

Tax reform is easier when there is room for decreasing the overall tax burden: one should cut the most distortive taxes (generally those on capital and labour income), especially when they are high by international comparison. Unfortunately, the tight budgetary pressures currently facing Portugal make tax reform less easy: any proposed package must be at least non-revenue-decreasing, which means that lowering some taxes will imply raising others. Besides the political difficulty of raising taxes, this will require a careful selection of taxes to be raised so as to minimize growth distortions. This chapter starts by outlining the main challenges of the Portuguese tax system, and then explores avenues to make the tax system more supportive to growth and competitiveness and to increase the efficiency of tax collection.

### **Main challenges of the Portuguese tax system**

#### ***Consolidation needs have led to a higher tax burden...***

Over the past decades, the Portuguese tax burden has been drifting upwards. This relative increase had initially been associated to the process of convergence towards higher income levels. In 2000, the final year of a period of strong economic performance, total tax revenue stood at 34.1% of GDP, more than 5 percentage points below the EU19 average and broadly in line with those countries closer to Portugal in terms of income levels (Figure 1).

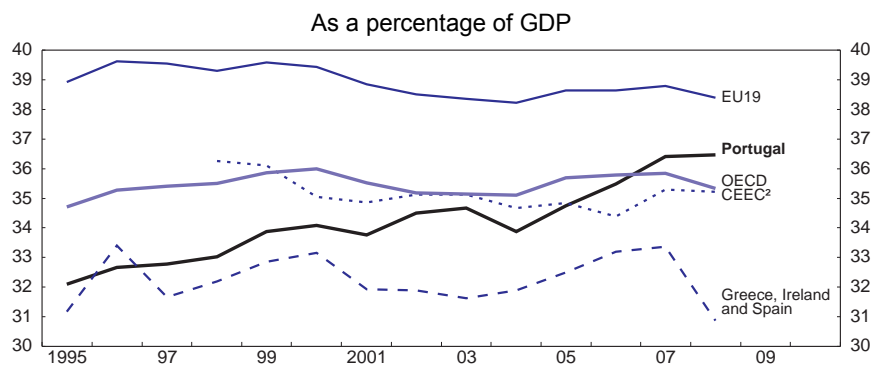
However, the need for fiscal consolidation has led to a steep increase in the tax burden since 2000. Though Portugal cannot be described as a high-tax country, it has more than halved the gap to the EU19 - and has actually surpassed the OECD average - since 2000. As a consequence of the current economic

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1. This paper was originally produced for the OECD Economic Survey of Portugal, published in September 2010 under the authority of the Economic and Development Review Committee. Álvaro Pina is an economist at the OECD Economics Department. The author is thankful for valuable comments on earlier drafts received from Andrew Dean, Robert Ford, Pierre Beynet, Orsetta Causa, Tomasz Kozluk and Nils-Axel Braathen, as well as for discussions with Portuguese government officials and tax experts. Statistical and research assistance from Sylvie Foucher-Hantala, Agnès Cavaciuti, Desney Erb and Guida Nogueira and editorial assistance from Sylvie Ricordeau are also gratefully acknowledged. This paper also benefited from external consultancy work.

and financial crisis, the need for fiscal consolidation is now greater, and – despite an appropriate emphasis on expenditure-reducing measures (Chapter 1) – the recent rise in rates of VAT, corporate and personal income tax will further increase the tax burden.

Figure 1. **Total tax revenue<sup>1</sup>**



1. Aggregates are unweighted averages. For aggregates in 2008, the last available year for Australia, Japan, The Netherlands and Poland is 2007.

2. Czech Republic, Hungary, Poland and Slovak Republic.

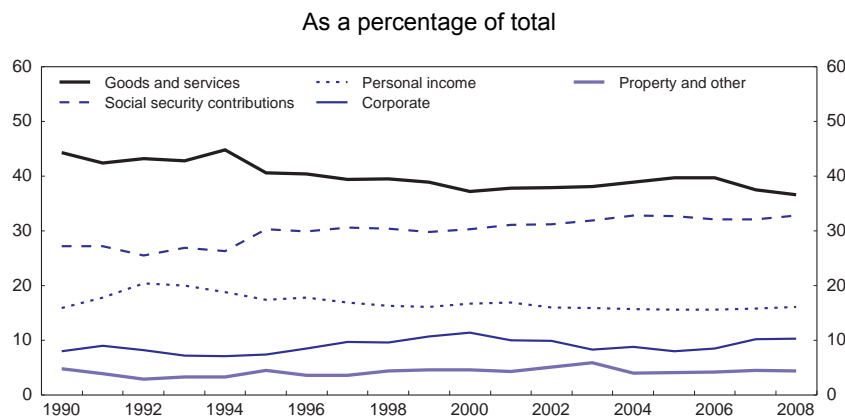
Source: OECD, *Revenue Statistics Database*.

On the revenue side, fiscal consolidation efforts pursued from 2002 to 2008 mainly relied on increases in statutory rates of indirect taxes, and on base broadening as regards direct taxes. The VAT standard rate was increased twice, from 17% to 19% in 2002 and then to 21% in 2005 (it was later reduced to 20% in 2008). Fuel and tobacco excises were also raised in several steps. Tax expenditures in personal and corporate direct taxes were somewhat reduced. As regards corporate taxes, this made it possible to essentially accommodate successive decreases in statutory rates (the corporate income tax statutory rate - excluding municipal surcharges – was brought down from 32% to 30% in 2002, and then to 25% in 2004). Progress in curbing tax fraud and evasion also contributed to higher revenues.

### *...without significant changes in the tax structure*

The overall tax structure has broadly stabilised since the turn of the century (Figure 2). This relative stability is largely associated with the fact that, despite relentless legislative fine-tuning, major tax reforms since 2000 were few and did not concern the largest taxes (Box 1). The recent (2010) changes in the rates of VAT, personal and corporate income taxes also should not change much the tax structure.

Figure 2. **Structure of tax revenues in Portugal**



Source: OECD, *Revenue Statistics Database*.

### Box 1. Major tax reforms since 2000 and the tax structure in more detail

Since 2000 two major tax reforms have taken place, in 2003 and 2007. A third reform was legislated in 2009 and is still awaiting implementation.

- In 2003 property taxes were reformed. The new recurrent tax on immovable property (IMI, which replaced CA) aimed at a general updating of taxable values, to be achieved through two different methods: a formula-based value assessment, which mainly applies as property is transmitted, and inflation-based coefficients in the remaining cases. However, the inherently gradual nature of the former method, as well as the limited updating brought about by the latter, imply that taxable values often remain far below market prices. Changes to the real estate transaction tax (IMT, formerly Sisa) were mostly minor, as it continues to be levied every time a given property is sold.
- In 2007 car taxation was reformed. The new registration tax (ISV) introduced CO<sub>2</sub>-based differentiation alongside cylinder capacity-based differentiation, with the former becoming gradually more important. Under the new circulation tax (IUC), those two criteria are also used to determine the annual amount to be paid by cars bought after the reform (for older cars the tax continues to be based on cylinder capacity and age). Further, relative to previous taxes, there has also been some shift of the tax burden from the purchase to the circulation phase.
- In 2009 social security contributions were reformed. The ensuing new Contributory Code – whose coming into force, initially scheduled for 2010, has been postponed by one year – enlarges the tax base for employees, bringing it closer to the corresponding PIT base, and makes the tax base for independent workers converge towards actual income (the self-employed can currently choose a conventional tax base, and often opt for the lowest possible value, only somewhat above the minimum wage). The Code also introduces a social contribution on firms purchasing services from self-employed workers.

For ease of reference, Table 1 below presents a more detailed breakdown of the Portuguese tax structure, making it possible to identify the items which underwent the above reforms and others that will be referred to in the chapter.

Table 1. The Portuguese tax structure in more detail

As a percentage of total tax revenue

	2000	2007
Personal income tax (IRS)	16.7	15.8
Corporate income tax (IRC) - including local surcharge ( <i>derrama</i> )	11.4	10.1
Social security contributions	30.3	32.1
On employers and employees	28.9	30.5
On the self-employed	1.4	1.5
Taxes on property	3.5	3.8
Real estate recurrent tax (CA/IMI)	1.2	1.7
Real estate transaction tax (Sisa/IMT)	1.6	1.6
Other	0.7	0.6
Taxes on goods and services	37.2	37.5
VAT	23.4	24.1
Tax on oil products (ISP)	4.7	5.6
Tax on motor vehicle sales (IA/ISV)	3.0	2.1
Other excises	3.1	2.3
Stamp duty (IS) on financial services <sup>1</sup>	2.0	2.4
Local tax on vehicles and road taxes (IUC)	0.3	0.4
Other	0.7	0.6
Other taxes	1.0	0.7

1. Stamp duty on financial services comprises bank transactions, debt related operations, interest and leasing of buildings, and insurance premiums.

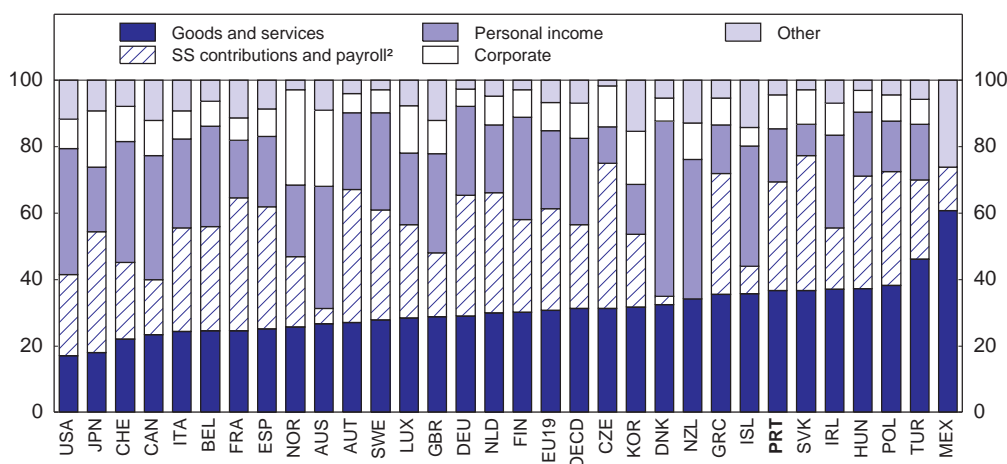
Source: OECD, *Revenue Statistics Database*.



In international comparison, the Portuguese tax mix tends to rely more on consumption taxes (Figure 3).<sup>2</sup> In 2008, taxes on goods and services accounted for 36.6% of total tax revenues, considerably above the corresponding shares for the EU19 or the OECD as a whole (respectively 30.8% and 31.3%, unweighted averages).

Figure 3. **Structure of tax revenue in the OECD**

As a percentage of total, 2008<sup>1</sup>



1. Zone aggregates are unweighted averages. Data refer to 2007 for Australia, Greece, Japan, The Netherlands and Poland.

2. Social security contributions plus taxes on payroll and workforce.

Source: OECD, Revenue Statistics Database.

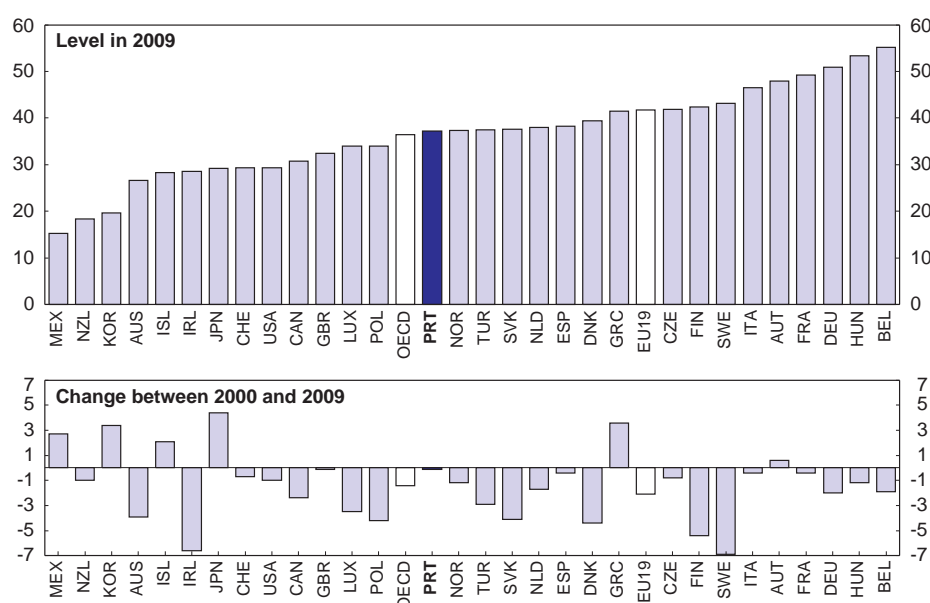
### ***Taxation could move further away from labour towards less distortive taxes***

*Although relatively moderate, the tax wedge has been increasing recently*

High indirect taxes are mainly mirrored in below-average personal income taxes (PIT) and social security contributions (SSC). As a consequence, the conventionally-defined labour tax wedge also stands at a comparatively moderate level (Figure 4). One should bear in mind, however, that the use of this conventional definition, which takes into account PIT and SSC but excludes consumption taxes, often rests more on data availability than on economic rationale. Since consumption taxes also account for the gap between firms' real labour costs and workers' real consumption wages, they should arguably be included in tax wedge computations (OECD, 2009a). Doing so would tend to erode Portugal's tax wedge advantage relative to most other European countries. Besides, in contrast with downward adjustments in a majority of other countries (Figure 4, lower panel), the labour tax wedge has stabilised over the past decade. The recent decision (May 2010) to raise personal income tax rates (see Chapter 1) will increase the tax wedge.

2. The terms "consumption taxes", "indirect taxes" and "taxes on goods and services" will be used interchangeably.

Figure 4. Labour tax wedge<sup>1</sup>  
As a percentage of total labour costs



1. Income tax plus employee and employer contributions less cash benefits for a single person without children at the income level of the average worker. Zone aggregates are unweighted averages.

Source: OECD, *Taxing Wages 2008-09*.

*High consumption-tax revenues are mainly the mirror of a sizeable share of final consumption in the economy*

The larger weight of consumption taxes in Portugal is more a consequence of a sizeable share of private consumption in GDP than of high tax rates on consumption. In an accounting decomposition, the large tax base explains 45% of the gap in indirect tax reliance between Portugal and the EU19, whereas (implicit) tax rates are responsible for only 30% (Box 2). After edging up by around 3 percentage points over the past decade, the private consumption-to-GDP ratio is unlikely to rise any further. On the contrary, some decrease is to be expected as a counterpart to the eventual needed reduction of current account imbalances. This adjustment process may then exert downward pressure on the relative importance of indirect taxation.

#### Box 2. Decomposing the relative importance of consumption taxes

The share of consumption taxes ( $T_C$ ) in total tax revenues ( $T$ ) can be decomposed into the following three factors:

- the implicit tax rate on private consumption ( $T_C/C$ )
- the weight of private consumption in GDP ( $C/Y$ )
- total tax revenues as a percentage of GDP ( $T/Y$ )

$$\text{Formally: } \frac{T_C}{T} = \frac{\frac{T_C}{C} \cdot \frac{C}{Y}}{\frac{T}{Y}}$$

The larger the first two factors are, the more reliant a country will be on consumption taxes. In contrast, the third factor works in the opposite direction: a higher overall tax burden tends to decrease the ratio of consumption taxes to total revenues through a denominator effect.

This decomposition can be applied to an international comparison of consumption tax shares, with the same three factors being defined in relative terms. Table 2 applies the analysis to Portugal *versus* the EU19 in 2007. It can be observed that the sharpest difference lies in the private consumption-to-GDP ratio, which is 8 p.p. higher in Portugal. In turn, the Portuguese implicit tax rate on private consumption is only somewhat above the EU19 average. Thus, relatively larger private consumption accounts for 45% of the difference in the importance of consumption taxes; the higher EU19 tax burden explains 24.5%; and implicit tax rates the remaining 30.5%. The underlying equation is

$$\log \left( \frac{T_C^P / T^P}{T_C^{EU} / T^{EU}} \right) = \log \left( \frac{T_C^P / C^P}{T_C^{EU} / C^{EU}} \right) + \log \left( \frac{C^P / Y^P}{C^{EU} / Y^{EU}} \right) + \log \left( \frac{T^{EU} / Y^{EU}}{T^P / Y^P} \right),$$

where superscripts *P* and *EU* denote Portugal and the EU19, respectively.

Suggestive as the results are, the accounting nature of the decomposition calls for some prudence in drawing causal interpretations. One should also bear in mind that private consumption is a stylized representation of the actual incidence base of taxes on goods and services.

Table 2. **Accounting for the importance of consumption taxes<sup>1</sup>**

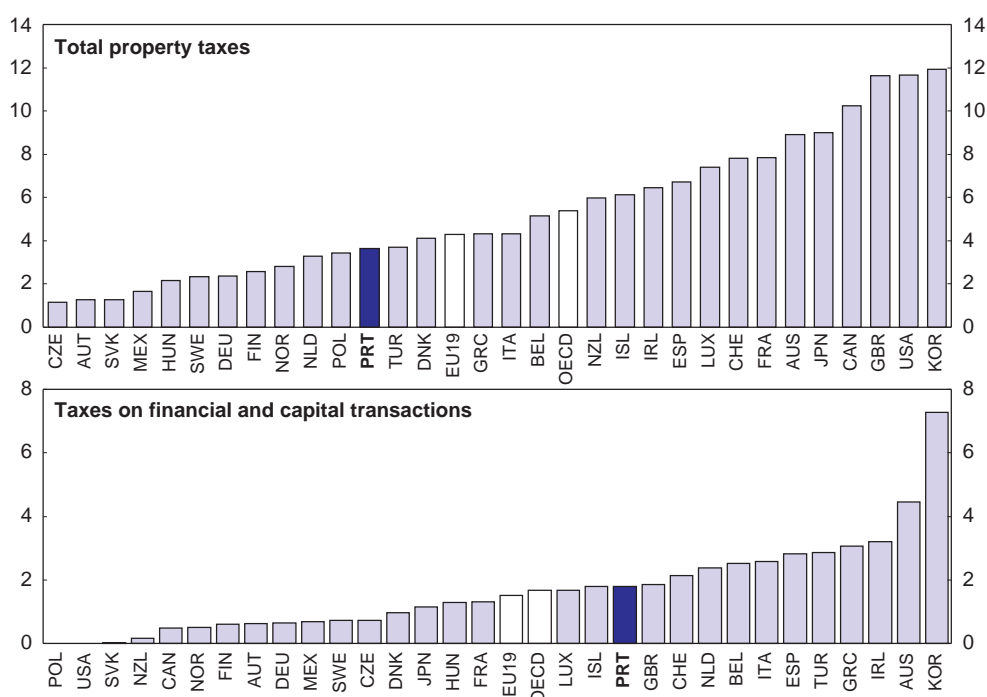
2007			
	Units	Portugal	EU19 <sup>1</sup>
Taxes on goods and services	% of total tax revenue	37.5	28.0
Taxes on goods and services	% of private consumption	21.0	19.2
Private consumption	% of GDP	65.0	57.1
Total tax revenues	% of GDP	36.4	39.1

1. National accounts data and definitions refer to base 2000, and are hence prior to the recent updating to base 2006.
2. Variables for the EU19 are constructed by summing across the relevant countries, and are therefore slightly different from unweighted averages.

Source: OECD, *Revenue Statistics* and *OECD Economic Outlook Databases*.

### *Property taxation is both low and distortive*

Despite a recent upward trend, property taxation in Portugal remains below the OECD average (Figure 5). Since this tax category tends to be regarded as the least detrimental to growth (Arnold, 2008), correcting its relatively small weight is in itself a margin for improvement of the Portuguese tax structure. Further, the composition of property taxation also matters. Portugal's overall low reliance only extends to the least distortive components: recurrent taxes on immovable property carry below-average weight, and recurrent net wealth taxes or inheritance and gift taxes virtually do not exist. In contrast, the highly distortive real estate transaction taxes present a somewhat above-average weight (Figure 5, lower panel), with negative impacts on revenue volatility and on the performance of the housing market.

Figure 5. **Property taxes**As a percentage of total, 2008<sup>1</sup>

1. Zone aggregates are unweighted averages. Data refer to 2007 for Australia, Belgium, Greece, Iceland, Japan, Mexico, The Netherlands and Poland.

Source: OECD, *Revenue Statistics Database*.

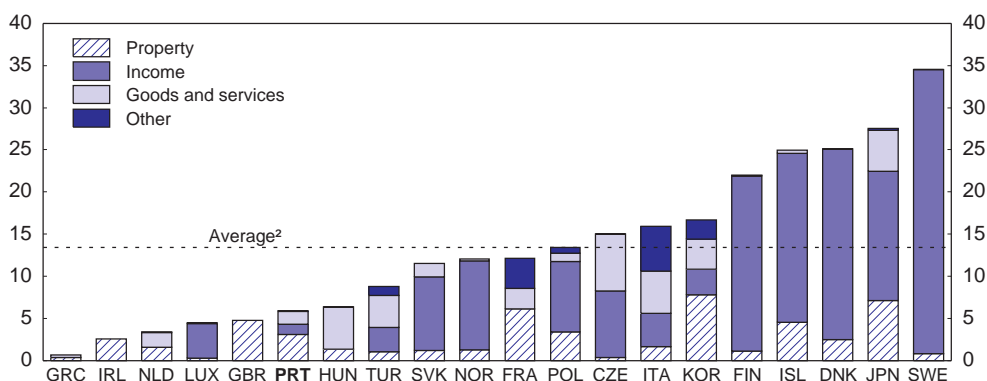
### ***The tax system remains highly centralized***

The Portuguese tax system is highly centralized, even by the standards of unitary countries (Figure 6). Though the role of sub-central governments in total public expenditure is also modest, the share of grants in their total revenues is somewhat above-average (Blochliger and Petzold, 2009). Better aligning taxes and expenditures at the local level would help improve the efficiency of local public services. In 2009, a modest step towards greater local government accountability in income taxation was implemented: municipalities are now entitled to claim up to 5% of the PIT paid by local residents and, should a lower percentage be claimed, the difference accrues to those residents (as a tax credit), rather than to the State. Nevertheless, municipalities' main taxing decisions continue to lie in recurrent taxes on real estate, where they can set the rate within centrally-defined bands. In contrast, local governments have no authority over the tax rate schedule of the real estate transaction tax, though they are also entitled to its proceeds.

Local governments have an above-average reliance on property taxation (Figure 6), a feature which has recently been reinforced by the strong growth of IMI revenues in the wake of the 2003 reform (Box 1). That reliance is generally perceived in Portugal as excessive, creating incentives for urban sprawl, especially if zoning law is not properly defined and strictly enforced. However, perverse incentives for favouring new buildings over renovation are likely to stem from distortive features of property taxes, rather than from reliance on property taxation per se. Those features include the high weight of real estate transaction taxes and the fact that taxable values of old buildings often remain outdated, as will be discussed below.

Figure 6. **Local government tax revenue<sup>1</sup>**

As a percentage of total tax revenue, 2008



1. For unitary countries only. Data refer to 2007 for Greece, Japan, The Netherlands and Poland.
2. Unweighted average.

Source: OECD, *Revenue Statistics Database*.

## Making the tax system more supportive to growth and competitiveness

### *Rebalancing the tax system from labour to consumption and property*

#### *Promoting employment*

Rebalancing taxes from labour to consumption should make the composition of tax revenues more growth-friendly, since the latter forms of taxation have a less distortive impact on employment (Johansson *et al.*, 2008). As a tax on consumption effectively falls not only on salaries but also on income from other sources (*e.g.* social transfers, part of capital income), tax rebalancing can be regarded as a base broadening reform, making it possible to reduce the wedge between firms' real labour costs and the real net consumption wage of workers (European Commission, 2008; Gauthier, 2009). In Portugal, the base broadening argument is reinforced by the sizeable share of consumption in the economy (Chapter 1). If property taxes also take part in financing lower labour taxation, the reduction in the labour tax wedge will be magnified. Further, lowering firms' labour costs will deliver gains in international competitiveness, at least in the short run, which has particular relevance for Portugal. Even though nominal wages should gradually absorb the cut in labour taxes in the long run, higher net wages will stimulate labour supply, and positive impacts on employment and the capital stock are expected.

Considering the currently weak fiscal position (Chapter 1), any tax shift should be at least revenue-neutral, and may even have to raise more revenue. The base broadening argument implies that it should be possible to reduce the tax wedge without losing budget revenue. Therefore, as fiscal consolidation progresses, the authorities should be able to create a margin to reduce employers' SSC by raising VAT and property taxes. In 1998, Denmark implemented a reform along these lines. More recently, Germany (2007) and Hungary (2009) have increased VAT rates to finance partly or fully cuts in social security contributions and personal income tax. In the case of Hungary, the revenues raised by a 5 percentage point increase in the VAT were expected to be high enough to finance a cut by 5 percentage points of social security contributions combined with a cut in personal income taxes and some other taxes. The experience of the Hungarian and other countries' tax reforms in times of crisis is further discussed in Box 3.

### Box 3. Tax Reform in Times of Crisis

Economic crises often make structural weaknesses more visible, and thus may provide incentives for pursuing difficult reforms, for example of labour and product market regulation (Høj *et al.*, 2006) and of the tax system (Brys, 2010). In the latter area, both Canada and Sweden implemented major tax reforms in crisis-ridden 1991, though preparatory work had started before. Hungary's recent tax shifting, prepared and adopted in 2009, offers a more recent illustration. If successful, tax reform could in itself increase confidence in the economy and its public finances. For example, tax reforms pursuing base broadening and a shift from direct to indirect taxation make the economy more efficient in the long run, which economic agents may take into account. Also, broad tax reform could reduce the risk that lobby groups succeed in focusing discussion on specific aspects taken in isolation (Brys, 2010).

Nonetheless, implementing a tax reform during crisis times remains difficult and requires caution. In the current context, it is essential to ensure that tax reforms are consistent, and are seen to be consistent, with the pressing need for fiscal consolidation. Reforms inevitably entail some degree of revenue uncertainty, and any occurrence of a revenue shortfall could undermine confidence. In times of crisis, revenue uncertainty can be compounded by factors such as the volatile behaviour of durable goods consumption, or a surge in company insolvencies. Thus, it could be best if any tax cuts were gradually phased-in, as Hungary did with the reduction in employers' social security contributions (OECD, 2010a). In this way, tax increases precede accompanying tax cuts.

The short-run macroeconomic impacts of tax changes are also hard to assess. For example, on the one hand, the short-run benefits in terms of improved competitiveness of a switch from employers' social contributions to consumption taxes (e.g. VAT) may be higher at a time of crisis because inflationary pressure which might undo these effects is more likely to be subdued. On the other hand, such a reform may hurt domestic consumption and aggravate activity further before the benefits of improved competitiveness and a less distortive tax system kick in. Reform of the tax on housing could also have short-run costs despite their long-term benefits. In Sweden, for example, higher taxes on housing brought about by the 1991 reform may have worsened the 1991–93 recession by depressing real estate prices and reducing demand for new construction, after several years of housing sector growth (Agell *et al.*, 1996).

Finally, the political acceptability of reform may be enhanced if the authorities commit to well-specified *ex-post* evaluation mechanisms, as was the case with the 2001 reform in the Netherlands (Brys, 2010). *Ex-post* evaluation promotes transparency and offers an opportunity to introduce tax reform adjustments. The Swedish 1991 reform was also the object of a major evaluation exercise (Agell *et al.*, 1996). Further systematic monitoring and external evaluation of reforms, in the tax system and elsewhere, is in itself highly desirable in Portugal.

Targeting the largest reductions of employers' SSC on low-wage workers is likely to maximize the employment gain of a revenue-neutral tax shift (Gauthier, 2009). This is mainly because those workers tend to have a more elastic labour supply. A way to implement such targeting would be to make employers' contributions progressive in the level of wages, for instance by moving from the current flat rate of 23.75% to a progressive schedule with two brackets, where the cut relative to the current rate would take place in the lower bracket.<sup>3</sup> Larger SSC cuts for low-wage workers would also be useful in reducing informality and in counteracting the regressive impact of a rise in consumption taxes.

The proposed tax rebalancing has much wider breadth than existing provisions on reduced SSC rates. The cut in contributions should apply across the board, even if cuts are larger for low-wage workers, whereas current reduced rates mainly concern vulnerable labour market groups (around 200 000 workers in 2008, less than 4% of total employment). Further, it should be permanent and unconditional, in contrast with the reductions in employers' SSC adopted as a response to the current crisis – which were temporary and often subject to net hiring requirements.<sup>4</sup> Finally, it should be sizeable (see below), unlike the small

3. Relative to the current situation, this would imply the same marginal rate for the upper bracket, and a decrease in average rates for all wage levels.

4. There is evidence that reductions in non-wage labour costs tend to generate stronger net employment effects among low-skilled workers when they are not temporary or very tightly targeted. Among other

magnitude of some existing reductions (for instance, 1 percentage point – in 2010 only – for workers earning the minimum wage).

Back-of-the-envelope computations show that a substantial cut in social contributions is achievable. Bringing property taxes as a percentage of GDP to the OECD average – *i.e.*, from 1.4% to 1.9% (2007 values) – can finance an across-the-board cut in employers' SSC of roughly 2.5 percentage points. In turn, the scope for shifting to VAT is enhanced by the high proportion of goods enjoying reduced rates and the large size of private consumption. Even if pensions and civil servant wages were fully indexed to higher prices,<sup>5</sup> a 1 percentage point rise in all VAT rates (standard and reduced) could still make room for a budgetary-neutral SSC cut of approximately 2 percentage points. Roughly the same would be achievable by applying the standard VAT rate to those goods and services currently taxed at the 13% intermediate rate, and potentially more if the scope of the 6% rate were restricted as well. Restricting the list of goods and services enjoying reduced rates would cut administrative and compliance costs, and make it possible to finance larger SSC cuts and/or rise less the standard VAT rate.

*Reducing labour costs is key to recover lost competitiveness*

Portugal has suffered a substantial cumulative loss of cost competitiveness, which has not been reversed so far and has been accompanied by successive losses in market shares (Chapter 1). Further, uncompetitive labour costs also deter FDI inflows, which have significant productivity-enhancing effects through technology transfers.

Although wage moderation is key to ensure a long-lasting reduction of unit labour costs, it can deliver competitiveness gains only gradually. Thus, reducing non-wage labour costs can be an effective strategy to regain competitiveness in the short and medium term as a cut in employers' SSC can smooth the adjustment, complementing the emphasis on raising educational levels as a tool for higher productivity in the long run (Chapter 3). Competitiveness gains can arise both in domestic and foreign markets. In the domestic market, local producers gain competitiveness because imported goods face the VAT increase although importers do not benefit from labour cost cuts. In foreign markets, exporters improve their competitiveness thanks to lower labour costs. In Portugal, firms in tradable sectors would also stand to gain if the reduction in employers' social contributions were tilted towards lower wages, as wages in those sectors are often much lower than the economy-wide average (Table 3).

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reasons, this is because labour demand for vulnerable labour market groups, such as the long-term unemployed, is often less elastic (Immervoll and Pearson, 2009).

5. It should be emphasised that an *ex-ante* budgetary neutral tax shift is not necessarily budgetary neutral *ex post*. While revenue collection may be positively affected by more dynamic prices and job creation, public intermediate consumption will rise (as it is subject to VAT) as well as all public expenditures potentially indexed to prices, such as wages, pensions and other social transfers. Hence, the authorities may wish to reduce the degree of indexation of some spending items (*e.g.*, through a freeze of nominal wages and certain social transfers) in order to allow a bigger cut in social contributions while keeping budgetary neutrality *ex post*.

Table 3. **Labour costs per employee per sector**

	2006		
	ISIC Rev. 3 code	Compensation per employee (EUR)	Number of employees (thousand)
Total		18 643	4 172
Agriculture, hunting, forestry and fishing	01-05	8 733	96
Mining and quarrying	10-14	16 555	15
Manufacturing	15-37	14 459	847
Low technology manufactures	15-22, 36-37	12 079	517
Medium-low technology manufactures	23, 25-28	15 955	184
High and medium-high technology manufactures	24, 29-35	21 016	146
Electricity, gas and water supply	40-41	41 938	22
Construction	45	14 657	427
Wholesale and retail trade <sup>1</sup>	50-52	15 267	753
Hotels and restaurants	55	10 876	268
Other business services	60-74	25 917	550
Community, social and personal services	75-95	23 941	1 194

1. Includes repair of motor vehicles and household goods.

Source: OECD, *Annual National Accounts Database*.

### *Tax rebalancing does not endanger social security sustainability*

Concerns about the sustainability of the social security system are a common objection against any large-scale reduction in social contributions. They may be grounded on the current financing arrangements of social security in Portugal, by which social benefits which replace labour income (*e.g.* pensions and unemployment benefits, among others) should be essentially financed by contributions. Lowering the latter, it is argued, would therefore create a revenue shortfall.

Yet those concerns are misplaced, as they regard social security in isolation from the rest of general government. Sustainability issues should be addressed on a general government basis, as is the case with the regular assessments of the impact of ageing on public finances (*e.g.* European Commission, 2009). There would simply be the need to adjust social security financing, making it less reliant on contributions and more on general revenues. Tax rebalancing from labour to property would also have implications for local government financing, which are dealt with below.

### *Enhancing incentives for green growth*

The transport sector generates significant external costs in Portugal (Annex 2.A1), which weigh on productivity, the environment and welfare. GHG emissions from this sector increased around 90% from 1990 to 2007, and account for a larger share of total GHG emissions than in the EU27 as a whole (23.8% versus 19.5% in 2007).<sup>6</sup> Despite some slight decrease over the past few years, transportation emissions continue to pose a challenge to compliance with targets under the Kyoto Protocol (2008–12) and beyond.

6. Excluding LULUCF (Land Use, Land-Use Change and Forestry) emissions and international bunkers (European Commission, 2010).



Congestion, perceived as an important problem in the Lisbon and Oporto metropolitan areas, hurts productivity by increasing travel time and travel time uncertainty, and reducing the scope for agglomeration benefits (Crafts, 2009). Further, transport-induced noise and air pollution pose a threat to human health in those two metropolitan areas. Road transportation accounts for the lion's share of the above externalities.

Tax instruments can play a useful role in the internalisation of such external costs. Economic theory suggests that, as a first-best solution, fuel taxes should be used to address CO<sub>2</sub> emissions, and distance charges to target other external impacts, such as air pollution or congestion (OECD, 2009b). As regards emissions, CO<sub>2</sub>-based differentiation in motor vehicle taxes can be a valuable second best in a recession context, if one wishes to change incentives without increasing the overall level of transport taxation (OECD, 2009b).<sup>7</sup> However, with a similar degree of CO<sub>2</sub>-based differentiation, a wide-ranging road pricing scheme should outperform vehicle taxes, since the latter are further away from the actual car usage. By further differentiating based on driving conditions, road pricing may come very close to the efficiency of fuel taxes in internalising the costs of emissions,<sup>8</sup> while preserving the potential to address other externalities as well (as for example the Dutch road pricing scheme currently under discussion, OECD 2010b).

Portugal has made an active use of taxes on fuels and vehicles to address GHG emissions from the transport sector, which partly explains why they have recently slowed down. Car taxation was reformed in 2007 (Box 1) and its differentiation according to CO<sub>2</sub> emissions ranks among the strongest in the OECD (OECD, 2009c). A car scrapping scheme, taking the form of a credit in the registration tax of the new car purchased, has been in place since 2000, and has also been given CO<sub>2</sub>-based differentiation since 2009.<sup>9</sup> Further, the tax system has also fostered the use of biofuels through an exemption from fuel taxes. The latter underwent significant increases over the past few years, as a result of which the diesel rate has essentially caught up to the EU average, and the petrol rate has surpassed it. As a consequence of these increases and of a heavy reliance on road transportation, Portugal collects more fuel taxes as a percentage of GDP than most other European countries (Figure 7). Besides this already high level of taxation, the perception of a strong (if unquantified) degree of tank tourism in Spain concerning freight transportation also limits the scope for further increases in diesel taxation, at least as long as Spain keeps a low rate. When regarded as a tool to help defray infrastructure costs, the effectiveness of fuel taxes also faces erosion from the expected increase in the use of vehicles powered by alternative energy sources, such as electricity.

In contrast with fuel and car taxation, the Portuguese reliance on user charges to curb road transport external costs is only at its infancy, implying that virtually no price-based instruments are currently geared to internalize non-emission costs. Though the highly developed motorway network generates significant revenues from tolls, these are only differentiated by vehicle type, and not by location,<sup>10</sup> time or vehicle environmental efficiency. Parking fees are widely used in urban areas, but their degree of differentiation is again modest; they do not respond to parameters such as traffic congestion or the level of parking saturation, while urban tolls do not exist. As a consequence, the potential for user charges to address GHG emissions and other transport externalities remains unexploited.

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7. Or if myopic consumers tend to under-value fuel economy savings.

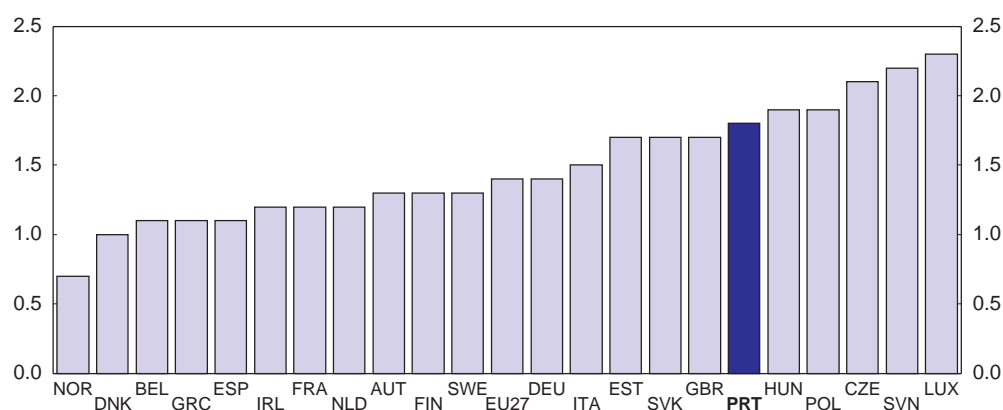
8. Without taking driving conditions into account, road pricing only emulates fuel taxes under constant (average) fuel consumption, yielding for each vehicle a constant amount of CO<sub>2</sub> per km.

9. The tax credit is only granted if the new car emits less than 130 g of CO<sub>2</sub> per km (2010 values).

10. The price per km is virtually uniform, and does not depend on driving conditions (*e.g.* congestion).

Figure 7. **Transport fuel taxes in EU countries<sup>1</sup>**

As a percentage of GDP, 2008



1. Aggregates are GDP-weighted averages.

Source: European Commission (2010), "Taxation trends in the European Union: Data for the EU Member States, Iceland and Norway".

Stylized simulation results show that CO<sub>2</sub>-based differentiation in user charges provides strong incentives to improve the fleet's environmental performance, and thus can be highly effective in curbing GHG emissions. A nation-wide, CO<sub>2</sub>-differentiated road pricing scheme could even outperform fuel taxes in this domain (Table 4 and Annex A1). At least in metropolitan areas, differentiation should also take into account other externalities, such as congestion, and hence foster modal shift away from private cars. Portugal should make a more extensive use of road pricing schemes, with embedded differentiation to tackle external costs. If authorities wish to keep the overall level of transport taxation broadly unchanged, then they should compensate for higher road pricing through a decrease in the car registration tax, rather than in fuel taxes. Shifting from car taxes to user charges would bring taxation closer to the point of use, and thus provide stronger incentives for modal shift.

Table 4. **Simulation of changes in transport sector taxation<sup>1</sup>**

Scenarios	Details	GHG Emissions	Road tax Revenues	Modal Split		Vehicle Environmental Performance (CO <sub>2</sub> g/km)	
				Passenger (private)	Freight (road)	Passenger	Freight
A. Increase in fuel tax	10% increase in both petrol and diesel taxes	94.8	104.1	97.4	99.8	97.1	98.8
B. Increase and differentiation of user charges	90% increase of user charges, <sup>2</sup> with 50% differentiation based on vehicle environmental performance	94.7	104.3	97.7	99.9	96.6	99.3

1. All results are relative to a baseline scenario (= 100) of unchanged policy and refer to impacts after 10 years.

2. User charges are calibrated so as to yield a tax revenue increase close to scenario A. Half of the charges amount undergoes CO<sub>2</sub>-based differentiation along the lines currently used for the car registration tax (ISV).

Source: Study commissioned by the OECD and carried out by TIS.

More extensive and differentiated forms of road pricing will have to be implemented in a gradual way. As a first step, authorities should introduce more differentiation in existing motorway tolls, and extend the application of road pricing to the rest of the motorway network. Other main roads could be progressively covered by the scheme as well. In the event of a shift from the car registration tax to user charges, equity considerations would also call for gradualism, in the sense of first applying road pricing to new cars (as these would have benefitted from the reduced registration tax). In any case, a very high number of subscribers (over 2 million) to *Via Verde*, the present electronic toll collection (ETC) system, should lower technological and cultural implementation barriers.

In urban and metropolitan areas, implementation issues become more complex, but also more pressing, since transport-related externalities have increased relevance. Differentiated parking fees can be a valuable instrument, and have more public acceptability than urban tolls and a well-defined administrative level of implementation (municipalities). However, their inherent second-best nature (due, for instance, to a tenuous relation to the distances travelled) makes it advisable to introduce urban tolls and congestion charges. While the latter will require inter-municipal coordination, where the newly-created Lisbon and Oporto metropolitan transport authorities can play a useful role, they also offer the prospect of providing a new source of municipal revenue, as parking fees do. Finally, more and better supply of public transportation in metropolitan areas must be provided in tandem with the above demand-side instruments (see Chapter 3), and with a high degree of priority. Otherwise, the modal shift potential of the latter will not fully materialize, and user charges may produce adverse equity impacts on those having to commute the longest distances.

### ***Reducing complexity and compliance costs***

#### *Tax complexity hampers growth*

A major problem with the Portuguese tax system is its high complexity, which hampers productivity and growth in a variety of ways. Voluminous and unstable tax rules act as a deterrent to entrepreneurship and investment. Companies and individuals have to allocate more time and resources to tax compliance activities and less to the production of goods and services. Those compliance costs can be thought of as an additional implicit tax, strongly regressive relative to firm size (European Commission, 2004). To the extent that it encourages informality and tax evasion (Lopes, 2009), complexity leads to base narrowing and thus also imposes higher explicit tax rates on complying private agents.

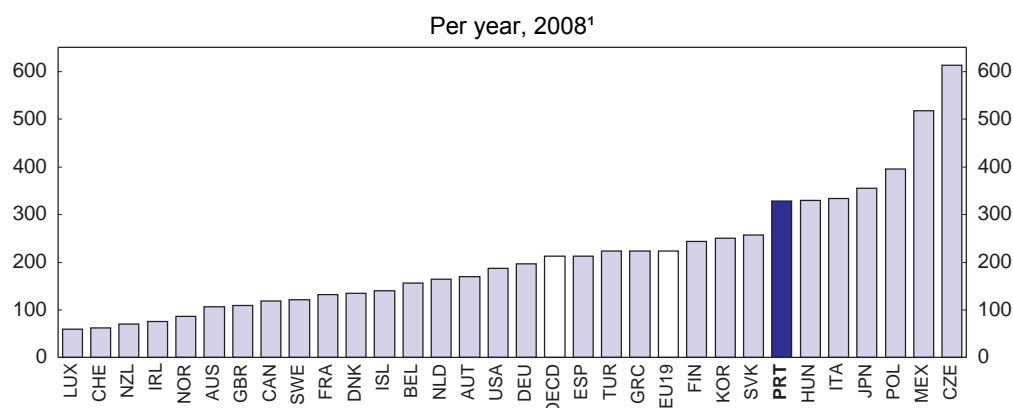
#### *Despite recent progress, day-to-day compliance costs are still substantial...*

Available international comparisons point to above-average compliance costs in Portugal, in particular for small and medium-sized enterprises (SME). According to the *Paying Taxes 2010* study (World Bank *et al.*, 2009), a Portuguese SME spends a total of 328 hours per year complying with tax obligations, almost 50% more than in the EU19 average (Figure 8). An even bigger gap is suggested in Lopes (2009), who finds that compliance costs amount to 5.27% of SME sales, against 2.60% for the European Union reported in European Commission (2004).<sup>11</sup>

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11. In the case of large companies, figures from the same sources are 0.05% (Portugal) and 0.02% (European Union). Though both studies use broadly similar methodologies, comparisons should be made with some prudence.

Figure 8. Hours spent preparing, filing and paying taxes

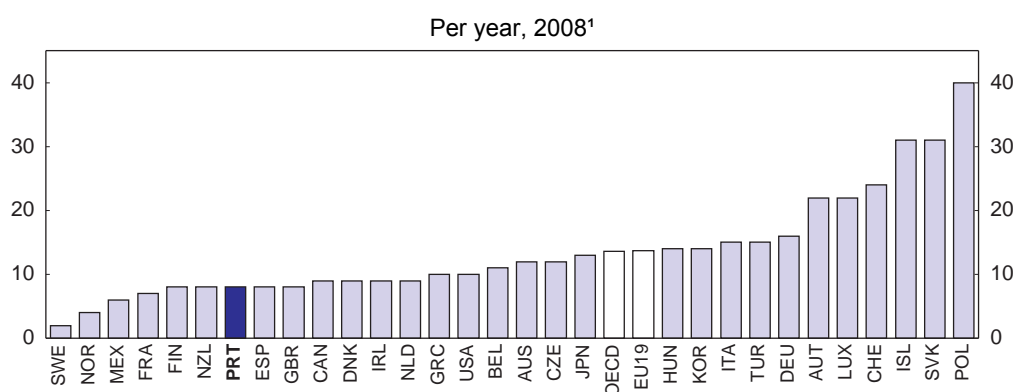


2. For small and medium-sized enterprises. Aggregates are unweighted averages.

Source: World Bank, IFC and PwC (2009), Paying Taxes 2010: The Global Picture, World Bank, International Finance Corporation and PricewaterhouseCoopers, [www.doingbusiness.org](http://www.doingbusiness.org).

In recent years, the authorities have taken important steps to tackle this problem. Considerable progress has been achieved in the use of electronic communications between taxpayers and revenue bodies: Portugal performs well in the number-of-payments indicator (Figure 9), which takes into account the extent of on-line filing and payment.<sup>12</sup> Investment in this area should continue, as the scope for further progress is far from exhausted. For instance, some services are still not available on-line, and traditional payment methods are still widely used (OECD, 2009d). The timeliness of tax refunds, which is a further dimension of compliance costs, has also substantially improved – VAT refunds to exporters took an average of 23 days in 2009, down from 62 days in 2005.<sup>13</sup>

Figure 9. Number of tax payments



1. For small and medium-sized enterprises. Aggregates are unweighted averages.

Source: World Bank, IFC and PwC (2009), Paying Taxes 2010: The Global Picture, World Bank, International Finance Corporation and PricewaterhouseCoopers, [www.doingbusiness.org](http://www.doingbusiness.org).

12. When for a given tax full electronic payment and filing is allowed and generalised, only one payment per year is counted, even if actual payments are more frequent (World Bank *et al.*, 2009, p. 49).
13. These figures refer to the so-called 30-day payment term, applicable mainly to exporters who fulfil a number of additional criteria. As for the more general 90-day payment term, the average delay decreased from 150 days in 2005 to 92 days in 2009, and the legal limit has recently been lowered to 60 days (thus becoming a 60-day payment term).

While filing and payment were made easy, the preparation of tax returns often remains burdensome, accounting for the bulk of total compliance time. Progress on this front must go beyond the expansion of electronic communications and explore the scope for enhanced cooperation between different revenue agencies and for reducing reporting requirements (especially for SMEs). Increased coordination between tax and social security agencies should be pursued. Ultimately, the most effective route to cut compliance costs consists in streamlining tax legislation, often by curbing targeted special provisions.

Companies currently file separate monthly returns for social security contributions and for personal income tax withheld from employees' pay. The convergence in tax bases brought about by the new Contributory Code (Box 1) should be carried further, as employees' taxable income for social contributions remains narrower than under PIT. This convergence should also be used as an opportunity to adopt unified reporting, both as regards employees and in what concerns the new contributions to be paid on services purchased from independent workers. Building on the recent improvements in the exchange of information between the tax and social security agencies, unified reporting would be accompanied by systematic integration and sharing of databases, yielding efficiency gains through avoided duplication of efforts and better fraud and evasion detection. Closer coordination, as proposed, does not necessarily imply moving towards a unified revenue agency for direct taxes and social contributions, but the authorities could consider doing so (Barrand *et al.*, 2004).

Reporting requirements for small businesses should be made less frequent, thus alleviating the competitive distortion suffered by smaller companies due to the regressive nature of compliance costs (fixed-costs). Currently, this only applies to the VAT, where small operators can opt for quarterly – rather than monthly – filing and payment. As in some other countries, such as Ireland (OECD, 2009d, 2009e), differentiation in reporting requirements should be extended to social contributions and withheld PIT – together with the reporting unification advocated above. If less frequent payments are seen as problematic for cash flow or tax evasion reasons, authorities could consider dissociating reporting from payment: information on contributions and withheld PIT for each individual employee could be reported only once a year, even if payments remained monthly.<sup>14</sup> Compliance and administrative costs can also be reduced by significantly raising the threshold (now at a mere 50 euros) for compulsory advance PIT payments by independent workers.

*... and so are those in case of disputes and litigation*

Administrative review mechanisms to tackle tax disputes have traditionally been slow and ineffective, thus contributing to higher court litigation. As recently as in 2007, the average time to make a decision in the framework of taxpayers' initial complaint mechanism (*reclamação graciosa*) was still close to 6 months, and delays in the appeal mechanism (*recurso hierárquico*) could be even longer. Responses to private ruling requests, which can be seen as a way to dissipate tax law uncertainty and thus preclude future disputes, could easily take more than 6 months. Further, the tax administration is often perceived as reluctant to change its own decisions (when assessing an appeal), and, more generally, to decide in favour of the taxpayer, even in instances where his or her case is fairly straightforward and can be seen as upheld by pre-existing court decisions.

There are encouraging signs that things are changing. The average time of response to *reclamações graciosas* has been reduced in 2009 to just over 1 month. As from September 2009, private ruling requests have been responded to within 90 days, the limit being reduced to 60 days in urgent cases, which benefit from a "silence is consent" clause. Authorities should secure this progress and extend it to other areas, such as faster decisions on *recursos hierárquicos* (appeals). They should also strive to further promote cultural

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14. Some countries make reporting less frequent than payment for all companies, and not just SMEs (OECD, 2009d, pp. 180–83).

change within the tax administration, including greater openness to reverse a previous decision when assessing an appeal.

The enduring slowness of tax courts – and of justice in general – remains a major hindrance for companies and investors. Though reforms in this area clearly go beyond the taxation sphere, better dispute resolution through administrative review would lead to fewer cases being brought to court, and hence to smaller delays. A similar contribution can be expected from recently announced plans to introduce binding arbitration as an alternative to tax courts. However, authorities should be prudent in implementing arbitration, since the international experience to draw on is very scant, and adverse selection problems might arise (taxpayers opting for arbitration might be those most likely to lose cases in courts). A possibility to be considered is to initially restrict access to arbitration to cases below a certain threshold (small cases clog tax courts the most), and in any case closely monitor the results.

*Fewer special provisions are the key to simpler and more stable legislation*

Complex and unstable tax laws place a lower bound on compliance costs, no matter how efficient other arrangements are. In turn, complexity and instability largely follow from the proliferation of special tax provisions, also known as tax expenditures, which often arise from an activist use of taxation as a tool for sectoral policies. Tax expenditures often end up creating vicious circles whereby targeted provisions are legislated, loopholes open, and even more complex laws are passed – sometimes barring intended beneficiaries from access to incentives, or straining to the limit the administration’s capacity. Authorities should in general refrain from introducing new tax expenditures, and should roll back many existing ones – as discussed below in more detail. A more stable tax system would also allow time for better law making, including clearer drafting, extensive consultation of experts and an ex-ante assessment of the impact on compliance costs.

**Avenues for raising the efficiency of tax collection**

Raising the efficiency of tax collection is important for several reasons. First, it could be a way to facilitate fiscal consolidation. Second, it could reduce distortions in resource allocation, which often stem from tax expenditures. In certain cases, the latter also give rise to adverse equity impacts, the correction of which would provide a third motivation. Finally, the high administrative costs incurred by revenue agencies (Box 4) would decrease, allowing them to devote more human resources to compliance functions.

***Reforming property taxes***

*The real estate recurrent tax (IMI) should be streamlined and increased*

Portugal should increase its reliance on recurrent taxes on immovable property, which are among the least harmful to growth (Arnold, 2008). This should primarily stem from base broadening, through regularly updating property values and removing most tax expenditures. However, an increase in tax rates is also likely to prove necessary, especially to rebalance the tax system. In this context, potential interactions of property tax reform with the rental housing market and housing prices should be taken into account.

Many dwellings still have outdated taxable values, very often far below market prices. To date the formula-based value assessment brought about by the 2003 reform (Box 1) has been applied to only roughly one third of urban properties. The average taxable value of the remaining two thirds, which underwent adjustment through inflation-based coefficients, is nearly three times lower than those assessed post-reform (Santos and Martins, 2009). Though 2013 remains the official deadline for completing the formula-based assessment of all urban properties, no concrete steps have been taken to that effect, and the process has been actually slowed down by excluding (as from 2009) most transmissions by bequest from

the formula-based updating. Arrangements should be made to complete this updating soon, without waiting for properties to be sold. The current dual method of taxable value determination is an important source of inequities – for instance, similar flats in the same building can pay vastly different IMI amounts depending on when they were last sold. It also gives rise to revenue losses. Though municipalities set rates within different bands for the two groups of buildings – currently 0.2–0.4% for formula-based assessments and 0.4–0.7% for the others – the difference in rates does not fully compensate the gap in taxable values. The fact that old buildings tend to yield less revenue worsens the bias towards new construction and urban sprawl.

Substantial revenue losses also stem from an extensive array of IMI exemptions. Most principal owner-occupied dwellings (POODs) enjoy a temporary exemption: for transactions having taken place after the 2003 reform, the exemption duration was set at 3 or 6 years (depending on taxable values), and has recently been extended to 4 or 8 years in the context of the measures taken in Autumn 2008 to alleviate the impact of higher mortgage interest payments on households. Other exemptions – sometimes permanent – apply *inter alia* to public bodies, non-profit-making organisations, tourism and other investment projects, and urban renewal. As a result, in 2008 more than 30% of the overall taxable value benefitted from some form of exemption. Most IMI exemptions should be abolished, with any possible exceptions restricted to the very specific cases where they play an important role in attracting investment or to low-value property belonging to poor households.<sup>15</sup> The less frequent case of high-value property occupied by income-poor owners, often put forward as an objection to increases in real estate recurrent taxes, could be dealt with by limiting the IMI payment for those owners.

*The real estate transaction tax (IMT) should be streamlined and restricted to first transactions*

The IMT should be levied only on the initial transactions of property. Under current rules, this tax is due every time a given property is sold, according to a central-government-set schedule of progressive average rates reaching up to 6% of the total value of dwellings. As a result, housing prices are inflated and geographical mobility discouraged. Many IMT tax expenditures – which resemble the non-POOD IMI exemptions – should also be abolished, thus helping to compensate for lost revenue on second and subsequent transactions.

While replacing IMT by VAT would be a desirable goal in the longer term, substantial problems need to be overcome. According to current EU rules, most newly-constructed buildings would have to be taxed at the VAT standard rate, which is much higher than IMT rates. A major impact on prices would therefore be expected, as inputs with recoverable VAT account for a limited share of total costs. Relative to IMT, the risks of tax evasion would also increase: as elsewhere, VAT would be levied on invoiced amounts, whereas IMT generally falls on whichever is largest between those amounts and the value resulting from the formula-based property assessments.

*Local government financing needs to be reconsidered*

Any major changes to property taxes have important implications for the financing of local governments, as they are currently entitled to the whole IMI and IMT revenues. In the near term, arrangements should aim at stabilizing overall municipal proceeds, both in terms of preserving the current level of resources and of reducing revenue volatility. Restricting the scope of IMT will contribute to the latter goal (as the respective revenue tends to be highly volatile and procyclical), but will also probably create some revenue shortfall, to be compensated through IMI. However, it is not desirable that higher total property taxation (as the increase in IMI proceeds should exceed the fall in IMT's) translates into more

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15. The case for exempting public bodies is much weaker, since full accounting of operating costs (including those from the use of buildings) tends to be conducive to a more efficient management.

resources for municipalities. This would fuel spending at the local level rather than help to create budgetary room for a reduction in social contributions. Additional revenue from property taxes could accrue to the State, possibly through a national-wide IMI surcharge. Alternatively, municipalities would remain fully entitled to property taxes and revenue-neutrality would be ensured through smaller grants from central government.

In the medium term, the goal of better aligning local taxation with local expenditures could also be pursued by diversifying the municipal revenue base. An avenue for achieving this would be to resort to some forms of transport taxation, like user charges, as discussed above. In this regard, one should note that several transport-induced externalities have a localised nature, and instruments like parking fees or urban tolls are well suited as sources of revenue for municipalities, due to their link to public infrastructure and services at the local level.

### ***Reducing tax expenditures***

#### *Tax expenditures abound and are often detrimental to growth and equity*

The Portuguese tax system is characterised by the extensive use of special provisions, or tax expenditures. These effectively narrow tax bases and hence require higher-than-otherwise tax rates. They also hamper growth through the same channels of complexity – of which they are a major source – and generate deadweight losses by encouraging and rewarding rent-seeking or tax-planning behaviour.<sup>16</sup> Further, administrative costs increase, as tax collection becomes more burdensome (Box 4). Finally, though many special provisions are motivated by equity goals, defective targeting often makes them a costly way to pursue those objectives, and may even induce regressive impacts.

#### **Box 4. Administrative costs of tax collection**

A complex and unstable tax system makes tax collection itself more difficult. The extent of the burden involved can be proxied by the cost of collection ratio, defined as the total administrative costs of a revenue body as a percentage of its net revenue collection. In 2007 this ratio stood at 1.41% for Portugal, on a declining trend but still clearly above an unweighted average of 1.10% for the EU19 (OECD, 2009d, pp. 87–88).<sup>17</sup> It is well known that any international comparisons of this ratio are inherently precarious, due to factors such as lighter or heavier tax burdens, differences in the range of taxes collected (e.g. whether they include SSC) and methodological discrepancies. These caveats notwithstanding, the indicator suggests that Portugal probably faces higher-than-average administrative costs.

The functional allocation of the revenue agency staff may also point to burdensome operational procedures. In 2007 only 33.5% of the Portuguese staff carried out compliance functions (audit, investigation and verification, and enforced debt collection), which compares with a simple average of 46.3% for the fourteen EU19 countries for which a breakdown is available (OECD, 2009d, pp. 95-96). Tax simplification is a promising avenue to free up more human resources for compliance functions.

Commendably, the Portuguese authorities have introduced a five-year limit on some tax incentives (those under the *Estatuto dos Benefícios Fiscais*); they will expire at the end of 2011. It is important that this rule is adhered to, and taken advantage of as a device for base broadening. However, the official definition of tax expenditures is more restrictive than in most other countries. The 2010 State Budget report

16. In some cases tax expenditures can themselves be efficiency-enhancing, by alleviating tax-induced distortions (e.g. the possibility to deduct notional interest on equity, to offset the well-known debt bias problem), or by lowering administrative and compliance costs (as is the case of exempting from VAT some financial services).

17. The value for Greece refers to 2004, the latest available year.



estimates the revenue forgone due to tax expenditures (*despesa fiscal*) in 2008, for all taxes, at 1 278.5 million euros, or 0.7% of GDP, which contrasts with an average of 4.2% of GDP for a sample of 7 countries<sup>18</sup> considered in OECD (2010c). Although international comparisons are inherently difficult in this area, most other countries have more streamlined tax benchmarks, and hence a wider definition of what constitutes a special provision. For example, unlike in Portugal, housing tax credits or some reduced rates of VAT are usually included among tax expenditures. If added to the official estimate above, revenue losses from all VAT reduced rates and from the education, health care and housing PIT tax credits would total around 4.5% of GDP. Therefore, as several examples below illustrate, base broadening in Portugal can and should go beyond the current official definition of tax expenditures.

*Personal income tax (PIT) tax expenditures are inequitable and distort capital allocation*

Expense-related PIT credits reach substantial amounts (roughly 1% of GDP, or 17% of PIT revenue, in 2007 – Figure 10) and are often inequitable or distortive. Credits for health care and education are two of the three largest items, and both allow the taxpayer to deduct 30% of the amounts spent, subject to a ceiling in the case of education but with no limit for health expenses (a very generous provision in international comparison). The impact on income distribution is widely perceived as regressive. The same percentage (30%, up to a ceiling) applies to mortgage interest payments. Higher ceilings for households in low tax brackets, in force since 2008, make regressivity less of a concern. However, as in some other countries, interest deductibility combined with no imputed rental income taxation distorts the allocation of capital towards the housing sector. Further, it provides incentives for increased indebtedness of households (a major issue in Portugal, as analysed in Chapter 1), making the economy less resilient to shocks. In this context, Portugal's housing market is characterised by an above-average owner occupation rate (see Figure 11). Tax credits for education, health care and mortgage interest payments should be eliminated and, if not, at least reduced.<sup>19</sup> The same holds for a variety of smaller expense-related relief – for instance, amounts invested in retirement savings plans or spent on life or health insurance *premia*. Expense-related tax credits aptly illustrate the narrow definition retained in official classifications of tax expenditures – none of the three largest items are included (Figure 10). Encouragingly, the authorities have announced in their recent Stability Programme the intention to curb PIT tax expenditures, though the envisaged reduction is still to be fully specified.

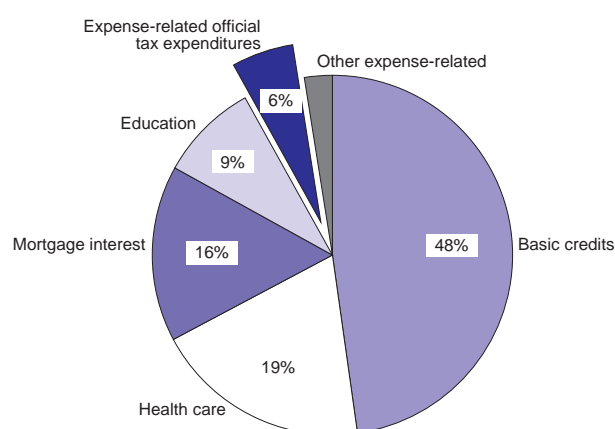
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18. Unweighted average of values reported for the latest actual year available by Canada, Germany, Korea, the Netherlands, Spain, the United Kingdom and the United States.

19. To ensure broad access to higher education, the current system of income-contingent grants and of student loans with mutual guarantee underwritten by the State should be maintained.

Figure 10. **Personal income tax credits**<sup>1</sup>

As a percentage, 2007



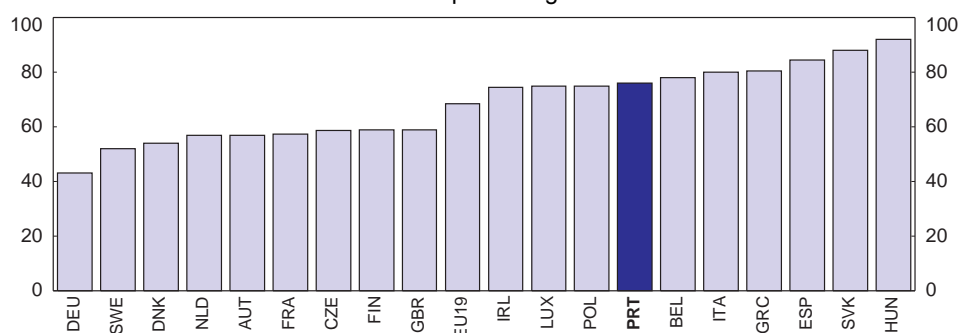
1. Total credits amount to EUR 3 145.

Source: Ministry of Finance (2008), "Descrição Estatísticas de IR", *Portal das Finanças*, November.

Basic PIT credits do not raise equity concerns, because they correspond to fixed amounts (per taxpayer, dependent child or dependent parent) and therefore have in general a progressive impact (though their wastable character may blur this for low incomes). However, the implied revenue cost has been rising, due to their indexation to the minimum wage, which has been the object of sustained increases. This indexation should be abolished, and replaced by an inflation-based alternative – for instance the IAS (*indexante dos apoios sociais*), an index already in use for updating social transfers.

Figure 11. **Owner occupation rates in EU countries**<sup>1</sup>

As a percentage



1. The latest available data is 2002 for Germany, 2003 for Austria and Hungary, 2004 for Poland, 2007 for Sweden, France, Finland, Czech Republic, Portugal and Belgium, 2008 for Denmark, The Netherlands, Greece, United-Kingdom, Ireland, Luxembourg, Slovak Republic and Spain. The EU19 aggregate is an unweighted average.

Source: European Mortgage Federation, "Hypostat 2008 A review of Europe's mortgage and housing markets".

Differential taxation across sources of capital income can also have negative impacts on equity and efficient resource allocation. Until 2009, a case in point concerned capital gains on financial investments, which were virtually exempt from PIT in Portugal: in broad terms, gains on equity shares held for more than 12 months and on bonds were tax-free, whereas gains on equity shares held for a shorter period enjoyed a special rate of only 10%. This tax regime could be expected to be strongly regressive, and stood out as one of the most concessionary among OECD countries (Johansson *et al.*, 2008). In a welcome recent

development, these capital gains are now in general taxed at a flat rate of 20%, which is already levied on other forms of capital income, such as interest and dividends. Authorities should also tax rental income at the same flat rate, rather than at the marginal ordinary PIT rates which now apply (in 2010, in the range of 35 to 43% for middle-class landlords).<sup>20</sup> This would alleviate distortions stemming from differential taxation of alternative savings vehicles, and would also contribute to a better-functioning housing rental market.

Further examples of differential taxation concern pensioners and the self-employed, both of whom tend to pay less PIT than dependent workers. These differences are detrimental from an equity point of view and induce revenue losses. Though some convergence has been taking place, pensions still often enjoy a more generous allowance than salaries (in most cases, 6 000 versus 4 104 euros, 2010 values). This gap leads to lower average tax rates for pensioners and mainly benefits those who are better off.<sup>21</sup> Therefore, plans for greater convergence of allowances, as envisaged by the authorities in their fiscal consolidation strategy, are welcome and should actually be strengthened: allowances for pensions and salaries should be equalised, which would not affect poor pensioners, who would still not pay any tax. As for the self-employed, they continue to pay fairly modest amounts of income tax. Though in 2007 they accounted for 23.0% of total employment, income from self-employment was only 10.8% of total gross income from both forms of employment (dependent and independent) in PIT tax returns.<sup>22</sup> Efforts at fighting fraud and evasion in this area should be stepped up, since the payoff will not be limited to PIT revenue but will also extend to social contributions (as from 2011, the SSC tax base for the self-employed will converge towards actual income – recall Box 1).

#### *Corporate income taxation should be streamlined*

The main statutory rate of the Portuguese corporate income tax (CIT) – which stands above the EU19 average (Figure 12) – is a misleading indicator of the severity of corporate taxation, as it does not reflect the existence of numerous base narrowing provisions. Some of these are captured by stylized indicators of effective tax rates, based on models which analyse the impact of taxation on returns from investment projects (Devereux *et al.*, 2008). For instance, generous capital allowances for machinery and industrial buildings, often exceeding true economic depreciation, reduce effective rates at the corporate level. Moreover, a lenient taxation of capital income under PIT brings effective rates at the shareholder level further down in comparative terms (Figure 12) – a feature which still holds, though by a smaller margin, if account is taken of the abovementioned recent reform of capital gains taxation. Other base narrowing provisions are encapsulated in more detailed features of the tax code (*e.g.* different forms of tax incentives) and thus elude the above indicators. They can nonetheless be taken into account by simpler definitions of effective or implicit rates, computed as tax revenues over some accounting or macroeconomic proxy of the tax base. Though international comparisons become more difficult, available evidence suggests a somewhat below-average implicit rate in Portugal (European Commission, 2010).<sup>23</sup>

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20. These rates reflect the additional consolidation measures decided in May 2010, with the 1.5 p.p. increase in the marginal rates for the relevant income brackets being scaled by a factor of 7/12 (the proportion of remaining months from June onwards). The exact range is from 34.88% to 42.88%.
  21. The more generous allowance is one of the reasons why net pension replacement rates in Portugal are higher than the OECD average for above-average earnings (OECD, 2009f, p. 121).
  22. The latter figure, however, is somewhat lowered by the fact that gross income for the self-employed – but not for dependent workers – is taken net of allowances (Source: Ministry of Finance, “Estatísticas de IR”, *Portal das Finanças*). The employment figure comes from INE, *Estatísticas do Emprego*.
  23. This study reports values for implicit tax rates on corporate income, defined as taxes on the income or profits of corporations over a national accounts-based proxy of the tax base. Portugal had a 22.6% rate in the most recent available year (2006), against a 23.1% average for seventeen EU19 countries.

However, extensive use of tax expenditures is not the best way to alleviate the tax burden, as productivity growth is impaired through several channels. Besides increased administrative and compliance costs, productivity can also be negatively affected by the dispersion of effective tax rates (Johansson *et al.*, 2008, p. 37), stemming *inter alia* from lower rates for certain regions or from a more favourable treatment of SMEs. The associated tax incentives are often poorly targeted, distorting investment patterns and inducing wasteful revenue losses. Recent developments in Portugal may have worsened these problems. Besides long-standing regional-based differentiation of statutory rates, in 2008 authorities introduced a reduced rate of 12.5% for the initial 12 500 euros of taxable income, thereby lowering effective rates for small firms. At the other end of the spectrum, the largest firms also often pay CIT at below-average effective rates, which may suggest a more intensive use of special provisions (Rodrigues, 2009). A prominent example consists in the full deductibility of dividends from most qualified participations, as well as of the financial costs stemming from their acquisition. Authorities should therefore considerably streamline CIT provisions, abolishing inefficient and distortive tax expenditures and promoting base broadening. The statutory rate, which retains some importance for investment decisions due to its high visibility, could then be decreased and brought closer to effective rates. It follows that the recent decision to increase the statutory rate for large companies by 2.5 percentage points, though helpful to ensure rapid progress in fiscal consolidation (Chapter 1), should be reversed when circumstances permit.

Some tax expenditures should nonetheless be retained or reformed. A case in point is the recent (2008) introduction of an allowance for corporate equity (ACE), which alleviates the debt bias in financing decisions. Besides potentially discouraging saving by companies and promoting their excessive indebtedness (problems associated to high external deficits in Portugal, as discussed in Chapter 1), this debt bias may also harm productivity growth by diverting investment away from small innovative firms or knowledge-based industries, since these are forced to rely more on equity. The Portuguese ACE has been defined in marginal terms (*i.e.* it applies to equity *increases*), which is welcome as it limits tax revenue losses while still addressing the debt bias, and authorities have expressed the intention to keep it in force beyond the original deadline (2010). A case can also be made to preserve the current system of R&D tax credits (SIFIDE, first applied in 2006 and stepped up in 2009 and 2010), which is regarded as instrumental in the recent surge of business expenditure in R&D (0.73% of GDP in 2008, up from 0.30% in 2005).<sup>24</sup> Yet another example concerns contractual investment tax credits, seen as an important tool for attracting FDI and therefore in securing the ensuing benefits as regards knowledge spillovers and productivity growth.

Curbing tax fraud and evasion is particularly important in corporate taxation, as the standard base broadening arguments are supplemented by efficiency gains stemming from the promotion of a level playing field for companies and the reduction of informality. Though significant progress has been made on this front (Braz *et al.*, 2009), several indicators suggest that the scope for increasing tax compliance is far from exhausted, and efforts in this area should therefore be maintained and stepped up. For instance, a long-standing feature of the Portuguese CIT is that a small number of companies accounts for a large share of total revenues (Bronchi and Gomes-Santos, 2001). The latest available data conform to this pattern: in 2007, 0.8% of the firms with positive assessed CIT (*IRC liquidado*) paid around 57% of total assessed tax revenue (Rodrigues, 2009). Further, also in 2007, 64% of firms had negative assessed tax and 20% did not pay any CIT (*ibidem*). One should note that this last figure would have increased to 34% in the absence of

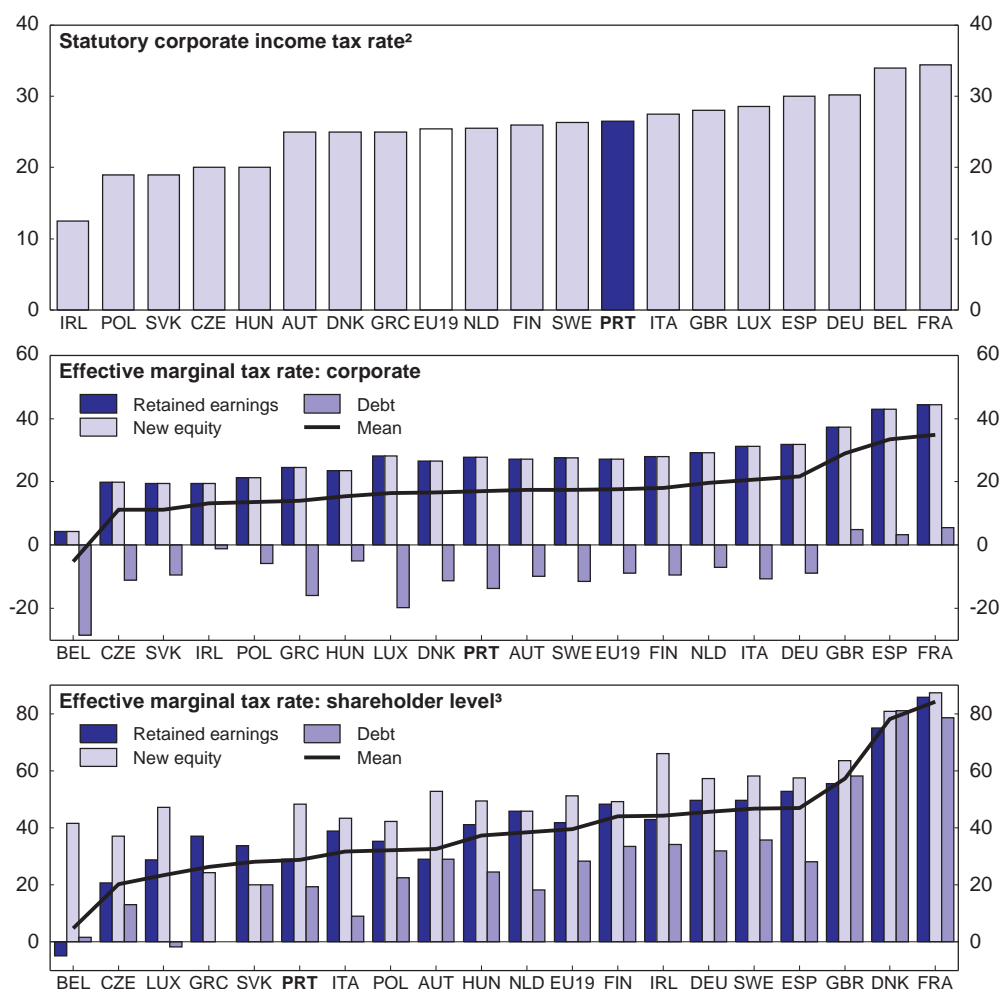
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24. However, it should be acknowledged that the literature is somewhat sceptical of a large impact of tax incentives on R&D expenditure (Jaumotte and Pain, 2005a and 2005b), and that no formal studies document the Portuguese case.

the Special Advance Payment (*Pagamento Especial por Conta*) – in practice, a minimum compulsory CIT payment, due even if losses are reported – implying that the latter may help to curb tax evasion.<sup>25</sup>

Figure 12. **Statutory and effective corporate tax rates**

As a percentage, 2009<sup>1</sup>



1. Effective rates are simple averages over five different assets and refer to domestic (as opposed to cross-border) investments. Portugal's ranking remains broadly similar if one considers other kinds of shareholders, or effective *average* (instead of *marginal*) tax rates. The effective marginal tax rate refers to an incremental investment and is defined as the proportionate difference between the pre-tax and the post-tax real rates of return. The effective average tax rate considers discrete choices for investment and measures taxes paid as a proportion of total income. See Devereux *et al.* (2008) for further methodological details. Data refer to 2009, and hence do not take into account the recent increase by 2.5 percentage points of the CIT rate for large companies in Portugal. The EU19 aggregate is an unweighted average.
2. Basic combined central and sub-central rate.
3. Top-rate non-qualified shareholder.

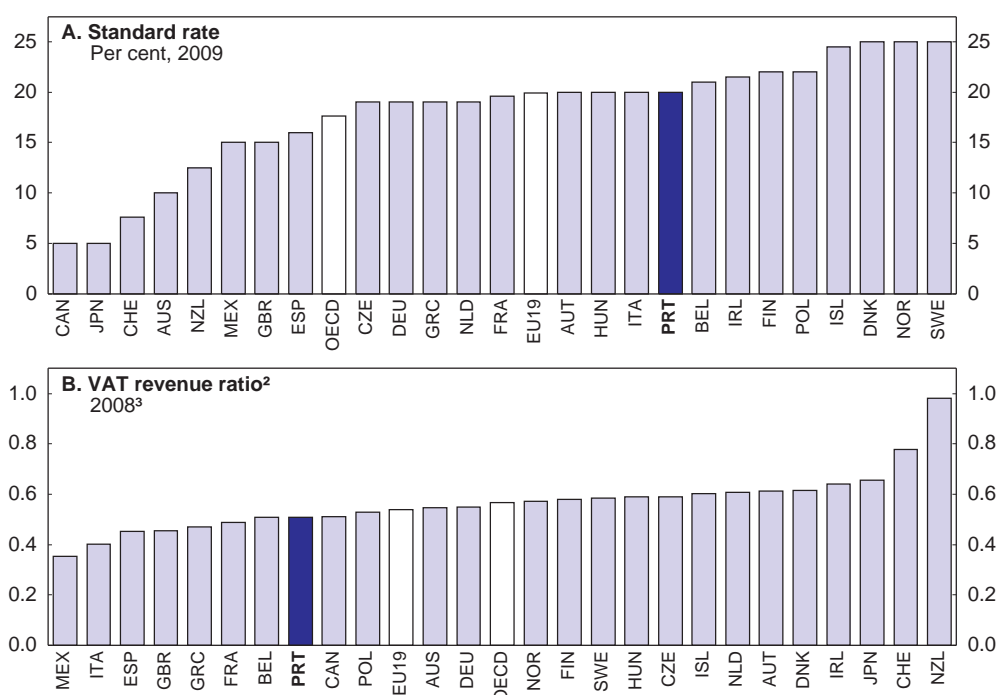
Source: OECD (2010), "Taxation of Corporate and Capital Income", *OECD Tax Database*, [www.oecd.org/ctp/taxdatabase](http://www.oecd.org/ctp/taxdatabase), March and M.P. Devereux *et al.* (2010), "Effective Tax Levels Using the Devereux/Griffith Methodology", Project for the EU Commission, TAXUD/2008/CC/099, Intermediate Report, Center for European Economic Research (ZEW).

25. The Special Advance Payment (SAP) is in general computed as a fraction of turnover, with a minimum limit of 1 000 euros per year. If a company reports losses, the amount paid is only recoverable by undergoing a tax audit procedure. Source: Ministry of Finance, "Estatísticas de IR", *Portal das Finanças*, November.

### Reduced VAT rates should be curbed

Portugal's extensive use of reduced rates is the main driving force behind the below-average efficiency in VAT collection (Figure 13).<sup>26</sup> A reduced rate of 6% is applied to no less than 28% of the tax base,<sup>27</sup> including essential foodstuff, medicine, hotels, electricity and natural gas, and renovation and repairing of private dwellings.<sup>28</sup> A further 12% of the tax base, including restaurant services and some other foodstuff, is subject to VAT at 13%. The revenue losses are among the highest in the EU (Copenhagen Economics, 2007).

Figure 13. Value added tax<sup>1</sup>



1. Zone aggregates are unweighted averages.
2. The VAT revenue ratio (VRR) is defined as the ratio between the actual value added tax (VAT) revenue collected and the revenue that would theoretically be raised if VAT were applied at the standard rate to all final consumption. This ratio gives an indication of the efficiency of the VAT regime in a country compared to a standard norm. It is calculated as:  $VRR = \text{VAT revenue} / ([\text{consumption} - \text{VAT revenue}] \times \text{standard VAT rate})$ .
3. 2007 for Australia, Belgium, Greece, Iceland, Ireland, Netherlands, Poland. OECD and EU19 aggregates exclude Korea, Luxembourg, Slovak Republic and Turkey.

Source: OECD, *Annual National Accounts and Revenue Statistics Databases*; and *OECD Tax Database*, [www.oecd.org/ctp/taxdatabase](http://www.oecd.org/ctp/taxdatabase).

26. Besides an extensive use of reduced rates, a low efficiency in collection can also be due to a high VAT gap, reflecting *inter alia* tax evasion or unpaid VAT due to insolvencies. However, Portugal's VAT gap in 2006 was estimated to be among the lowest in the EU (Reckon LLP, 2009).
27. Ministério das Finanças e da Administração Pública (2010). In this source the reduced VAT rate was still 5% (and the intermediate rate 12%).
28. With a limit on materials used.

Pursuing equity or efficiency objectives through reduced VAT rates is generally hampered by severe targeting problems. VAT in Portugal is slightly progressive relative to expenditure (Braz and Cunha, 2009), as poorer households tend to devote a higher share of their total spending to reduced-rate goods and services like essential foodstuffs, utilities or health care, even if richer households receive most of the absolute benefits of the reduced rates. Applying reduced rates to some sectors with a high incidence of low-skilled employment, such as the hospitality industry, tends to be regressive (richer households spend relatively more on these services) and is a poor way of targeting low skill workers, who still account for most of the Portuguese workforce. Also, applying a reduced VAT on restaurants is generally considered an inefficient instrument to create jobs, because demand for restaurants is relatively inelastic to prices. Authorities should then substantially extend the scope of application of the VAT standard rate, with accompanying measures to compensate for adverse equity impacts – namely, enhanced income support to poor households.

#### **Box 5. Summary of recommendations on reforming the tax system**

##### **Making the tax system more supportive to growth and competitiveness**

- As fiscal consolidation progresses, reduce employers' social security contributions (SSC) in a (at least) revenue-neutral way by raising property taxes and VAT. In this context, make social security financing less reliant on contributions and more on general revenues, and ensure that additional revenue from property taxes does not translate into higher overall resources for municipalities.
- Target the largest reductions of employers' SSC on low-wage workers. For this purpose, consider making employers' contributions progressive in the level of wages.
- Address transport sector externalities through extended infrastructure use charges, differentiated by vehicle environmental performance, location and time. If an overall increase in transport taxation is deemed undesirable, decrease the car registration tax to compensate. Improve the supply and governance of metropolitan public transportation.
- Complete the convergence in labour income tax bases between SSC and personal income tax (PIT).
- Increase coordination between tax and social security agencies: unify firms' tax returns for SSC and withheld PIT, and integrate agencies' databases. In the longer term, consider moving towards a single agency.
- Reduce tax reporting requirements for small businesses, possibly by dissociating reporting from payment.
- Further improve administrative review mechanisms through faster response to appeals and, in assessing them, greater openness to reverse previous decisions.
- Explore the potential of binding arbitration as an alternative to courts, starting with small cases.

##### **Avenues for raising the efficiency of tax collection**

- To help create a margin to reduce employers' SSC, substantially increase IMI (the real estate recurrent tax) revenues. Broaden the tax base and, if needed, increase tax rates.
- Levy IMT (the real estate transaction tax) only on the initial transactions of property, and abolish many of its tax expenditures. In the longer term, consider replacing it by VAT.
- Eliminate, or at least substantially reduce, PIT credits for health care, mortgage interest payments and education, as well as for a variety of smaller expense-related items.
- Tax rental income under PIT at a flat rate of 20%, as other forms of capital income.
- Set pensions' PIT allowance at the same level as for salary income.

- Step up tax audit of independent workers to avoid significant losses in PIT and SSC.
- Streamline corporate income tax (CIT) provisions, abolishing distortive tax expenditures. Further broaden the CIT base through fighting fraud and evasion. Consider decreasing the CIT statutory rate when fiscal conditions permit.
- Preserve contractual investment tax credits when relevant for FDI attraction. Carefully-designed tax credits for R&D may also be of value.
- Substantially extend the scope of application of the VAT standard rate, accompanied – to the extent that basic essentials are concerned – by enhanced income support to poor households.

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## ANNEX A1

### Transport externalities and road pricing

1. This annex provides more detailed information on transport sector externalities in Portugal. It also gives some technical background on the simulation exercise performed to illustrate the potential impact of road pricing schemes.<sup>29</sup>

#### Main transport externalities in Portugal

2. GHG emissions from the transport sector pose a major challenge for compliance with international commitments, not only under the Kyoto Protocol (for 2008-12) but also in the 2020 horizon, when Portugal is bound to record a maximum increase of 1% in non-ETS sectors relative to 2005 levels. A recovery in economic activity and international trade in the coming years has the potential to reverse the slight decline in transport emissions observed in the recent past, especially if one takes into account the trend towards a growing importance of the road mode in international freight transport activity. Though projections for transport emissions in Portugal by 2020 are not yet available, scenarios at the European level show that further increases from the sector can be expected (Rijkee and van Essen, 2010).

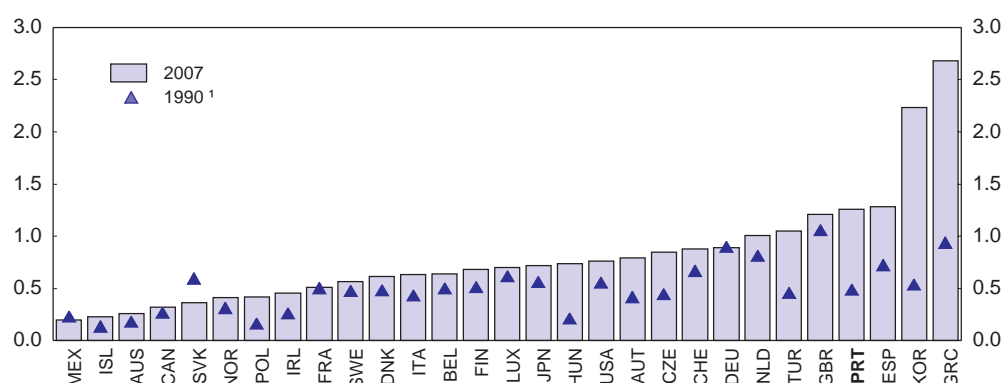
3. In the EU15 context, congestion is by far the most important component of the external costs of road transport, accounting for roughly half of their total money amount (Persson and Song, 2010). However, the estimation and international comparisons of road congestion costs in Portugal face severe data limitations.<sup>30</sup> Bearing in mind this caveat, available evidence suggests that the degree of congestion is relatively low in the country as a whole (Crafts, 2009) but could be on an upward trend, since Portugal has recorded strong increases in the intensity of road network utilisation (Figure A1.1 and Chapter 3). Congestion becomes a significant concern in the two main metropolitan areas (as acknowledged, for instance, in Ministério das Obras Públicas, Transportes e Comunicações, 2009), weighing on commuting time. In the 2010 Eurotest inspection of local public transport systems, Lisbon came only 22<sup>nd</sup> out of 23 European cities as regards travel time.<sup>31</sup>

4. Air pollution, noise and accidents are also important transport sector externalities. In the Lisbon and Oporto metropolitan areas local concentrations of particles (PM10) and nitrogen oxides (NO), originating mainly from road transportation, often exceed the legal limits. The transport sector also accounts for almost half (45% in 2007) of the overall Portuguese NO<sub>x</sub> emissions (regulated under the NEC Directive), whose levels in 2007, though on a downward trend, were still slightly above the ceiling set for 2010.

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1. The simulation exercise has been carried out for the OECD by a Portuguese consulting company, TIS.
  2. The most reliable study to date (Macário *et al.*, 2003) only considered congested traffic in the Lisbon and Oporto metropolitan areas, with 1998 as the most recent observation.
  3. Results available at <http://www.eurotestmobility.com>. One should bear in mind that public transport speed is also affected by variables other than congestion, such as the distance between stops or the technical features of different vehicles.

Figure A1.1. Road network utilisation

Million vehicle-kilometres per kilometre of roads



1. Data refer to 1991 for Germany and to 1992 for Slovak Republic.

Source: Based on OECD environmental data and OECD estimations.

5. Information on exposure to noise from transport activity is very limited in Portugal – for instance, no systematic data exists even for the Lisbon and Oporto agglomerations. However, it is estimated that in 2000 between 41% and 52% of the Portuguese population was exposed to road traffic noise above 55dB(A), which compares with a value of 44% for the EU as a whole (CE Delft, 2007).<sup>32</sup> Road accidents continue to take a heavy toll in Portugal, despite very significant progress over the past two decades. In 2008, road fatalities relative to the volume of passenger transport activity was still almost 25% above the EU27 average (European Commission, 2010).

### The optimal use of economic instruments to deal with transport externalities

6. Economic theory suggests that optimal taxation of the transport sector consists in using fuel taxes to internalize CO<sub>2</sub> emissions and differentiated road charges to tackle other important external costs, such as congestion, local pollution or noise (OECD, 2009). In contrast, vehicle taxes (either of registration or circulation types) are in general a less efficient instrument to address externalities, as they are not related to actual car use. There is a widespread perception that in many OECD countries the current levels of transport taxation are below the gap between social and private costs (OECD, 2009; Persson and Song, 2010). Further, despite the prominence of congestion costs, road charges are still much less developed than taxes on fuels or cars. Therefore, an increase in overall transport taxation could be justified from an efficiency point of view, and should probably rely on higher and more differentiated road pricing.

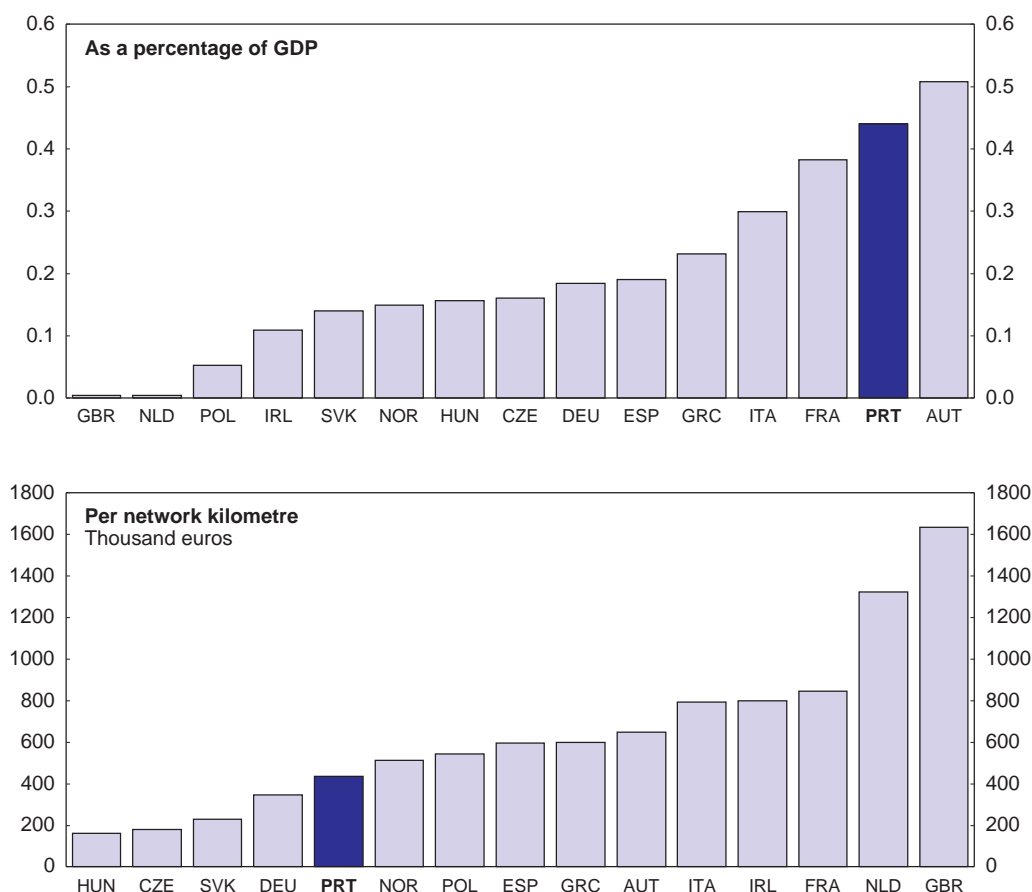
7. Revenue from fuel taxes as a percentage of GDP is comparatively high in Portugal (Figure 7). Tax rates recorded several increases over the past decade, as a result of which the rate on petrol is already above the EU19 average. Though the rate on diesel is still below-average, tank tourism in Spain acts as a deterrent to further increases. Portugal is therefore in relatively unfavourable circumstances to raise fuel taxes significantly. The country is also among those where revenue from motorway tolls is highest as a percentage of GDP, but this mainly reflects its extensive motorway network: the level of revenue per kilometre is relatively low, suggesting room to increase toll revenues further (Figure A1.2). More broadly, as argued above, road pricing is generally underdeveloped across the OECD, and Portugal is not an exception as regards the case for stronger reliance on this form of transport taxation. Furthermore, tolls in Portugal are only differentiated by vehicle type, and hence have very low effectiveness in addressing

4. This source compiled data from previous studies. Estimates for Portugal were presented in absolute terms (no. of people).

externalities. In cities, parking fees are the only existing form of road pricing. Although in use in many municipalities, their degree of differentiation is modest, as are the amounts collected. Data on total revenue from parking fees at the national level is not available. However, in Lisbon, despite strong growth over the past decade, parking fees amounted to only 20 million Euros in 2007. Hence, there is scope in Portugal for higher and more differentiated road user charges.

Figure A1.2. Toll revenues <sup>1</sup>

2009



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

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

### Simulating the impact on GHG emissions and traffic structure of a road pricing scheme

8. The expected impact of road pricing on different variables, compared with that of fuel taxes, has been simulated by using a stylized analytical model of traffic flows in Portugal. The model focuses on road transportation for both passengers and freight (though allowing for shifting to non-road modes). For comparability, increases in fuel taxes and user charges have been calibrated to raise roughly the same amount of fiscal revenues *ex post*. The simulation shows how the increase in taxes affects GHG emissions through impacts on modal split and vehicle environmental efficiency.

9. Traffic volumes are taken at the level of the whole country, which precludes an explicit examination of local impacts, such as congestion, air pollution and noise: for instance, user charges are modelled as a national-wide additional cost per km travelled. The model has been calibrated with elasticity values taken from international studies (see Box A1.1); while their plausibility for the Portuguese case has been assessed, simulation outcomes should be regarded as illustrative.

#### Box A1.1 Key elasticities applied in the simulations

- Car sales w.r.t. fuel tax and road charging: an elasticity of  $-0.2$  was applied, based on the comparison of short-term ( $-0.08$ ) and long-term elasticities ( $-0.25$ )
- Vehicle environmental performance w.r.t. fuel tax and road charging (environmental component only): an elasticity of  $-0.5$  was applied, based on a literature review;
- For the modal split effects of the various taxes and charges a parameter was calibrated, taking into account the elasticities observed in the literature. A reference short-term elasticity of private transport demand w.r.t. circulation costs of  $-0.3$  was used.

The main source of information concerning elasticities was Goodwin *et al.* (2004), while other studies were also consulted (e.g. Litman, 2004).

10. Simulation results, summarized in Table 4, show that an increase in fuel taxes or in user charges bring almost identical results in terms of the reduction in GHG emissions. In that sense, they are almost perfect substitutes. The main difference relates to the improvement of the vehicle fleet. This is explained by the fact that user charge differentiation based on vehicle environmental performance provides stronger incentives for a continuous improvement of fleet efficiency, as charge parameters become more demanding over time, while raising fuel taxes has a stronger impact in terms of a reduced use of private cars (modal split). On this count, user charges also entail higher circulation costs, and hence lead to some modal shift away from private transport. This higher use of public transportation should have beneficial impacts in terms of reduced congestion, which would be reinforced if congestion were added as a criterion for charge differentiation. On the other hand, it should be noted that a user charge scheme is more costly to operate (which is not taken into account in the above simulation), which may reduce its efficiency from a fiscal point of view.

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