

TAX SYSTEMS IN EUROPEAN UNION COUNTRIES

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INTRODUCTION

A review of tax policies of EU countries is useful for several reasons. First, the tax to GDP ratio in the EU area, having risen steadily up to the late 1990s, is very high by international standards (Figure 1). Second, while some caution is needed in measuring the incidence of the tax burden, there is little doubt that average effective tax rates on labour and consumption are much higher in the EU area than in most other OECD countries. Finally, the removal of obstacles to the free movement of goods, people and capital within the EU area, combined with the advent of the single currency, have brought to the fore a number of international taxation issues, related to cross-border investment, saving and shopping, as well as e-commerce. Thus, tax design is an important influence on EU countries' performance and their experience may provide useful insights for other countries and regions where international integration is deepening.

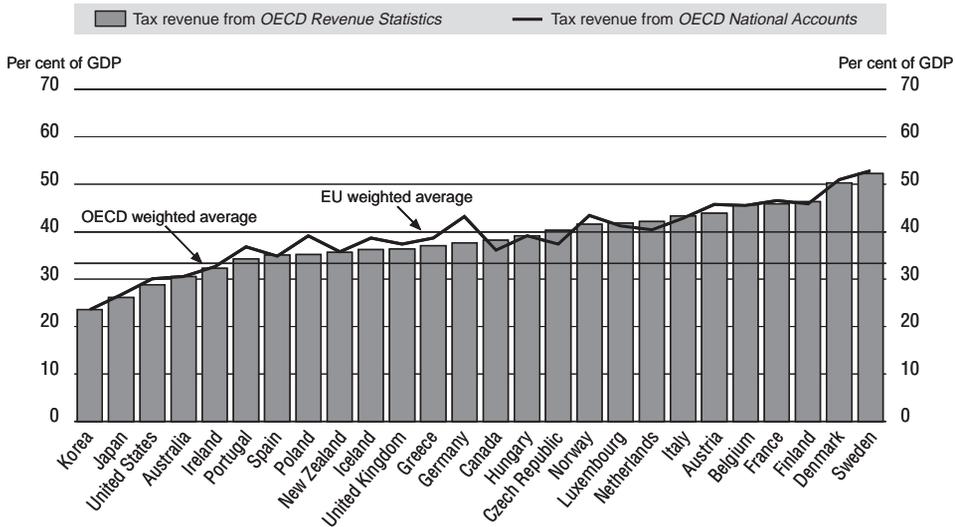
This paper provides an overview of some of the more common broad features of tax systems in the EU and of the main policy issues they raise. The first section presents the main forces shaping tax policy in the EU area, since the early 1970s and in the near future. The second section examines the main features of EU countries' tax systems and how they affect employment, consumption patterns, saving and investment, income redistribution, and tax compliance and collection costs. Finally, the last section proposes some recommendations for future tax reforms.

FORCES SHAPING TAX POLICY IN THE EU AREA

Growth in public spending and fiscal consolidation commitments have implied rising tax burdens

A sustained expansion of public sector commitments to welfare provision – which has gradually become more general and generous – and the rise in unemployment acted as persistent underlying pressures to increase taxes in most EU countries between 1970 and the early 1990s.¹ From a level broadly at par with that of the United States in 1970, the tax-to-GDP ratio for the EU area

Figure 1. Tax to GDP ratio in OECD countries¹
1999

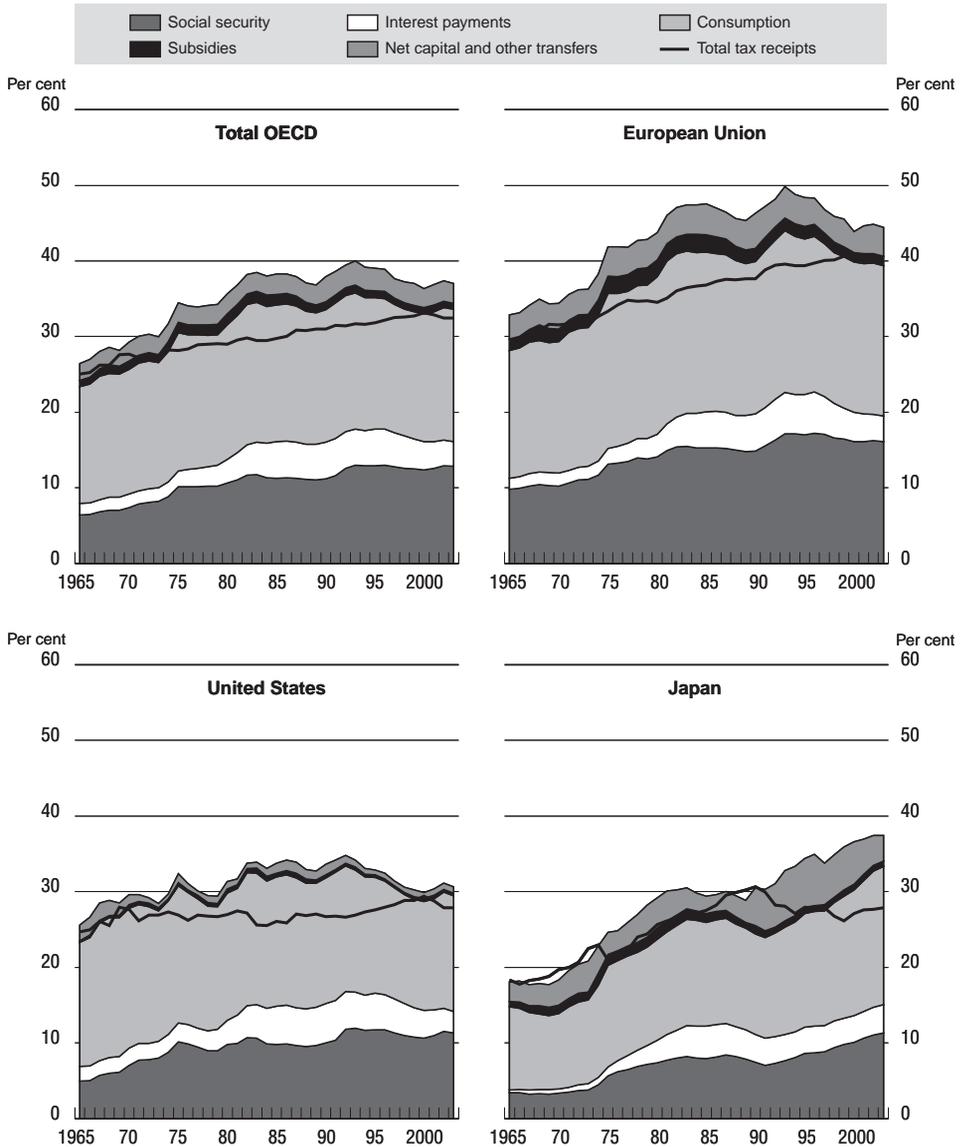


1. Tax revenues from *OECD National Accounts* are not fully comparable with the information found in *OECD Revenue Statistics*. The divergences are due to a variety of general and country specific factors. The most important are the following: *i*) differences in accounting periods and methods; *ii*) voluntary social security contributions, which are fairly large for some countries (including Germany), are included as tax revenues in the National Accounts but not in the Revenue Statistics; so are the employer social security contributions for government employees; *iii*) imputed government contributions are not included in the Revenue Statistics; *iv*) inheritance and gift taxes are not considered as taxes in the National Accounts while they are included in the Revenue Statistics; *v*) for EU countries, VAT and customs revenues are shown net of the amounts transferred to the European Commission in the National Accounts while the Revenue Statistics show gross data.

Source: *OECD National Accounts*; *OECD Revenue Statistics*, 1965-2000.

increased by 8 percentage points up to 1993, while it remained broadly stable in the United States. The rise in the tax-to-GDP ratio in Japan was broadly similar to the EU area but from a much lower starting point. Reflecting the important role played by wage-based taxes in financing the welfare system in most EU countries (social security contributions and/or personal income tax), this was largely reflected in a pronounced rise in the tax wedge on labour. Since the increase in public expenditure was also financed by an “inflation tax” until the late 1970s, the disinflation policies pursued during the 1980s implied a surge in real interest rates and a debt “snowball effect” reflected in a steep increase in interest payments on public debt as shown in Figure 2 (in particular Belgium, Denmark, Greece, Italy, Portugal and Sweden). The surge in government expenditure also reflected substantial support to public enterprises (Greece, Italy,

Figure 2. Trends in general government tax revenues and outlays
As a percentage of GDP



Note: From 2000 onwards data are based on OECD estimates and projections presented in *OECD Economic Outlook 70*.

Source: *OECD Analytical Data Base* and *OECD Revenue Statistics, 1965-2000*. Weighted average for total OECD and European Union.

Portugal, Spain and Sweden), and/or the implementation of large public infrastructure programmes (in particular for countries benefiting from EU structural funds – Greece, Ireland, Portugal and Spain – which cover only part of the spending on these programmes).

The 1992 Maastricht Treaty and later the Stability and Growth Pacts created a framework in which many EU countries have implemented fiscal consolidation efforts. In many EU countries, scaling back public spending was achieved by curtailing public sector pay, adopting strict rules on the number of civil servants (replacing only a fraction of retiring employees), and cutting or postponing public investment. Meanwhile, the tax-to-GDP ratio continued to rise in most EU countries, with the main exceptions being Ireland and the Netherlands. The bulk of the rise in revenues no longer stemmed from personal income taxes and social security contributions but from corporate income and indirect taxes.

A brighter economic outlook has recently allowed some tax reductions

Since the late 1990s, most EU countries have taken advantage of buoyant revenues to reduce tax rates. Though some of these tax measures have involved cutting indirect taxes with little overall impact on supply-side conditions, many have been designed to have a structural impact: increase employment incentives and opportunities, and boost productivity. Main candidates for cuts have been social security contributions and the personal income tax (*e.g.* in Germany, Finland, France, Ireland, Italy, the Netherlands, Spain, Sweden and the United Kingdom). Overall, this has implied a slight decline in tax wedges on labour, though sometimes with a more pronounced impact on low-wage earners. In addition, several EU countries have also introduced measures to achieve a general reduction in corporate income taxes and improve the functioning of capital markets (*e.g.* Germany, Ireland, Italy).

Upward pressures on public spending will likely increase...

Population ageing will, in the absence of reforms, raise spending on pensions and health care. Fiscal implications will likely be considerable for EU countries, with old-age pension spending projected to increase, as a share of GDP, by over 4 percentage points by 2050 in Denmark, Finland, France, Germany, the Netherlands, and Spain (Table 1 and Dang *et al.*, 2001). While estimates are more uncertain for health care, they could add an additional 3 percentage points to the increase in overall public spending on average across EU countries. This mainly reflects rapidly rising elderly dependency ratios in conjunction with extensive public old-age pension and health and long-term care systems in place in many EU countries. Prospects for enlargement of the EU by admitting 13 new member countries may also imply additional spending,² although this would be less significant. The European Commission budget would have to pay for “pre-accession”

Table 1. **Age-related spending in some OECD countries**
Per cent of GDP, changes in percentage points

	Total age-related spending			<i>of which:</i>					
	Level 2000	Change 2000-peak ¹	Change 2000-50	Old-age pension			Health care and long-term care		
				Level 2000	Change 2000-peak ²	Change 2000-50	Level 2000	Change 2000-peak ⁵	Change 2000-50
Austria	10.4	4.6	2.3	9.5	4.3	2.2	..	..	..
Belgium	22.1	5.4	5.2	8.8	3.7	3.3	6.2	3.0	3.0
Denmark	29.3	7.3	5.7	6.1	3.6	2.7	6.6	2.7	2.7
Finland	19.4	8.5	8.5	8.1	4.8	4.8	8.1	3.8	3.8
France ³	..	..	..	12.1	4.0	3.9	..	..	..
Germany	..	..	..	11.8	5.0	5.0	..	..	..
Italy	..	..	..	14.2	1.7	-0.3	..	..	..
Netherlands	19.1	10.1	9.9	5.2	5.3	4.8	7.2	4.8	4.8
Portugal ⁴	15.6	6.6	4.3	8.0	4.5	4.5	..	..	..
Spain	..	..	..	9.4	8.0	8.0	..	..	..
Sweden	29.0	3.4	3.2	9.2	2.2	1.6	8.1	3.2	3.2
United Kingdom	15.6	0.8	0.2	4.3	0.0	-0.7	5.6	1.8	1.7
<i>Memorandum items:</i>									
Australia	16.7	5.6	5.6	3.0	1.6	1.6	6.8	6.2	6.2
Canada	17.9	8.7	8.7	5.1	5.8	5.8	6.3	4.2	4.2
Japan	13.7	3.0	3.0	7.9	1.0	0.6	5.8	2.4	2.4
United States	11.2	5.5	5.5	4.4	1.8	1.8	2.6	4.4	4.4

1. The peak values are in 2050 except for Denmark (2030), Sweden and the United Kingdom (2035), and Belgium and the Netherlands (2040).
 2. The peak values are in 2050 except for Japan (2015), the United Kingdom and Italy (2030), the United States, Finland, Sweden, Austria and France (2035), Denmark, the Netherlands, Norway, Portugal and Belgium (2040) and Spain (2045).
 3. For France, the latest available year is 2040.
 4. Portugal provided an estimate for total age-related spending but did not provide expenditure for all of the spending components.
 5. The peak values are in 2050 except for Denmark (2035) and United Kingdom (2040).
- Source: Dang, Antolin and Oxley (2001).

preparations, devote resources to infrastructure developments and regional support in these countries, and extend to them the EU Common Agricultural Policy (CAP).

... while forces working to erode tax bases are of concern

Free capital movements, the elimination of custom controls, the advent of the single currency and the development of information and communication technologies all contribute to increase the mobility of tax bases. On the one hand, enhanced mobility within the EU area may create welfare gains by enabling individuals and companies to choose, as a jurisdiction of residence, the country or

region that provides the fiscal package – in particular the provision of public goods and the associated tax burden – best suited to their needs. The greater exposure to international competition also provides strong incentives for governments to raise public sector efficiency and may yield a double dividend: lower taxation and better public services. On the other hand, free movements of products and factors, in conjunction with differences in EU countries' tax systems and barriers to effective information exchanges, extend the scope for tax avoidance and evasion. This could require lowering the tax burden on highly mobile production factors, and result in a higher tax pressure on the less mobile ones, in particular labour, or erode revenues to the point where public services cannot be delivered as extensively as voters might wish. At the corporate income tax level, there is no clear evidence of a race-to-the-bottom since cuts in statutory rates have often been accompanied by base-broadening measures. Nevertheless, recent trends in capital income taxation and the preferential tax treatment to non-residents by many EU countries may signal that such a pressure to lower taxes on highly mobile factors is at play. While enhanced co-ordination in some areas of tax policy could moderate tax base erosion pressures, there are economic and institutional constraints in this regard. Both the size and the composition of public spending vary significantly across EU countries (Atkinson and Van den Noord, 2001). This is reflected in different financing needs which may in turn warrant significant differences in tax systems. Institutionally, the requirement of unanimity for any decision on tax policy at the EU level makes agreement on how to proceed difficult where countries have diverging interests.

The trend towards globalisation in financial markets and the advent of cheap and rapid electronic links to overseas financial markets make it increasingly difficult to tax capital income effectively. In EU countries, restrictions on capital movements were fully removed in the early 1990s. Reinforcing the attractiveness of cross-border investment is the single currency, which has eliminated exchange risks and costs within the euro area. Meanwhile, the limited information flows between financial intermediaries and tax administrations both within and across EU countries – including bank secrecy laws in some EU countries – makes it easy to evade tax.³

EU countries' consumption and corporate tax bases are also becoming more vulnerable to erosion. Intra-EU cross-border shopping has been given a further boost since the adoption of the single currency, which facilitates cross-country price comparisons, and the emergence of e-commerce transactions. E-commerce is much less advanced in most EU countries than in the United States, though disparity across countries is wide – the Nordic countries being in a leading position. Recent estimates suggest that it accounted for less than 0.5 per cent of consumption in 1999, but its share is growing rapidly (Coppel, 2000). And, the advent of "smart" mobile phones, free Internet access, and cheaper telecom tariffs, are expected to boost private consumer e-commerce transactions. Tax base

erosion pressures may thus intensify in certain fields. In the context of Business-to-Consumer (B2C) transactions, EU countries which have maintained a higher effective tax rate on consumption (*e.g.* Denmark and Finland) will be the most affected since EU online providers of digital products currently apply their own country's VAT rates to intra-EU sales and products delivered from a non-EU online source are tax-free.⁴ New information and communication technologies also make a physical location of management and service activities much less important, thus increasing the mobility of corporate income tax bases.

COMMON FEATURES OF EU TAX SYSTEMS

Overview

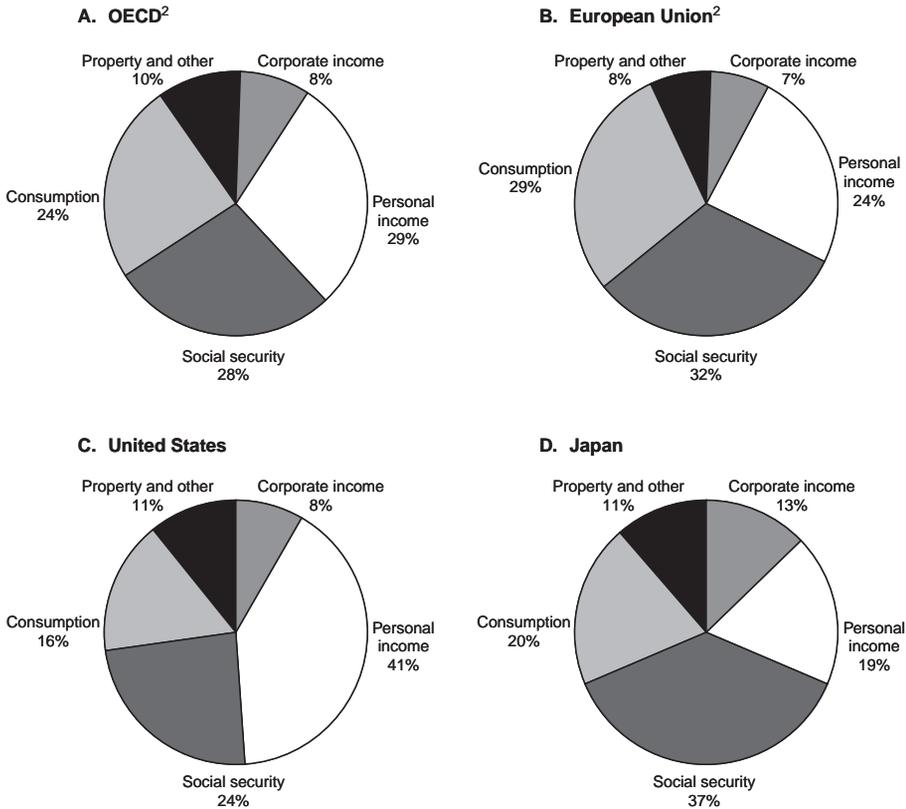
The tax burden in the EU area is much higher than in most other OECD countries. Defined as the tax-to-GDP ratio, it stood at almost 41 per cent in 1999, some 11 and 13 percentage points higher than in the United States and Japan, respectively.⁵ The tax mix is also different. Most EU countries rely heavily on social security contributions, consumption and environmentally-related taxes. On the other hand, corporate income and property taxes account for a much lower share of total tax revenues than in Japan and the United States – the United Kingdom and France being the main exceptions to this EU model (Figure 3). This often reflects a wide range of tax incentives for corporations and a lenient taxation of real estate. As a result of some integration between personal and corporate taxes, the tax system also creates less distortion for corporate financing decisions among domestic resources than in other major OECD economies, though it introduces some discrimination towards foreign investment. Another common distortion is that the personal income tax often grants a favoured tax treatment to specific saving vehicles (housing investment, life insurance and pension schemes). Overall, while income redistribution is often conceived as a key objective of EU countries' tax systems, progressivity embodied in statutory tax rates on personal income is weakened by a large set of tax allowances and tax credits, which mostly benefit higher-income groups. Further lessening the redistributive nature of the tax system is the relatively low taxation of property and capital income and the fact that social security contributions are basically proportional and sometimes regressive (mainly due to ceilings).

High tax wedges on labour

High taxes on labour are partly shifted forward into labour costs...

The average effective tax rate on labour in the EU area appears to be about 15 percentage points higher than in the United States and Japan.⁶ While the calculation of average effective tax rates is fraught with methodological problems

Figure 3. **Tax mix by source**¹
Per cent share of total tax revenue, 1999



1. The breakdown of income tax into personal and corporate tax is not fully comparable across countries.

2. Weighted average.

Source: OECD, *Revenue Statistics 1965-2000*.

and does not take into account any shifting of tax incidence, there is little doubt that taxes in the EU area impinge very heavily on labour markets.⁷ Labour income is most heavily taxed in Austria, Belgium, France, Italy and the Nordic countries while the United Kingdom, Ireland, and Portugal stand out for taxing labour income at an average effective rate broadly equal to that of the United States and Japan. Since the mid-1990s, many EU countries have introduced measures to lower the tax burden on labour, typically by reducing payroll taxes to boost the demand for labour, and foster work incentives (see Box I). However, both the

Box 1. Tax measures to improve labour market performance since the mid-1990s: individual countries' experiences

Many countries have cut payroll taxes since the mid-1990s...

To stimulate the demand for labour, several EU countries have cut social security contributions since the mid-1990s. Some countries (Austria, Belgium, France, Greece, the Netherlands, Spain and the United Kingdom) have targeted the low-paid and/or low-qualified workers, *i.e.* those who have usually suffered the most from high unemployment. Further supporting this approach is evidence suggesting that low-skilled workers face greater wage elasticity of labour demand (OECD, 1994a; Dormond, 1997). In France, the reduction in non-wage labour costs covered about one fourth of wage earners and amounted to about 18 per cent for workers at the minimum wage in 1998.¹ In the Netherlands, the so-called SPAK, introduced in 1996, covers one in six of the workforce and consists of a reduction in social security contributions for wage levels up to 115 per cent of the minimum wage. In Spain, since May 1997 new permanent labour contracts for the young, long-term unemployed, female and older workers, and workers previously with a temporary contract contribute to the social security system at reduced rates (of between 25 and 50 per cent, depending on the targeted group). More than 60 per cent of the new permanent contracts signed over the 1998-2000 period were subject to these reduced contribution rates. In Belgium, a labour cost reduction of about 2 per cent has been achieved and a further cut by 3.4 per cent over six years is programmed (from 1999 to 2004). In the United Kingdom, the National Insurance Contribution system was reformed to reduce the cost of hiring low-paid employees. The starting point at which employers and employees pay their components of National Insurance has been raised, with zero rates for wages below these limits.² Contrasting with these targeted approaches, several countries have cut social security contributions across the board or envisage doing so (Germany, Austria and Finland). In Greece, to promote job creation, a new tax allowance to corporate income tax was introduced in 1999, equal to half of the employers' social security contributions for every new job created.

... rebalanced the tax burden away from labour...

Several countries have recently shifted the tax burden away from labour-intensive activities in order to give a further boost to the demand for labour.

Shifting the tax burden from labour to capital or to a broader tax base. Some EU countries have recently lowered the generous tax allowances granted through the corporate income tax for the depreciation of equipment investment, thus re-balancing the relative cost of labour and capital (*e.g.* Germany and Denmark). Since 1999, the French government is gradually removing the wage component from the base of the local business tax (*taxe professionnelle*), a process which is supposed to be completed in 2003. Furthermore, the tax base to fund contributions for health insurance and family allowances has been progressively extended from labour to capital income (*Contribution sociale généralisée*). In Italy, the 1997-98 tax reform eliminated some employers' compulsory health contributions, bringing the overall employers' contribution rate down to 34.1 from 46.4 per cent. At the same time, a new tax, IRAP, based on expenditure was introduced.

Box 1. Tax measures to improve labour market performance since the mid-1990s: individual countries' experiences (cont.)

... and to polluting activities (the "double dividend approach"). Several countries have introduced or raised energy and other "green" taxes to finance, at least partly, cuts in payroll taxation. In Germany, new taxes on energy consumption implemented in April 1999 have been used to lower pension contribution rates. Italy launched a green tax reform in 1999 which involves a stepwise implementation of excise taxes which are both higher and more closely related to the carbon dioxide emissions produced by each fuel by 2005. The increase in tax revenues is to be recycled through lower taxes on labour. In the United Kingdom, a new climate change levy on companies for the use of gas, coal, and electricity came into effect in April 2001. Part of the receipts is recycled through a 0.3 percentage point cut in employers' social security contributions. In the Netherlands, about one third of the cut in personal income taxes in 2001 was expected to be financed through a VAT hike and green taxes.

Lowering indirect taxes on labour intensive activities. The European Council adopted in 1999 an EC directive granting an option to those EU countries who wish to do so to apply a reduced VAT rate to certain labour intensive services, for the period 2000-02. The objective is to stimulate demand for these services, and thus employment, and to bring part of the informal economy back to the surface. Activities targeted are: *i)* small repairs to bicycles, footwear, leather articles, clothing and household linens; *ii)* renovation and repairs to private housing; *iii)* window washing and cleaning of private homes; *iv)* home health care; and *v)* hairdressing. Nine countries have seized this opportunity: Belgium, France, Greece, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom (for the Isle of Man only).

... and enhanced tax incentives to work

EU countries have implemented a large array of tax measures to enhance incentives to enter into employment or to increase work efforts.

Cuts in marginal rates on labour income have been a key device aimed at boosting the supply of labour, across the board (Austria, Germany, Ireland, the Netherlands, Spain, Sweden and the United Kingdom) or targeted on the lower income groups (Denmark, France, Finland, Italy and Portugal).

Tax relief to make work more attractive for targeted groups of the population (spouses and low-paid workers in most cases). An earned income tax credit (EITC) and/or a tax relief for childcare expenses have been introduced or raised in Belgium, Finland, Germany, Italy, the Netherlands and the United Kingdom. To improve second earners' incentives to enter work, Ireland is switching gradually from a joint to an individual assessment of married couple income. France, Germany, Greece, and Spain have also recently raised the general personal income tax allowance, thus exempting the income of most low-qualified workers from taxation. In addition, to

Box 1. Tax measures to improve labour market performance since the mid-1990s: individual countries' experiences (cont.)

lessen the unemployment trap, a few countries have removed some of the tax privileges granted to out-of-work benefits, or introduced a progressive phase-out scheme for means-tested benefits or tax breaks. Unemployment benefits became taxed in Spain in 1994. In France from 1999, people who qualify for the basic income support (*Revenu Minimum d'Insertion*), are granted a temporary exemption for the tax on rented flats (*taxe d'habitation*) once they find a job. In 2001, an employment bonus (*Prime pour l'emploi*) delivered through the tax system is being introduced and is expected to benefit up to ten million people. As a key element of the United Kingdom's Welfare to Work programme, the qualifying ceiling for several in-work support schemes has been raised and the phase-out rate lowered.

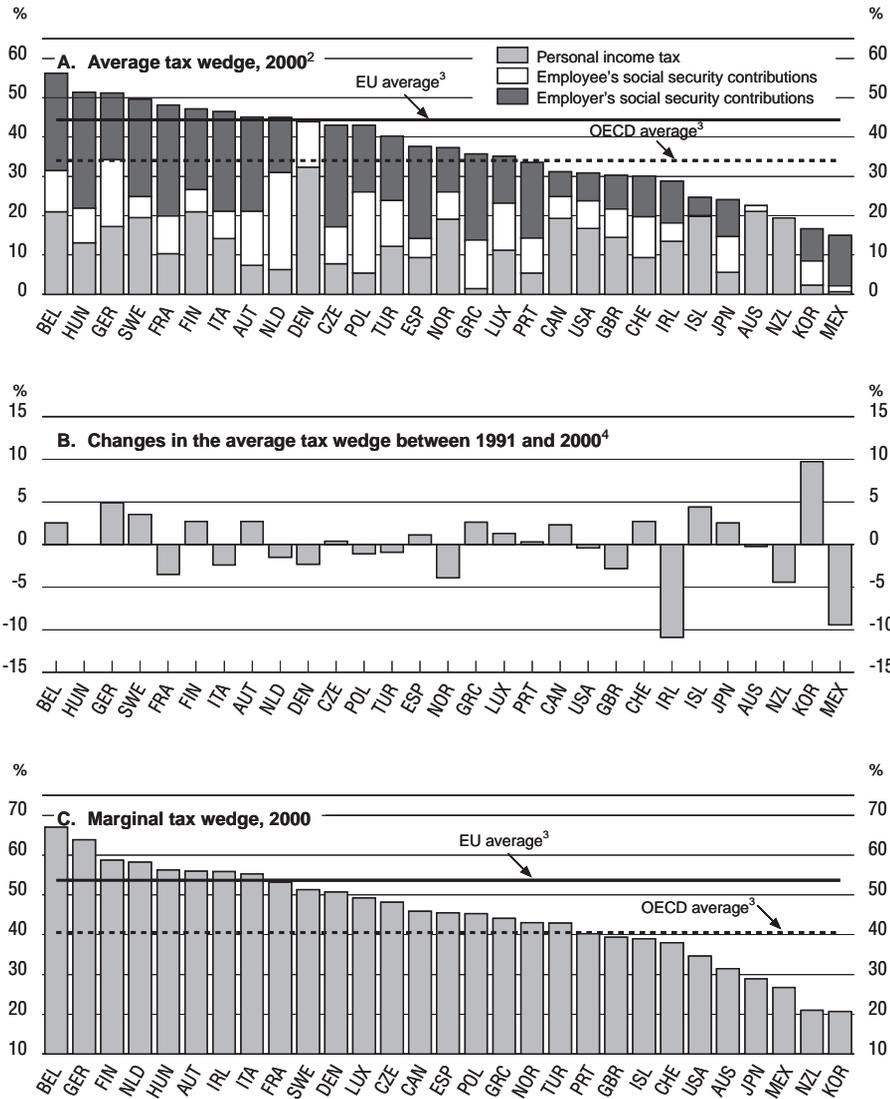
1. In France, a system of graduated rebates of social charges on low wages (*ristourne dégressive*) was instituted in 1993 and later refined and extended in several stages. For more details, see OECD (1999a), Gubian (1999) and Pearson (2000).
2. In the previous system, firms paying wages above the lower limit were required to pay National Insurance on wages below it (as were employees), effectively providing an entrance fee for workers whose wages rose above the threshold.

average and marginal tax wedges on labour remain high. At the wage level of an average production worker (APW), the average effective tax wedge on labour in the EU area approached 40 per cent in year 2000, compared with about 30 and 24 per cent in the United States and Japan respectively (Figure 4, Panel A). For most EU countries, high tax wedges on labour largely reflect the important role played by wage-based contributions in financing the transfer system, as well as its broad coverage and public nature. High tax wedges on labour help to explain the low degree of labour resource utilisation in most EU countries since taxes on labour are in turn partly shifted forward into labour costs (Daveri and Tabellini, 2000).⁸ This largely reflects various rigidities on the labour and product markets, collective bargaining arrangements, and the weak relation between contributions paid and transfers received, all of which reduce firms' ability and/or incentives to resist wage claims.⁹

... and operate to lower work incentives

The marginal tax wedge on labour, which is an important indicator for work incentives, is also significantly higher than in other OECD countries (Figure 4, Panel C). This may result in a low participation rate and/or in lower working hours.

Figure 4. Tax wedges on labour¹



1. For a single individual at the income level of the average production worker. Tax wedges are calculated by expressing the sum of personal income tax, employee plus employer social security contributions together with any payroll taxes as a percentage of labour costs (gross wage plus employers' contributions).
2. Data for 2000 are based on estimated wage levels of the average production worker.
3. Weighted using 1995 GDP and purchasing power parities.
4. The first year refers to 1991 or the earliest year available. To be consistent with the 1991 data, the 2000 data for Austria excludes payroll taxes.

Source: OECD, *Taxing wages 1999-2000*.

If the system contains some elements of family taxation (either because income taxes are levied on households rather than individuals or because there are family-related tax allowances or credits), high marginal tax wedges on labour may discourage a potential second earner from taking on a job. In some countries, in particular the Nordic countries, the distorting effects of the tax system seem to work through short working time amid high participation rates.¹⁰ In some countries, low-paid workers are the most severely affected by high taxes on labour, despite nominally progressive income tax schedules (Figure 5). This largely reflects social security contribution ceilings and/or floors (in place in Austria, Germany, Greece, the Netherlands and Spain) and the fact that high-income earners may benefit from tax relief on certain components of their income, such as compensation in-kind and/or stock options.¹¹

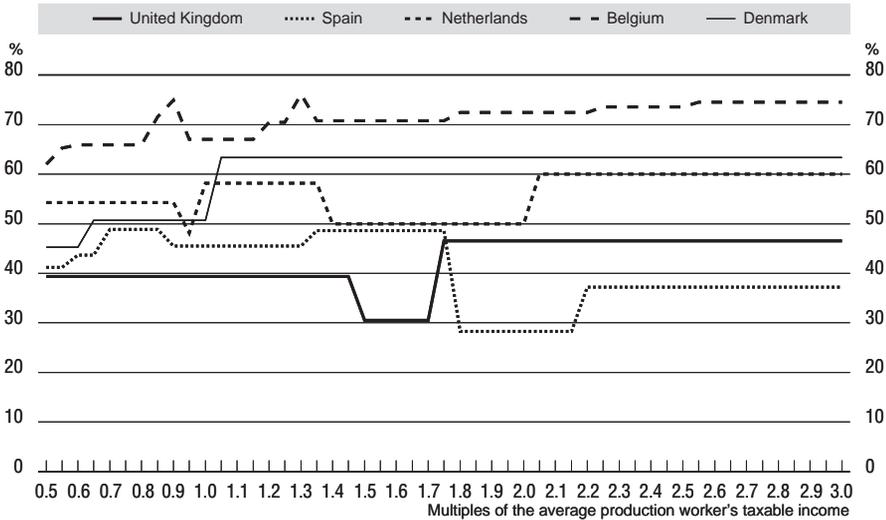
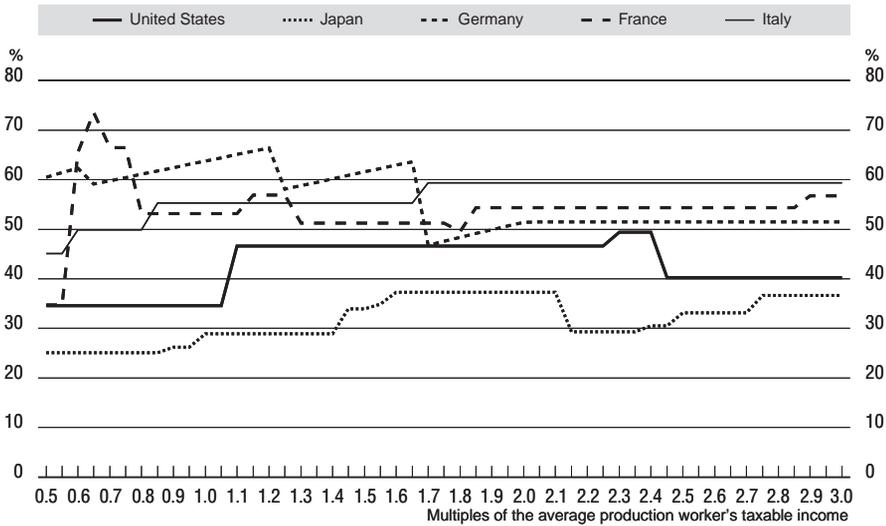
The interaction of the tax and transfer systems further creates incentives to remain outside the labour market for some groups, in particular low-wage and older workers, as well as spouses of low-income earners. First, some EU countries have applied favourable tax rules to pensions, which combined with a front-loaded accumulation pattern of pension rights, provide strong incentives for early retirement (Blöndal and Scarpetta, 1999).¹² This may partly explain the relatively low participation rates for older people. Second, at the family level, net replacement rates are close to, or exceed, 100 per cent in some cases and may thus create unemployment traps (Table 2). This partly reflects a preferential tax treatment granted to transfer payments or the granting of benefits conditional on the family income level. In fact, unemployment benefits are tax free or taxed at a reduced rate in Austria, Belgium, Germany, Greece, and Portugal and social security contributions are often payable by beneficiaries at a reduced rate (OECD, 1999b).¹³ High marginal effective tax rates at the low end of the wage scale could also reflect employment conditional benefits or tax reductions, such as those currently in place in Finland, the Netherlands and the United Kingdom. They are designed to increase the incentive for people without work to take a low-paid job, but on the other hand may encourage those already in work to reduce their working hours or create adverse incentives for individuals in families with more than one potential worker (Dilnot and McCrae, 2000 and Blundell, 2000).¹⁴

Consumption taxes play an important role

Consumption taxes account for a large share of total tax revenues

Effective tax rates on consumption in the EU area are, on average, higher than in most other OECD countries. This not only reflects a higher tax-to-GDP ratio but also a tax mix relying heavily on consumption taxes. In fact, consumption-based taxes accounted for 29 per cent of total tax revenues in the EU area in 1999 – compared with 20 and 16 per cent in Japan and the United States, respectively –

Figure 5. **Marginal tax wedge on labour along the income ladder¹**
 For a single person with no children, 2000, per cent



1. Tax wedges, between labour costs to the employer and the corresponding net take-home pay of the employee, are calculated by expressing the sum of personal income tax, employee plus employer social security contributions together with any payroll tax, as a percentage of labour costs.

Source: OECD, *Taxing wages 1999-2000*.

Table 2. **Marginal effective tax rates on additional income for different family types¹**
1997

Principal earner	Full-time employed			Unemployed		Part-time employed
	Full-time employed	Part-time employed	Non-employed	Full-time employed	Part-time employed without benefit entitlements	Non-employed
Austria	30	21	76	32	43	135
Belgium	57	61	68	43	25	109
Denmark	50	48	84	55	61	84
Finland	36	23	88	48	23	117
France	28	38	76	29	30	69
Germany	51	50	80	31	19	115
Greece	30	30	54	66	118	104
Ireland	32	25	68	20	38	83
Italy	33	25	63	37	19	84
Luxembourg	30	14	87	26	12	198
Netherlands	39	37	89	45	52	90
Portugal	21	13	79	14	11	174
Spain	23	19	78	23	19	77
Sweden	37	42	88	43	42	79
United Kingdom	28	20	72	60	55	93
<i>Memorandum items:</i>						
Canada	37	33	75	34	29	105
Japan	12	10	60	10	7	133
United States	19	11	68	20	0	102
OECD average	32	27	74	34	32	107
EU average	35	31	77	38	38	107

1. This table provides estimates on the incentives to increase working hours or to move out from non-employment for the secondary earner of a family with two children, taking into account the labour market position of the principal earner. The marginal effective tax rate (METR) expresses the amount of earnings which are "taxed away", either via income taxes or means-testing procedures and cancellation of benefits. $METR = 1 - (\text{net income in work} - \text{net income out of work}) / \text{change in gross income}$. Part-time employment corresponds to 16 hours or two days each week, and total earnings are 40 per cent of the average production worker level of earnings. Earnings from full-time employment correspond to average production worker earnings.

Source: OECD (1999), *Benefit system and work incentives*.

with VAT playing a dominant role, accounting for about 60 per cent of total tax revenues on goods and services in the EU area. The heavy reliance on consumption taxes, notwithstanding some administrative issues they raise, has several advantages: *i*) consumption taxes are relatively neutral towards saving and investment decisions; *ii*) they do not discriminate between imports and locally-produced goods and do not affect external competitiveness (as long as they are based on the destination principle); and *iii*) they provide a symmetric treatment of

labour, transfer and capital income, thus creating fewer disincentives to work and meeting the criteria for horizontal equity better than income taxes.

But rate differentiation and exemptions contribute to lower efficiency and neutrality of consumption taxes...

However, many EU countries have maintained reduced rates or exemptions for the value added tax which induce revenue losses.¹⁵ In most cases, this tax relief reflects distributional considerations.¹⁶ However, where such use of VAT rate differentiation is extensive, it gives rise to large dead-weight losses as reduced rates benefit also high income groups (*e.g.* those for restaurant and hotel services). Adding to direct revenue losses, rate differentiation also lowers VAT efficiency indirectly by increasing the complexity of the system and making it more difficult to assess the degree of tax compliance. Overall, as of 1998, effective rates were far below standard rates, in particular in Belgium, Italy, Spain, and Sweden (Table 3). To lower compliance costs for small enterprises, turnover thresholds below which firms are not required to register for VAT have been introduced; the tax liability must thus be determined by applying presumptive methods and/or through simplified regimes. This increases the difficulty of monitoring compliance and may induce tax avoidance by splitting companies into smaller units and under-reporting sales. And the recent Italian experience has shown that requiring small (non-incorporated) companies to register for VAT may also prompt better overall compliance with the tax code.

Differentiated rates and exemptions may also distort competition and consumption patterns within EU countries. For example, one long-standing case of distortion has been the privileged tax treatment of catering (which is taxed at a reduced VAT rate in most EU countries) against restaurant services. Other cases have emerged more recently with the introduction of competition in those sectors which were traditionally controlled by the public sector – *e.g.* postal and telecommunications services, radio and television broadcasting services, as well as electricity, gas and water supply. Under current VAT rules, public sector bodies are subject to a special (and rather complex) VAT treatment which potentially distorts competition (Aujean *et al.*, 1999). One key exemption case of public sector bodies applies to the supply of postal services, which have been traditionally operated by monopolistic public agencies and are increasingly operating in competitive markets. In this context, the special VAT treatment granted to public bodies, in place in some countries, may operate to distort competition, as evidenced by the complaints already received from private operators. It may also introduce a bias for public authorities towards self-supply of goods and services *versus* contracting out to the private sector since they may not claim back the VAT paid on their inputs provided by the private sector. However, Denmark, Finland, the Netherlands, Sweden, and the United Kingdom have introduced special refund schemes to allow local authorities a refund of VAT outside the VAT system.¹⁷

Table 3. Value added taxes in EU countries

Panel A. VAT statutory rates					
	Standard VAT rates			Memorandum items:	
				Hotel accommodation	Restaurant
	End of 1980	End of 1993	May 2001	May 2001	May 2001
Austria	18.0	20.0	20.0	10.0	10.0
Belgium	16.0	19.5	21.0	6.0	21.0
Denmark	22.0	25.0	25.0	25.0	25.0
Finland	n.a.	n.a.	22.0	8.0	22.0
France	17.6	18.6	19.6	5.5	19.6
Germany	13.0	15.0	16.0	16.0	16.0
Greece	n.a.	18.0	18.0	8.0	8.0
Ireland	25.0	21.0	20.0	12.5	12.5
Italy	14.0	19.0	20.0	10.0	10.0
Luxembourg	10.0	15.0	15.0	3.0	3.0
Netherlands	18.0	17.5	19.0	6.0	6.0
Portugal	n.a.	16.0	17.0	5.0	12.0
Spain	n.a.	15.0	16.0	7.0	7.0
Sweden	23.5	25.0	25.0	12.0	25.0
United Kingdom	15.0	17.5	17.5	17.5	17.5
<i>Memorandum items:</i>					
Average ¹ (EU 11)	17.5	19.4	19.8	11.2	15.1
Coefficient of variation (EU 11)	0.3	0.2	0.2	0.6	0.5
Average, ¹ full sample	17.5	16.2	19.4	10.1	14.6
Coefficient of variation	0.3	0.2	0.2	0.6	0.5
Maximum range (maximum-minimum)	15.0	10.0	10.0	22.0	22.0

1. Simple average.

... and variations in consumption tax rates and exemptions across countries may distort international competition...

International differences in VAT rates do not seem to affect consumption choices greatly, although they can have a significant impact on cross-border shopping in boundary areas and on a few goods and services. In fact, while harmonisation efforts in the 1980s and early 1990s were reflected in a lower dispersion of VAT rates, the 10 per cent range in standard VAT rates across EU countries has persisted since 1993, suggesting that there is no clear spontaneous trend towards harmonisation (Guichard and Lefebvre, 1997).¹⁸ Furthermore, since the application of reduced or super-reduced rates is not homogeneous across EU countries, bilateral variations for some products are much higher. The tourism industry, where price competition is important, provides an example: VAT rates

Table 3. Value added taxes in EU countries (cont.)

Panel B. Effectiveness of value added taxes, 1998				
	Standard VAT rates, ² per cent	Effective VAT ³ rates, per cent	Effective VAT rates in per cent of standard rates	Memorandum items: Turnover thresholds for VAT exemption (position as of 1 January 2000)
	A	B	B/A	Euro
Austria	20.0	12.2	61.2	21 802
Belgium	21.0	10.3	49.0	5 578
Denmark	25.0	14.6	58.3	2 681
Finland	22.0	12.9	58.5	8 409
France	20.6	10.9	53.0	76 225/26 679 ⁴
Germany	16.0	9.4	59.0	16 617
Greece	18.0	9.5	53.0	7 337
Ireland	21.0	12.2	58.2	50 790/25 395 ⁵
Italy	20.0	8.5	42.7	2 582
Luxembourg	15.0	8.9	59.2	9 916
Netherlands	17.5	10.5	60.1	1 883 ⁶
Portugal	17.0	10.5	61.5	14 964
Spain	16.0	8.0	49.7	.. ⁷
Sweden	25.0	10.0	40.1	..
United Kingdom	17.5	8.8	50.1	82 426
EU average ¹	19.4	10.5	54.2	

1. Simple average.

2. Effective VAT rates are calculated by dividing VAT revenue by its base (i.e. consumption exclusive of consumption taxes).

3. Position as at 1st January 1998.

4. € 76 225 for delivery of goods, restaurants and accomodation; € 26 679 for other services.

5. € 25 395 (excluding VAT) for suppliers of services.

6. When net tax payable lies between € 1 345 and € 1 883 businesses receive a graduated relief.

7. Individual retailers do not register for the VAT.

Sources: OECD, *Revenue Statistics, 1965-1999*; OECD, *Consumption Tax Trends*. European Commission (2001), VAT rates applied in the Member States of the European Community, Doc/2905/2001-EN.

range between 3 and 25 per cent within the EU area. The dispersion of excise duties is even larger and induces not only cross-border shopping but also smuggling.¹⁹ Overall, some EU countries can maintain lower indirect tax rates, thus attracting consumers from neighbouring countries. This serves to raise their tax revenues at the expense of neighbouring countries and contributes to the erosion of aggregate EU tax revenues.²⁰

The emergence and rapid development of e-commerce transactions has given a new, and international, dimension to the potential non-neutralities embodied in the current VAT system. For services delivered on-line, international practices for taxing e-commerce give rise to significant distortions, inducing a discrimination against EU online sellers, and within the EU area against high VAT

countries. This occurs because the VAT rate which applies for electronic deliveries (B2C transactions and to some extent B2B transactions) is the one where the supplier is located (*i.e.* the origin principle). Thus, online sellers established in EU countries with a low VAT rate have a competitive advantage over those in higher VAT countries. In addition, EU online sellers currently suffer a double competitive disadvantage *vis-à-vis* non-EU countries. First, if an EU customer buys and downloads software from an EU online retailer, then VAT is imposed. In contrast, if the retailer is based outside the EU, the transaction is tax-free. Second, services sold to a customer outside the EU area are subject to VAT.

To remove discriminatory factors on services delivered online, the Commission proposed a directive in June 2000 requiring non-EU e-commerce providers to register in at least one EU country when offering services to private consumers and charge the VAT according to the rules of that country on all online sales. To ensure that the compliance burden is eliminated where it would reduce the incentive to carry on business activity and to permit tax administrations to focus resources where the return is likely to be high, the proposed directive introduces thresholds of online sales.²¹ In addition, the Swedish authorities, during their Presidency of the Council of the European Union in 2001, have proposed to require vendors to charge VAT at the rate applicable to the customer's country of residence. This would reduce the competitiveness bias against high VAT countries and the non-neutralities between electronic and traditional commerce. However, despite broad support of most EU countries, there is currently no agreed approach to levy VAT on e-commerce while any decision at the EU level requires unanimity. In any case, in absence of an enhanced international co-operation among tax administrations, fair and effective taxation of e-commerce transactions would rely on voluntary compliance by companies based outside the EU area. Given the complexity of existing VAT rules and the lack of effective enforcement, it may be faster and cheaper for traders to opt for non-compliance. However, private purchasers often prefer to deal with entities that have established a degree of credibility and trust, including compliance with tax rules.

... while "transitional" VAT arrangements are complex, not uniformly applied and prone to tax evasion

The lack of uniformity in the implementation of EC Directives on VAT across EU countries and procedural complications that the cross-country differences in the VAT regime entail in a single market creates further distortions in trade flows. The "transitional" VAT regime for cross-border trade, implemented since the abolition of custom controls between EU countries in 1993 (Appendix 1) embodies a wide variety of rules for determining the place where the transaction is taxed and, consequently, the place where the tax is deducted or refunded.²² The European Commission has argued that, in conjunction with the lack of uniformity

in which the present VAT system is applied, this creates confusion, additional workloads, administrative complication and legal uncertainty for traders (European Commission, 1999a and 1999b). This is reflected in the fact that business surveys consistently point to the complexities of VAT procedures as a major disincentive to cross-border trade.²³ As an illustration, a survey on Dutch firms estimated that compliance costs of the transitional VAT system are equivalent to a 5 per cent border tax on intra-community transactions (Verwaal and Cnossen, 2000).

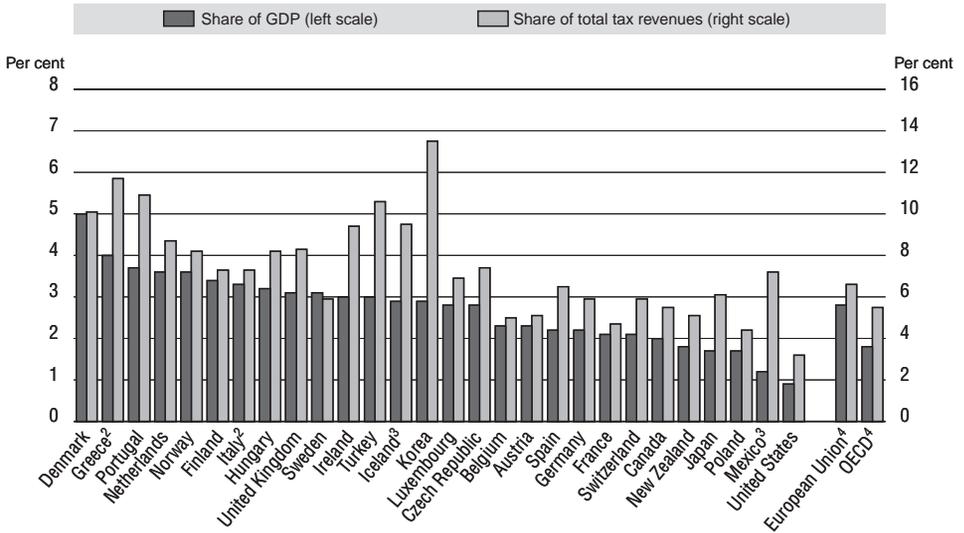
This “transitional” system may be also prone to fraud, as goods travel tax-free across intra-EU frontiers, unless EU countries’ tax authorities fully co-operate with each other. The European Commission (1998b) noted: “Given that, rather than being collected at the moment of importation, VAT is recovered at a later stage, and on the basis of the taxpayers’ periodic declarations, the possibility of fraud has been proportionately increased”.²⁴ And VAT declarations are rarely subject to selective and co-ordinated controls.²⁵ As a result, according to the European Commission (2000e) estimates, VAT fraud amounts to € 8 billion annually, and the European Commission (2000d) noted, “there are indications that the level of serious fraud in intra-Community trade is growing”.

One solution to cut compliance costs, which create distortions in the single market, and to reduce scope for tax fraud would be to replace the destination principle by the origin principle (see Appendix 1). The taxation of imports and the non-taxation of exports would be abolished and the VAT system would be operated within the EU area in the same way as it would within a single country. Even though the European Commission remains committed to adopting such a system, it could only be introduced with greater harmonisation in value added taxes across EU countries, including tax rates. It would also require the introduction of a revenue-sharing scheme. Acknowledging the significant technical and political challenges associated with such a radical change, the Commission proposed a new approach in June 2000 to improve the current “transitional” system. The “Strategy to improve the operation of the VAT system within the context of the internal market” (European Commission, 2000c) is based on four objectives: simplification of current rules and their modernisation (in particular to reflect recent developments in e-commerce, and some network industries, such as postal services, broadcasting, water and electricity), more uniform application of current rules and a new approach to administrative co-operation.

Environment-related taxes raise substantial revenues

Environmentally-related taxes represent a much higher share of GDP in EU countries than in most other OECD countries (Figure 6). Motor fuel and vehicle taxes account for the bulk of these revenues. However, over past decades, EU

Figure 6. Revenues from environmentally-related taxes¹
1998, in per cent of GDP and total tax revenue



1. These data do not reflect environment-related provisions in other taxes, including personal and corporate income-taxes, such as accelerated provisions or tax credits for energy-saving and pollution-reducing equipment.
 2. 1997 instead of 1998.
 3. 1995 instead of 1998.
 4. Weighted average.
- Source: Environmentally-related tax database, OECD.

countries have increased the use of economic instruments for pollution control. They have given preferences to taxes, while other countries – in particular the United States – have made greater efforts to rely on pollution permits (OECD, 1999c).²⁶ A number of countries have implemented comprehensive green tax reforms, *e.g.* Denmark, Finland, Germany, the Netherlands and Sweden (OECD, 2001).

However, the tax system does not always provide appropriate incentives to abate pollution. Fuel and vehicle taxes have usually been introduced for fiscal rather than environmental reasons. In addition, the objectives of avoiding competitiveness losses in particular sectors, as well as regional development considerations, have often taken precedence in the design of the tax system over the provision of incentives to abate pollution. This has frequently resulted in a preferential tax treatment granted to heavy polluters, in particular agriculture and energy-intensive manufacturing industries.²⁷ Some countries (Denmark and the United Kingdom, for example) make exemptions for firms conditional on their

agreeing to reduce their emissions substantially. Such an approach is administratively burdensome and it is not clear that the reduction achieved will be much greater than would have occurred anyway (O'Brien and Vourc'h, 2001). Also, existing taxes on electricity are not differentiated by the carbon content of the primary energy used in most EU countries, as efficient efforts to discourage greenhouse gas emissions would warrant. As a result, tax rates in terms of CO₂ emissions vary considerably (estimates for Germany are provided in Kirkpatrick *et al.*, 2001 and for Finland in Vourc'h and Jimenez, 2000). The low taxation of diesel compared to gasoline in the European Union (Figure 7) – diesel releases more CO₂ per litre and other environmental costs associated with diesel are higher – is another illustration of the failure of taxes to reflect the pollution content of products/activities.²⁸

Taxation of capital is relatively low but some distortions remain

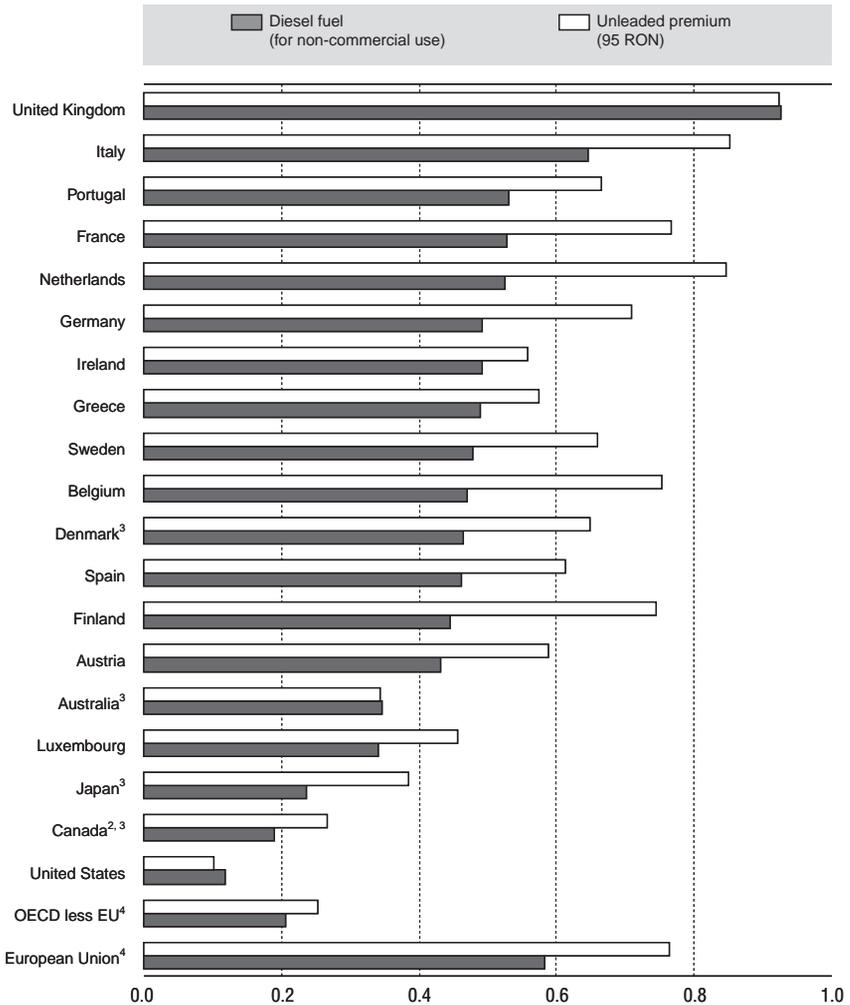
Tax rates on saving vehicles are relatively low and converging

Progress towards greater tax neutrality on capital income accruing from different types of assets has been a hallmark of recent reforms in most EU countries. Precursors are the Nordic countries (Denmark, Finland, Norway and Sweden) which adopted a dual income tax system in the late 1980s-early 1990s (for a description of this model, see Cnossen, 1997). Under such a system, a unique flat rate tax applies to net capital income (interest income, dividends and capital gains) while labour income is subject to an additional and progressive tax. Most other EU countries have not adopted a “pure” dual income tax system but increasingly tax interest income and capital gains at flat rates, usually lower than marginal rates which apply to labour income; and these rates are tending to converge (*e.g.* Austria, France, Germany, Greece, Italy and Spain).²⁹ The Netherlands has also introduced a system which resembles a dual income tax system in 2001 (the so-called “box approach”).³⁰ The move towards a lower and flat tax on capital income has often reflected the need to remain competitive on the international capital market, in particular in the context of free capital movements and the advent of the single currency, and/or the difficulty of securing a proper tax assessment (in particular in countries which have maintained bank secrecy for tax purposes). The potential drawback of the dual income tax model is that it may have adverse effects on income distribution. Also, moving to a dual income tax system may prompt tax planning, in particular for small enterprises and liberal professions for whom the distinction between labour and capital income is not always easy to draw (Strand, 1999 and Van den Noord, 2000).

But the taxation of saving still favours housing investment and retirement schemes...

Most EU countries grant tax-favoured treatment to specific saving instruments. Typically, retirement schemes and housing investment benefit from the

Figure 7. **Petrol taxes in international comparison: unleaded gasoline versus diesel**
 Total taxes levied in 2000, US\$ per litre¹



1. Using purchasing power parities.
2. Taxes concern diesel for commercial use.
3. For Australia and Japan taxes concern unleaded 91 RON gasoline, for Canada 97 RON gasoline and for Denmark 98 RON gasoline.
4. Weighted average using weights based on 1995 GDP and PPP.

Source: IEA (2001), *Energy Prices and Taxes, first quarter 2001* and OECD, *Main Economic Indicators*.

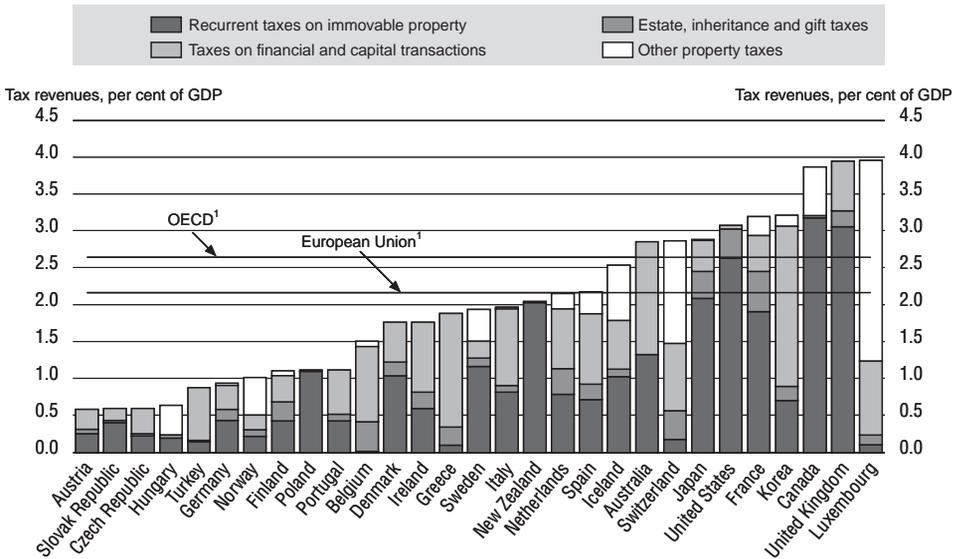
most generous tax breaks. In both cases, these breaks are motivated in part by social or economic objectives: alleviating future pressures on public pension schemes and facilitating population access to proper housing. It is unclear if these measures succeed in achieving these aims. Several empirical studies (OECD, 1994b) have shown that tax incentives are mainly reflected in the composition – and not the level – of saving. In addition, tax privileges to pension vehicles often give some institutions – pension funds and insurance companies in many cases – an undue competitive advantage over other financial intermediaries (Carey *et al.*, 1999). As well, tax privileges for housing investment may largely be capitalised, reflected in higher land and house prices given the low responsiveness of housing supply to demand, or in the financial conditions of mortgage loans if competition in the banking sector is low.

Tax breaks for retirement saving typically include the provision of tax allowances for contributions paid to pension funds or life insurance schemes and the absence of (or reduced) tax on income or capital gains earned by the funds. Many EU countries (*e.g.* Germany, Italy and Spain) have recently increased tax incentives to retirement saving, though from very different starting points. Adema (2002) estimates that tax breaks towards pensions savings amounted to more than 2 per cent of GDP in Ireland and the United Kingdom, but to only 0.1 per cent in Germany in 1997. However, in the absence of co-ordination across the EU area, these tax privileges may act as a barrier to the single market. Specifically, tax incentives for retirement savings could inhibit the participation in another EU country pension scheme, since non-resident citizens and companies usually do not get the same tax privileges (both for contributions and benefits) as nationals when using the services of a pension provider in another member state.³¹

Tax breaks granted to owner-occupied housing are both widespread and extremely diverse. First, interest costs, and in some case principal repayments, are deductible from the tax base or give rights to a tax credit in 12 EU countries.³² To be symmetric with productive investments, tax deductibility of home ownership costs should only apply if housing is consistently treated as an investment good, with service (*e.g.* imputed rents) being taxed. However, the effective taxation of imputed rents, when it exists, is often low since imputed rents are well below market values in many countries. Furthermore, high compliance and administrative costs have also led some countries to abolish the taxation of imputed rents (*e.g.* Spain in 1999). Second, money invested in housing saving accounts gives the right to a tax rebate in some countries. Third, realised capital gains on owner-occupied housing are tax-free in 13 EU countries.

The under-valuation of housing investment for tax purposes is also reflected in the low revenues from property taxes as a share of GDP in the EU area compared to most other OECD countries, the United Kingdom and France being the main exceptions (Figure 8). The general trend, however, has been to reduce

Figure 8. Taxes on property
1999



1. Weighted average using 1995 GDP and purchasing power parities.
Source: OECD Revenue Statistics, 1965-2000.

the generosity of some of owner-occupied housing tax privileges. The most decisive move has been made in the United Kingdom which is fully phasing out the mortgage interest relief but Denmark, France, Ireland, the Netherlands and Spain have also reduced these tax privileges recently.

Other features of the taxation of capital income introduce significant non-neutralities. First, some EU countries have fairly large basic allowances against capital income taxation, in particular in Belgium, France, Germany, the Netherlands and the United Kingdom.³³ In some cases, these basic allowances substantially reduce the compliance and administrative burden on taxpayers who make small gains or losses on everyday items. However, these allowances also lower tax revenues, create threshold effects, harm horizontal equity, and worsen income redistribution. Second, some countries grant tax incentives for long holding periods (e.g. Austria, Germany, Portugal, Spain and the United Kingdom). They aim to encourage owners to take longer-term investment decisions. However, they may also create a “lock-in effect”, by reducing the liquidity of capital markets and limiting the financing available for newly created and dynamic firms.

... and often grants a favoured regime to non-residents

Some international issues also exist. EU countries still apply different tax provisions on capital income, and often grant a preferential tax treatment to non-residents. While it must be noted that the tax treatment of income, for residents and non-residents, varies substantially between different financial assets, the example of the treatment accorded to interest from government bonds is shown in Table 4. Since some tax administrations do not exchange information on interest income on an automatic basis, or apply a withholding tax on every non-resident's savings income, EU residents may be able unlawfully to escape the tax on this income imposed by their residence country, as well as lawfully earn the interest free of tax in the source country. In 1998, the European Commission proposed a directive on the taxation of cross-border savings of individuals. It was intended to ensure a minimum effective taxation on cross-border interest payments of EU individuals within the EU area but has no direct impact on tax regimes applicable to residents. It envisaged the co-existence of two models: a withholding tax and an automatic exchange of information.³⁴

In 2000, a revised approach was agreed by EU finance ministers which identified the automatic exchange of information system as the preferred regime in the long term. Effective exchange of information is preferred by the EU to a withholding tax system because it represents the only way in which income from savings invested overseas can be taxed on the same basis as domestic savings, thus avoiding distorting saving flows and horizontal equity.³⁵ The agreement provides a seven-year transition period during which Austria, Belgium and Luxembourg may operate a withholding tax system before implementing an exchange of information system. The revised approach also introduced a delay before the directive comes into force to allow negotiation with some non-EU financial centres over adopting similar measures. Luxembourg and Austria have indicated that their eventual approval of the directive – which is due before the end of 2002 and under the rule of unanimity – would be conditional on the Commission reaching an agreement with non-EU financial centres.³⁶

Arrangements to undo double taxation exist but are still imperfect

Some EU countries grant resident individuals some relief for the taxation at the corporate level, by granting them a tax credit corresponding to the tax already paid on corporate profits.³⁷ This contrasts with the system in place in Japan, the United States and some other OECD countries. For a resident investor, this relief results in a lower tax wedge on distributed profits (Figure 9). However, if the typical investor is a resident household, the tax system still gives firms a strong incentive to use debt funding rather than new equity or retained earnings in most EU

Table 4. Taxation of interest income from government bonds in EU countries in 2000

	Residents (per cent)	Non- residents	Notes
Austria	25	Exempt	For residents, the withholding tax is final if the taxpayer so decides. Otherwise, interest income is aggregated into the taxable income.
Belgium	15	Exempt	For residents, the withholding tax is final if the taxpayer so decides. Otherwise, interest income is aggregated into the taxable income and taxed at the individual's marginal rate. The first € 1 377 of interest income received per household are tax-free.
Denmark	60.5 ¹	Exempt	Interest income for residents is incorporated into the taxable income and taxed at the individual's marginal rate. Non-residents are in general not subject to tax on interest income, except certain former residents.
Finland	29	Exempt	The withholding tax is final for residents. Non-residents are exempt from taxes on interests derived from Finnish Bonds, debentures and other mass instruments of debt.
France	15	Exempt	For residents, the withholding tax is final if the taxpayer so decides. Otherwise, interest income is included in the taxable income and taxed at the individual's marginal rate. Certain National Savings products are tax exempt and other short-term products are withheld to 15 per cent up to 50 per cent when unnamed.
Germany	53.8 ¹	Exempt	A creditable 31.65 per cent withholding tax is applied for residents. Interest income for residents is incorporated into the taxable income and taxed at the individual's marginal rate. An allowance for income from capital investment is granted up to € 1 534 per year (€ 3 068 for jointly assessed spouses).
Greece	15	7.5%	The withholding tax for non-residents is applied on certain products issued after the EMU joining.
Ireland	46 ¹	Exempt	A creditable 24 per cent withholding tax is applied for residents. Interest income for residents is incorporated into the taxable income and taxed at the individual's marginal rate, except senior citizens and incapacitated persons with no taxable income who are entitled to a refund.
Italy	12.5	Exempt	For residents, the 12.5% withholding tax is final.
Luxembourg	47.15 ¹	Exempt	Net interest income is taxed at the individual's marginal rate. A basic exemption of € 1 487 applies to income from movable capital (of which interest), and if the taxable income is not more than € 8 924, the tax due is reduced to nil.

Table 4. Taxation of interest income from government bonds in EU countries in 2000 (cont.)

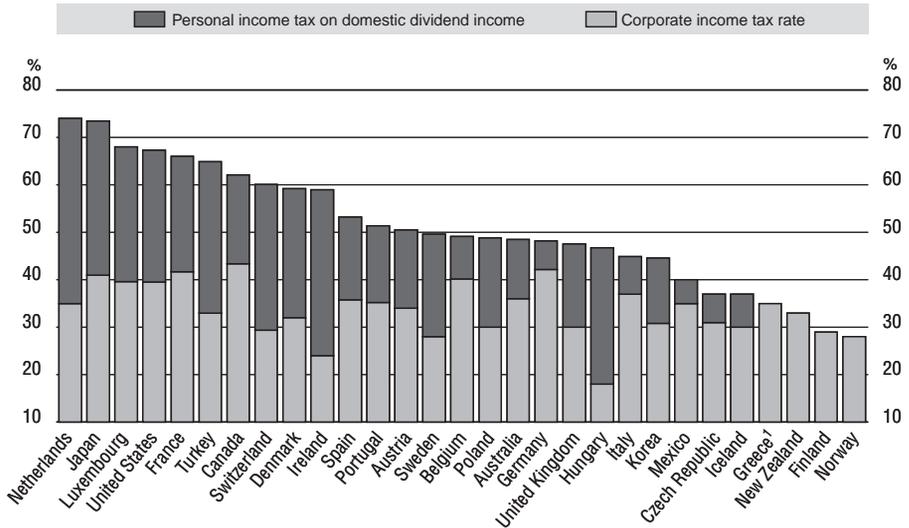
	Residents (per cent)	Non- residents	Notes
Netherlands	60 ¹	Exempt	Net interest income is taxed at the individual's marginal rate, with an exemption on the first € 454 (double for married couples).
Portugal	20	20%	For residents, the 20 per cent withholding tax is final unless the recipient elects to treat it as a payment on account.
Spain	48 ¹	Exempt	A creditable 18 per cent withholding tax is applied for residents. Interest income for residents is incorporated into the taxable income and taxed at the individual's marginal rate. Interest received by European Community debt holders from Spain is exonerated.
Sweden	30	Exempt	Taxed as capital income for residents. Interest derived by non-residents is not taxable in Sweden.
United Kingdom	20	Exempt	Interest on certain British Government securities is paid net of tax at 20 per cent but may be received gross in certain circumstances. The latter interest income for residents is then incorporated into taxable income and taxed at the individual's marginal rate. Interest on National Savings Certificates and individual savings accounts (ISA) is tax exempt.

1. The reported rate applies to individuals taxed at the highest marginal tax rate.

Source: OECD Tax Database 2000.

countries. This results from the fact that, as in most other OECD countries, corporate interest payments – as opposed to distributed profits – are deductible from the corporate tax base while at the personal level interest income is often taxed at a rate lower than that which applies to dividends. This may contribute to under-capitalisation, which would make firms more prone to insolvency and, at a macro-level, could exacerbate business cycles. Several countries have recently adopted measures to lower this non-neutrality with respect to the choice of finance, in particular Denmark and Finland, which have applied a combination of imputation credits and a dual income tax system since the early 1990s (see above). Contrasting with approaches to relieve the double taxation at the shareholder level, more recently, two countries have introduced a two-tier system of corporate taxation (Italy in 1997-98 and Austria in 2000) to reduce the relative cost of financing new

Figure 9. **Combined corporate and personal income tax wedge on distributed profits**
1999, resident top earner individuals



1. 1998.
Source: *The OECD Tax database, 2000.*

investment via own-capital (Box 2). Overall, in a purely domestic perspective, the taxation of capital income is both lower and more neutral towards corporate financing decisions in most EU countries than in Canada, Japan and the United States – largely owing to the relief for double taxation of dividends as well as relatively low and converging tax rates on capital income. This is evidenced by international comparisons of the marginal effective tax wedge, and its standard deviation, across financing instruments (Table 5).³⁸

Moving from a purely domestic perspective to an open economy with free capital movements gives a different view on the neutrality of tax relief schemes for corporate taxation on distributed profits at the individual shareholder level, and on their influence on corporate financial structures. If companies are able to finance their investment on international capital markets, the personal tax treatment of investment income at home may not affect much their financing behaviour, in particular for small and open economies. Thus, imputation relief cannot be used to address effectively the under-capitalisation concern. Furthermore, imputation credits, in place in some EU countries to relieve the double

Box 2. **Alternative approaches to lessen the double taxation of equity capital: the Italian, Austrian and Finnish approaches**

With a view to finding ways of relieving the double taxation on equity capital other than by granting imputation credits to the shareholders, some EU countries have tried to reduce the relative cost of financing new investment via own capital by introducing some tax breaks directly at the enterprise level, through the corporate income tax.

The DIT and super DIT model in Italy

In Italy, the ordinary rate of corporate income tax is 37 per cent (to be cut to 35 per cent in 2003). However, the 1997-98 tax reform introduced a two-tier corporate taxation system with the intent of reducing the relative cost of financing new investment via own capital – the dual income tax, or DIT model. Since January 1998 business income is subject to a reduced rate of 19 per cent which applies on the portion of income that is deemed to be derived from the increase in equity capital of the company (qualifying increases are contributions in cash or retained profits). The income taxable at the 19 per cent reduced rate is calculated by applying a certain rate of remuneration (currently set at 7 per cent) to the qualifying increases. The *super* DIT was introduced in 2000 and allows the application of the reduced rate attributable to increases in equity capital to part of the old stock of capital. A “blow-up” factor of 1.4 (raised from 1.2 in 2000) is applied to the increase of the stock of capital in order to extend the tax advantage to part of the income originating from old capital. Remaining profits are taxed at the ordinary 37 per cent rate. However, the effective corporate income tax rate (resulting from the application of the ordinary plus the reduced rate) may not be lower than 27 per cent.

The 2000 corporate income tax reform in Austria

As part of an income tax reform introduced in 2000, the corporate income tax has been changed in Austria to stimulate companies' capitalisation and reduce the relative advantage of debt finance. An opportunity cost on increases of own capital of a company is deductible as an “operating expense” and taxed at a lower rate. In fact, profits are divided in two parts: *i*) a notional interest on additions to own capital that is deductible as an operating expense from the corporate tax base; *ii*) the residual taxable profits, *i.e.* taxable profits less the operating expenses. The first component is taxed at a 25 per cent rate (which is equal to the final withholding tax on interest payments and on “speculative” capital gains). Residual taxable profits are taxed at the normal 34 per cent tax rate. To compute the “operating expense”, the taxpayer has to multiply an imputed interest rate, set annually by the government, by the new equity capital invested in the company through capital subscriptions and retained earnings less capital withdrawals.

Box 2. Alternative approaches to lessen the double taxation of equity capital: the Italian, Austrian and Finnish approaches (cont.)

The Finnish deduction system up to 1990

Finland applied a dividend deduction system up to 1990 to eliminate the double taxation of dividends. Under this system, a company did not pay corporate tax to the central government on dividends distributed to holders of new shares and the distributing company was entitled to a partial (60 or 40 per cent) deduction for dividends relating to old shares in calculating the corporate income tax. In practice, this system often led to a situation where dividends were tax exempt both at the corporate and at the investor level. In fact, dividends received by a domestic limited company from another domestic limited company were tax exempt. For households, a large part of the dividends they received also remained tax free reflecting the capital income tax allowance. Above the capital income allowance threshold, dividends received by individuals were added to other income components and taxed at the taxpayer's marginal rate. Overall, about 65 per cent of all dividends in Finland were fully tax exempt or subject to low taxation while others were subject to double taxation (Myhrman *et al.*, 1995). To remedy these flaws, an imputation system was introduced to replace the dividend deduction system in 1990.

taxation of distributed profits, discriminate against outward and inward investment. In fact, countries with imputation systems do not give any relief to their residents who are shareholders in companies established in other countries, in respect of corporate income tax already paid in those countries, while they do for resident companies. Likewise, they usually do not extend the imputation credit to non-resident individual shareholders (the United Kingdom and, to a lesser extent, France being notable exceptions owing to bilateral tax treaties with certain countries – both countries grant refundable tax credits to non-residents). This constitutes an inducement for savers to invest in shares at home rather than abroad and for companies to generate profits domestically rather than on an EU-wide (or global) basis, thereby discouraging outward and inward investment.

The failure of the imputation system to redress the distortions in corporate finance decisions, in particular for small and open economies, combined with its bias against foreign investment have led some EU countries to reconsider the taxation of dividends. To avoid discriminating against shareholders in foreign equity, Germany has abolished the imputation system in 2002. At the personal level, shareholders are no longer entitled to an imputation credit but only half of

Table 5. **Marginal effective tax wedges in manufacturing for a resident final investor¹**
Per cent, 1999

	Standard deviation ²	Sources of financing		
		Retained earnings	New equity	Debt
Australia	0.6	2.0	0.8	2.1
Austria	1.1	0.7	2.7	0.1
Belgium	1.3	1.4	2.5	-0.6
Canada	1.5	4.5	5.6	2.0
Denmark	0.3	1.9	2.4	2.5
Finland	0.6	2.2	0.9	0.9
France	2.9	3.6	7.7	0.7
Germany	0.7	0.9	2.5	1.3
Greece	0.7	0.9	0.9	-0.6
Iceland	1.0	1.8	2.3	-0.1
Ireland	1.5	1.5	4.1	0.7
Italy	0.4	1.3	1.3	0.4
Japan	2.3	3.3	5.5	-0.1
Korea	0.5	0.6	1.6	1.6
Luxembourg	0.8	3.6	2.4	1.6
Mexico	0.1	0.8	1.0	1.0
Netherlands	2.0	0.5	5.3	2.5
New Zealand	0.0	1.5	1.5	1.5
Norway	0.0	1.1	1.1	1.1
Portugal	1.1	1.1	2.5	-0.3
Spain	0.6	3.2	2.2	1.6
Sweden	0.8	2.1	2.8	0.8
Switzerland	1.3	0.4	3.5	1.8
United Kingdom	0.5	2.9	2.4	1.6
United States	1.5	1.7	4.8	1.4
EU ³	0.9	2.0	3.2	1.0
OECD ³	1.2	2.0	4.0	1.1

1. These indicators show the degree to which the personal and corporate tax systems scale up (or down) the real pre-tax rate of return that must be earned on an investment, given that the representative investor can earn a 4 per cent real rate of return on a demand deposit. Wealth taxes are excluded. The representative investor is assumed to be a resident person, taxed at the top marginal income tax rate (these calculations ignore the taxation of non-residents and residents investing in foreign assets). Many of the complexities of the tax system that do not affect the marginal investor (*e.g.* regarding reserves and tax allowances) are left aside. See OECD (1991), *Taxing Profits in a Global Economy: Domestic and International Issues*, for discussion of this methodology. Calculations are based on a 2 per cent inflation rate.
 2. The standard deviation across financing instruments provides an indicator of the neutrality of the tax system towards corporate financing decisions. The tax system is neutral if a given pre-tax flow of corporate profits produces the same after-tax flow of corporate income for final investors, whether the return takes the form of interest payments, dividends, or capital gains (*i.e.* nil standard deviation).
 3. Weighted average across available countries (weights based on 1995 GDP and PPPs).
- Source: OECD Secretariat.

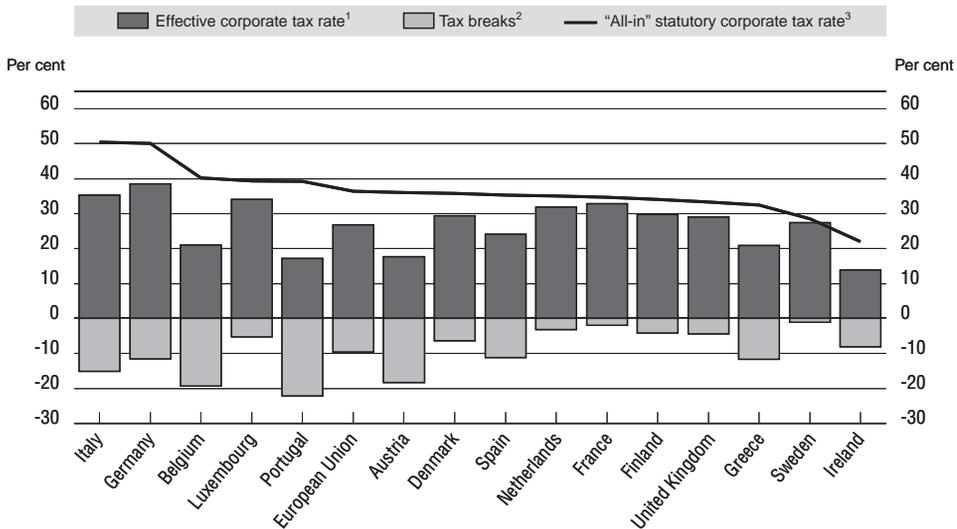
the dividends received from both home and foreign sources enters the shareholder's personal income tax base, and is taxed at his marginal tax rate. To make foreign investment more attractive, the corporate income tax rate has also been lowered to 25 per cent in 2001. In 1997, Italy introduced the choice between imputation credits and a reduced flat tax on dividends. Sweden reintroduced the double taxation in 1995 but cut the corporate tax rate, *de facto* reducing the overall tax wedge on distributed profits, both for domestic and foreign shareholders.

Corporate income tax bases remain narrow, and special regimes are widespread

Corporate income tax revenues in most EU countries are low by international standards, as a share of GDP, despite statutory rates on corporate profits broadly in line with other OECD countries. This relatively low yield, and its large variations across EU countries with similar statutory rates, reflect several factors. Among these are large differences in accountancy rules that firms must comply with, and the percentage of incorporated firms.³⁹ However, the extensive use of tax relief also plays a role, as revealed by a recent business survey of EU firms which provides some estimates of effective tax rates in manufacturing based on firms' financial statements.⁴⁰ The survey suggests that, over 1990-96, the effective corporate tax rate was almost 10 percentage points lower than the statutory rate in the EU area in the manufacturing sector (Figure 10), with large variations across countries in the conditions and generosity of the associated tax allowances.

These rebates often include: investment tax credits, accelerated depreciation allowances for investment in equipment and in intangible assets (such as R&D), tax breaks for employment creation, and tax incentives for deprived areas.⁴¹ Generous investment tax credits in some EU countries, combined with depreciation rates higher than economic depreciation, produce a bias in favour of capital-intensive activities. In addition, many countries have recently introduced or raised tax measures that favour small enterprises, newly created firms and/or information technology companies (*e.g.* France, Netherlands, Portugal, Spain, and the United Kingdom).⁴² These measures are designed to offset the disadvantages of new, or small, enterprises in financing their investment projects and/or the disproportionate costs stemming from administrative complexities, including tax compliance. However, a progressive corporate income tax system may create threshold effects and/or induce the splitting of companies in order to qualify for the reduced taxation scheme. To address this risk, some countries (*e.g.* Spain and the United Kingdom) have introduced legal provisions to guard against disaggregation of larger businesses to exploit the thresholds. Nevertheless, introducing targeted tax relief may result in an inefficient allocation of resources, the creation of tax loopholes, and growing tax planning and lobbying activities.

Figure 10. **Statutory and effective corporate taxation in the EU area**
Average 1990-96



1. These estimates are drawn from the consolidated financial statement data of non-financial EU firms, mainly listed and manufactured companies.

2. Difference between the effective corporate tax rate and the statutory corporate tax rate.

3. Including local government taxes and temporary surcharges.

Source: Buijink, B. *et al.* (1999).

In a number of cases, tax allowances are designed to attract multinational investments. Countries have introduced special regimes to attract foreign direct investment in specific geographical areas or activities (*e.g.* Ireland has applied a reduced corporate income tax rate for manufacturing and certain internationally traded services, off-shore and shipping companies are tax exempt in Greece, and until recently in Spain the Basque country granted large tax privileges for fixed-assets investment above € 15 million). Furthermore, special holding-company schemes and co-ordination centres in some countries allow international investment income to flow through these companies with low taxation (*e.g.* Belgium, Denmark, France, Germany, Greece, Luxembourg, and the Netherlands).⁴³ To eliminate tax measures which could induce harmful competition between EU countries, a Code of Conduct on business taxation was agreed in December 1997 (Appendix 2). Though it contains no legally binding obligations or sanctions, EU countries have committed themselves not to introduce new tax measures which might be considered as harmful and to roll back existing ones by the end of 2002.⁴⁴

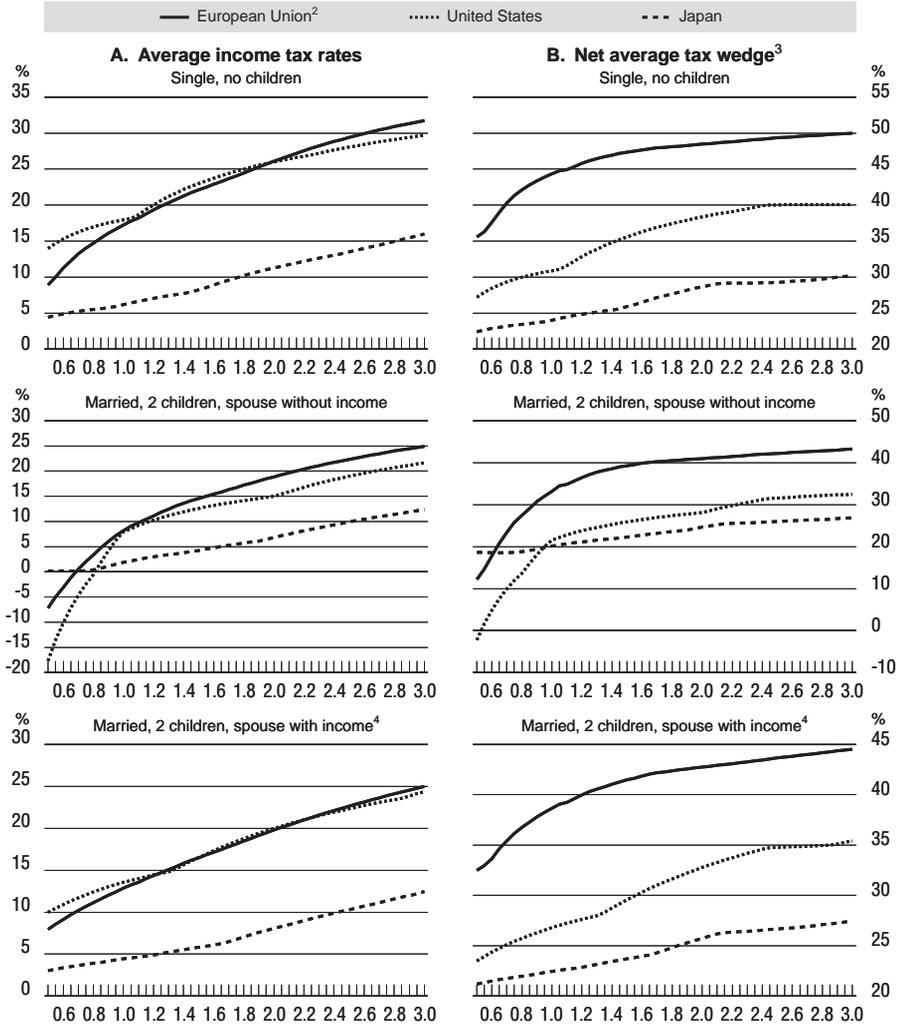
An emphasis on income redistribution?

Income redistribution is often considered to be an important objective of EU countries' tax systems. It is mainly reflected in a highly progressive tax schedule of the personal income tax. However, for low-income working families with children, most EU tax systems are less favourable than the system in place in the United States (Figure 11), where the earned income tax credit conditional on the family situation results in a positive transfer for the most needy. Furthermore, several factors act to weaken the statutory progressivity of EU tax systems.⁴⁵ First, the personal income tax base is very narrow in many countries, in particular in France (Bourguignon, 1998), Greece, and Portugal (Bronchi, 2001; Bronchi and Gomes-Santos, 2001).⁴⁶ Second, capital income is mainly taxed at a flat rate in EU countries, contrasting with its incorporation into the personal income and thus taxed according to a progressive schedule in most other OECD countries. The taxation of property/wealth is also low in most EU countries compared with the OECD average. Third, the personal income tax in most countries embodies extensive tax advantages whose value tends to increase with income, such as tax breaks for health, childcare and education expenses. Likewise, tax breaks for retirement savings and investment in owner-occupied housing may have a regressive impact on the distribution of income since the wealthy tend to save more, in absolute terms and as a share of their income. In addition, ceilings on social security contributions in place in some EU countries are reflected in a slight decline in net tax rates when the income rises (*e.g.* Germany and Spain).⁴⁷ Furthermore, some of the goods and services which are mostly consumed by higher income groups are sometimes taxed at reduced VAT rates (*e.g.* hotel and restaurant services in most EU countries). Overall, the tax system contributes more to income redistribution in EU countries than in most other OECD countries but this largely reflects higher overall tax shares while the relative efficiency of EU countries' tax systems in redistributing income appears to be lower than that of many other OECD countries (Burniaux *et al.*, 1998).⁴⁸ On the other hand, higher tax shares in EU countries are partly used to finance expenditure programmes which are targeted to the most vulnerable groups.

PRIORITIES FOR FUTURE TAX REFORMS

Given the pressures on public spending which will likely emerge in the medium-term – mostly reflecting population ageing – significant cuts in taxes cannot be considered as a sound fiscal option for EU countries. On the other hand, tax base erosion pressures associated with the growing integration within the EU area and with the rest of the world need to be recognised. They could probably be

Figure 11. **International comparisons of tax progressivity**¹
Average personal income tax rates and total tax wedges by multiples
of the Average Production Worker's taxable income, 2000



1. The statutory progressivity presented here is based on OECD's tax equations. These equations do not include specific tax allowances and credits such as those related to housing investment or child care expenses.

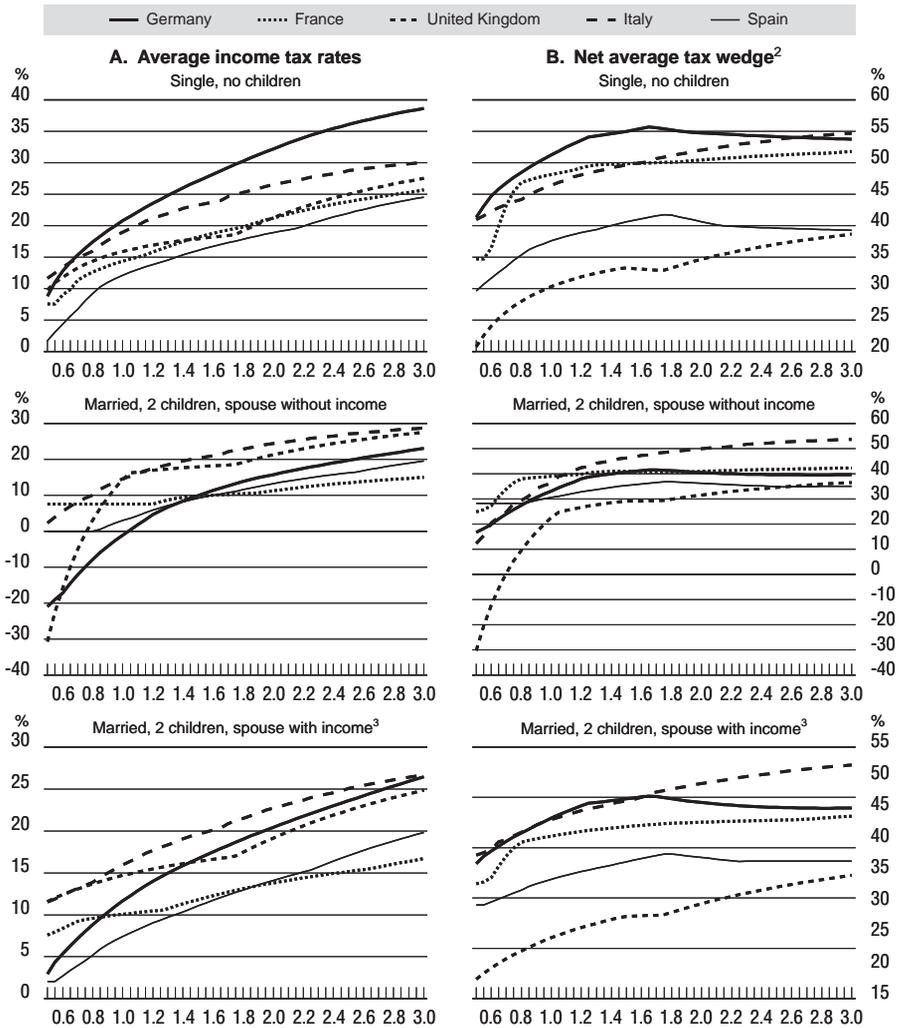
2. Weighted average using 1995 GDP and purchasing power parities. For technical reasons the EU average does not include Austria.

3. Income tax plus employers and employees social security contributions, less cash benefits.

4. Spouse earning 0.67 per cent of the income of the Average Production Worker.

Source: OECD, *Taxing Wages 1999-2000*.

Figure 11. **International comparisons of tax progressivity¹ (cont.)**
 Average personal income tax rates and total tax wedges by multiples
 of the Average Production Worker's taxable income, 2000



1. The statutory progressivity presented here is based on OECD's tax equations. These equations do not include specific tax allowances and credits such as those related to housing investment or child care expenses.

2. Income tax plus employers and employees social security contributions, less cash benefits.

3. Spouse earning 0.67 per cent of the income of the Average Production Worker.

Source: OECD, *Taxing Wages 1999-2000*.

lessened by enhanced co-ordination of tax policies and exchanges of information between national tax authorities. For highly mobile factors such as financial capital, it would contribute to avoid that individual countries race to the bottom, into a negative-sum game, but would leave each country the opportunity to decide on tax rules for its residents and apply them consistently. However, tax harmonisation within the EU area is unlikely to be an appropriate option. In fact, both the level and the composition of public spending vary significantly across EU countries, calling for a different level and mix of taxes and making it difficult to define an “optimal” tax system for the EU area. In addition, some differences in taxes, and concomitantly on the level and mix of public services, is also beneficial inasmuch as it increases EU citizens’ menu of choice on where to locate and fosters pressures on governments to raise public sector efficiency. While leaving open the question of what would be an optimal system of taxation for individual EU countries, the following section suggests how tax arrangements might be improved at the margin, drawing on the most blatant inefficiency and equity concerns described previously. In this context, two main revenue-neutral approaches are considered: *i*) rebalancing the tax system away from labour to less distortive and mobile bases (*e.g.* consumption and real estate); and *ii*) broadening tax bases, by eliminating exemptions and special regimes, combined with a flattening of the rate structure.

Improve labour market performance

Since the mid-1990s, many EU countries have introduced measures to lower the tax burden on labour, especially at the lower end of the income scale (as mentioned in Box 1). Many of these measures have had promising results, as evidenced by the strong response of employment to output growth and the rise in participation rates in some EU countries since the mid-1990s. However, the tax burden on labour remains high. Lowering further the tax burden on labour while also reducing labour market rigidities could lead to increases in both labour supply and demand, boosting economic growth and increasing employment (OECD, 1994a). In most cases a reduction in the tax burden on labour should preferably be paid for by cuts in primary expenditure (European Commission, 2000e). If this proves to be difficult, an alternative would be to shift more of the burden onto other tax bases.⁴⁹ There are several candidates, in particular taxes on consumption and/or property. This would contribute to lowering the direct cost of labour, and/or improving incentives for work and human capital accumulation especially if transfer income recipients do not receive a full compensation for the rise in effective taxation of consumption or property.⁵⁰ Shifting from wage to a consumption tax would have another advantage: it would broaden the tax base insofar as consumption out of other income would also be taxed, thus partly redressing the low taxation on property and capital income which mitigates the

progressive impact of the tax system. Simulations performed by the European Commission show that a cut in labour taxes by 1 per cent of GDP, coupled with an increase in VAT, would increase employment by almost 0.7 per cent in the long run if transfer recipients were not compensated for their real income loss – though this could induce some undesirable distributional effects. If the loss in purchasing power for transfer recipients were fully compensated, the employment effect would be halved (Table 6).

The impact of a cut in labour taxes on employment prospects would probably be higher if it were targeted on low-skilled workers who are the most vulnerable to the adverse effect of a high tax wedge. One priority would be to reconsider ceilings and floors on social security contributions, especially if social security benefits are not directly related to the amount people have put in. They penalise low-skilled workers, and encourage overtime at the expense of job creation. Reductions in labour taxes may also have to be accompanied by reforms of the labour market and of the benefit system to strengthen the responsiveness of the supply and demand for labour. Cuts in payroll taxes may require reconsidering restrictive employment protection legislation in order to provide employers adequate incentives to hire.⁵¹ Likewise, enhancing the responsiveness of labour

Table 6. **Long-run effects of a tax reform in the EU area: EC estimates¹**
Percentage changes

	GDP	Employment	Investment
Tax cut fully offset by a reduction in government consumption (1 per cent of GDP)			
<i>a)</i> Reduction of labour, corporate and VAT ²	0.54	0.54	1.28
<i>b)</i> Reduction of labour and corporate taxes only ²	0.65	0.57	1.88
<i>c)</i> Reduction of labour taxes only ²	0.81	0.97	1.24
Tax shift from labour to consumption (1 per cent of GDP)			
<i>d)</i> Tax shift from labour to VAT <i>without</i> compensating transfer recipients ³	0.66	0.82	0.73
<i>e)</i> Tax shift from labour to VAT <i>with</i> compensating transfer recipients ⁴	0.37	0.48	0.32

Note: The simulations also reveal that economic growth would lead to a reduction of general government deficit to GDP ratios of about 0.5 percentage point after ten years. Similar tax cuts, without offsetting spending cuts, would entail a deterioration in deficit to GDP ratios of about ¾ percentage point.

1. These simulations have been performed by the European Commission, using the QUEST model.
2. The simulations in rows *a)* to *c)* are conducted under the assumption that unemployment benefits are kept constant in real consumption terms, *i.e.* the reservation wage is assumed to remain constant. In this case, the cut in labour tax is partly shifted onto firms in the form of lower wage costs.
3. The experiment reported in row *d)* assumes that unemployed workers (and other transfer recipients) are not compensated for the increase in consumer prices, *i.e.* the reservation wage is assumed to fall by an amount equivalent to the rise in consumer prices.
4. Unemployed workers (and other transfer recipients) are compensated for the increase in consumer prices.

Source: European Commission (2000), "Public Finance in EMU".

supply to tax cuts may call for increased emphasis on in-work benefits while strengthening eligibility conditions for out-of-work transfers. Some tax privileges granted to transfer payments should also be reconsidered, in particular unemployment benefits, severance payments and pensions.

Further reduce non-neutralities in product markets...

Streamlining the VAT structure is a priority to reduce the distortions on the product market stemming from the tax system. This would entail in particular reconsidering reduced VAT rates and exemptions, and to envisage instead more cost-effective direct transfers to households when the effect on income distribution is a concern. Reducing the complexity of the VAT system would in turn cut compliance costs, and thus allow VAT thresholds for small businesses to be lowered. The simplification and modernisation of the current VAT system, combined with a more uniform application across EU countries, should also work to lower compliance costs, and hence encourage firms (especially SMEs) to export, as well as facilitating the detection of fraud.

... and towards saving vehicles

Further progressing towards the dual income tax system in place in most Nordic countries could contribute to improve the neutrality of the tax system with respect to different savings vehicles. This would improve economic efficiency, reduce administrative costs and close some tax loopholes. However, the likely adverse impact on income distribution might require adjustments elsewhere in the tax and/or benefit systems. A less radical change would involve reconsidering privileges granted through the personal income tax to some saving instruments, in particular owner-occupied housing and pension savings. In some cases, relaxing restrictive land-use regulations may be more efficient than tax incentives in facilitating the population's access to better housing. Reducing tax privileges to housing investment could also help to rebalance private investment towards business needs and, in some cases, improve the geographical mobility of workers.⁵² Reconsidering incentives for retirement saving and owner-occupied housing would also lessen equity concerns which arise when relatively well-off taxpayers benefit most from it and/or because the value of tax incentives usually increases with taxpayers' marginal rates (Franco, 1996; Joumard and Varoudakis, 2000).

Another effective non-neutrality embedded in many EU countries' tax systems is the differentiated tax treatment according to the origin and destination of savings. Non-residents are often granted a preferential tax treatment on their interest income. Given the high degree of mobility of the tax base, strengthening international co-ordination for the taxation of income from financial investment is required. The agreement reached in June 2000 between EU governments on the

exchange of information for the taxation of non-residents' saving income is a step in this direction. However, any system, to be truly effective and avoid hurting the competitiveness of EU countries' financial markets, would need to be adopted by a wider group of countries than the European Union.

Increase reliance on the taxation of property

Enhanced taxation of property would contribute to improving the neutrality of the tax system towards various forms of wealth (the main components of which are real estate, financial assets and human capital) and thus serve to rebalance the tax burden away from labour. In a number of countries (including Austria, France, Greece, Portugal and Spain), improving the taxation of property implies updating land registers with an accurate valuation of land and building. Incidentally, enhanced property taxation would also contribute to reducing income inequalities and, if accruing to sub-national governments, close the gap between their spending and revenue-raising powers. This could also improve local governments' fiscal discipline, since property taxes are in general well suited for use by local governments to charge for the benefits of local services, but it obliges them to be more responsive to the concerns of local voters than is the case with other means of financing, *e.g.* central government grants. To this end, greater flexibility in setting property taxes should be given to local governments.

Improve neutrality on the corporate financing side

Improving tax neutrality towards corporate financing by reducing the tax advantage given to debt financing would work to promote sounder financial structures in the business sector. In addition, lessening the tax discrimination against financing through new equity would benefit business start-ups, and innovative and fast-growing companies which may face difficulties in borrowing from banks. On the other hand, the arrangements that undo double taxation of dividends and retained earnings may not fully be effective in reducing the bias towards corporate debt financing, in particular for small and open economies since representative investors are likely to be non-resident. For these reasons, some countries may need to reconsider the relative merits of the imputation credit system and of alternative methods to mitigate the double taxation of profits. In doing so, important variables to be considered include the openness of the economy, tax revenue consideration, but also the administrative costs attached to each system and the transition costs to switch from one system to another.

Streamline special corporate tax regimes and relief

The variety of tax regimes and extensive tax breaks for entrepreneurial activities – according to the size of the company and its activity – should be

reconsidered in favour of the use of structural reforms addressing problems from their roots. In particular, simplifying administrative requirements and tax files may boost small enterprises' growth more efficiently than the introduction of reduced tax rates for small enterprises. Reconsidering local taxes on business inputs (labour, productive equipment, land and/or premises), levied regardless of profitability, would also foster entrepreneurship since these taxes are often a particular burden on small firms and newly-created companies (among countries which apply this type of local taxes are France, Germany, and Italy). Enhanced provisions for carrying forward and backward operational losses may further contribute to improving incentives for risk taking in some countries. In general, granting transparent and universal tax breaks would be less distortive for resource allocation and less inducive to tax avoidance.

At the EU level, streamlined corporate taxation that eliminates special regimes would work to produce a level playing field:

- By ending the practice of offering tax relief to attract new inward investment to a country or a region when these inducements are not available to existing firms in that area. In general the location decision probably owes more to the desire for market proximity, search for agglomeration economies, adaptation to differences in cost levels and availability of infrastructure than to pure tax factors. However, geographical distances within the EU area are short while differences in costs and quality of inputs are narrowing. Since significant irreversibilities associated with productive investment cannot be ruled out, the potential cost of these special incentives may be significant.
- By ensuring that competition for mobile activities, particularly in the financial sector, is fair, *i.e.* transparent, non-discriminatory (does not involve ring-fencing) and accompanied by effective exchange of information.

This argues for the rapid implementation of the EU Code of Conduct and efforts to comply with the OECD harmful tax practices initiative.

Pursue environmental objectives in a cost-effective way⁵³

Despite some improvement in environmental performance in some EU countries over the past decade, there is a need for further progress. Taxes and/or tradable permit schemes have a role to play to improve the cost-effectiveness of environmental policy in EU countries. They will be needed to reduce greenhouse gas emissions at least cost. Economic instruments would also allow the targets on reducing sulphur dioxide and nitrogen oxides emissions that all EU countries have committed to in the Göteborg Protocol to be met in a cost-effective way. In general, there is much room for taxes on different kinds of energy to reflect more accurately the respective environmental externalities associated with their use.

The gap between diesel and petrol taxes that exists in many EU countries is one case in point. Exemption of all commercial aviation fuel is another. Exemptions for particular sectors are frequently introduced to meet competitive concerns, but it is important to avoid them, as they put all the weight on non-exempt sectors and increase the overall costs of meeting a given target. Efforts within the EU to introduce environmental taxes in a co-ordinated way may make it easier to avoid such exemptions and improve their efficiency by limiting opportunities of tax avoidance. The case of aviation kerosene provides a good illustration of how environmental effects would be magnified, and competitiveness concerns would be less acute, if co-ordination were enhanced and extended to non-EU countries (Box 3). However, those efforts have not been very successful in the past. Illustrative is the failure to reach an agreement on a directive on energy taxation proposed in 1997 by the Commission, largely because potential costs for individual countries would

Box 3. Taxing aviation kerosene: the need for international co-ordination

Aviation kerosene is currently exempted from excise duties in the EU area in spite of the EC recommendation to extend excise duties to this product. The EC recently published a study on the impact of the taxation of aircraft fuel on greenhouse gas emissions, EC carriers' international competitiveness and employment (European Commission, 2000f). The study examined five possible tax coverage levels, ranging from taxation of national flights only to taxation of all flights for all carriers to all destination world-wide. Three possible levels of tax were also envisaged. The study showed that environmental effects would be small unless all flights to all destinations were taxed. In a "high taxation scenario" (€ 245/1 000 litres) on all routes for EU carriers only, EU CO₂ emissions would be cut by 0.3 per cent if compared with the baseline scenario. However, the competitive position of EU carriers would suffer and tax avoidance opportunities would increase if non-EU members do not apply a similar tax. In particular, tankering, in which more fuel is taken on board an aircraft than is necessary for a flight, would avoid refuelling in countries where the tax applies. It would also imply that more fuel needs to be burned in order to carry the extra fuel somewhere along the route, thus having additional detrimental effects on the environment. Taxing only intra-EU area flights (at € 245/1 000 litres) would reduce competitive distortions but EU CO₂ emissions would be cut by only 0.06 per cent. Thus, the EC concluded that: "it would not be practicable or desirable for the Community as a whole to introduce taxation of aircraft fuel targeting exclusively intra-Community flights operated by Community air carriers at the present time". It then recommended Member States to intensify their work within the International Civil Aviation Organisation (ICAO) framework for the introduction of taxation on aviation fuel.

likely differ significantly as differences in energy resources and industrial structures among EU countries remain sizeable. As a result, most EU countries have introduced or raised green taxes on a unilateral basis since the early 1990s, but tax breaks for heavily-polluting activities most exposed to international competition continue to flourish.

Abating pollution in a cost-effective way may also require strengthening the design and use of tradable permits. In fact, the European Commission recently launched a discussion on greenhouse gas emissions trading within the European Union (European Commission, 2000g). Enhanced use of tradable permits may also need to be considered for other pollutants since in some cases, tradable permits have several advantages over green taxes. First, they would allow setting a quantity of pollution to be tolerated by issuing a fixed quantity of permits (*e.g.* a maximum amount of greenhouse gas emissions, in line with the EU target). Second, gaining experience with emission trading schemes within EU countries might be useful in the perspective of an introduction of such schemes at an international level. Third, they may allow political hurdles inherent to the subsidiarity principle and the unanimity rule associated with tax decisions at the EU level to be avoided.

NOTES

1. Martinez-Mongay and Fernandez (2000) provide evidence that causality runs from spending to taxation for the EU area. Spending increases are matched by increases in tax receipts one year later.
2. The 13 candidate countries are: Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Romania, Slovakia, Slovenia, Poland and Turkey. Among these, six countries started talks in March 1998 and are at the head of the line for membership: Cyprus, the Czech Republic, Estonia, Hungary, Slovenia and Poland.
3. A potentially aggravating factor is the development of offshore capital investment via the Internet. The so-called e-banking may expose capital-income tax revenues to an increased risk of international evasion if it makes cross-border evasion easier and more accessible to a broader range of population than just the wealthy. Security problems and a relatively low penetration of the Internet in the EU area still limit the expansion of these financial transactions. The Nordic countries are a notable exception: more than one fourth of the entire population of Finland and Sweden do banking online. However, such financial transactions are likely to expand rapidly in the medium run.
4. This anomalous situation is currently the subject of a Commission proposal to correct the place of taxation rule in these circumstances. Those plans for applying VAT to Internet on-line sales from outside the EU area also raise the prospect of pressure for these high tax countries since, if the seller has the option of registering in a single EU country, the tax rate may play an important role in the choice. Nevertheless, it is recognised that this B2C sector of e-commerce currently represents a relatively small proportion of total e-commerce, and that business-to-business transactions will continue to predominate.
5. The tax-to-GDP ratio – showing the share of total tax revenues, including social security contributions, in gross domestic product – is the main aggregate indicator used to measure the overall tax burden. However, this indicator has certain limitations as a comparative measure across countries and over time. Among the factors which can affect the level and trend of the tax-to-GDP ratios are: the extent to which countries provide social or economic assistance via tax expenditures, rather than direct government spending, and whether or not social transfers are subject to tax. Adema (2002) estimated that in 1997 taxes and social security contributions on transfers exceeded 5 per cent of GDP in Denmark, Finland, the Netherlands, and Sweden. They did not exceed 2 per cent of GDP in Belgium, Canada and Germany, and were even lower in Australia, Ireland, Japan, the United Kingdom and the United States.
6. Carey and Rabesona (2002) estimate that the average effective tax rate on labour reached some 37 per cent in 1999, compared with 25 and 23 per cent for the United States and Japan, respectively. Martinez-Mongay (2000) provides broadly similar estimates. The average effective tax rate is the ratio of labour taxes to labour income.

Labour taxes are the sum of the labour's share of the personal income tax, social security charges and payroll taxes. Labour income consists of compensation from dependent employment, including employers' social security contributions.

7. Methodological problems associated with the calculation of effective tax rates are spelled out extensively in Carey and Tchilinguirian (2000). The orders of magnitude provided in this paper should therefore be interpreted as purely indicative.
8. Daveri and Tabellini (2000) show that an increase in labour tax is shifted onto labour costs in continental Europe, but not in the other OECD countries. They estimate that for each percentage point rise in labour taxes, labour costs go up by almost half a percentage point in Europe.
9. Based on panel data for 19 OECD countries, Elmeskov *et al.* (1998) show that different collective bargaining arrangements influence the way in which tax wedges affect unemployment. The impact is stronger in countries with an intermediate degree of centralisation/co-ordination, *i.e.* where sectoral wage bargaining predominates with limited co-ordination (*e.g.* Belgium, Finland, France and Spain). This gives insiders strong bargaining powers to resist employers' attempts to reflect higher payroll taxes in lower wages.
10. Despite a tax wedge on labour which ranks amongst the highest within the OECD area, employment rates in the Nordic countries are high. This partly reflects a strong link between employment history and benefit entitlements, excellent welfare facilities (*e.g.* day care) and flexible job contracts for youngsters.
11. Recently, however, some countries have broadened the personal income tax base to include some of these compensation components. In Germany for instance, reduced taxation on bonuses for employees was eliminated but travel expenses to the working place still give rise to tax relief. Some countries have also introduced a ceiling above which stock options do not benefit from a preferential treatment (*e.g.* France, Spain and the United Kingdom), though differences across countries remain sizeable in this area.
12. Some countries grant pensions a favoured treatment through the personal income tax. For instance, in Belgium, a € 1 510 tax credit was granted for a single taxpayer for pension income and early retirement benefits in 1999. In Austria, pensioners are entitled to an annual tax credit of € 400. In Germany, pension benefits are granted a tax-free allowance of 40 per cent (annual maximum of € 3 068). In Finland, pensions granted through the national pension scheme are exempt up to around € 555 per month.
13. In addition, severance payments are largely tax-free in France, Ireland, Portugal, and Spain. Some information on the taxation of social benefits can be found on the website: http://europa.eu.int/comm/employment_social/soc-prot/missoc99/.
14. In the United Kingdom, the concentration of hours worked by lone parents around the 16 hours point – the cut-off for eligibility for the Family Credit in place up to October 1999 – indicates that the benefit systems impacted significantly on female labour supply.
15. EU countries agreed in 1977 to establish a harmonised VAT system, which had to be adjusted later on to comply with the objective of the single market. The current system has a fair degree of harmonisation, with a harmonised tax base, with two categories of rates, and minimal standard and reduced rates fixed at the EU level. However, exemptions, derogation and special schemes, ruled under the European Community law, allow a certain number of differences to exist across EU countries, depending on their specific economic situation.

16. The main consumption items which benefit from reduced VAT rates in most EU countries are: food products, water supplies, pharmaceuticals products, books and newspapers, transport of passengers, hotel accommodation and restaurant services. Other, less frequent, consumption items taxed at reduced rates include: pesticides (Greece, France, Italy, Luxembourg, Netherlands, Portugal and Spain), heating oil (Ireland, Luxembourg, Portugal, United Kingdom), clothing and footwear for children (Ireland, Luxembourg, United Kingdom).
17. In Finland, the special VAT refund scheme which applies to VAT paid on the inputs of municipalities increases neutrality concerning contracting out of taxable services to the private sector. However, for tax-exempt services, including medical and social services, the refund scheme stimulates own production by municipalities since they are compensated for the VAT paid on inputs while private companies are not. In the draft 2002 budget, the government has however proposed to mitigate this bias by introducing a new compensation (OECD, 2002).
18. By 1993, the luxury VAT rates were abolished, the standard rate set to at least 15 per cent and a maximum of two reduced rates were allowed, which must be equal to, or greater than, 5 per cent. In addition, countries were allowed to maintain super-reduced rates and a zero rate on a limited number of products taxed at those rates before 1991. For more details on VAT rates and exemptions, see European Commission (2000b). For excise duties, a system of minimum rates was implemented from 1993.
19. British excise duties on tobacco and alcohol are much higher than in Belgium and France. The British government estimated lost excise duty and VAT from tobacco smuggling to be £1.7 billion in 1998 (Ussher, 2000).
20. As an illustration, gasoline prices are about 25 per cent lower in Luxembourg than in Belgium, Germany and France, largely reflecting lower VAT and excise taxes. It is mirrored in the fact that non-residents' consumption of gasoline accounts for more than 75 per cent of the gasoline sold in Luxembourg.
21. For digital goods delivered online (such as software and music), the Commission proposed in June 2000 a threshold of annual sales of € 100 000 to consumers in the EU area under which non-EU companies will not qualify to pay VAT.
22. For sales to foreign businesses that are registered for VAT, the goods are exported tax free; the receiving business has to declare the import and pay VAT on it. Importing businesses that are not registered for VAT are treated as consumers. For sales to consumers in another EU country, firms have to register for VAT in the destination country and apply its VAT rates. However, for small scale sales (*e.g.* through mail or Internet order), the VAT rate in the supplying country is applied.
23. A recent business survey revealed that in year 2000 26 per cent of firms considered that difficulties related to the VAT system and VAT procedures are an obstacle to the functioning of the EU internal market (*Single Market Scoreboard*, No. 7, November 2000). Verwaal and Clossen (2000) also argue that: "Due to the transitional VAT and Intrastat system, the legal and procedural requirements imposed in respect of intra-community transactions differ from those imposed on domestic transactions. These requirements bring additional (differential) compliance costs in their train". Compliance costs for intra-community transactions are also shown to vary significantly across firms, largely reflecting economies of scale and variables related to information technologies. The evidence suggests also that the differential compliance costs reduce the intensity of intra-community trade.

24. The European Commission considers that one of the main reasons for the increase in fraud under the current VAT system is the fact that goods circulate without VAT being paid (European Commission, 2000c). It reports two main types of fraud: *a*) the declaration of fictitious intra-Community deliveries: the exempted goods are in fact sold on the internal market and VAT due on final consumption is thus evaded; *b*) failure to declare VAT due on intra-Community purchases, which may then result in VAT fraud on final consumption if the goods are resold through underground trade channels. The right to deduct the tax upstream may also be misused in cases where buyers' VAT declarations request the refund of VAT on purchases for which no VAT was paid.
25. There are some 100 billion VAT declarations submitted per year in the EU area. However, mainly due to lack of resources, they are mostly used as a document stating the tax said to be due while all the other information, which could form the base for control decisions, is not actually used, but is nevertheless collected and stored (European Commission, 2000d).
26. For environmental-related matters, decisions at the EU level require, in general, a qualified majority. There is one main exception relating to decisions covering taxes, which can only be adopted unanimously. Thus, at the EU level, regulations and minimum standards often dominate because the competence of the Commission is more easily exercised (though this does not impede individual countries from introducing taxes on an unilateral basis to comply with EU rules and standards).
27. In fact, tax relief is granted in most countries. In Germany, the energy tax is capped. In Sweden, manufacturing industries are exempt from energy tax while the CO₂ tax rate is one-third of the standard rate. Special, and even more favourable rules, apply to about 60 energy-intensive enterprises. Energy-intensive industries are also largely exempt from the CO₂ tax in Denmark and Finland, as well as from the SO₂ tax in Sweden and Denmark (since 1999, though, Danish electricity utilities pay the SO₂ tax). Agriculture is exempted from tax on wastewater in some EU countries (*e.g.* Denmark) though agriculture is one of the most important contributors to the poor quality of surface water. Likewise in Denmark, the fertiliser tax applies only to non-agricultural uses.
28. However, in some countries, *e.g.* Austria and Finland, registration fees for cars discriminate against diesel-driven passenger vehicles. In Austria, the tax rate also depends on the fuel efficiency of the vehicle. For a petrol-driven and a diesel-driven vehicle using the same amount of fuel per 100 km, the tax rate is higher for the diesel-driven one. However, the tax bases used in annual taxes on vehicles are seldom close proxies to the environmental impacts caused by the vehicles. Lévêque *et al.* (1999) estimate tax concessions to diesel users in France to amount to € 1.2 billion.
29. In some countries, capital gains are taxed at a flat rate (which can be nil), conditional on a minimum holding period (*e.g.* one year in Austria, Germany, Portugal and Spain). Capital gains are tax free in Belgium and the Netherlands. In Germany, dividends and interest income are subject to a withholding tax but should *de jure* also be incorporated into the taxable income, and taxed at the taxpayer's marginal rate. *De facto* however, they are largely unreported (Lang *et al.*, 1997).
30. Since 2001, income in the Netherlands is classified into one of three boxes depending on how it was generated: income from labour (including home ownership); income from a substantial business interest; and imputed income from wealth. The first component is taxed according to a progressive rate schedule while the other two are taxed at a flat, though different, rate (OECD, 2000a).

31. The European Commission as presented in April 2001 a Communication to eliminate obstacles to the cross-border provision of supplementary pensions caused by the tax system. After a detailed examination of EU countries' rules in the field of pension taxation, it envisages a negotiation with individual countries which fail to fulfil an obligation imposed by EC law. Where issues cannot be resolved, the Commission will bring cases before the European Court of Justice.
32. Tax privileges on housing investment are easier to measure in countries which have implemented a dual income tax. For instance in Denmark and Sweden, so extensive are the deductions of interest payments that the net revenues from the taxation of household capital income are actually negative. Acquisition costs are deductible (at least partly) in Austria, Belgium, Portugal. In Spain, mortgage interest payments and acquisition costs give rise to a 15 per cent tax credit, with a maximum € 1 352 credit.
33. In Germany, an allowance for income from capital investment (*e.g.* dividends, interest) was granted up to € 1 534 – double for jointly assessed spouses – in 2000. In France, the first € 1 202 – double for married couples – of dividends received from resident companies were exempt in 2000 and capital gains were tax free below a € 7 625 threshold of sales. The allowance for dividend income has recently been abolished for taxpayers with a net taxable income exceeding € 45 634 – double for married couples. In the Netherlands, the positive balance between interest received and paid (with the exception of mortgage interest for self-occupied housing) is exempt up to € 454 – double for married couples. In the United Kingdom, individuals are entitled to a £6 800 basic annual exemption for capital gains and some saving account instruments (PEPs and ISAs) are tax exempt.
34. In the withholding tax system envisaged by the EC proposed Directive on cross-border savings, the destination country would keep 25 per cent of the tax proceeds and give back the remaining 75 per cent to the country of residence of the investor.
35. The relative merits of information exchange and withholding tax are also influenced by the strength of the incentives to adopt and effectively implement an information exchange system given *i*) questions about its administrative costs; and *ii*) the fact that its financial benefits derive from information received from other countries and any resulting reduction in tax evasion.
36. The centres specifically targeted include the United States, Switzerland, Liechtenstein, Andorra, Monaco, San Marino as well as dependent territories of some Member states such as the United Kingdom's Channel Islands and the Isle of Man.
37. Finland, France, Germany (before the 2000 reform), Ireland, Spain, and the United Kingdom apply an imputation system (dividends are taxed according to the personal income tax of the shareholder and corporate and withholding taxes paid on dividends are fully or partly creditable). Austria, Belgium, Denmark and Sweden do not grant relief for taxation at the corporate income level but apply relatively low tax rates at the personal level while Greece has removed double taxation by simply exempting dividends for the personal income tax. Italy and Portugal offer taxpayers the choice between the two systems (imputation credit or a reduced, flat and final withholding tax on dividends). The Netherlands do not provide a relief for the tax paid at the corporate level and apply a flat rate at the personal level, though the tax base is an imputed income and not the effective one.
38. The tax system is neutral towards corporate financing decisions if a given pre-tax flow of corporate profits produces the same after-tax income for final investors, whether the return takes the form of interest payments, dividends, or capital gains (*i.e.* the standard deviation of the rates of return to different sources of finance is nil). This requires that the combined corporate and personal tax burden is equal across financing instruments.

39. In fact, EU countries have failed to agree on various EC proposals for a harmonised accountancy model. The latest initiative dates from June 2000, when the EC unveiled a plan to force companies to offer accounts that conform to a single regional standard by 2005.
40. These estimates are provided by Buijink *et al.* (1999). They are drawn from the consolidated financial statement data of a panel of 2 118 EU manufacturing companies, mainly listed – therefore excluding important sectors such as insurance and financial services.
41. The Baker and McKenzie (1999) survey singled out some of these specific sectoral and geographical tax regimes. They include: high unemployment regions in Belgium; the so-called development zones and shipping in Finland; tax relief granted by France for newly created companies in Corsica, the overseas departments and the so-called “privileged investment zones” (which include Nord-Pas-de-Calais); Eastern Länder in Germany; the less-developed regions, and electric power plants and hotels in Greece; Dublin designated areas, Shannon Airport Industrial Zone, and for manufacturing and financial activities in Ireland; regions with a high unemployment rate in Italy and for certain activities carried out by SMEs; shipping in Luxembourg and the Netherlands; tax breaks granted by Portugal for SMEs and to investment in certain regions, including the International Business Centre of Azores and Madeira for banks, financial and insurance companies; tax breaks granted by Spain for investment in the Canary Islands and for mining and export activities; and Northern Ireland for the United Kingdom.
42. For the United Kingdom, see Freedman and Ward (2000). To help small companies, a 10 per cent starting rate was introduced in April 2000 for companies with taxable profits below £10 000. A 20 per cent rate is also applied for companies with taxable profits between £50 000 and £300 000 (the “normal” corporate income tax rate, *i.e.* paid by companies with profits above £1.5 million, is 30 per cent). In addition, the Budget 2000 introduced an enhanced relief for SMEs for R&D spending. From April 2000, SMEs are entitled to claim 150 per cent of their qualifying expenditure on R&D. In France, full and partial exemptions are granted to companies created between 1995 and 2004 if certain conditions concerning the type and location of the activity are satisfied.
43. Under the holding-company regime, a company based in these countries pays low or no tax on dividends or capital gains from the stakes it holds in other companies. Under the co-ordination centre regime, a company can benefit from substantial tax breaks if it can prove to the government that the branch located in the country co-ordinates the finances for all the company’s European offices.
44. The Report of the Code of Conduct group on business taxation, reported to the ECOFIN council in November 1999, considered 66 tax measures as harmful. It also noted that some of them were being phased out, in particular: Co-ordination Centres in Luxembourg; International Financial Services Centres of Dublin; Luxembourg Finance companies; the Irish 10 per cent manufacturing rate and the Shannon Airport Zones.
45. The statutory progressivity presented in Figure 11 is based on OECD’s tax equations (OECD, *Taxing Wages*). There are several limitations to measuring the progressiveness of the tax system based on these equations. First, take-up rates for tax allowances and credits not included in the tax equations tend to increase with income (*e.g.* those associated to housing investment and childcare expenses). Second, these equations apply to wage income mostly while large groups of taxpayers do not pay social security contributions, or less than wage earners, in many countries (*e.g.* the self-employed, retirees, pensioners, unemployed). In addition, the taxation of the capital income component is not reflected here.

46. In France, about half of the households do not pay personal income tax. In addition, two proportional allowances apply successively on wage income: 10 per cent (with a maximum of € 11 809 in 1999) and 20 per cent on the first remaining € 107 781.
47. Social contributions often finance insurance schemes and thus are not aimed at redistributing income from the rich to the poor. They should rather be considered as redistributing income over the life-cycle of the individual. Contributions for pensions, unemployment, or sickness, largely pertain to this category in many EU countries. However, even in these cases, the insurance component may not be fairly defined on an actuarial basis (*e.g.* for pensions) and/or benefits may increase with the level of income while contributions are subject to a ceiling (*e.g.* health care expenses tend to increase with income). Overall, they may thus benefit more the rich. This has led some countries, including France, to remove most social contribution ceilings.
48. Burniaux *et al.* (1998) present a breakdown of the sources of income inequality. Four components are singled out: labour, capital and self-employment, transfers, and taxes. Using a methodology proposed by Shorrocks, they show that taxes contribute more in EU countries than elsewhere to reduce income inequality. However, controlling for their size, the relative contribution of taxes in reducing inequality was in the mid-1990s lower in all of the seven EU countries considered than in Australia and Japan, and broadly similar to the United States. In other words, for every dollar of income taxes and social security contributions, a larger proportion was taken from the wealthy in Japan and Australia compared with Belgium, Denmark, Finland, Germany, Italy, the Netherlands and Sweden.
49. Econometric simulations for EU countries suggest that cuts in social security contributions offset by an increase in other levies produce a significant positive effect on employment. The most favourable results are observed when the reduction in employers' social security contributions is targeted on categories of workers with a low level of skills and if a tax on CO₂/energy is introduced rather than VAT being increased. For more information on the models and simulations, see European Commission (1993) and Roeger *et al.* (1998). Likewise, using panel data on EU countries over the period 1965-95, Daveri and Tabellini (2000) hardly found any distorting effects of both consumption and capital taxes on employment and growth, in sharp contrast with labour taxation. They thus recommend shifting the burden of taxation away from labour onto consumption or capital. On the other hand, Tyrväinen (1995) showed that while payroll, income and consumption taxes have the same effect on wage-setting behaviour in the long run for most countries, adjustment speeds differ considerably, with wages appearing to adjust more slowly to consumption taxes than to other taxes.
50. Grüner and Heer (2000) develop an endogenous growth model in which a shift from labour to capital and wealth taxation increases growth through higher education.
51. The complementarities between the two measures may largely explain the boom in employment in Spain following the introduction of a new job contract in 1997 with reduced firing costs and social security contributions.
52. In Spain for instance, tax incentives were reduced in 1998 but remain generous. They have been reflected in a very high rate of owner-occupied houses by international standards while the housing rental market is poorly developed. On the labour market, 90 per cent of new job contracts were of a short-term nature in 1999 and only about one fourth of the unemployed indicated that they would accept a job if they had to move.
53. For an in-depth discussion of these issues, see O'Brien and Vourc'h (2001) and OECD (2001).

Appendix 1

REFORMING VAT: MOVING FROM THE DESTINATION TO ORIGIN PRINCIPLE?

Since the common VAT system was introduced in the 1970s, its declared objective has been to create the conditions necessary for the establishment of an internal market characterised by healthy competition, under which the taxation of imports and the non-taxation of exports in intra-Community trade would be abolished. This commitment underpinned the objective of designing a VAT system which was tailored to the internal market and operated within the EU area in the same way as it would within a single country, *i.e.* to introduce a system of taxation where goods and services would be taxed in the Member State of origin. However, in practice, such a radical change has not secured the necessary support from Member States. Foremost amongst the reasons for this are reservations about the efficiency of the necessary clearing mechanism for the distribution of VAT receipts, and the degree of harmonisation of rates that such a regime would necessitate. Nevertheless, the elimination of custom controls within the EU area in 1993 made it necessary to reform the VAT system operating up to then according to the destination principle. It was thus decided to adopt a “transitional” system which would enable controls at the Community’s internal borders to be abolished whilst allowing tax, in most instances, to continue to be collected in the Member State of destination.

The destination principle. The destination principle implies that consumption taxes are levied where the products are consumed for both final consumers and producers. This system ensures production neutrality, since indirect taxes do not discriminate between foreign and domestic producers, and exports are exempt from domestic taxation. However, this principle requires the monitoring of cross-border trade flows and administrative co-operation since goods and services travel free of tax.

The origin principle. The origin principle implies the taxation of goods and services where produced, regardless of where they are consumed. It has advantages in that it can be applied without border controls, and since exports would no longer travel tax free, the potential for tax fraud would be lower. However, the origin principle introduces the possibility for the tax system to discriminate between domestically-produced goods and imports. The full move from the destination to origin principle would also induce significant changes in the distribution of VAT revenues across countries. EU countries with a trade surplus *vis-à-vis* the rest of the EU area would thus collect extra VAT revenues, compared with the existing regime of export zero-rating, while deficit countries would have to be granted a VAT credit on their intra-community business purchases. To ensure that VAT receipts accrue to the country where consumption takes place, a mechanism to redistribute VAT revenues across countries would thus be required. In 1987, the Commission proposed to set up a “clearing house” which would make the necessary adjustments based on detailed records of individual transactions. This would have required numerous information exchanges and involved high

transaction costs. The Commission thus later proposed a mechanism to reallocate VAT collected, using as a basis aggregate consumption, to ensure that VAT receipts accrue to the EU country where consumption takes place, thus compensating countries for VAT paid on goods that are exported. However, the choice of a method, and statistical sources, to measure aggregate consumption could become a delicate issue, in particular as to the size of the underground economy, each country preferring an estimate of taxable consumption which would maximise its share of the redistribution of overall VAT income (European Commission, 1998b). In addition, such a system would have the drawback of disconnecting tax collected in a particular country from its tax revenues, thus reducing national tax authorities' incentives to improve compliance.*

A "transitional" dual system. Instead, the European Union has kept a dual system since 1993: the destination principle has remained intact for the business sector, but the origin principle now applies to cross-border purchases by individuals. Individuals can now purchase goods anywhere in the EU area, without any further tax liability being incurred when they move the goods from one EU country to another (with the exceptions of new vehicles and mail order transactions). Such a dual system attempts to fulfil the requirements of an internal market without frontiers whilst allowing room for manoeuvre at the national level as regards the establishment of VAT rates and the collection and auditing of the tax (European Commission, 1998b). The transitional regime replaced custom controls by the obligation, for all EU firms exporting to another EU country (B2B and B2C distance selling), to declare their exports to the tax administration, identifying the buyer by a VAT identification number (or giving their own identification number in the country of destination in case of distance selling). A computerised system for automatic exchange of information on the value of intra-EU trade was set up among the national authorities (VAT information exchange system, VIES).

* Keen and Smith (1996) recommend maintaining a close relation between taxes collected and tax revenues for each country to keep the incentive of improving tax collection and compliance for national authorities. They thus proposed to introduce a unique VAT rate on EU cross-border transactions while member states would retain the power to determine the VAT rate on sales by traders to final consumers.

Appendix 2

THE EU CODE OF CONDUCT ON BUSINESS TAXATION

The EU Council adopted a Code of Conduct on business taxation in December 1997, as part of the wider tax package. With the adoption of the EU Code of Conduct, EU countries committed themselves to refraining from introducing new *harmful tax measures*, and to roll back existing ones, *i.e.* those special schemes which may affect in a significant way the location of business activity in the EU area. In March 1998, a group to manage the Code of Conduct on business taxation was created (known as the Code of Conduct group). It produced a report in November 1999 which identified 66 harmful tax measures that unfairly encourage businesses to locate in one EU country at the expense of another. The Code of Conduct is not legally binding, but some of the tax measures covered by the Code fall within the scope of the Maastricht Treaty on state aid, on which the European Commission has some legal powers if it is considered to distort competition.*

According to the Code of Conduct, tax measures are to be regarded as potentially harmful if they provide for a significantly lower effective level of taxation, including zero taxation, than those levels which *generally* apply in the Member State in question. The tax measures covered by the Code include both laws or regulations, and administrative practices. When assessing whether tax measures are harmful, account should be taken of, *inter alia*:

- whether advantages are accorded only to non-residents or in respect of transactions carried out with non-residents; or
- whether advantages are ring-fenced from the domestic market, so they do not affect the national tax base; or
- whether advantages are granted even without any real economic activity and substantial economic presence within the Member State offering such tax advantages; or
- whether the rules for profit determination in respect of activities within a multinational group of companies departs from internationally accepted principles, notably the rules agreed upon within the OECD; or
- whether the tax measure lacks transparency, including where legal provisions are relaxed at an administrative level in a non-transparent way.

* Tax breaks are recognised to have effects equivalent to cash subsidies. The European Commission draws a distinction between state aids and general measures. General measures are deemed not to constitute aid and therefore are not controlled by Article 87(1) of the EC Treaty. Measures are considered general when there is no specificity in terms of sector, region or category; the eligibility for the aid is based on objective criteria, without any discretionary power of the authorities; and the measure is in principle not limited in time or by a predetermined budget.

The EU Code of Conduct and the OECD harmful tax practices initiative

With broadly the same rationale as for the EU Code of conduct, the OECD (1998, 2000b) sets out an approach to dealing with harmful preferential regimes in OECD Member countries and adopted a series of recommendations for combating harmful tax practices. Whilst the EU Code of Conduct and the OECD Guidelines are broadly compatible, the scope of the two differs. The Code of Conduct looks at business activities in general, although with an emphasis on mobile activities. The OECD Guidelines, on the other hand, are clearly limited to financial and other service activities, reflecting a particular concern for the abusive tax practices that preferential regimes of this type can encourage. They are also intended to cover a wider geographical area.

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