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Fundamental Reform of Personal Income Tax



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Foreword

This report analyses fundamental reforms of personal income tax systems in OECD countries. Personal income tax reforms have tried to create a more competitive fiscal environment, which encourages investment, risk-taking and entrepreneurship, and provides increased work incentives. At the same time, fairness and simplicity have become the byword of reformers. Fairness requires that taxpayers in similar circumstances pay similar amounts of tax and that the tax burden is appropriately shared. Simplicity requires that paying your taxes becomes as painless as possible and that the administrative and compliance costs of collecting taxes are kept to a minimum.

Almost all of the personal income tax reforms in the last two decades can be characterised as rate reducing and base broadening tax reforms. Many countries have introduced semi-dual income taxation of personal capital income, in the sense that all or some personal capital income is taxed at lower rates than wage income. However, no other OECD country has fully copied the approach of dual income taxation introduced in Finland, Norway and Sweden in the early 1990s, although the Box system in the Netherlands resembles it somewhat. More recently, flat tax proposals have been high on the political agenda. These flat tax reforms reduce the rate schedule to a single tax rate and eliminate special tax reliefs, with the possible exception of a basic allowance.

This report analyses the trends in the taxation of personal income in OECD countries. It discusses the drivers for tax reform and the trade-offs that inevitably will be encountered. The report also presents the features that have to be considered when designing and reforming a personal income tax system. This analysis then leads to a discussion of the main types of personal income tax systems: the comprehensive income tax, the dual income tax and the flat income tax. These alternative tax systems are evaluated in light of the principles of sound tax policy and the objectives that policy makers

try to achieve. Finally, some recent tax reform proposals and results of recent tax reform experiences in OECD countries are discussed.

This study has been prepared in the OECD Secretariat by Bert Brys, drawing heavily on earlier work by Ulf Pedersen and input from Delegates to the Working Party No. 2 on Tax Policy Analysis and Tax Statistics of the Committee on Fiscal Affairs.

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Executive Summary

This report studies fundamental reform of personal income tax systems in OECD countries. Many OECD countries have reformed their personal income tax system fundamentally over the last two decades. Almost all of these tax reforms can be characterized as rate reducing – the reduction in the income tax rates is often compensated by an increase in social security contributions and consumption taxes – and base broadening tax reforms. Although no other OECD country has fully copied the approach of dual income taxation introduced in Finland, Norway and Sweden in the early 1990s, many countries have moved away from semi-comprehensive personal income taxation and introduced semi-dual income tax systems, in the sense that all or some personal capital income is taxed at lower rates than wage income. More recently, flat tax proposals were put high on the political agenda. These flat tax reforms mainly consist of two elements: the reduction of the rate schedule to a single tax rate and the elimination of special tax reliefs, possibly except for a basic allowance.

Chapter 1 reviews the recent trends in the taxation of personal income in OECD countries. On average in the OECD area, the share of personal income tax as a percentage of both total tax revenue and GDP has remained relatively stable over time. The overall OECD average conceals large differences in tax policies between OECD countries, where countries differ on policies concerning both how much and how to tax personal income. The analysis shows that there has been a reduction in the top marginal income tax rates. A similar trend towards lower rates is observed with respect to top marginal tax rates on dividend income. This is part of an overall trend of reducing tax rates at all income levels, and it suggests a reduction in the use of high marginal rates for top-income earners as a vehicle for income redistribution. (In some OECD countries, income redistribution is strengthened by the introduction of in-work tax credits at the bottom of the income distribution). In fact, the distribution of income has become somewhat less equal over the last

couple of decades in many OECD countries. On the other hand, the tax rates on labour income and the tax wedges have become slightly more progressive on average in the OECD area. However, the progressivity is significantly lower when comparing tax wedges than when comparing income tax rates, which reflects the non-progressivity of social security contributions. Many countries have also reduced the number of tax brackets significantly during the 1980s and 1990s. This trend towards flatter tax systems – also caused by the reduction in top marginal income tax rates – has continued after 2000.

Tax policy involves a series of complicated trade-offs between different policy objectives, as discussed in chapter 2. Careful consideration must be given to the amount of taxes that are levied and to the design of the tax system. Governments find themselves squeezed by pressures to maintain or to increase their expenditures on the one hand and the need to make their tax systems more competitive on the other hand. In fact, increased international mobility has increased tax-competition and put a downward pressure on tax rates. Tax design should be shaped by considerations of efficiency. The tax system should minimize discrimination in favour of or against any particular economic choices, which in practice means building tax systems substantially around broad bases and minimizing differences in tax rates that can be applied to different bases. Maintaining the fairness of the personal income tax system requires attention from the authorities as well, both in terms of horizontal equity – taxpayers in an equal situation should be taxed in an equal manner – and in terms of vertical equity – taxpayers with the better circumstances should bear a larger part of the tax burden as a proportion of their income. Moreover, there is a growing understanding of the detrimental effects of complexity. Governments might also increase overall tax compliance by simplifying their tax system.

Policy makers need to make decisions on a broad set of detailed design features. The most important design features concern the tax base, the tax unit, the rate schedule, the use of tax expenditures, the impact of inflation, the effects of the personal income tax system on the overall tax-benefit system, the effects on tax compliance and tax administration and the tax reform process. These design features are discussed in detail in chapter 3.

Different types of personal income tax systems are discussed in chapter 4. Governments can implement a comprehensive type of income tax system, which taxes (most of) all income less deductions according to a progressive rate schedule, a dual income tax system, which levies a proportional tax rate on all net income (capital, wage and pension income less deductions) combined with progressive rates on gross labour and pension income, a flat tax system, which levies a proportional tax rate on all net income (capital income, labour income and other income minus all deductions) or an expenditure tax system that taxes only consumption and not savings. All these tax systems possess strengths and weaknesses. Generally speaking, flat tax systems are simpler than the others, but put less emphasis on redistribution. Flat tax and dual income tax systems have fewer tax allowances and tax incentives than is common in comprehensive income tax systems. From an efficiency viewpoint, a flat tax system probably gives rise to fewer tax-induced distortions than the other tax systems, but it is far more difficult to give a general statement on the effects on the overall efficiency of the tax system as a flat tax system might require the implementation of a rather high tax rate in order to satisfy the budget requirements. In practice, no OECD country has fully implemented either a comprehensive, dual or flat personal income tax system. All OECD countries have special tax treatment for certain types of income (*e.g.*, fringe benefits and owner-occupied housing), and many countries levy social security contributions only on certain types of income (mainly labour income). In other words, most countries use semi-comprehensive, semi-dual or semi-flat income tax systems and most countries have in practice a mixture of income and consumption taxes.

Besides an analysis of the discussion on dual-income tax reform in Germany and a presentation of the tax simulation model of Statistics Norway which is used to simulate the effects of changes in the Norwegian personal income tax system (from a dual towards a comprehensive or flat tax system), chapter 5 discusses the impact of the flat tax reform in Russia and the Slovak Republic and it presents and analyzes the debate on flat tax reform in Switzerland and Poland. The analysis concludes that these tax reforms obviously have their merits. However, the analysis also demonstrates that these countries have not implemented or have not considered implementing a genuine 'flat' tax system, which would tax all types of income once – thereby resolving all types of distortions – at a flat rate. Moreover,

they (would) continue to levy social security contributions separately. In fact, the 'flat' tax system then might turn into a dual income tax system with proportional instead of progressive taxation of labour income.

Chapter 5 also studies the impact of the choice of the tax unit. The simulations for Belgium study the move towards individualization from a system that combines separate taxation and a marital quotient. In the case of France, the simulated shift is from a pure marital quotient to individual-based taxation.

Finally, chapter 6 evaluates the different types of personal income tax systems in terms of the fundamental principles of sound tax policy: simplification, efficiency, equity, tax compliance and tax revenue and evaluates the main advantages and disadvantages of the different personal income tax systems. The analysis concludes that the personal income tax system of many OECD countries is characterized as being a *semi*-comprehensive income tax system. The problems of tax-arbitrage behaviour – individuals making use of differences in tax rules and rates and of tax exemptions and allowances – that are caused by these tax systems then have led to the success during the last decades of tax policies that focused on base broadening and a lowering of the tax rates. Dual and flat personal income tax reforms are options for further tax reform.

Dual personal income tax systems introduce horizontal equity in the taxation of capital income on the one hand and in the taxation of labour income on the other hand. It is especially from an international tax perspective that one can make a strong case for the taxation of capital income at a low rate, as it reduces the incentives for capital exports and tax avoidance/evasion strategies. On the other hand, the focus on redistribution and the need to raise a sufficient amount of tax revenue continue to explain the progressive tax rates on labour income in a dual income tax system. However, taxpayers with a different mix of capital and labour income are taxed differently under a dual income tax system, which might be seen as violating horizontal equity (if year-to-year income is used as the basis for evaluation; if horizontal equity is evaluated on the basis of life-time income, the taxation of capital at a lower rate becomes a source of horizontal equity). The introduction of a lower proportional tax rate on capital income might undermine the tax code's vertical equity as well, especially because income from capital tends to be concentrated in the upper income brackets. Moreover, income

shifting between low-taxed capital income and high-taxed labour income remains possible, for instance because individuals incorporate themselves, which reduces the tax system's horizontal and vertical equity. These income-shifting problems are not encountered under a flat personal income tax system. Moreover, the introduction of a flat tax is often combined with a further reduction in tax allowances and credits. This further base broadening will make the tax system simpler and easier to administer, and will increase efficiency as well. One of the main disadvantages of flat personal income tax systems is that they limit the scope for a fair sharing of the tax burden, although the analysis demonstrates that a significant amount of progressivity can be achieved through the basic allowance. Moreover, in the presence of social security contributions which do not confer an actuarially fair entitlement to a possibly contingent future social benefit, there continue to be gains from income shifting between capital and labour income, even under a flat personal income tax system. Having a flat tax on capital and labour income might require a rather high tax rate. Not levying social security contributions separately but incorporating them into the flat tax rate, might force governments to levy an even higher tax rate. It remains to be seen if this would be sustainable in the presence of international mobile tax bases. On the other hand, the implementation of a rather low flat tax rate would undermine the benefit system in many OECD countries.

Introduction

Since the mid-1980s, many OECD countries have engaged in fundamental reforms of their personal income tax system. Yet no clear consensus has emerged on what is the ideal personal income tax.

These reforms have been driven by the need to provide a more competitive fiscal environment: one which encourages investment, risk-taking, entrepreneurship and provides increased work incentives. At the same time, governments are aware of the need to maintain taxpayers' faith in the integrity of their tax systems. Fairness and simplicity have become the byword of reformers. Fairness requires that taxpayers in similar circumstances pay similar amounts of tax and that the tax burden is appropriately shared. Simplicity requires that paying your taxes becomes as painless as possible (not something easily achieved in modern societies) and that the administrative and compliance costs of collecting taxes are kept at a minimum.

Almost all of the tax reforms in the last two decades involving the personal income tax can be characterized as rate reducing and base broadening tax reforms, following the lead given by the United Kingdom in 1984 and the United States in 1986. For instance, in the mid-1980s, most OECD countries had top marginal income tax rates in excess of 65 per cent. Today most OECD countries have top rates below, and in some cases substantially below, 50 per cent. This indicates a reduced emphasis on redistribution by use of high marginal rates for top-income earners, although the effects on actual redistribution also depend on increases in tax thresholds, tax allowances and credits, *etc*.

The most recent fundamental personal income tax reforms (see OECD, 2004) have probably been the introduction of the Box system

in the Netherlands and the introduction of a 19 per cent flat tax in the Slovak Republic, where both reforms implied fairly substantial cuts in tax rates combined with extensive base broadening. Australia, Canada, Germany, Ireland, Italy, Luxembourg, Spain and the United States are among the other countries that have reduced or are in the process of cutting personal income tax rates and/or increasing tax thresholds. Other countries, among them France and the United Kingdom, have introduced or increased working tax credits in order to stimulate labour supply among low-income earners.

Many countries have introduced "semi-dual" income taxation of personal capital income, in the sense that all or some personal capital income is taxed at lower rates than wage income. However, no other OECD country has fully copied the approach of dual income taxation introduced in Finland, Norway and Sweden in the early 1990s, although the Box system in the Netherlands resembles it somewhat. More recently, flat tax proposals have been put high on the political agenda. These flat tax reforms mainly consist of two elements: the reduction of the rate schedule to a single tax rate and the elimination of special tax reliefs, possibly except for a basic tax allowance.

This paper discusses the guidelines for tax reform and the trade-offs that inevitably will be encountered and it focuses on the main explanations of why fundamental reform of personal income tax systems has been so high on the agenda. The paper also points at the broad set of detailed design features that have to be considered when designing and reforming the personal income tax system. This analysis then leads to a discussion of the main types of personal income tax systems: the comprehensive income tax, the (semi) dual income tax and the flat income tax. These alternative tax systems will be evaluated in light of the principles of sound tax policy and the objectives that policy makers try to achieve. At the end of the paper, some recent tax reform proposals and results of recent tax reform experiences in OECD countries will be discussed.

Chapter 1

Trends in the Taxation of Personal Income

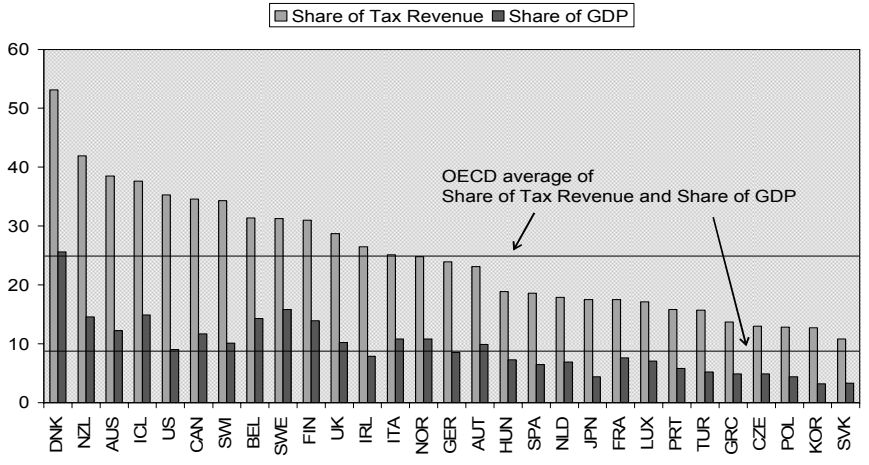
This chapter sets the stage by reviewing some recent trends in the taxation of personal income. Following the OECD tax classification, personal income tax refers to the tax on the individual's gross income minus allowable tax reliefs. Levies on income that are earmarked for social security funds but don't confer an entitlement to benefit are also included in the personal income tax. All compulsory payments that do confer an entitlement to receive a (possibly contingent) future social benefit (*e.g.* unemployment insurance benefits, accident, injury and sickness benefits, old-age, disability and survivor's pensions) are defined separately as (either employer or employee) social security contributions. Taxes on property, which are levied on a presumed or estimated income, are part of the income tax as well.

1. Personal income tax revenue

Revenue Statistics 1965-2004 shows that, on average in the OECD area, the share of personal income tax as a percentage of total tax revenue has remained relatively stable over time, at 26.1 per cent in the mid-1960s, increasing to about 30 per cent in the mid-1970s and mid-1980s before falling back to 27 per cent in the mid-1990s. The share in 2003 was 24.9 per cent, 1.2 percentage points below the share in 1965. The share of personal income tax as a percentage of

GDP has been stable since the early 1980s. While taxes on personal income were 7 per cent of GDP on average among OECD countries in 1965, the share had increased to 10.4 per cent of GDP by 1980 and has since been stable at around 10 per cent of GDP. In 2003, the share had decreased to 9.4 per cent of GDP.

Figure 1.1. Personal income tax in OECD countries as a share of total revenue and of GDP (2003)



Source: OECD Revenue Statistics 1965-2004.

As illustrated in Figure 1.1, the overall OECD average conceals large differences between OECD countries. In 2003, personal income tax as a percentage of total tax revenue varied from 10.8 per cent in the Slovak Republic and 12.7 per cent in Korea to 41.9 per cent in New Zealand and 53.1 per cent in Denmark. As a percentage of GDP, it varied from 3.2 per cent in Korea and 3.3 per cent in the Slovak Republic to 15.8 per cent in Sweden and 25.6 per cent in Denmark. This clearly illustrates the large differences in tax policies between OECD countries, where countries differ on policies concerning both how much and how to tax personal income.

There are also large differences between countries in the development over time. While the share of personal income tax in total tax revenues was higher in 2003 than in 1965 in 14 of the then OECD Members, it was lower in 9 countries. In some countries, the changes over time have been considerable. For example in Canada

the share increased from 22.6 per cent in 1965 to 40.8 per cent in 1990 before falling back to 34.6 per cent in 2003, while in New Zealand the share increased from 39.4 per cent in 1965 to 61.6 per cent in 1980 and the share in 2003 was 41.9 per cent. The share fell substantially between 1965 and 2003 in *e.g.* the Netherlands, Norway and Sweden. However, there seems to be a more general recent trend to reduce the reliance on personal income taxes, as the share was reduced between 1990 and 2003 in 22 of the then 25 Member states.

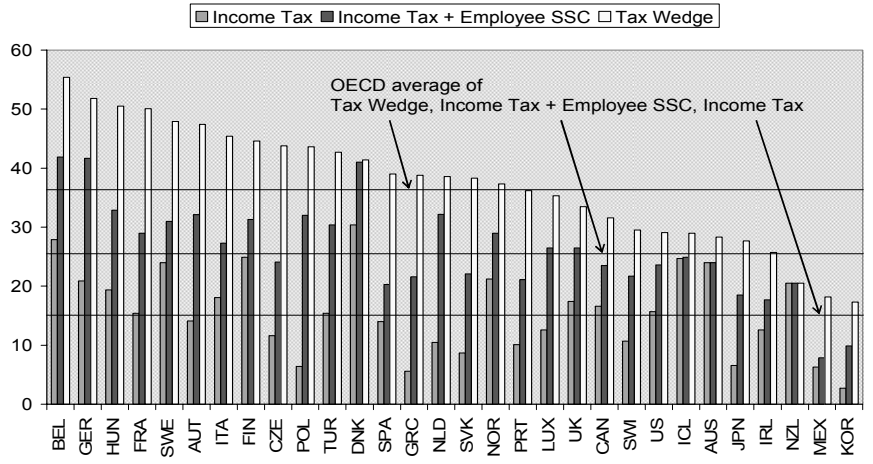
This reduced reliance on personal income taxes in recent years is partly due to changes in tax policy, *e.g.* reflecting an increased reliance on social security contributions and/or consumption taxes over income taxes. Partly, it is the result of fundamental tax reform in many countries, where tax base broadening went together with cuts in statutory tax rates. In addition, the reduction in the share of personal income taxes in total tax revenue is partly exogenous to a country's tax policy, as it for instance might be the result of changes in the business cycle and the rate of inflation.[1]

2. Trends in the taxation of labour income

Differences in the taxation of labour income between OECD countries can be illustrated by using the *Taxing Wages* framework.

Figure 1.2 presents tax wedges, which measure the difference between labour costs to the employer and the corresponding net take-home pay of the employee. It also shows the parts of the wedges that are due to personal income taxes plus employee social security contributions and that are due to personal income taxes alone. There are substantial differences between countries in the level of personal income taxes for someone at average earnings, ranging from below 7 per cent in five countries to above 30 per cent in Denmark. Countries also differ on the reliance on social security contributions, from New Zealand that does not levy any such contributions to several countries where the main part of the tax wedge on labour is due to social security contributions.

Figure 1.2. Income tax and social security contributions in OECD countries[1] (2005)



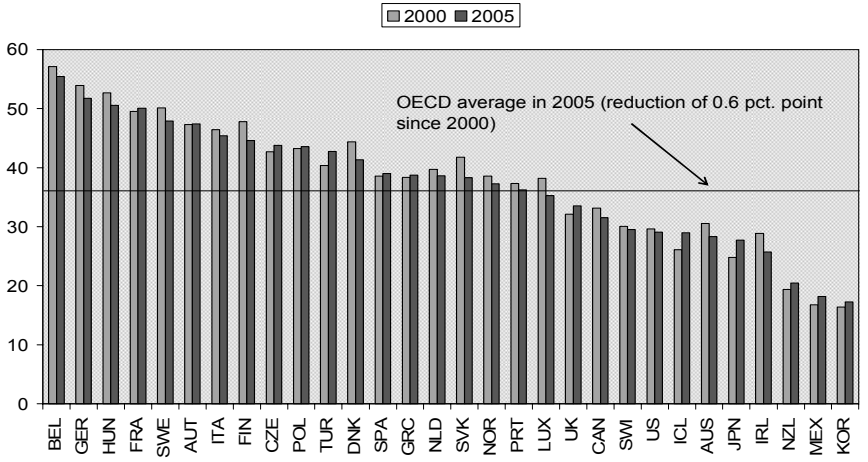
[1] As a per cent of labour costs – gross wage earnings of employees plus employer social security contributions – for single individuals at 100 per cent of average wage. *Source:* OECD Taxing Wages 2004-2005.

The change in the tax wedge over time for single individuals at average earnings is illustrated in Figure 1.3. The figure illustrates that the tax wedge has remained fairly stable in most countries between 2000 and 2005. The unweighted OECD average has decreased by 0.6 percentage point since 2000, while the unweighted EU15 average fell by 1.2 percentage points. The rate fell by more than 3 percentage points in Finland, Ireland and the Slovak Republic and fell by 0.6 percentage point in the United States. The tax wedge increased by more than two percentage points in Iceland, Japan and Turkey. It increased by 1.4 percentage points in the United Kingdom, while it decreased by 1.6 percentage points in Canada. Although the largest reduction took place in the EU15 area, the average rate in the EU15 was still substantially above the OECD average and above the levels in the United States, Canada and Japan in 2005.

The trend is similar for single individuals at 67 per cent and 167 per cent of average earnings. At 67 per cent of average earnings, the tax wedge was reduced by 1.4 percentage points in the EU15 and by 0.5 percentage point in the United States. The overall OECD average wedge was reduced by 0.7 percentage point, but it decreased by more than 5 percentage points in France, Hungary and the Slovak

Republic. The tax wedge increased by more than 3 percentage points in Iceland, Japan and Mexico. The tax wedge decreased by 1.9 percentage points in Germany and by 0.8 percentage point in Canada. At 167 per cent of average earnings, there was an average reduction in the tax wedge in the OECD of 0.3 percentage point and of 0.7 percentage point in the EU15. The reduction in the Slovak Republic was 4.8 percentage points and it was respectively 3.5 and 3.2 percentage points in Luxembourg and Ireland. The tax wedge decreased by 1.2 percentage points in the United States, while it increased in Turkey by 9.5 percentage points and in Greece by 5.2 percentage points. The tax wedge in the EU15 in 2005 was still substantially higher than in the United States, Canada and Japan at these income levels.

Figure 1.3. Tax wedge for single individual at average earnings[1]



[1] The tax wedge is the sum of income tax plus employee and employer social security contributions less cash benefits as a percentage of total labour costs (gross wage plus employer social security contributions).

Source: Taxing Wages 2004-2005.

Table 1.1 illustrates that on average in the OECD area, personal income taxes on labour have been reduced between 2000 and 2005. For a single person earning 67 per cent of APW earnings, the rate has been reduced by 0.8 percentage points (6.6 per cent). They have been reduced by 0.6 and 0.7 percentage points at 100 and 167 per cent of

APW earnings respectively (3.7 and 3 per cent). These reductions in personal income tax reflect changes in tax policies aiming at reducing taxes on income, and in particular taxes on low wage income.

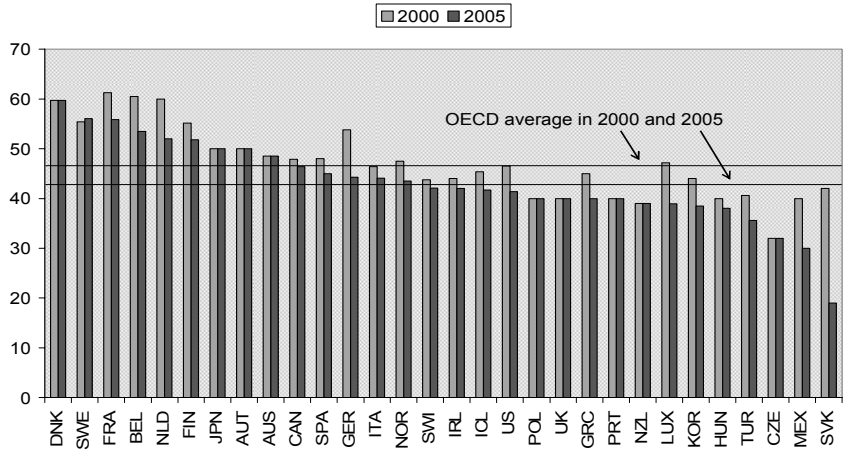
Table 1.1. Income taxes and social security contributions on average in OECD

	67% of APW		100% of APW		167% of APW	
	2000	*2005*	*2000*	*2005*	*2000*	*2005*
Income tax	12.2	11.4	16.2	15.6	23.0	22.3
Income tax + employee SSC	22.5	22.1	26.6	26.2	32.4	32.1
Tax wedge	34.4	33.7	37.9	37.3	42.4	42.1

Source: OECD Taxing Wages 2004-2005.

The total tax wedge on labour is significantly higher because social security contributions are included. At 67 per cent of average earnings, the total tax wedge in 2005 is more than 3 times higher than the average income tax rate as a per cent of gross earnings. At 100 per cent of average earnings the tax wedge is about 2.4 times the average income tax rate, and it falls below 2 times at 167 per cent of average earnings (as social security contributions tend to be levied at flat rates and often have ceilings). The difference between the tax wedge and the average income tax rate has been relatively constant between 2000 and 2005.

Figure 1.4. Top statutory tax rates on wage income[1]



[1] The statutory personal income tax rates on wage income applicable at the highest income threshold for single individuals.

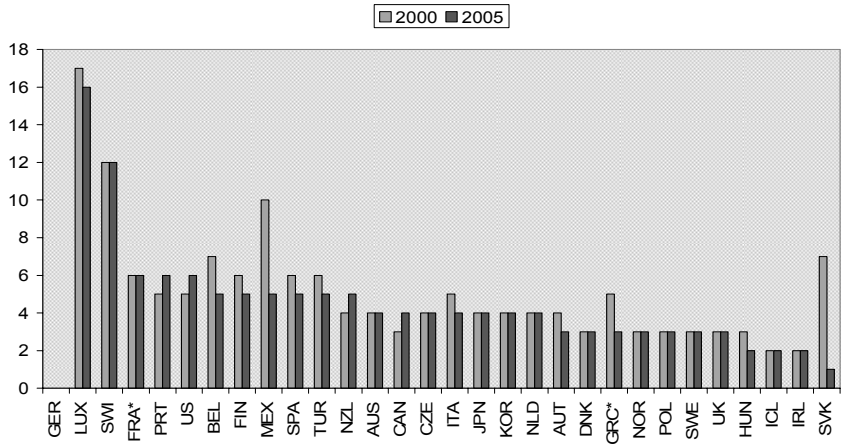
Source: Taxing Wages calculations.

Figure 1.4, which compares the statutory income tax rates for high-income earners in 2000 and 2005, illustrates that these rates have been reduced in 19 OECD countries and increased only in 3 countries over this (relatively short) period. The unweighted OECD average has decreased by 3.71 percentage points, from 47.01 per cent in 2000 to 43.3 per cent in 2005. This trend towards a reduction in tax rates for high-income earners might be part of an overall trend of reducing tax rates at all income levels, but it also suggests a reduction in the use of high marginal rates for top-income earners as a vehicle for income redistribution.

As part of a trend towards "flatter taxes", Figure 1.5 illustrates the reduction in the number of tax brackets. Many countries have reduced the number of tax brackets significantly during the 1980s and 1990s. Figure 1.5 shows that this trend – also caused by the reduction in the top marginal income tax rates – has continued after 2000. The number of brackets in the personal income tax system in 2005 varies from just one positive rate in the Slovak Republic to 16 in Luxembourg. Most countries apply a piecewise linear system,

with Germany being the only country that has a formula-based system where the marginal tax rate increases continuously with income between a minimum and a maximum rate. Eleven countries (Austria, Belgium, Finland, Greece, Hungary, Italy, Luxembourg, Mexico, Slovak Republic, Spain and Turkey) reduced the number of tax brackets between 2000 and 2005, while the number of income brackets was increased in Canada, New Zealand, Portugal and the United States. The Slovak Republic is the first OECD country to introduce a single positive tax rate on all personal (and corporate) income above a basic threshold in 2004.

Figure 1.5. The number of tax brackets in the taxation of wage income[1]



[1] 2004 figures for countries marked *.

Source: OECD Tax Database and OECD Taxing Wages 2004-2005.

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3. Trends in the taxation of capital income

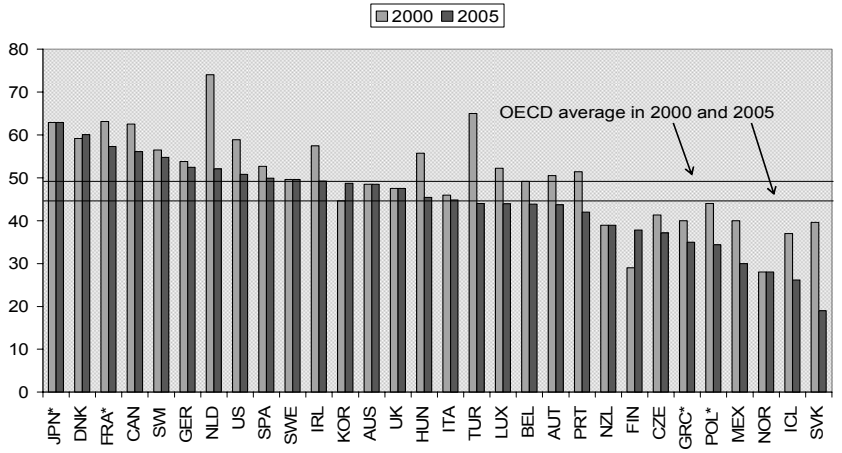
Figure 1.6 illustrates a similar trend towards reduced rates in the top marginal tax rate on dividend income in 22 OECD countries, although this rate increased somewhat between 2000 and 2005 in 3 countries. The unweighted OECD average has decreased from 49.8 per cent in 2000 to 44.5 per cent in 2005. This reduction mainly reflects the significant reductions in the corporate tax rates in many OECD countries (on average in the OECD area, the corporate income tax rate has fallen from about 37 per cent in 1997 to 33.6 per cent in 2000 and further to 29 per cent in 2005), but it also reflects changes in the taxation of dividend income at the shareholder level – in particular the move from full imputation systems to partial inclusion systems in many European countries.

There is a similar trend of reductions in tax rates for other types of personal capital income. For example, according to Huizinga and Nicodème (2004), the average tax rate on interest income was reduced from above 50 per cent in 1983 to around 30 per cent in 2000 in the 24 countries (both OECD and non-OECD countries) included in their analysis.

4. Trends in the effect of taxation on income distribution

Recent empirical studies indicate that the distribution of income has become somewhat less equal over the last couple of decades in many OECD countries (Förster and Mira d'Ercole (2005), Atkinson (2003), Smeeding (2002)). Figure 1.7 illustrates that countries vary significantly with respect to the level of inequality, when measured by using Gini coefficients, with Denmark and Sweden having the lowest level of income inequality and Turkey and Mexico the highest among the 27 OECD countries included in this chart.

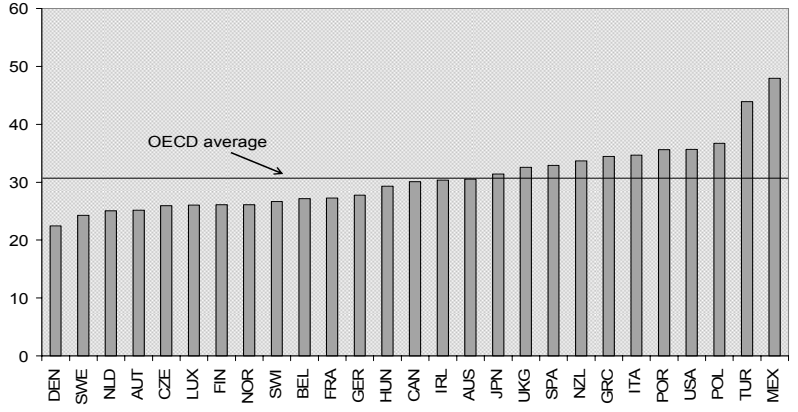
Figure 1.6. Top marginal tax rates on dividend income[1]



[1] 2004 figures for countries marked *. The overall (corporate plus personal) rate on distributions of domestic source profits to a resident individual shareholder, taking account of imputation systems, dividend tax credits *etc.*

Source: OECD Tax Database.

Figure 1.7. Gini coefficients of income concentration in 27 OECD countries, most recent year



Note: The income concept used is that of disposable household income, adjusted for household size (e=0.5). Gini coefficients are multiplied by 100. "Most recent year" refers to the year 2000 in all countries except 1999 for Australia, Austria and Greece; 2001 for Germany, Luxembourg, New

Zealand and Switzerland; and 2002 for the Czech Republic, Mexico and Turkey; In the case of Belgium, the data refers to 1995.

Source: Förster and Mira d'Ercole (2005).

Table 1.2 illustrates that income inequality rose in 17 of the 27 OECD countries included in the analysis between the mid-1980s and the mid-1990s, and in 9 countries between the mid-1990s and 2000 (4 of which showed a decline or no change in the previous period). The rise in inequality was particularly strong between the mid-1980s and the mid-1990s, where 12 countries experienced moderate or strong increases in income inequality. According to Förster and Pearson (2002), the main driving force behind the increase in income inequality between the mid-1980s and the mid-1990s was a widening distribution of market income. The increased dispersion from gross earnings was partly caused by an increase in "employment polarization" between those with and those without a job. They also found that the role of taxes and transfers in reducing income inequality had increased. However, the main redistributive effects of transfers were not from rich to poor, but from young to old, from those who work to those who do not work and from childless families to families with children. Förster and Mira d'Ercole (2005) found that between the mid-1990s and 2000, the role of the driving forces was reversed – dispersion of market income did not play a major role in explaining income inequality, whereas the effectiveness of taxes and transfers in reducing income inequality was weakened.[2]

Table 1.2. Overall trends in income inequality: summary results for the entire population

	Strong decline	*Moderate decline*	*Small decline*	*No change*	*Small increase*	*Moderate increase*	*Strong increase*
Mid-1970s to mid-1980s	Greece	Finland Sweden	Canada		Netherlands	United States	United Kingdom
Mid-1980s to mid-1990s		Spain	Australia Denmark	Austria Canada France Greece Ireland	Belgium Germany Luxembourg Japan Sweden	Czech Rep. Finland Hungary Netherlands Norway Portugal United Kingdom United States	Italy Mexico New Zealand Turkey
Mid-1990s to 2000		Mexico Turkey	France Ireland Poland	Australia Czech Rep. Germany Hungary Italy Luxembourg Netherlands New Zealand Portugal United States	Austria Canada Denmark Greece Japan Norway United Kingdom		Finland Sweden

Note: "Strong decline/increase" denotes a change in income inequality above +/- 12%; "moderate decline/increase" a change between 7 and 12%; "small decline/increase" a change between 2 and 7%; "no change" changes between +/- 2%. Results are based on the values of the Gini coefficient in four reference years which may vary among countries. "2000" data refer to the year 2000 in all countries except 1999 for Australia, Austria and Greece; 2001 for Germany, Luxembourg, New Zealand and Switzerland; and 2002 for the Czech Republic, Mexico and Turkey; "Mid-1990s" data refer to the year 1995 in all countries except 1993 for Austria; 1994 for Australia, Denmark, France, Germany, Greece, Ireland, Japan, Mexico and Turkey; and 1996 for the Czech Republic and New Zealand; "Mid-1980s" data refer to the year 1983 for Austria, Belgium, Denmark and Sweden; 1984 for Australia, France, Italy and Mexico; 1985 for Canada, Japan, the Netherlands, Spain and the United Kingdom; 1986 data for Finland, Luxembourg, New Zealand and Norway; 1987 for Ireland and Turkey; 1988 for Greece; and 1989 for the United States. For the Czech Republic, Hungary and Portugal, the period mid-80s to mid-90s refers to early to mid-90s.

Source: Förster and Mira d'Ercole (2005).

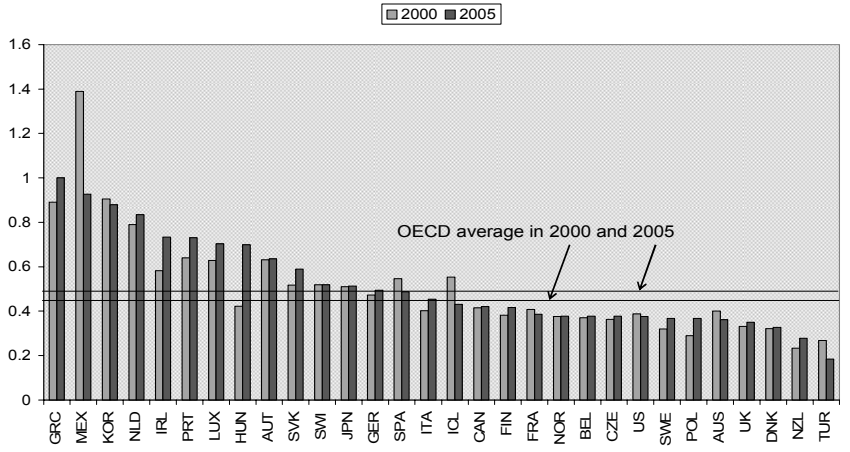
Capital income is normally concentrated at the top of the income distribution. While gross earnings (and public transfers) are the main sources of income for most families, the share of capital income is often high for families in the top-income percentile. Atkinson (2003) argues that an increased dispersion of capital income is in fact the main driving factor behind the observed increase in income inequality, which indicates that the development in the after-tax net rate of return to capital is an important factor in explaining trends in income inequality. Similarly, a Tax Commission's analysis in Norway demonstrates that the increase in the Gini-coefficient

between 1986 and 2000 was mainly driven by an increase in capital income in the top-income percentiles.[3]

Although the effects of taxation are not analyzed directly in the studies mentioned above, they indicate that the dispersion of market income is the main explanatory factor for the development in income inequality and that taxes and benefits can only partially undo these effects. However, taxes and benefits do play a role in reducing income inequality in all OECD countries – although the effectiveness may vary somewhat over time and their main effects are redistribution between age groups or family types rather than between rich and poor. Benefits seem to be the main policy instrument in influencing the disposable income of low-income families, although the tax system will have an indirect effect as it influences the incentives to work one's way out of a low-income situation. At the other end of the income scale, top-income tax rates and corporate income tax rates probably have a larger effect on income distribution the more important is the after-tax net rate of return to capital as a factor which explains income inequality.

Using a simple measure of tax progressivity, Figure 1.8 indicates that the income tax applied to labour income has become slightly more progressive on average in the OECD area. The figure compares the average income tax rate for single individuals earning 167 per cent of the average production wage with the average income tax rate for individuals earning 67 per cent of that amount. The comparison shows that progressivity, measured in this manner, has increased somewhat on average in the OECD area between 2000 and 2005. Progressivity has increased in 22 countries and decreased in 8, but in most countries the changes have been fairly minor.

Figure 1.8. Statutory income tax progressivity for single individuals[1]

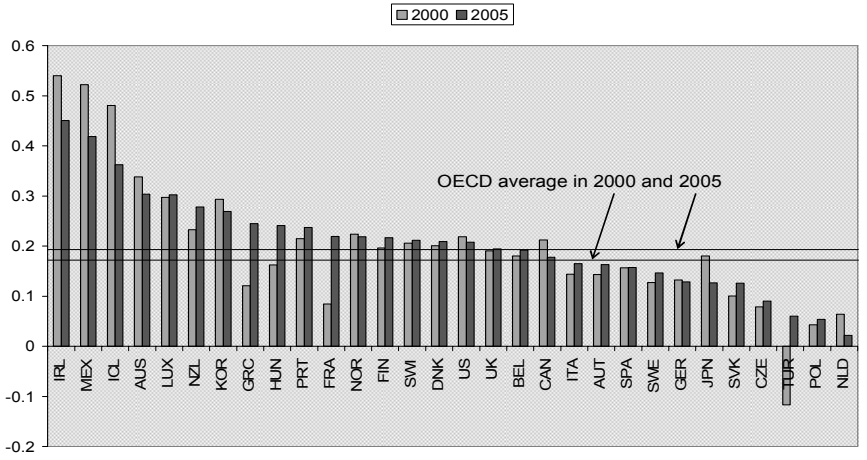


[1] Higher number indicates higher progressivity. The rates are calculated as $(T_{167}-T_{67})/T_{167}$, where T_{167} is the average income tax (as a per cent of gross earnings) at 167 per cent of APW and T_{67} is the average income tax at 67 per cent of APW.

Source: Taxing Wages calculations.

Many OECD countries rely heavily on social security contributions, and such contributions tend to be levied at flat rates and often have ceilings. Figure 1.9 therefore compares tax wedges (including employee and employer social security contributions) for a single individual earning 167 and 67 per cent of the average production wage. The comparison shows that progressivity, also measured in this manner, has increased somewhat on average in the OECD area between 2000 and 2005. Progressivity increased in 19 countries and decreased in 11, but in most countries the changes were again fairly minor. By comparing Figures 1.8 and 1.9 it becomes clear that the level of progressivity is significantly lower when comparing tax wedges than when comparing income tax rates, which reflects the non-progressivity of social security contributions.

Figure 1.9. Statutory tax wedge progressivity for single individuals[1]



[1] Higher number indicates higher progressivity. The rates are calculated as $(TW_{167}-TW_{67})/TW_{167}$, where TW_{167} is the average tax wedge at 167 per cent of APW and TW_{67} is the average tax wedge at 67 per cent of APW. The tax wedge is the income tax, employee and employer social security contributions less cash benefits as a per cent of gross earnings.

Source: Taxing Wages calculations.

The introduction of social security contributions reverses the direction of the change in some countries. For instance, 6 countries experienced an increase in progressivity between 2000 and 2005 when measured by the income tax rate, but progressivity was reduced when social security contributions are included (Canada, Germany, Ireland, Japan, the Netherlands and Norway). The opposite is the case for France, Spain and Turkey, where the levels of progressivity increased when comparing tax wedges although they were reduced when comparing income tax rates.

One needs to be careful when drawing conclusions based on this type of comparison. The main weakness is that the analysis only takes account of tax rates, standard tax allowances and tax credits relevant for the taxation of labour income. In other words, the taxation of corporate and capital income is excluded from the analysis, as are non-standard tax allowances and tax credits. As high-income groups are more likely to have capital income and probably are able to take full advantage of many of these tax allowances (as opposed to medium and low-income groups), the course of statutory

tax progressivity might be different if this additional information were to be included in the analysis.

Notes

1 However, a large number of OECD countries adjust their tax brackets to inflation.

2 The income inequality, which is measured on a year-to-year basis, might exceed the inequality that would have been found under a life-cycle perspective, although the analysis captures that the main effects of taxes and transfers are to redistribute between age groups or family types rather than between rich and poor.

3 See NOU 2003: 9 Skatteutvalget. Another analysis showed that the Gini-coefficient in 1986 and 2000 was almost identical when using an estimate of the net rate of return to investment (regardless of whether it is paid out as dividends/capital gains or kept as retained earnings in the corporation) instead of using annual income (which includes dividends and capital gains). The explanation is that the Norwegian tax reform in 1992, and some related changes in accounting rules, implied that retained earnings were no longer tax favoured compared to dividend payments.

Chapter 2

The Main Drivers of Personal Income Tax Reform

Modern OECD economies have fundamental economic and social objectives that require public spending. The main objective of any tax system is to raise revenue in order to finance these objectives. However, because taxation inevitably impinges on most aspects of economic activity, careful consideration must be given to the amount of taxes that are levied – and hence the level of expenditure – and to the design of the tax system. Besides the level of revenue that is raised, three additional features of taxation are especially important. First, so long as taxation affects incentives it distorts economic behaviour in ways that adversely affect economic efficiency. These effects should be taken into account when the costs and benefits of public expenditure to be funded by taxes are being assessed and when tax systems are evaluated. Second, the distribution of the impact of taxes across the population raises issues of equity, or fairness, to which most countries give substantial weight even if it entails costs in terms of economic efficiency. Third, the practical issues of the enforceability of tax rules and the costs arising from compliance are important considerations, the more so since these are both affected by, and have implications for, the efficiency and (public perceptions of) the fairness of tax systems. The key challenge for tax policy and tax reform is then to strike the best possible balance among these issues.

Reforming well established tax systems cannot be done without costs. The tax administration and the taxpayers will have to adjust to new tax rules and new procedures. They will have to devote time and resources to understand and implement the new rules. Taxpayers for instance incur costs when they hire tax specialists who might help in dealing with new tax rules (and who might find new loopholes in the tax code). Conflicts, possibly involving the court system, will inevitably arise concerning how to interpret the new rules. Taxpayers may have made (partially) irreversible investments based on a belief that the existing tax rules would not be changed, where the investments may not have been undertaken under a reformed tax system. Households that attempt to minimize their tax liabilities might want to adjust their savings portfolio in response to the reform of the tax system.

There are also costs involved in identifying and analyzing the need for tax reform and how the tax system should be changed, making the necessary proposals for changes in the law and attaining a sufficiently broad political consensus for actually implementing such changes. There is also an element of uncertainty involved in the political process from making a proposal to the final decision. Due to conflicting political views on taxation and lobbying activities from those affected by the proposed changes, there is no a priori guarantee that the decision actually made will fully solve the problem that was originally identified. Moreover, the tax reform will have to be followed up and evaluated which then might lead to additional changes in the tax code and might show the need for further fundamental tax reform.

Governments might prefer the status quo as changing the tax code might entail risks and costs which outweigh the tax reform's benefits. As there is a value of having stability in the tax system, one would expect that governments would usually not be keen on fundamental reforms of the tax system unless there is widespread concern about the negative effects of the existing system, unless large groups in society would gain from the tax reform and if the taxpayers that would lose can be compensated easily (or have less political impact), and/or unless there are ideological reasons for fundamental reform.

In addition to guidelines for fundamental tax reform and the trade-offs that inevitably will be encountered, reasons why reform of

the personal income tax systems still is or has recently been high on the political agenda in many OECD countries are discussed below.

1. Raising revenue in an international competitive environment

OECD governments find themselves squeezed by pressures to maintain or to increase their expenditures on the one hand and the need to make their tax systems more competitive on the other hand. The ageing of the population, high levels of unemployment, the need to replace physical infrastructures and the remaining government debt all increase the pressure on government expenditures. Yet at the same time, increased international mobility has increased tax-competition and put a downward pressure on the rates. Recent proposals for personal income tax reform in OECD countries can be seen as a response to these challenges.

Population aging in almost all OECD countries suggests that the demands for government finance for pensions and healthcare will grow significantly over the next fifty years. At first sight, this appears to give governments a very difficult choice – between raising taxes substantially, cutting entitlements to core expenditure programs, imposing higher user charges and/or improving the efficiency of the public sector. Many OECD countries mainly finance pensions and healthcare from social security contributions and payroll taxes. Increasing these taxes would result in increasing the tax wedge on labour – something that many countries have been fighting hard to reduce. The increased tax wedge could reduce labour force participation and working hours and could lead to additional job destruction, implying a further reduction in the tax base, making it even harder to raise the desired revenues.

Exactly by reducing personal income tax rates, OECD countries attempt to reduce the obstacles to job creation and people's willingness to work. As such, governments protect their tax revenue *indirectly* by reducing expenditures (unemployment benefits, *etc*.) and increasing tax revenues as more individuals pay taxes. The empirical data show that many Member countries have, at least partly, financed the cuts in income taxes with higher social security contributions. However, on average, the tax wedge in the OECD area has decreased. On the other hand, governments have tried to compensate the loss in revenue by broadening the tax bases. Increasing the number of people that work can also be achieved by

increasing expenditures. For instance, several OECD countries have recently introduced in-work tax credits to help "make work pay" for the low-skilled, as a way of achieving employment and distributional objectives at the same time. Such policies are expected to increase employment by increasing the incomes of those who accept low-paid work and can indirectly help to maintain the government's tax revenue as well.

International mobility puts a downward pressure on the amount of revenue it is possible to collect from the most mobile tax bases. Corporate income, personal capital income and labour income for certain types of experts (who are usually high-income individuals) are examples of tax bases that become increasingly geographically mobile. A growing proportion of the consumption tax base – particularly that associated with digital products (*e.g.* music, software) – is also already highly mobile. For a given revenue requirement, any reductions in revenues from these tax bases will have to be met by increases in the taxation of other and less mobile tax bases – typically consumption taxes, social security contributions, taxes on land and real property, and/or the labour income taxation of less mobile employees. On the other hand, the revenue loss would be even larger if the tax rates on the most mobile bases are not lowered, as they would otherwise be moved abroad and not generate any tax revenue at all. A lowering of such tax rates might also attract inbound foreign direct investment, which may compensate for some of the revenue loss from existing domestic activities.

Downward pressures on the revenue governments collect from mobile tax bases might be even increasing, as attitudes towards tax compliance are shifting. More and more taxpayers are prepared to engage in aggressive (domestic) tax arbitrage behaviour by (re)allocating savings into tax-favoured saving vehicles, and (international) tax planning, often involving the use of tax havens.

In addition, globalization may lead to increased competition among jurisdictions in trying to attract inbound foreign direct investment, as well as avoiding significant increases in outbound foreign direct investments from domestic firms and investors. Although tax reforms focusing on a broadening of tax bases and a lowering of tax rates can in part be explained by an objective of reducing domestic tax distortions, the significant decrease of corporate tax rates since the mid-1990s most likely also reflects a

political objective to make the tax system more "internationally competitive". To what extent this trend is a result of increased tax competition or not is still under debate, in particular since there has not been a similar decline in tax revenues from corporate income taxes. However, it will in any case reflect an external pressure in the sense that the rate reductions are a result of trying to adjust the tax systems to a situation with increased globalization.

One notable response to the increased international mobility of financial capital/savings has been the introduction during the 1980s and 1990s of anti-avoidance rules in the form of Controlled Foreign Corporations (CFC) legislation. However, growing international mobility of fixed and financial investment and the integration of capital markets may force countries to reduce taxes on income from capital, relative to taxes on other income. One particular illustration is the move away from comprehensive taxation, where one rate is applied to aggregate income from different sources, to a schedular tax system which applies different tax rates to different income sources.

2. Restoring efficiency

Many tax reforms in OECD countries since the mid-1980s have been based on the principle of broadening tax bases and lowering tax rates. An important objective of such reforms has been to reduce tax distortions which may be an important impediment to economic growth.

If tax policy's only concern were to minimize welfare losses associated with taxation, taxes should be designed so as to leave economic behaviour unaffected. As tax design is shaped by the need to raise revenues and by considerations of equity and enforceability as well, a more useful guideline is that the tax system should be as neutral as possible. The tax system should minimize discrimination in favour of or against any particular economic choices, which in practice means building tax systems substantially around broad income and expenditure bases and minimizing differences in tax rates that can be applied to different bases.

As taxes put a wedge between the (pre-tax) profitability of a certain activity and the after-tax income that the investor actually receives, personal income taxes may have a negative effect on labour supply and demand decisions, as well as on decisions on how much

and where to save and invest. Moreover, everything else being equal, the welfare costs of taxation tend to increase more than proportionally with the tax rates – implying that the negative effects of tax distortions will more than double if the tax rates are doubled. Obviously, the incentives to avoid and evade taxes also increase with the tax rates. Increased international mobility has evolved as an additional opportunity for agents to reduce the tax burden on the most mobile tax bases.

An increased political awareness of the distortionary effects of having very high tax rates can probably in large part explain the focus on lower tax rates. For example while it was not uncommon in the 1970s to have top personal income tax rates of well above 70 per cent, the top rates are now below – and in many cases substantially below – 50 per cent in many OECD countries. Similarly, the average corporate income tax rate in OECD countries has dropped from about 37 per cent in 1997 to less than 30 per cent in 2005.

The focus in tax reforms on base broadening may in part be explained by the need to compensate for the revenue loss due to reductions in tax rates. However, base broadening may also help to reduce tax distortions and enhance efficiency as tax systems often discriminate between specific forms of savings and investment vehicles as a result of their non-neutral tax treatment. Providing tax incentives to certain types of investment opportunities may lead to an increase in tax-favoured activities relative to other investments that are more profitable before tax. If the tax incentives are sufficiently high, private investors that engage in this tax-arbitrage behaviour will finance investments that would otherwise not have been undertaken. These socially unproductive investments lead to a reduction in the overall profitability of investments, unless there are (significant) positive external effects that can justify the tax incentives. Similarly, giving tax incentives to certain forms of saving accounts over others will increase savings in these tax-favoured accounts. While such incentives will lead to changes in the composition of savings, it is uncertain whether they will lead to any substantial increases in total savings. As personal income tax distortions on savings, investments and in the labour market can be found in many OECD countries, some of these distortions will be discussed in more detail below.

The double taxation of distributed profits, first at the corporate level and subsequently at the shareholders' level, can produce a high

combined tax rate on dividends. With interest on debt deductible against the corporate tax this would create an incentive to finance investment through debt rather than equity. This may make companies more prone to insolvency and discriminate against small companies and start-ups, which have reduced access to and less favourable terms on debt financing and thus depend more on equity. This points to the desirability of removing such double taxation. One way that this has been done is by granting a tax credit to dividend recipients corresponding to the corporate tax on distributed profits (the imputation system). However, the concerns over double taxation of equity have eased over time because a major source of debt bias – inflation – has been practically removed. Moreover, the bias towards debt financing in many countries has been eased by cutting corporate tax rates, as this reduces the tax value of interest deductions, while double taxation relief is often provided indirectly, by adopting low tax rates on personal dividend income.

Retained earnings, in turn, are usually treated more favourably than new equity financing given that capital gains are often not fully taxed at the individual level beyond a certain holding period. Instead of distributing the firm's profits as dividends and issuing new equity to finance the investment, the firm may defer the dividend taxes by retaining and reinvesting profits. In fact, the firm's profits are locked in the firm because if they are distributed, the higher dividend tax is levied. The favourable tax treatment of retained earnings implies an advantage for mature firms that generate sufficient retained earnings to finance investment, compared to small companies and start-ups that have to issue new equity. Consequently, the tax code in many OECD countries offers mature firms a tax-induced competitive advantage compared to young firms. This hampers the dynamics on the equity market, misallocates resources and inhibits the entry of new firms.

The tax code in many OECD countries distorts the finance and investment decisions of proprietorships. The tax code also distorts the decision of businesses whether to incorporate or not. Debt receives a similar tax treatment in corporations and in proprietorships. Interest payments are not taxed at the proprietor's income tax rate and are not taxed at the corporation's corporate tax rate. Equity, however, receives a different tax treatment. The return on corporate equity is taxed at the corporate tax rate and is again taxed at the shareholder level: either with a dividend tax or with a

capital gains tax. The return on equity-financed investment in the proprietorship is taxed only once at the income tax rate of the proprietor.

Favourable tax treatment of pension plans is widespread. One of the purposes of these provisions is to avoid "moral hazard" of workers, who may otherwise be tempted to consume too much of their earnings during working life and "free ride" on the social safety net once they retire. Moreover, countries with a severe ageing problem may find such tax privileges a useful way to smooth the transition from pay-as-you-go financing to pre-funding, by providing some offset for the "double burden" hitting present generations who are required to finance both current and future pension payments. However, these advantages need to be weighed carefully against the risks of poor targeting, as moral hazard does not affect groups whose prospective pension income, with reasonable saving, is well above the social safety net. In fact, the favourable tax treatment of pension savings often just distorts the composition of household savings, at the expense of government tax revenue. Moreover, systems that provide tax breaks to pension vehicles often give particular providers a favoured status, something that the design of such systems should avoid as well.

Another area often favoured by tax systems is home ownership. According to the neutrality principle, the rental income stemming from home ownership should be imputed for tax purposes, while capital gains should be taxable and mortgage interest payments should be deductible. However, in most countries little or no rental income is imputed for tax purposes and/or capital gains of owner-occupiers are not taxed – even if property taxes may offset this form of tax relief to some extent. Moreover, mortgage interest payments often result in tax deductions against the highest marginal income tax rate, which favours extensive debt-financing of the property. The favourable tax treatment of home ownership implies an asymmetric treatment compared to the taxation of other types of personal savings, which is usually not tax-advantaged. Tax advantages for owner-occupiers are often motivated by social policy objectives – to assist middle income groups in acquiring a home. However, it risks favouring higher income groups, who face a comparatively high marginal income tax rate and can afford the investment to qualify for the tax subsidy.

There are only few options available to move away from such unfavourable features. Some countries have reduced mortgage interest deductions – or eliminated them altogether – while removing imputed rental income from the personal tax base (if they had any). While enhancing the simplicity of the tax code and facilitating tax compliance, this type of measure still involves an asymmetry between the taxation of net capital income from housing and other forms of capital income. In fact, this indirect approach reduces the tax advantage only for those who borrowed to finance the investment, but does not abolish the tax advantage for those who bought the property with cash. An alternative approach – more neutral but also more complex – is to impute a rental value and tax both it and any capital gains (net of mortgage interest payments) together with other forms of personal capital income at a uniform flat rate, akin to the dual income tax system adopted by the Nordic countries. However, the experience in the Nordic countries has shown that the associated transition costs, in terms of abrupt declines in house prices and solvency problems, may be high. Indeed, whatever change in tax regime adopted for owner-occupiers, it would need to be phased in gradually.

As the taxation of income from saving is predominantly residence-based, the pattern of saving flows between countries should not be influenced if there is an exchange of information between source countries and residence countries. However in the absence of the required exchange of information, a divergence in source country (withholding) and residence country (personal income) tax rates creates tax evasion incentives to shelter income from home country tax by having that income accrue abroad (if the income can be hidden from their home authorities). At the same time, investors may seek securities subject to no, or low, withholding tax at source to minimize the overall tax liabilities.

The heavy taxation of wage earnings drives a large wedge between the real labour compensation as perceived by employers and real take-home pay per worker. To the extent that industrial relations, regulatory constraints or transfer schemes prevent the burden of this wedge from being borne by the workers, firms will be induced to cut back on their use of labour. This may take the form of substitution of (typically low-skill) labour with other production factors, downsizing of activity or relocation of activity to countries that offer lower labour costs for a given level of skills and competencies. At the same

time, where tax and social security contributions are shifted back into wages they may generate disincentives to seek work or raise work effort. If tax enforcement is weak, firms and workers may also drift into the "informal" economy.

The examples demonstrate the distortionary impact of non-neutral personal income taxation. However, it may be desirable to use the tax system to enhance welfare by correcting market failure. Taxes and/or tax reliefs may have positive effects on economic efficiency if they help to internalize so-called positive or negative externalities that may arise in a market economy. The most common example is environmentally related taxes, which may be levied in order to provide economic incentives to reduce activities that have a negative impact on the environment. It is often also claimed that the social profitability of certain research and development activities exceed the profits retained by private investors. These positive externalities may justify tax incentives for R&D activities as well.

3. Maintaining fairness

All OECD countries have progressive income tax systems, implying that income redistribution through the tax system is a policy objective. In most countries the effects on the income distribution of proposed tax changes are in fact one of the main issues in the political debate on tax reforms.

The empirical analysis in chapter 1 indicated that the distribution of income has become somewhat less equal over the last couple of decades in many OECD countries. Countries still vary significantly with respect to the level of inequality, as well as the strength of and the reasons for the changes. But generally speaking, the increased inequality seems to be driven by the widening of the distribution of before-tax income and that tax and benefits can only partially undo these effects. As social security contributions tend to be levied at flat rates, a reduced reliance on income taxes combined with an increased reliance on social security contributions partly causes the reduction in the redistributional impact of the tax system. On the other hand, the level of absolute poverty has decreased over the same time-period.

When analyzing the effects of taxation on income distribution, there are two main types of equity that are relevant: horizontal and vertical equity. *Horizontal equity* from a tax perspective implies that

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taxpayers in an equal situation should be taxed in an equal manner as they have the same ability to bear the tax burden. Horizontal equity then implies that the tax on a given level of total income should be the same regardless of how this income is composed (*e.g.* wage and pension income, fringe benefits or any form of capital income including imputed income from owner-occupied housing and capital gains on an accruals basis). However, the notion of "an equal situation" can be ambiguous. Some tax systems consider, for instance, the number of children or the marital status as a relevant difference for tax purposes while other tax systems do not. Moreover, the notion of "an equal situation" can be interpreted not only on the basis of income but also on the basis of taxpayer's welfare. The notion's meaning might change over time as well. The tax policy objective of *vertical equity* prescribes that taxpayers with better circumstances should bear a larger part of the tax burden as a proportion of their income. Vertical equity then implies that the distribution of after-tax income should be narrower than the distribution of before-tax income, or that the average tax rate should be increasing in income. This can be achieved by having a basic allowance and/or by having a progressive rate schedule (marginal tax rates that are increasing with income).[1]

The tax system's equity can be evaluated either on the basis of the taxpayer's year-to-year income or on the basis of the taxpayer's life-time income. If year-to-year income is taxed, taxpayers with income that varies over time might have to pay more taxes than taxpayers with a more constant stream of earnings. This approach then violates the tax system's horizontal equity and therefore favours the taxation on the basis of the taxpayer's life-time income. Horizontal equity then implies that taxpayers who have the same after-tax income in present value terms should be taxed in the same way, independently of their consumption pattern over the life-cycle. Individuals who postpone their consumption to later periods are not disadvantaged by the tax code only if the return on their savings is not taxed. Except in case of bequests, horizontal equity in a life-time perspective therefore requires that the 'normal' return on capital (the interest rate) is not taxed. The taxation of the above-normal return on capital does not violate the equity concept.

However appealing at first sight, it is not straightforward to evaluate the personal income tax system of OECD countries on the basis of these simple equity concepts. For instance, one may argue

that tax-arbitrage behaviour (the households' and firms' tax-induced changes in savings, investments, labour decisions and purchases as a means to minimize tax liabilities) violates the horizontal equity principle because it produces differences in taxes paid, not on the basis of the taxpayers' ability to pay (OECD (2001)), but only as a result of differences in the tax-minimizing behaviour of different agents. Hagemann, Jones and Montador (1987) however argue that the opportunity to engage in tax-arbitrage behaviour does not violate the horizontal equity tax principle if these opportunities are available to all taxpayers. Under their view, horizontal inequity arises only if the ability to choose tax-favoured saving vehicles is restricted ex-ante, for instance, if some firms and households possess less knowledge about the legal tax-avoiding possibilities or fewer financial resources to pay for the legal and financial tax-avoidance assistance than others do. Moreover, Auerbach and Slemrod (1997) point out that tax differences do not necessarily imply horizontal inequity as these taxes can be offset by price differentials. Once these tax preferences are reflected in prices – the price differentials are often referred to as 'implicit taxes' – undoing the preference might just become another source of inequity.

An additional complication when analyzing the (long-term) effects of taxation on income distribution is the fact that individuals may react differently to changes in tax rates and incentives. If for example marginal tax rates are reduced, some people will probably work harder and save more, while others will hardly change their behaviour at all. As a result, the former group will increase their income relative to the second group – which again may lead to some increase in the inequality of before-tax income. The effects of taxation (and benefits) on income distribution will also depend on whether one takes a life cycle perspective or a short-term (annual) perspective. One important effect of progressive taxation and many types of benefits (*e.g.* child support and pensions) is to redistribute income between different age groups, which means that families may be net receivers of benefits in some parts of the life cycle and net contributors in other parts of the life cycle. Thus, the redistribution of life cycle income between households is much lower than the effects on income distribution of taxes and benefits in any specific year.

Furthermore, it is not easy to get a full picture of the overall effects of the tax system on income distribution. Most OECD countries rely heavily on taxes that are normally not progressive;

some taxes may even be de facto regressive. Authorities also allow for tax exemptions, tax allowances and tax credits which may depend on income or not. Moreover, social security contributions are often levied as a flat rate on gross wage income and often have ceilings. Flat rates are also used for consumption taxes, although many countries have introduced lower value added tax rates for certain goods (usually basic food) in an effort to reduce the relative burden of consumption taxes for low-income families. An overall analysis of the effects of the tax system on income distribution then requires that the impact is studied of all the taxes that are levied, including social security contributions and consumption taxes, and of all exemptions, allowances and credits.

Last, but not least, taxation is only one of very many factors that influence the income distribution. The main factor is what in broad terms may be called the "market forces", *e.g.* how the distribution of income before tax is determined. In addition, public policies such as benefit systems, pension systems and the level and prices of publicly provided services will also have an impact on the "real" distribution of after-tax disposable income.

4. Improving compliance by reducing complexity

Another significant part of the political debate on personal income tax reform in many OECD countries is the need for significant simplification of the existing tax systems. There is a growing understanding of the detrimental effects of complexity. Tax exemptions, tax allowances and tax credits have given rise to complicated rules and imply that authorities have to levy high tax rates, which creates further pressure for new exemptions, allowances and credits, as complexity breeds complexity (Bradford (1986, 1999)).

There are costs involved in raising a given amount of revenue both for the taxpayers and for the tax administration. Generally speaking, such costs increase with the complexity of the tax system. Costs for taxpayers increase because they have to use more resources on understanding how to declare and to minimise their taxes within the framework of the tax law, which may include having to use accountants or tax lawyers. Authorities must make extra efforts to implement the complex tax rules and to ensure that taxpayers understand their obligations.

Complexity inevitably puts compliance at risk as some proportion of taxpayers will not fully understand their obligations and make errors while others will simply ignore what is expected from them. In addition, the possibilities to avoid or evade taxes normally also increase with the complexity of the tax system – which may encourage taxpayers to spend even more resources on reducing their tax bill and which increases the amount of resources needed in the tax administration to prevent and detect tax fraud. In reducing the complexity of the tax system by broadening tax bases through the reduction in the number of tax exemptions and allowances, authorities might reduce the opportunities for taxpayers to make filing errors and to avoid and evade taxes. Less complexity then leads to an increase in tax compliance.

Besides reducing tax complexity, governments might also reduce tax rates in order to increase tax compliance. Other strategies that restrict the opportunities to evade taxes, for instance by taxing more income at source, will also have a positive compliance effect. Moreover, authorities might increase tax compliance by increasing the fines, by increasing the actual and the perceived audit probabilities and by improving the efficiency of the tax administrations' audits. Other factors that explain the level of voluntary tax compliance include the extent to which taxpayers are satisfied with how tax revenues are used (either through the direct transfer of funds or through the provision of public goods), the perceived fairness of the tax system, and the perceived degree of compliance and amount of taxes paid by other taxpayers.

One of the main arguments being put forward in favour of flat tax rate systems is that they reduce compliance costs for the taxpayer and are easier to administer for the tax administration. While it is probably fair to say that the main complexities in the tax system arise from the definition of the tax base (*e.g.*, whether the income in question is taxable or not and the use of special rates, tax allowances and tax credits) and not from the rate structure itself, the debate illustrates that there is a trade-off between simplicity and the use of the tax system to achieve other objectives than to raise revenue. Having a special tax treatment for certain types of income implies for example that one has to define each type of income in the tax law and be able to administer this distinction. For each tax allowance and tax credit one has to draw a line between what is eligible and what is not eligible for the allowance/credit. When social benefits are

delivered through the tax system, there are normally certain qualifying conditions that must be fulfilled by the taxpayer (*e.g.* based on total household income or wealth). In other words, it is virtually impossible to get a simple tax system unless the number of special tax incentives is reduced significantly, which underlines the trade-off between simplicity and the use of the tax system to achieve specific policy objectives.

Some countries have attempted to simplify their tax systems but more can be done in most countries. Simple tax systems, characterised by low rates applied to a very broad tax base, generally lead to fewer economic distortions, greater certainty for the taxpayer, lower tax evasion, as well as lower administrative and compliance costs. Yet despite a widespread consensus on the desirability of simplicity, tax systems in many OECD countries remain rather complex.

5. Policy choices

Given the breadth of relevant issues to consider when designing a personal income tax system, tax policy in practice involves a series of complicated choices between different policy objectives. This of course helps explain why tax reform often is politically controversial, given that there might be wide differences in views on how to make these policy choices. These choices can be classified in four broad categories (some choices can be allocated in more than one category): the revenue requirement, the equity – efficiency balance, the complexity of the tax system, and the external pressures that challenge the personal income tax system.

Revenue requirement

Governments have to determine how much revenue to raise from personal income taxes, not only in absolute terms, but also in comparison to other taxes and social security contributions. As explained before, this choice is influenced by the pressures to increase expenditures as a result of population aging and decreasing employment in OECD countries and the pressures to decrease the income tax burden.

As tax revenues decline as a result of tax exemptions, tax allowances and tax credits and as a result of tax-arbitrage behaviour,

defining a broad tax base – a broad base minimizes the opportunities for tax-arbitrage behaviour – has a direct positive impact on tax revenue. In order to avoid abuse of the tax rules and provisions, taxpayers' behaviour has to be strictly monitored. As these monitoring costs are increasing in the number of tax exemptions, tax allowances and tax credits and in the number of tax-arbitrage opportunities, defining a broad tax base raises tax revenue indirectly as well. Hence, governments have a choice between raising revenue and, as it creates tax exemptions and tax-arbitrage opportunities, the use of the tax system to stimulate certain types of activities or deliver benefits.

Equity-efficiency balance

Governments face a trade-off between efficiency and the possible use of the tax system to stimulate certain types of activities or deliver benefits. Especially because, for a given revenue requirement, the general tax rates will have to be higher in tax systems with extensive tax allowances and tax credits than in tax systems with a broad tax base. Providing increased incentives to certain activities, which leads to a more complex tax system, may therefore also lead to weaker general incentives for labour supply and personal savings. Moreover, the special tax exemptions, reliefs and regimes that abound in OECD countries often violate the principle of horizontal equity, while achieving little of real value. The elimination of these, or their replacement with policies that achieve their objectives more efficiently, would (often) decrease administrative and compliance costs and produce a gain in revenue while improving economic efficiency.

Policy makers will have to choose between using the tax system for income redistribution (vertical equity) and minimizing the negative effects of tax distortions (efficiency). As such negative effects of taxation increase with the tax rate, using progressive rates to promote income redistribution is accompanied by weaker incentives and higher distortionary costs. Certain types of tax allowances and tax credits favour low-income households, *e.g.* the earned income tax credit. However, especially high-income taxpayers are often able to benefit from other tax reliefs, via the purchase of pension annuities, housing or other tax-favoured assets. Moreover, top-income earners may become more prone to labour mobility towards other countries where income taxation at the top

end of the income distribution is lower. Maintaining strongly progressive tax rates under such conditions frustrates economic efficiency without gaining much in terms of equity. Reducing marginal tax rates at the top end while broadening the base by limiting tax reliefs, especially in countries where the pre-tax income distribution is narrow, becomes then an interesting policy objective. In fact, taxing all forms of savings at the same rate and therefore reducing the amount of tax-favoured saving and investment provisions (*e.g.*, the deduction of mortgage interest rate at the progressive marginal income tax rate) increases efficiency, while it at the same time strengthens vertical equity (as these provisions undermine the actual progressivity of the tax system) and horizontal equity (as it ensures that people in the same economic position pay the same amount of tax).

There may be efficiency reasons for taxing certain types of income at lower rates than other types (leading possibly to a lack of horizontal equity), *e.g.* due to higher international mobility of certain tax bases, positive or negative externalities of certain activities or to discourage arbitrage transactions that might otherwise yield socially unfavourable outcomes. Taxing income from saving at low flat rates may be considered as lacking horizontal equity in a "static" sense. However, it may also be seen as promoting horizontal equity in a "dynamic" sense, as it reduces the discrimination between different lifetime profiles of saving and consumption.

Osberg (1995) challenges the claim that there is an equity-efficiency trade-off. According to the new endogenous growth theory, limiting inequality has a long-run positive impact on economic growth. While too much tax progressivity might create unfavourable distortionary effects, some progressivity might be desirable if the additional personal income tax revenues are redistributed so that all taxpayers obtain a similar opportunity to participate in the economy. As the increased participation favours long-term growth, a fair tax policy becomes efficient as well.

Complexity of the tax system

If the only objective of the tax system was to generate a specific amount of revenue at as low administrative and compliance costs as possible, an obvious policy recommendation would be to tax all income at the same rate with no other deductions than for costs

related to the generation of that income. But this apparently simple policy rule is more complicated than it seems at first sight. Although it is relatively easy to define taxable income if only cash income is included, it is far less straightforward to determine income on a consistent accruals basis, which is often labelled as the Schanz-Haig-Simons definition of income.[2] This *comprehensive* personal income tax not only includes cash income, but also includes a market-based valuation of fringe benefits, imputed income from owner-occupied dwellings, and capital gains on an accruals basis. It also includes the employee's contributions to a pension plan. In fact, the increasing value of the pension claim over time is recognized as taxable income as well. The pension that the employee ultimately receives will then not be included. These additional household receipts are included in taxable income because if only cash income would be included, taxpayers would have an incentive to reduce taxes by receiving income in the form of non-taxable or tax-deferred benefits. Defining income instead on a consistent accruals basis avoids the agents' tax arbitrage behaviour and the efficiency losses which that tax-avoiding behaviour provokes. However, this neutrality can only be obtained at high administrative cost because it implies, for instance, that all assets have to be valued on an annual basis.[3]

Authorities face a trade-off between keeping administrative and compliance costs as low as possible versus using the tax system to deliver benefits to certain groups by the use of special tax incentives. On the other hand, general redistribution through a progressive rate schedule with a reasonably small number of income brackets itself creates little more complexity than a single rate from an administrative point-of-view[4], as the main complexities in the income tax system arise from the rules for determining the tax base.

External pressures

Finally, there is a trade-off between efficiency and adjusting the tax system to external pressures by reducing tax rates on the most mobile tax bases. If reduced tax rates on mobile tax bases are financed by increased tax rates on other tax bases, the result may be an increase in domestic tax distortions. Targeted tax incentives based on the perceived mobility of the tax base, for instance by providing special tax treatment for internationally mobile industries, will create incentives for less mobile industries to make international investments in order to be perceived as mobile and qualify for a

similar tax treatment. Such investments are socially unproductive if they are mainly driven by these tax incentives and so produce a further efficiency loss. Adjusting the tax system to external pressures by reducing tax rates on the most mobile tax bases obviously implies an equity trade-off as well, as taxpayers that earn their income from a less mobile tax base do not benefit from the tax provisions and reductions. However, the revenue loss would be even larger if the tax rates on the most mobile bases are not lowered and, in response, move abroad.

Notes

1 In principle it can be argued that horizontal equity would imply equal taxation of all with equal opportunities (potential income) – vertical equity would imply higher taxation of all with better opportunities – whether or not this potential is realized in the form of taxable income. Obviously, such a tax system would be close to impossible to implement in practice.

2 According to this definition, personal income is defined as the market value of consumption plus any changes in net wealth measured on an accruals basis.

3 As a result of the high administrative costs, many OECD countries apply the realization concept of income which avoids having to value all assets on an annual basis. The administrative complexities of taxing pension savings on an accruals basis are avoided in many OECD countries by allowing the exclusion of pension contributions and exempting accruing earnings from income tax. The pension that finally is received is however taxed under the income tax.

4 However, it would be easier to calculate the correct amount of taxes to withhold at source if all types of income were taxed at a single rate.

Chapter 3

Personal Income Tax Design Considerations

When making the type of trade-offs discussed in the previous chapter, policy-makers need to make decisions on a broad set of detailed design features. These include the basic concepts behind the taxation of personal income, the definition of the tax unit, the establishment of schedules for tax rates, the use of tax expenditures and the impact of inflation. Policy-makers also need to examine the reform process itself, considering the effects of personal income tax reform on the overall tax-benefit system, as well as on tax compliance and tax administration.

These design features are outlined below and will be discussed in more detail in the next sections.

- The basic concepts for the taxation of personal income
  - the tax base
  - comprehensive income tax versus dual or semi-dual income tax versus flat personal income tax
  - income based taxation versus consumption/expenditure based taxation
- The tax unit
  - individual versus family-based taxation

- The rate schedule
  - flat tax rate (with or without basic allowance) versus a progressive rate schedule
  - the level and, in a progressive rate system, the number of rates
  - the extent to which other taxes are levied on income (e.g. social security contributions and payroll taxes)
- The use of tax expenditures
  - the reliance on tax allowances versus tax credits, and whether the latter are non-wastable
  - the use of tax credits/allowances to deliver social benefits
  - the use of tax credits/allowances to increase work incentives among certain groups
  - the use of tax expenditures to stimulate (certain forms of) savings
  - the use of tax expenditures to compensate for specific (private) costs or to stimulate a specific kind of behaviour, where the costs/behaviour are not related to the income generation as such
  - the degree of deductibility of costs related to the generation of income (e.g. work-related costs and interest costs)
- The impact of inflation
  - bracket creep
  - the taxation of the nominal return on capital income
- The effects of personal income tax reform on the overall tax-benefit system
  - the taxation of capital income at the personal versus the corporate level
  - the taxation of self-employment versus incorporated businesses

  - the combined effects of personal income taxes, other taxes and public benefits on incentives (e.g., the effective taxation of labour), income distribution etc.

- The effects on tax compliance and tax administration
  - the reduction of efforts and costs for complying with the tax law
  - the reduction of efforts and costs for control and verification of tax returns for tax administrators, combined with an improved ability to ensure that "equal" taxpayers are treated in an equal and consistent manner
  - the reduction of tax evasion and avoidance opportunities for taxpayers and facilitating the detection for tax administrators
- The tax reform process
  - whether or not part of the reform should be phased-in (use of grandfathering rules)
  - whether or not to compensate in full or in part those who lose as a result of the reform (and if so, how)

These design features will be discussed in more detail in the next sections.

1. Basic concepts

The first task of governments is to determine the income to be taxed. This section briefly summarizes the items that could possibly be included in the tax base. Determining the tax base is closely connected to the discussion with respect to the different personal income tax systems as, for instance, the comprehensive income tax, the dual income tax, the semi-dual income tax and the flat tax. This discussion will be presented in chapter 4.

'Gross' income might include the following items: wages, salaries and tips, business income (income from unincorporated businesses), capital income (dividends, capital gains, interest payments), rents, royalties, fringe benefits, imputed rents from owner-occupied housing and other consumer durables, income transfers (disability compensation, unemployment benefits, sick pay,

etc.), pension income, annuities, life insurance cash value, and gifts and bequests (see also Bradford (1986, 1999)). Not all of these items are included in the definition of 'gross' income in every OECD country. In fact, which items are chosen to be included will also depend on the specific personal income tax system that is implemented in a particular country (see chapter 4).

In order to obtain taxable income, 'gross' income then has to be lowered by tax allowances and exemptions. In addition to personal exemptions or family allowances, these might take the form of standard deductions, which could depend on the characteristics of the taxpayer, and/or itemized deductions. Taxpayers might have the opportunity to choose the most beneficial approach. The itemized tax allowances may include employee business expenses (travel expenses, union dues, tools, materials, *etc*.), charitable contributions and certain other gifts, educational expenses, pension and life insurance contributions, personal or mortgage interest payments, medical expenses, taxes paid to other governments, social security contributions, and casualty or theft losses (see also Stotsky (1995)). The allowed deductions might be limited to a certain proportion of income or expenses. Expenses might be deductible only if they exceed a certain threshold level or only the expenses that exceed the threshold level might be deductible. These tax reliefs, which are part of the 'tax expenditures', are discussed in more detail in one of the following sections.

2. Tax unit

One choice is whether to use the family or the individual as the *tax unit*. Many OECD countries have moved away from family-based taxation towards individually based systems, although the Czech Republic went in the opposite direction when joint taxation was introduced in 2005. Spouses with children in the Czech Republic can be taxed either as married individuals filing separately or as a married couple filing jointly. Seventeen of the OECD countries used pure individual taxation and four countries (France, Luxembourg, Portugal and Switzerland) used pure joint taxation of earnings in 2005. In Canada, the Czech Republic, Iceland, Norway, Poland and Spain, the individual is used as the tax unit but joint taxation is also possible (only capital income of married couples is taxed jointly in Iceland). In Germany and Ireland, spouses are normally assessed

jointly but they have the option of being separately assessed. In the United States, married couples can file their earnings either separately or jointly. According to OECD (2006), France, Germany, Ireland, Luxembourg, Poland, Portugal, Switzerland and the United States are the only countries where couples with average earnings are likely to benefit from joint taxation compared to individual-based taxation.

The main purpose of family-based taxation is to increase horizontal equity in the taxation of households with a different composition of income. For a given level of household income, the tax system is often considered to satisfy the horizontal equity tax principle if families where only one partner works pay the same amount of taxes as households where both partners contribute to the same total income level. Family-based taxation can influence taxpayers' decision to get married as the average tax rate increases with income in progressive income tax systems, and so individual taxation is often advantageous for households where both partners earn similar amounts of income. The so-called "marriage penalty" then provides taxpayers with an incentive not to get married. Tax systems may provide relief from this marriage penalty. Income-splitting systems, for instance, divide the income of a sole-earner spouse into two components so as to attribute a portion of it to the non-earning spouse. Examples here are the French "family quotient" system, with its 50-50 split of spousal income, and the Belgian "marital quotient" system, with a 70-30 split. Or if income splitting is not allowed, different rate schedules may apply to couples filing jointly. However, family-based taxation is often favourable when the partners' earnings are very dissimilar, as marriage then implies that the partner with the higher income moves into a lower marginal income tax bracket, which in that case then implies a "marriage subsidy".

Under individual-based taxation, governments may attempt to equalize the tax burden on couples who have the same total income but who have a different distribution of earnings between spouses through the use of special tax allowances and credits, which may be transferable between spouses. Several of the countries with individual-based taxation have special tax allowances/credits for dependent spouses and/or benefits based on family income. These provisions in practice may have some of the same effects as joint taxation. This is also illustrated by the fact that the average tax rate

of second earners was higher than for single individuals at the same level of earnings in most OECD countries in 2002 when taking into account income tax, employee social security contributions and income-related benefits as a result of the tax reliefs being withdrawn.

Family-based taxation is not without its problems. Joint taxation is usually only an option for married couples and not for other types of family structures (*e.g.* unmarried cohabitants) – a difference which is difficult to justify from the perspective of horizontal equity (but which might be explained by privacy arguments, as it is not the task of tax authorities to check if people live together or not). In addition, family-based taxation reduces incentives for second earners to participate in the paid labour market and reduces their hours worked. The reason is that the initial marginal tax rate of a second earner will typically be equal to the highest marginal tax rate paid by the primary earner in the household, implying that a second earner faces higher average and marginal tax rates on labour income than in a situation where both spouses were taxed individually. OECD (2006) also shows that the disincentive effects on labour supply of second earners are generally stronger for low-income than for high-income families, and in particular for families that also receive benefits.

But individual-based taxation is not without its problems either, as non-labour income has to be attributed between the spouses. Non-labour income might be attributed partly or fully to the spouse with the highest income. However, this might imply that the spouse is taxed on income over which he or she does not hold control. On the other hand, if couples could freely choose, the non-labour income will obviously be shifted to the spouse with the lowest taxable income, which would reduce tax revenues.

Thus, the choice on the tax unit may be seen as making a trade-off between equity concerns and avoiding problems with the attribution of non-labour income on the one hand and providing labour market incentives for second earners and not distorting the marital decisions on the other hand. However, the overall effects on labour supply also depend on other factors, such as benefit systems and child support costs. Furthermore, as illustrated in the analysis of the consequences of moving to an individually based tax system in France in chapter 5, the effects on income distribution may depend on the strength of the labour supply responses.

3. Rate schedule

Once the tax base and the tax unit have been defined, authorities can determine the tax rates and tax brackets. A tax bracket refers to a range of taxable income to which a specific tax rate is applied. In principle governments can implement either a progressive, proportional or even regressive rate schedule. A discussion of the relative advantages of a progressive rates schedule and a flat tax is incorporated in chapter 4.

This section focuses on the redistributional effects of a reduction in the number of tax brackets and therefore in the number of tax rates in a revenue-neutral framework. The analysis is based on an assumed pre-tax distribution of income in ten income deciles, where gross income is assumed to increase from 10 in the first income decile to 130 in the last.[1] The example is not based on the situation in any particular country, but the profile of the assumed pre-tax income distribution is probably not very different from that in many countries.

Figure 3.1 illustrates the move from a three rate schedule (20 per cent rate on income between 12.5 and 40, 35 per cent rate on income between 40 and 80, and 55 per cent tax rate on income between 80 and 130) to a two rate schedule within a revenue-neutral framework. The basic allowance is kept constant at 12.5; the first rate applies to income between 12.5 and 60 and the second rate applies to income between 60 and 130.

An increase of the lowest rate from 20 to 25 per cent implies that, in order to keep tax revenues constant, the second rate has to increase to 45.75 per cent, which is about the average rate in the second and third tax bracket before the reform. The tax reform increases the tax burden in deciles 2 to 5 and 7 to 8. The tax burden decreases for taxpayers in decile 6 who gain from the reduction in their top rate from 35 to 25 per cent and for taxpayers in deciles 9 and 10 who benefit from a lower top marginal income tax rate as well.

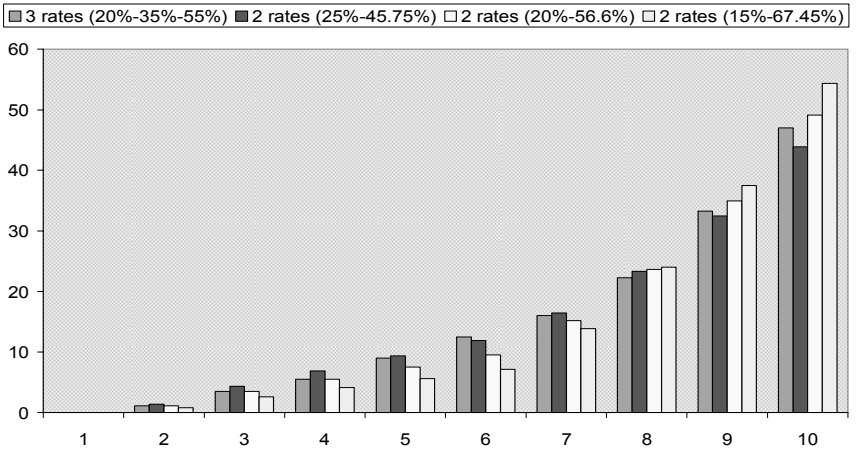
In case of a low rate of 20 per cent, the top marginal income tax rate has to be increased to 56.6 per cent. The tax burden does not change for taxpayers in the first 4 income deciles: their marginal tax rate remains at 20 per cent. Taxpayers in deciles 5, 6 and 7 benefit from the reduction in the 35 per cent rate (because of the increase in

the income range to which the 20 per cent rate applies). The other taxpayers have to pay more taxes.

Finally, a reduction in the lowest marginal income tax rate to 15 per cent implies a top marginal tax rate of 67.45 per cent. Taxpayers in deciles 2 to 7 gain from the reduction in the lowest rate. In fact, the gain is largest in income decile 6. Obviously, the rate reduction is paid for by the taxpayers in the highest income deciles.

Alternative income ranges could be implemented as well. Figure 3.1 shows that replacing the three rate schedule with a two rate schedule while keeping the basic allowance and the lowest marginal income tax rate constant requires that the top marginal income tax rate, for income between 60 and 130, is increased to 56.6 per cent. Under this tax reform, middle-income taxpayers have to pay fewer taxes and the highest-income taxpayers have to pay more. However, reducing the range of the first tax bracket (for instance, income between 12.5 and 40), requires a top marginal income tax rate of only 41.12 per cent. In this case, middle-income taxpayers have to pay more taxes and the highest-income taxpayers have to pay less.

Figure 3.1. Taxes paid under alternative rate schedules within a revenue-neutral framework



These examples demonstrate that a reduction in the number of tax rates (from 3 to 2) may have different effects on the income distribution. In fact, governments continue to have at their disposal a

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sufficient amount of 'degrees of freedom' (the basic allowance, the two income ranges and the two tax rates), which allow them to redistribute income in many different ways, even under a rate schedule with only two tax rates.

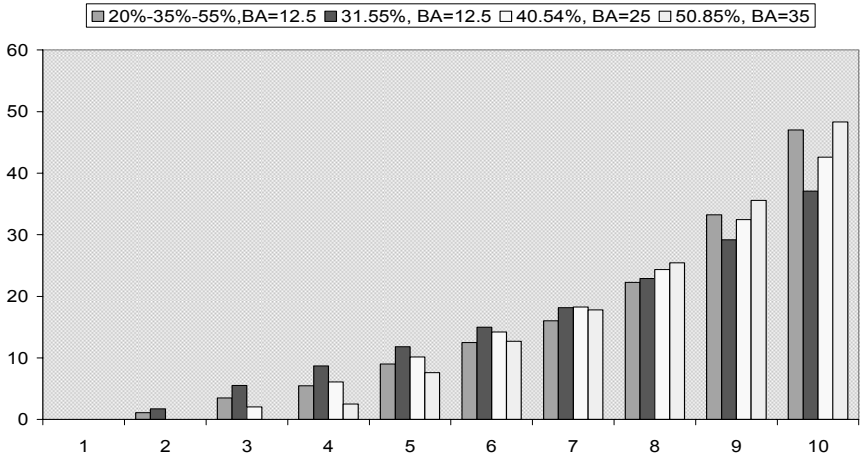
Figure 3.2 illustrates the move from a three rate schedule (20 per cent rate on income between 12.5 and 40, 35 per cent rate on income between 40 and 80, and 55 per cent tax rate on income between 80 and 130) to a flat rate schedule within a revenue-neutral framework. If the basic allowance is kept constant at 12.5, this tax reform requires a flat rate of 31.55 per cent. Taxpayers in income deciles 2 to 8 will have to pay more taxes. Only the highest income taxpayers gain, where the gain is largest for taxpayers in decile 10.

An increase of the basic allowance from 12.5 to 25 requires an increase in the flat rate up to 40.54 per cent. Taxpayers in decile 2 and 3 will then have to pay fewer taxes than under the three rate schedule. The highest income taxpayers gain as well. The tax reform will therefore be paid for by taxpayers in deciles 4 to 8, with those in decile 4 facing only a small increase in their tax burden. Taxpayers in decile 8 face the largest increase in taxes due.

A further increase in the basic allowance up to 35 would require a flat tax rate of 50.85 per cent. In this case, taxpayers in the first 3 deciles do not have to pay taxes. Moreover, taxpayers in deciles 4 and 5 will have to pay less. All other taxpayers, including the ones with the highest income, will have to pay more taxes. Taxpayers in decile 8 face the largest tax increase.

These examples demonstrate that a significant amount of progressivity can be achieved through the basic allowance, even under a flat personal income tax system, and that it are not necessarily the poorest taxpayers whose taxes rise most from a change to a flat tax. Implementing a flat income tax system does not imply that governments can no longer use the income tax system to redistribute income.

Figure 3.2. Taxes paid under alternative rate schedules within a revenue-neutral framework



Reductions in personal income tax rates will probably have a positive effect on labour supply and savings, reducing the distortionary effects of the tax system. So whether a move from a progressive to a flat tax system actually improves the efficiency of the tax system depends on what happens with the tax rates. Most flat tax proposals actually imply a reduction of the top marginal tax rates on personal income, partly financed by the reduction of tax allowances and tax incentives. A revenue-neutral flat tax reform might however increase tax rates at low and medium income levels in order to finance the basic allowance and the reduction in top marginal income tax rates. And if tax rates are reduced for some groups and increased for other groups, it is an empirical question whether the overall effect on the efficiency of the tax system will be positive.

From economic theory one would expect that a lower marginal tax rate will induce individuals to work more (the substitution effect). An increase in the marginal tax rate will have a negative effect on labour supply. However, a lower average tax rate will make taxpayers better of as their after-tax income increases, which will induce individuals to work less (the income effect). An increase in the average tax rate will then have a positive effect on labour supply. In practice, tax reforms have an effect both on marginal and average effective tax rates, often at different points in the income distribution. The overall outcome on labour supply then depends on the strengths

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of both effects and on the responsiveness of different groups to the substitution and income effects. Most empirical studies of labour supply elasticities seem to indicate that actual effects of taxes on labour supply depend on the income level and family situation, where the labour supply of low-income individuals and married women seem to be somewhat more responsive to changes in tax rates than higher income individuals, single women and men.

4. Use of tax expenditures

Tax expenditures are provisions in the tax code that can be used by authorities to encourage certain activities or to support taxpayers in special circumstances. They are similar to a payment by the government because they cause a loss of tax revenue. Tax expenditures can take different forms, as governments might allow for certain exemptions from the personal income tax base, for (tax) allowances that can be deducted from taxable income, for (tax) credits that can be deducted from tax liability, for tax rate reductions and for tax deferrals. Defining a tax expenditure taking any of these forms requires the definition of what is considered to be the norm or benchmark and what are the deviations from that norm. In general, the norm includes the rate structure, accounting conventions, the deductibility of compulsory payments, provisions to facilitate administration and those relating to international fiscal obligations (OECD (1996)). The definition of the tax benchmark also depends on the definition of the tax unit, on the treatment of pensions and of imputed income and it depends on the views on the required integration of the personal and corporate income taxes. The deviations from this norm are then considered to be tax expenditures.

The effects of an extensive use of tax expenditures on the complexity of the tax system, as well as the negative effects such complexity may have on efficiency and equity, have already been discussed. But even if the use of tax expenditures add to the complexity of the tax system, many OECD countries still use them extensively either as a supplement to or as a replacement of direct public expenditures. One reason is that there are costs and complexities involved in administering a public expenditure program, and that there might be some economies of scale/scope of having the tax authorities administer the public subsidy by providing it as a tax incentive. This may in particular be relevant in cases where

the tax incentive is general in the sense that it is reasonably easy to identify the activities or persons that are eligible for the incentive. The case for using the tax system to deliver subsidies that are targeted according to a complex set of criteria is much weaker, as tax administrators would then need to spend resources on wide range of areas in addition to taxation. The tax system may, in other words, be used where the objective is to have a general incentive for a clearly defined activity, without the beneficiaries having to go through a (cumbersome) screening process. A more political economy argument is that tax incentives tend to be more stable once introduced than public expenditure programs – the reason being that public expenditure programs are often subject to a greater political scrutiny in the annual budgets than are tax expenditures. This argument may be used in favour of or just against the use of tax expenditures.

A number of OECD countries have replaced tax allowances by tax credits in recent years. The main argument in favour of tax credits is that they are of the same value for all taxpayers (if they pay a sufficient amount of taxes), whereas the value of tax allowances increase with income in tax systems with progressive tax rates.[2] A related issue is the increased use of non-wastable tax credits, where a cash payment is made by the revenue authorities to the individual or family if tax liabilities before the credit are lower than the value of the credit. This means that even low-income households benefit fully from the credit, even if they do not have a sufficiently high taxable income. In practice, a non-wastable tax credit thereby becomes equivalent to an income transfer.

Several OECD countries have recently introduced in-work tax credits to help "make work pay" for the low-skilled, as a way of achieving both employment and distributional objectives at the same time. Such policies are expected to increase employment by increasing the incomes of those who accept low-paid work. An increase in transfers to those with low incomes is however linked to their employment status. While such policies have many advantages, they are not without problems. These tax credits are, for example, usually gradually phased-out against labour income in order to target the incentives only to low-income households, which implies that the effective marginal tax rate on increased labour supply may become very high even though the average tax rate on labour income is reduced.[3]

5. Impact of inflation

Inflation interacts with the income tax in a number of ways. Because tax brackets and tax credits are often set in nominal terms, their value erodes with inflation. Because inflation increases taxpayers' nominal incomes, they will be pushed into higher tax brackets. The resulting increase in the average tax rate, which is referred to as 'bracket creep', could be avoided if tax brackets would be indexed to inflation (Stotsky (1995)). However, governments often only periodically index tax brackets and credits to inflation as it gives them more budget flexibility.

Inflation also interacts with the taxation of capital income, as the nominal instead of real return on capital income is taxed in most OECD countries. From a horizontal equity point of view – evaluated on the basis of year-to-year income – it can be argued that labour income and the *real* return on capital should be taxed equally. If the nominal return to capital is taxed, horizontal equity would therefore imply that capital income should be taxed at somewhat lower rates than labour income. However, we did argue in chapter 2 that taxing capital income violates horizontal equity anyway (if horizontal equity is evaluated on the basis of life-time income), as it discriminates between individuals with different consumption patterns over their life-cycle.

6. Effects of personal income tax reform on the overall tax-benefit system

Reform of personal income tax systems will have impacts on the overall tax-benefit system, and can therefore not be evaluated in isolation of the rest of the tax system and public benefits (and in particular income-related benefits). Such linkages between personal income taxes and other taxes and benefits are obviously important, but it is outside the scope of this paper to have any discussion of these issues except for the few examples mentioned below. However, these considerations are important as it is unlikely that fundamental personal income tax reform can lead to entirely satisfactory results if it is considered in isolation.

One example is the choice between being an employee and being self-employed, which may be affected by the taxation of wages versus the taxation of income from self-employment. Similarly, the

choice of organizational form of a business (unincorporated versus incorporated) is influenced by the corporate tax system and the integration between the corporate and personal income tax systems. And indeed, for certain professions it is possible to incorporate their activities rather than being an employee – a choice that may be influenced by the relative taxation of wages versus distributed profits from a corporation. Such possibilities for income shifting affect the distributional impact, the tax revenue that can be raised, the complexity and the distortionary effects of the tax system. Another example is the taxation of capital income at the personal or the corporate level, for instance the double taxation of dividends and the alleviation of the corresponding tax burden if corporations and investors are treated as separate entities. Various types of arbitrage possibilities may arise when capital income is taxed differently at the corporate and the personal level, which will be further enhanced if the rates vary between different types of capital income. One example arises when interest income is taxed at (and deducted against) higher rates at the personal than at the corporate level, as this may create an incentive to finance investments by borrowing by the shareholder rather than at the corporate level.

Most OECD countries levy both income taxes and social security contributions on labour income. As social security contributions are typically levied at a flat rate on gross wages and often have ceilings, the overall effect of the tax system on income distribution is affected, and possibly also work incentives, unless social security contributions are part of an actuarially fair pension system.[4] There is also an interaction between the taxation of labour income and public benefits, as the combined effects of taxation and income-related public benefits may lead to very high effective taxation of labour income for low-income groups. The increase in disposable income from entering the workforce or increasing labour supply by low-income households may be small as a result of a reduction in income-related benefits when labour income increases, but also in part due to the higher taxation of labour income than of benefit income in most countries. As mentioned above, in order to reduce such negative effects on employment, many countries have replaced or supplemented benefits by in-work tax credits targeted at low-income households.

Many OECD countries rely heavily on consumption taxes, and in particular VAT, as a revenue source. Although consumption taxes

are levied when the income is spent rather than when it is earned, such taxes obviously have an effect on the disposable income a given work effort gives rise to and may thereby affect work incentives. Likewise, such may also affect the overall distributional impact of the tax system.[5] Value added taxes, as well as most excise duties, are normally levied at flat rates, and may therefore be de facto regressive if low-income households spend a larger share of their income on taxed goods and services. However, many countries use lower VAT rates on basic food and certain other goods and services as a way of reducing the tax burden for low-income households; as such households normally use a larger share of their income on basic foods than high-income households.

7. Tax compliance and tax administration

The effects of fundamental personal income tax reform on *tax compliance and tax administration* should be considered as well. In most OECD countries taxpayers complain that the tax system is too complicated, and the issue of simplifying the tax system is therefore high on the political agenda in most discussions on tax reform, as already discussed in chapter 2. However, it is not easy to have simple tax systems in a complex economic environment. Such complexities have probably increased significantly over the past decades as a result of globalization. There is an increase in cross-border investments by companies, which implies that taxpayers and tax administrators have to deal with several tax systems. The tax base associated with capital income and wealthy individuals is also becoming increasingly geographically mobile, in part reflecting the relatively easy access to tax havens. Globalization has increased the possibilities for tax avoidance and tax evasion, and it has made the task for tax administrators more challenging. To the extent that attitudes towards tax compliance are shifting as well, *e.g.* if more taxpayers are prepared to engage in aggressive tax planning, this will further complicate the task for tax administrators. In order for the authorities to be able to meet these challenges, it might be necessary to introduce new legislation that increases the complexity of the tax system even further.

The unavoidability of such complexities was recognized by the Joint Committee in the United States as early as in 1927 when it wrote that "(…) it must be recognized that while a degree of

simplification is possible, a simple income tax for complex business is not". Some countries have tried to tackle this problem by means of re-drafting the tax legislation in every day language. In some OECD countries the complexity is "hidden" from the average taxpayer, in the sense that a large share of taxpayers do not have to complete any tax returns either because of withholding at source or because the tax returns are pre-completed. Simplicity seems to be more easily achieved if there is a strong tradition of voluntary compliance with taxpayers respecting both the letter and spirit of the law (Owens and Hamilton (2004)).

However, the bottom line is that complexity in the tax system reflects to a large part the policy choices made by government. True simplicity can only be achieved if the tasks that are asked of the tax system are simplified. The main complexities in the income tax system, and thus the major part of administrative and compliance costs occurred, arise from the rules for determining the tax base (taxable income and tax allowances/tax credits), which implies that the tax system gets more complex when the tax system is used to redistribute income and as a vehicle for delivering benefits to specific groups. As already discussed in chapter 2, tax policy makers therefore need to acknowledge that there is a trade-off between an objective of simplifying the tax system and the use of the tax system to achieve other political objectives than to raise revenue. Put another way: administrative feasibility should be one of the most important criterions for judging the merits of a proposed tax reform. On the other hand, some of the complexities of the tax system may be enhanced as a result of inefficiencies in the tax administration. Therefore, reforms aiming to simplify the tax system are probably more likely to be successful if combined with a consideration of the need for reforms in the tax administration.

8. Tax reform process

Some rules to smoothen the transition from the old to the new tax system might be welcome in a tax reform process. Some transitions rules will be necessary for purely technical reasons. However, there also is the question of whether the tax reform should be gradually phased-in over time (so-called grandfathering) and whether to introduce some form of (temporary) compensation for some of those negatively affected by the tax reform.

Reforms of the personal income tax system will usually create a large number of both winners and losers, at least if done within a revenue-neutral framework. And even though reforms based on the principle of rate reductions and base broadening normally create more winners than losers, this may not be sufficient to gain a broad political support. The reason is that the gains of tax cuts are broadly spread, while the costs of base broadening are normally concentrated. Thus, the losers are often easy to identify as a group and are often able to create lobby groups to oppose the specific changes that affect them negatively. This will create a political trade-off between vocally active losers and passive winners, and is one of the reasons for why it may be politically difficult to implement major tax reforms unless there is either a broad political consensus about the need for reform or if the government proposing the reform has a clear majority in parliament.

In order to create a broad political consensus for tax reform, it might be necessary to use grandfathering or other forms of compensation to reduce the burden on those who lose as a result of the reform. Another argument in favour of grandfathering rules is that those who made partially irreversible decisions based on the expectation that the old tax system would prevail will have time to adjust to the new rules before they have full affect. For those who lose as a result of the tax reform, such grandfathering implies that the net present value of the tax increase will be lower compared to a situation where the new rules are implemented immediately. Even if this is only an implicit form of compensation, it may be sufficient to gain a broader support for the tax changes.

On the other hand, those who pay less tax as a result of the reform will benefit less as the gains are postponed as well. There is also a cost for the society at large if the tax reform improves economic efficiency, as such efficiency gains will also be postponed. Another drawback of grandfathering rules is that they add to the complexity of the tax system, as taxpayers and tax administrators have to administer a mix of the old and the new tax system during the phasing-in period.

The most generous form of grandfathering makes the new tax rules only applicable to income earned as a result of decisions made after a specific date, and that the old tax rules apply for income earned as a result of decisions made prior to that date. However, such a distinction is very difficult to administer over time. Grandfathering

rules are therefore normally based on simpler rules and have a more limited scope. An example is when decisions on rate reductions and/or base broadening are announced a couple of years in advance in order for taxpayers (to be able) to adjust their portfolios before the new tax rules are implemented. A related example is when decisions with respect to the future tax system are gradually implemented.

An alternative to grandfathering rules would be to introduce some form of (temporary) compensation for some of those who are negatively affected by the tax reform. Such compensation might be in the form of (targeted) tax reductions for certain groups. This could be achieved through the tax system by introducing (wastable or non-wastable) tax credits or increasing the basic personal tax allowance. Alternatively, it can be done by introducing or increasing the level of cash transfers or social benefits. Such schemes are probably most effective when the objective is to compensate low-income households. It is more difficult to design compensation schemes to other groups that are sufficiently targeted and that at the same time can be administered at a reasonable cost.

The main argument in favour of compensation schemes is that they may be necessary to gain a sufficiently broad (political) support for the tax reform. However, when designing the compensation schemes one should seek to avoid that the schemes counter the positive effects of the tax reform on economic efficiency. For the same reason, such compensation should normally be of a temporary nature. An additional drawback of introducing compensation schemes is that they increase the tax reform's administrative costs.

Notes

1 More specifically, the income in the first decile is 10 and it is 18 in the second decile; it is respectively 30, 40, 50, 60 and 70 in deciles 3, 4, 5, 6 and 7. The income in decile 8 is 85; it is 105 in decile 9 and 130 in decile 10.

2 Tax allowances and tax credits are equivalent in countries where allowances/credits are deductible against a flat tax rate, such as in the dual income tax systems in Finland, Norway and Sweden and in the flat tax rate system in the Slovak Republic.

3 For more details on "Making Work Pay" policies in OECD countries, see Chapter 3, Section 3 of OECD (2004).

4 If all social security contributions are returned to the taxpayer on an actuarially fair basis (there is no income redistribution in the pension system), then such contributions should be regarded as compulsory saving rather than a tax on labour.

5 Taxes on luxury goods have an equalizing effect, while taxes on necessities have the opposite effect.

Chapter 4

Types of Personal Income Tax Systems

This chapter discusses different types of personal income tax systems:

- The *comprehensive income* tax system taxes all or most (cash) income less deductions (net income) according to the same rate schedule. This implies that wage and capital income are taxed at the same rates, usually according to a progressive rate schedule, and that the value to the taxpayers of the tax allowances increases with income.
- The *dual income* tax system levies a proportional tax rate on all net income (capital, wage and pension income less deductions) combined with progressive rates on gross labour and pension income. This implies that labour income is taxed at higher rates than capital income, and that the value of the tax allowances is independent of the income level.
- The *semi-dual income* tax system uses different nominal tax rates on different types of income, typically by taxing some forms of capital (personal and corporate) income at low and often flat rates and remaining forms of income at higher and progressive rates.
- The *flat tax* system levies a proportional (flat) tax rate on all net income (capital income, labour income, other income minus all deductions). This implies that wage and capital

income are taxed equally, and that the value of the tax allowances is independent of the income level.

- The *expenditure* tax system taxes only consumption and not savings.

All these tax systems possess strengths and weaknesses, which will be discussed in more detail below. Generally speaking, flat tax systems are simpler than the others, but put less emphasis on redistribution. Flat tax and dual income tax systems have fewer tax allowances and tax incentives than is common in comprehensive income tax systems, although New Zealand is an example of a country with a comprehensive income tax system and a broad tax base. From an efficiency viewpoint, a flat tax system probably gives rise to fewer tax-induced distortions than the other tax systems, but it is far more difficult to give a general statement on the effects on the overall efficiency of the tax system.

A country's choice of a system for the taxation of personal income depends on how the trade-offs discussed in chapter 2 are valued in each individual country. In practice, no OECD country has fully implemented either a comprehensive, dual or flat personal income tax system. All OECD countries have special tax treatment for certain types of income (*e.g.*, fringe benefits and owner-occupied housing), and many countries levy social security contributions only on certain types of income (mainly labour income). In other words, most countries use "semi-comprehensive", "semi-dual" or "semi-flat" income tax systems. "Semi-dual" income tax systems are particularly common. This distinction, however, cannot perfectly be made. Whether a particular income tax system is characterized, for instance, as a "semi-dual" rather than as a "semi-comprehensive" income tax system is a question of interpretation and remains open for discussion.

This chapter includes a brief discussion of expenditure (consumption) taxation. Although no OECD country has introduced such a tax system in its pure form, most OECD countries have in practice a mixture of income and consumption taxes – in particular countries which rely heavily on value added taxes. In addition, most OECD countries have introduced special tax rules for pension savings (so-called EET tax systems) which are equivalent to an expenditure tax – and many OECD countries have also special tax incentives for other forms of savings. Another reason for including a

brief discussion of expenditure taxation is that many economists argue that this form of taxation has many advantages over income taxation.

1. Comprehensive income tax

A majority of the OECD countries have tax systems that in principle are based on a comprehensive income tax system, although in practice their tax system deviates from it on many accounts. In principle, a comprehensive income tax system is based upon the principle of horizontal equity in the sense that individuals with the same level of income are taxed equally; it obviously is based upon the vertical equity tax principle as well. In fact, a genuine comprehensive income tax system makes it easier to effectively redistribute income by way of progressive income taxes, as it is more difficult to avoid taxes through income shifting. Lack of income shifting possibilities then probably reduces administrative costs. As already pointed out, a genuine comprehensive income tax – following the Schanz-Haig-Simons definition – implies a tax base that includes the market value of consumption plus changes in net wealth on an accruals basis. However, to follow this income definition in practice would be very difficult, and would imply fairly high compliance and administrative costs.

In fact, no OECD Member country actually follows the Schanz-Haig-Simons definition of comprehensive income. In practice, comprehensive income tax systems are mainly based on realized income, implying that the tax base includes remuneration and capital income received in cash. This implies that capital gains, if taxed at all, are taxed when they are realized and not when they accrue. Similarly, most countries do not tax imputed income from owner-occupied dwellings at all[1] or tax it at effective rates that are much lower than the taxes on other types of capital income (the same applies for other consumer durables). And although most countries include fringe benefits in the taxation of labour income, they are in practice taxed at lower effective rates than wage income. The fact that actual income tax systems do not tax all types of income in an equal manner provides possibilities for arbitrage behaviour. This lack of neutrality, in turn, increases the compliance and administrative costs, reduces tax compliance and tax revenues and impairs the efficiency and equity of the tax system.

In addition, there are concerns that progressive (comprehensive) income taxation violates the efficiency and the horizontal equity principle as it discriminates against variable income. This may for example discourage seasonal work and reduce the investment in human capital and the demand for risky assets. Such negative effects may, however, be mitigated by other types of public policies. Low-income employees may for example be helped by social insurance systems, and the incentives for investment in human capital will also depend on public subsidies to education. Furthermore, the effects of progressive rates on the demand for risky assets also depend on the tax treatment of losses. In addition, investors will normally adjust their portfolios to take account of the potential effects of taxation.

Additional problems arise as comprehensive income tax systems do not take into account the fact that capital is more mobile across borders than labour. In fact, it is often fairly easy to evade high taxes on capital income by moving savings abroad and not reporting the true income to the tax administration. In response, several OECD countries tax all or some personal capital income at lower rates than wage income. These countries' tax systems are therefore better labelled as "semi-dual" rather than as comprehensive personal income tax systems.

Also, OECD countries that implement a comprehensive income tax system often rely more heavily on tax expenditures than countries that use either a dual or a flat personal income tax system – although New Zealand is one of the exceptions in this regard. Such deviations imply that comprehensive income tax systems in practice abide less by the principle of horizontal and vertical equity, yield less revenue, are more complex and induce more non-neutralities than a more "pure" comprehensive income tax system.

2. Dual income tax

A policy objective of reducing tax distortions, in particular in the taxation of corporate and capital income, combined with an objective of continued income redistribution through the income tax system were the main driving forces behind the introduction of dual income tax systems in Finland, Norway and Sweden, and to a lesser extent in Denmark, in the early 1990s. The main guiding principles of the dual income tax are the combination of progressive taxation of labour

income with proportional taxation of corporate and capital income on a broad tax base and at a fairly low tax rate.

Norway introduced the purest form of dual income tax, and will therefore be used as an example. The main characteristics of the Norwegian system are:

- A flat personal income tax rate of 28 per cent on net income, which includes wage, pension and capital income less tax deductions. The same rate is used for corporate income. This implies:
  - a symmetrical treatment of all capital income, e.g. with no double taxation of dividends and capital gains on shares (see below) and full deductibility of all interest expenditures,
  - a broad tax base, aiming to bring taxable income in line with true economic income and a reduction of the number and the value of tax allowances, as all remaining allowances are deductible only at the flat 28 per cent tax rate.
- Progressive taxation of wage and pension income in addition to the flat rate, by means of a surtax on gross income from wages and pensions above a certain threshold level. The highest surtax rate on wages and pensions was 13 per cent when the tax reform was implemented in 1992; it increased to 19.5 per cent in 2000 and it decreased to 15.5 per cent in 2005.

As the return on equity is already taxed at the corporate tax rate, as opposed to interest payments that are deductible from taxable corporate profits and are therefore taxed only at the personal level, double taxation of distributed profits is prevented through a full imputation system. Shareholders are permitted a tax credit against the personal income tax on dividends for the corporate tax that can be imputed to the dividends which they receive. Double taxation of retained profits is prevented as well. Shareholders are permitted to write up the basis of their shares by an amount equal to the taxable corporate income which is retained in the corporate firm. As a result, the capital income tax is levied only on capital gains in excess of retained profits that already have borne corporate tax (Sørensen

(2003)). This method, which is called RISK, is administratively costly.

In order to ensure an equal tax treatment of wage earners and the self-employed, the dual income tax system splits the income of the self-employed into a labour income component as a reward for work effort and a capital income component, which is the return to the savings invested in the proprietorship. The part considered as labour income is taxed according to the progressive rate schedule, while the part considered as capital income is taxed at the flat rate. This so-called split-model imputes a return to the capital invested and categorizes the residual income as labour income (Sørensen (1998)). The split-model is also used to prevent the 'active' owners of closely-held corporations transforming their highly taxed wages into lower taxed capital income (by distributing dividends or by accumulating capital gains inside their corporation). By definition, 'active' owners work in their own business and own at least two thirds of the shares of the firm or are entitled to at least two thirds of the firm's dividends. This again implies that an imputed return on the value of the corporate assets is taxed as capital income and that the remaining part of the closely-held corporation's profits is taxed as labour income.

The imputed return in Norway is the interest rate on five year government bonds augmented by a risk premium of four per cent. As this return is considered to be the opportunity return on alternative business investment, the split-model does not distort investment across different types of firms. Moreover, this approach implies that the Norwegian dual income tax system taxes not only labour income but also various economic rents at the higher progressive rates. Two additional elements of the Norwegian split-model that restrict the relevance of this result are worth mentioning (Christiansen (2004)). First, income that exceeds a certain threshold level is considered to be capital income and is therefore taxed at the flat rate (except for certain professions as doctors, lawyers, *etc*.). Secondly, active owners with employees are entitled to make a salary deduction from residual income, which equals 20 per cent of the wage bill of their employees, in order to derive their own labour income.

The split-model raises a number of technical issues (Sørensen (1998)): the types of business assets have to be defined to which a return may be imputed, the value of these assets has to be determined, an appropriate rate of return has to be chosen that can be

imputed to the value of these business assets, and authorities have to decide whether or not financial assets and liabilities can be included in the base to which a return will be imputed.[2]

In principle, dual income tax systems achieve horizontal equity in the taxation of capital income on the one hand and in the taxation of labour income on the other hand. Taxpayers with a different mix of capital and labour income are taxed differently under a dual income tax system, which might be seen as violating horizontal equity if year-to-year income is used as the basis for evaluation. However, if horizontal equity is evaluated on the basis of life-time income, the taxation of capital at a lower rate becomes a source of horizontal equity. Dual income tax systems also combine fairly neutral and low taxation of capital which enhances efficiency, with income redistribution through the progressive taxation of labour income. The dual income tax systems are also rather simple as they reduce the number of tax allowances and tax credits.

However, the introduction of a lower proportional tax rate on capital income might undermine the tax code's vertical equity, especially because income from capital tends to be concentrated in the upper income brackets. Defenders of a dual income type of tax system often argue that the loss of vertical equity is largely offset by the gains in efficiency due to the strong reduction in tax-arbitrage opportunities and that semi-comprehensive income tax systems are not necessarily more in accordance with vertical equity.

A low tax rate on capital income can be justified on other grounds as well. Personal income tax systems usually tax the nominal return to capital, even though the inflation premium just compensates for the erosion of the real value of the assets. A lower personal capital income tax rate might then offset the higher tax burden as a result of the taxation of the *nominal* return on savings and investment – an argument which especially holds in periods of high inflation.

Sørensen (1998) offers another interesting argument why capital income might be taxed at a proportional rate and labour income at progressive rates under the dual income tax. As pointed out, a genuine comprehensive income tax would tax the market value of consumption plus changes in net wealth on an accruals basis. These changes in net wealth include additions to the taxpayer's stock of human capital as well. However, traditional income tax systems allow investment in human capital, which takes the form of foregone

(taxable) wage income, to be fully expensed while investment in physical capital does not enjoy this favourable tax treatment. The progressive taxation of labour income – it is assumed that investment in human capital leads to higher labour income – as opposed to the proportional taxation of capital income, then counteracts the discrimination in favour of human capital investment.

An international tax perspective offers additional reasons for introducing a low tax rate on capital income. As it is difficult for tax administrations to monitor the foreign source income of their residents, implementing a high tax rate on capital income increases the incentives for capital exports, which will lead to lower tax revenues and might reduce the available funds for domestic investment. As international capital mobility tends to equalize the pre-tax level of interest rates across countries, a resident-based personal income tax system implies that individuals in countries with the highest marginal income tax rates will realize the lowest after-tax return on their savings. A low tax rate on capital income might then avoid the corresponding negative impact on total savings as well.

However, no country has introduced a pure dual income tax system where *all* capital income (personal and corporate) is taxed at the same flat rate, whereas labour and pension income are taxed at progressive rates. The main exception is imputed income from owner occupied dwellings, which is taxed more favourably than other forms of capital income. In addition, certain other tax-favoured savings schemes have been kept in Norway, as for instance the favourable treatment of pension savings.

In fact, the low tax burden on investment in owner-occupied housing provides a final argument for introducing a lower tax rate on capital income. While income from housing is not highly taxed, interest payments on debt-financed investment in owner-occupied housing are often fully deductible from taxable personal income. This strongly reduces the capital income tax revenue and provides incentives for excessive debt-financing. In fact, taxpayers with the highest income often benefit the most, as they are characterized by the highest marginal income tax rate. These negative effects on revenue, efficiency and equity can be reduced by lowering the personal capital income tax rate as it reduces the tax value of the interest deductions.

The main problems with the dual income tax system were twofold. First, dividends and capital gains on foreign shares were

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taxed more heavily than dividends and capital gains on shares in Norwegian companies. Because personal shareholders were not entitled to a full imputation credit (but only to a tax credit for foreign withholding tax), dividends on foreign shares – taxed with the foreign corporate tax rate plus the 28 per cent tax rate on capital income at the shareholder level – were taxed more heavily than dividends received from Norwegian companies, which were taxed only at a rate of 28 per cent. Similarly, the RISK scheme that avoided double taxation of retained earnings only applied to shares in Norwegian companies. Retained earnings by the foreign firm – taxed with the foreign corporate tax rate plus the 28 per cent tax rate on capital income at the shareholder level when the capital gains were realized – were taxed more heavily than retained earnings by Norwegian companies, which were taxed only at a rate of 28 per cent.

A second problem of the Norwegian dual income tax systems was due to the large difference in top marginal tax rates on labour and capital income. This difference provided taxpayers with a tax-induced incentive to have their income characterised as capital income rather than as labour income, for instance by incorporating themselves. These income shifting problems are observed in most countries where the tax burden on capital income deviates from the tax burden on labour income. The fact that social security contributions are often levied only on labour income just strengthens the income shifting. Sørensen (2005a) points out that an increasing number of active shareholders were able to avoid income splitting by inviting 'passive' owners into the company. Moreover, a large number of active shareholders subject to income splitting had often a negative labour income, which suggests that the salary deduction of the employees' wage bill from residual income was too favourable. The extensive income shifting obviously reduced the tax system's horizontal equity as there are individuals who are able to get some of their income from labour taxed as capital income and others who are not. Furthermore, such income shifting weakened the actual redistributional effects of high taxes on labour income (vertical equity), in addition to the loss in tax revenue and the loss in efficiency.

As from January 1, 2006, Norway introduced a higher shareholder income tax on realized income of shares above the normal rate of return, which is called the 'rate-of-return allowance'

or 'RRA'. The shareholder tax is levied on realized shareholder income, which consists of dividends plus any realized capital gains minus realized capital losses, after deduction of the RRA (see Sørensen (2005b)). It is levied on the shares of Norwegian and foreign firms owned by resident taxpayers in Norway and it replaces the previous imputation system as well as the RISK scheme. The normal rate of return is not taxed at the shareholder level and is therefore taxed only at the corporate tax rate of 28 per cent. Dividends in excess of this normal rate of return are taxed at the shareholder level as capital income at a rate of 28 per cent, which then yields a total maximum marginal tax rate on dividends of 48.16 per cent. If the distributed dividends are lower than the RRA, the surplus tax free amount can be carried forward (by stepping-up the basis of the shares with the unused RRA) to be offset against dividends distributed in the following year or against any capital gain when the equity is sold. After the tax reform, realized capital gains (insofar that realized income exceeds the RRA) are taxed at the higher shareholder income tax, which implies that the maximum tax rate on capital gains equals the maximum marginal rate on dividends (48.16 per cent). However, this tax burden will often be lower because the shareholder tax on capital gains can be deferred.

After the tax reform, the split-model for self-employed income has been replaced by a more general regulation that taxes all business profits exceeding the risk-free interest on the capital invested as labour income at progressive rates. The split-model for the income of active owners has been replaced as well. From 2006, distributed profits in excess of the normal rate of return will be taxed as capital income at a rate of 28 per cent. Because retained and distributed profits are subject also to the corporate tax rate of 28 per cent, the maximum marginal tax rate on distributed income is 48.16 per cent.

Hence, the tax burden on equity income above the RRA increased considerably (from 28 per cent to 48.16 per cent). At the same time, the top marginal personal income tax rate (including employee social security contributions) has declined (from 61.5 per cent to 54.3 per cent). As both adjustments will significantly reduce the rate differential on the margin, incentives to convert labour income to capital income are correspondingly reduced.

3. Semi-dual income tax

The discussion above reveals that no country uses a pure comprehensive or a pure dual income tax system. In practice, a majority of OECD countries may therefore be characterised as having "semi-dual" (or "semi-comprehensive") tax systems. A "semi-dual" income tax system is defined as a tax system that uses different nominal tax rates on different types of income, typically by taxing some forms of capital (personal and corporate) income at low and often flat rates and remaining forms of income at higher and progressive rates.

As pointed out before, the distinction between a "semi-dual" and "semi-comprehensive" personal income tax system remains a matter of interpretation as the borderline between these characterizations is not easy to draw. However, while semi-dual income tax systems tax most types of capital income at low and often flat rates that deviate from the progressive tax rates on labour income, semi-comprehensive income tax systems tax most types of capital income at high and often progressive rates which are levied on labour income as well.

The Box system introduced in the Netherlands by the Income Tax Act 2001 is probably the tax system in the OECD area outside Finland, Norway and Sweden that is closest to the "pure" dual income tax system. This section starts by a brief discussion the Box system, and then illustrates the move towards "semi-dual" income tax systems in many other OECD countries.

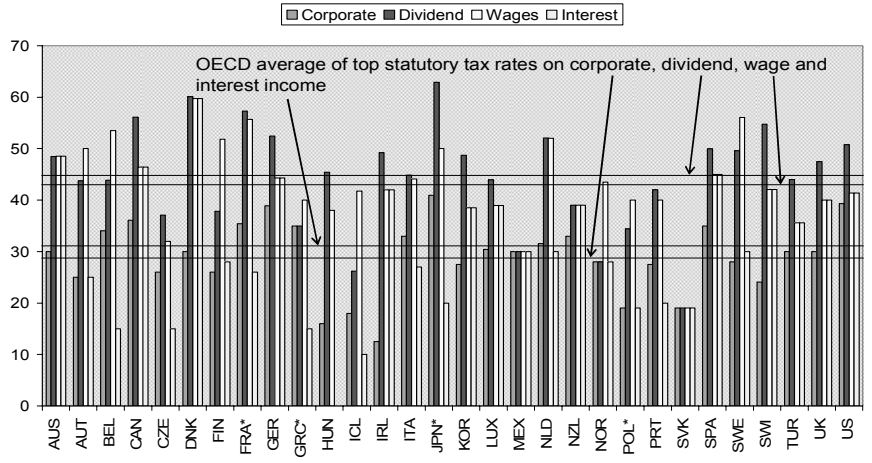
The objectives of the Box system in the Netherlands were to reduce the tax rates and broaden the tax base, to replace tax allowances by tax credits and to replace the wealth tax and the taxation of personal capital income with the taxation of an imputed income from capital. One of the main arguments for taxing an imputed income from capital is to ensure that all forms of personal capital income are taxed equally, which prevents taxpayers from realizing capital income in the form of tax-free capital gains (which was possible prior to the reform). The main features of the system are:

- Box 1 includes wage income, income from self-employment, social security payments, pensions and imputed income from owner-occupied property, less allowable deductions (e.g.

personal allowance, deduction of childcare expenses and certain other deductions). The net income is taxed at progressive rates, ranging from about 30 per cent (including social security contributions levied on net income) to a top rate of 52 per cent.

- Box 2 includes taxable income from a substantial business interest, which is defined as income from the shares, whether received as dividends or realized capital gains, of a private or public limited company of which the shareholder controls (directly or indirectly) at least 5 per cent. The net income from such activities is taxed at the personal level at a proportional rate of 25 per cent.
- Box 3 deals with the taxation of capital income on all personally held assets such as deposits, stocks, bonds and real estate (except owner-occupied property) – including income from non-substantial business interests. Instead of a tax on the actual capital income, a 30 per cent proportional tax rate is applied on a notional return of 4 per cent on the net value of the assets owned by the shareholder (average of net assets on 1 January and 31 December). In practice, this presumptive capital income tax is equivalent to a tax on net wealth of 1.2 per cent (30 per cent tax rate times 4 per cent return). In order to insert a progressive element in the tax system, there is a basic tax-free allowance.
- The corporate income tax rate was reduced from 35 per cent to 34.5 per cent as of 2002, and it has been further reduced to 31.5 per cent as of 2005.

Figure 4.1. Top statutory income tax rates on corporate income, dividend income, wage income and interest income in OECD countries[1, 2] (2005)



[1] The tax rates on dividend income are the combined corporate and personal income tax rates on dividends paid by resident corporations to resident shareholders. The tax rates on wage income do not include social security contributions. The tax rates on interest income are the rates paid on interest from ordinary bank deposits.

[2] 2004 figures for countries marked *.

Source: OECD Tax Database for information on tax rates on corporate, dividend and wage income; European Tax Handbook and national websites for information on the tax rates on interest income.

Figure 4.1 partially illustrates the extent to which OECD countries have comprehensive, dual or semi-dual income tax systems. The illustration is based on the top statutory tax rates on corporate income, dividend income from a resident corporation to a resident shareholder, wage income (excluding social security contributions) and interest income from ordinary bank deposits. The figure illustrates that Norway has the typical dual income tax system with a high rate on wage income and the same rate on different types of capital income. The top rates on dividend and wage income are almost equal in Sweden and are higher than the rates on corporate and interest income. The figure shows that the tax rate structures in Austria, France, Italy, the Netherlands, Poland and Portugal are similar to the Swedish rate structure. Iceland and Finland, on the other hand, have a tax rate schedule that is fairly close to the one used in Norway – although the top rates on the three different types

of capital income included in the figure vary slightly. Other countries that may be characterised as having semi-dual income tax systems according to Figure 4.1 are Belgium, the Czech Republic, Greece, Hungary and Japan.

Australia, Denmark, Mexico, New Zealand and the Slovak Republic are countries where the top personal income tax rates on dividend income, wage income and interest income are equal (or almost equal), although Mexico and the Slovak Republic are the only countries where corporate income is also taxed at the same rate. The remaining OECD countries (Canada, Germany, Ireland, Korea, Luxembourg, Spain, Switzerland, Turkey, the United Kingdom and the United States) may also be characterised as using tax structures that are close to a comprehensive income tax system ("semi-comprehensive"), although the rates on different types of personal income varies somewhat.

This comparison suggests that half of the OECD Member countries may be characterised as having dual or semi-dual income tax systems, whereas the other half uses tax rate structures that correspond to comprehensive or semi-comprehensive income tax systems. Figure 4.1 is, however, undoubtedly both partial and open to interpretation. This comparison includes, for example, only the top statutory tax rates, while countries vary according to whether capital income is taxed at proportional or progressive rates. Some countries also have different basic allowances for different types of income, implying that the average tax rate on different types of income may differ even though the top rates might be the same. The effective taxation of different types of assets may also be affected differently by inflation or the existence of wealth taxes.

Another weakness is that this comparison does not include capital gains which are taxed differently from dividend income in many OECD countries. Furthermore, some Member countries have different tax rates depending on the source of interest income[3] and/or have special tax incentives for certain types of saving accounts or assets.[4] The tax rate on dividend income used in Figure 4.1 is the combined tax rate on dividends from a resident company paid to a resident shareholder, which may be different from tax rates on cross-border dividends.[5] Finally, a comparison of statutory tax rates does not provide a sound basis for discussing the economic effects of different types of tax systems.[6] This section therefore abstains from

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discussing and comparing potential economic effects of "semi-dual" and "semi-comprehensive" income tax systems.

4. Flat tax

Estonia was the first European country to introduce a flat tax, when a 26 per cent flat tax rate was introduced on personal and corporate income[7] in 1994. In fact, they are in the process of reducing the rate gradually to 20 per cent from 2007 onwards. The other Baltic States soon followed the Estonian example, as did several other Central and Eastern European countries – among those are Russia where a flat personal income tax rate of 13 per cent was introduced in 2001.[8] The Slovak Republic is the first, and so far the only, OECD country having a flat tax. They introduced in 2004 a 19 per cent rate that applies to both corporate and personal income, and which is also used as the value added tax rate.[9] Poland has considered the introduction of a similar single tax rate system. In addition, flat tax systems have been and still are discussed in several other OECD countries.

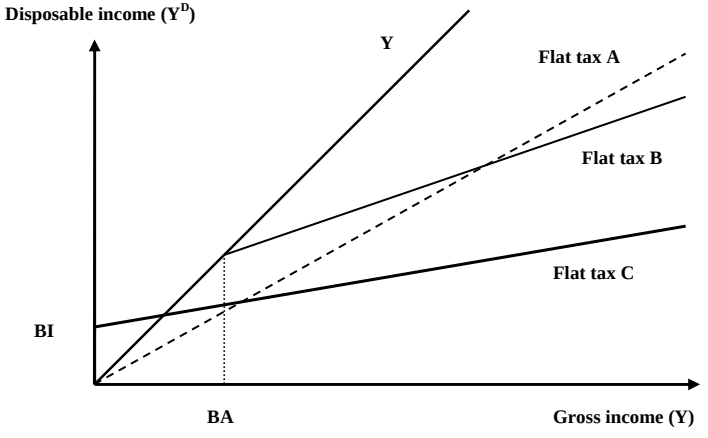
There are several possible definitions of a flat tax, as is illustrated in Figure 4.2.

- Single rate, no basic tax allowance. All (positive) income is taxed at a flat rate (**Flat tax A** in Figure 4.2).
- Single rate, with a basic tax allowance. All (positive) income above a basic allowance (BA) is taxed at a flat rate (**Flat tax B** in Figure 4.2).
- All (positive) payments to employees above a basic allowance are taxed at a flat rate (similar to Flat Tax B in Figure 4.2). In addition, the same flat tax rate is levied on all business income (incorporated and unincorporated business income). The base of the business tax is value added, which is calculated on a cash-flow basis, less the payments to employees. This is equivalent to a consumption tax with a basic allowance, and is often referred to as the Hall-Rabushka (1985, 1995) flat tax proposal. Consequently, the income from savings and investments is not taxed under this flat tax proposal.

- Single rate, with a non-wastable tax credit (basic income). This non-wastable tax credit is of equal value to all individuals, regardless of their income levels (thus, it is in practice a negative income tax at low-income levels). This is often called the "basic income flat tax", where the basic income (BI) is supposed to replace all social security benefits. In addition, a flat tax rate is levied on personal income. This is equivalent to the Atkinson (1995) flat tax proposal10 (**Flat tax C** in Figure 4.2).

This short list serves to illustrate that "flat tax" may have several meanings. It can be based on income or on consumption. A flat income tax can include only personal income (as in Russia) or both personal and business income (as in the Slovak Republic). It can be strictly proportional or progressive (through a basic tax allowance or tax credit). And it can, as is the case of the Atkinson flat tax proposal, also include a basic income which is to replace social benefits.

Figure 4.2. Different types of flat tax – an illustration



Proponents of flat tax often claim that a flat tax is simpler, fairer and more efficient than the alternatives.

A common feature of all flat tax proposals is that the introduction of a single rate is combined with the abolition of all or most tax allowances and tax credits. It is mainly the abolition of such

allowances that makes flat tax proposals *simpler* than existing progressive systems. In addition, the tax system is simplified even further if the same flat rate is introduced for both personal and corporate income as this reduces or even removes the tax incentives for income shifting between the personal and the corporate sector. However, identical tax rates are not sufficient for these incentives to disappear, as they also depend on the definition of the tax base. When viewed from the perspective of personal income tax in isolation, it might be argued that it is not much more difficult to have a progressive rate schedule than a flat rate once the tax base is set. While this is probably true, having a very large number of tax brackets may make it more difficult for taxpayers to understand how the system works and to calculate how much they will actually end up paying in taxes than in a flat tax system. In addition, a progressive rate schedule implies that the incentives for tax avoidance and tax evasion increase with income, which then negatively affects tax revenue and the efficiency of the tax system and undermines the fairness of the tax system. This then in turn might negatively affect tax morale, increasing the enforcement and administrative costs of having a progressive schedule even further. On the other hand, the incentives to avoid and evade taxes are probably more influenced by the level rather than the number of tax rates.

In addition to the personal income taxes, most countries levy social security contributions only on labour income (and not, for instance, on capital income). Social security contributions then undermine the 'flatness' of the tax system if they don't confer an actuarially fair entitlement to a possibly contingent future social benefit. One could then say that flat tax systems turn into (semi-) dual income tax systems with proportional instead of progressive taxation of labour income.

Progressivity in flat tax systems is achieved by means of a basic allowance/basic income provision and not through marginal rates that are increasing with income. Those in favour of the flat tax often argue that the reduction of tax allowances will increase the *fairness* of the tax system. They also argue that it will have a positive effect on redistribution, both because the value of deductions in a progressive tax rate system are increasing with income and because high-income persons are generally in a better position to take advantage of these allowances than are low and medium income persons. In addition, it is often argued that lowering tax rates

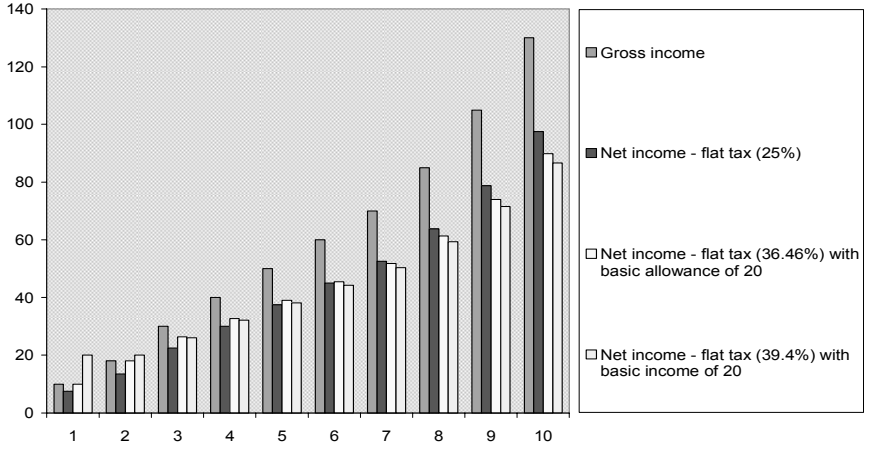
stimulates the economy and leads to increased employment, which will normally have a positive effect on income distribution as well. On the other hand, the static/first-year effects of flat tax reforms will probably give by far the largest tax cuts to high-income individuals – at least this is claimed by opponents to the Hall-Rabushka flat tax in the United States and it is what was found by the Norwegian Flat Tax Commission in its 1999 report.[11] In order for those first-year distributional effects to cancel out over time, the dynamic effects of going from a progressive to a flat tax need to be relatively significant.

Furthermore, as illustrated in Figure 4.3, the tax system's progressivity depends on the type of flat tax system that is effectively chosen. Similarly to the analysis presented in Figures 3.1 and 3.2, this analysis is based on an assumed pre-tax distribution of income in ten income deciles, where gross income is assumed to increase from 10 in the first income decile to 130 in the last.

This example derives the distribution of after-tax income for three types of flat tax systems, where all of them generate the same amount of tax revenue:

- Flat tax rate of 25%, with no deductions
- Flat tax rate of 36.46%, with a basic tax allowance of 20
- Flat tax rate of 39.4%, with a non-wastable tax credit (basic income) of 20

Figure 4.3. A comparison of flat tax systems within a revenue-neutral framework



This simple example illustrates two things. First, the level of the flat tax rate within a revenue neutral perspective may depend significantly on the level of the basic allowance or basic income. In this simple example, the flat tax rate has to increase from 25 per cent to almost 36.5 per cent to finance a basic allowance of 20, and further to 39.4 per cent if one instead introduces a non-wastable tax credit (basic income). This is the case even though the example's basic allowance/income is not unrealistically high, as less than 20 per cent of the population is taken out of the tax net. Secondly, Figure 4.3 illustrates the different effects on the income distribution of the different types of flat tax systems. Not surprisingly, the effects of introducing a basic allowance or a basic income (in a revenue-neutral framework) are strongest at the bottom and the top end of the income distribution – whereas the effects are rather minor in the mid-range of the income scale.

The third claim from proponents of flat tax systems is that they are more *efficient* than systems with a progressive tax rate schedule. There are at least two aspects of flat tax proposals that may affect the efficiency of the tax system: the level of effective tax rates on personal income and the distortions caused by tax allowances and tax incentives for certain activities.

Reductions in personal income tax rates will probably have a positive effect on labour supply and savings, reducing the distortionary effects of the tax system. So whether a move from a

progressive to a flat tax system actually improves the efficiency of the tax system depends on what happens to the tax rates. Most flat tax proposals actually imply a reduction of the top marginal tax rates on personal income, partly financed by the reduction of tax allowances and tax incentives. A revenue-neutral flat tax reform might however increase tax rates at low-income levels in order to finance the basic allowance and the reduction in top marginal income tax rates. And if tax rates are reduced for some groups and increased for other groups, it is an empirical question whether the overall effect on the efficiency of the tax system will be positive.

Tax allowances and tax incentives may distort the household's labour market and saving decisions – especially the allocation of savings when the effective tax rates differ between saving vehicles. However, these distortions are mainly a result of the existence of special tax provisions and are not a result of whether there is a single rate or a progressive rate schedule. If policy-makers decide to keep such tax provisions when moving from a progressive to a flat rate schedule, the distortions will prevail although the value of them might change depending on the level of the tax rate. And, *vice versa*, it is possible to get rid of such tax distortions without making any changes in the rate schedule. However, policymakers often prefer to include unpopular base broadening measures in a "package" of fundamental tax reform where tax rates are also cut. An example of such a fundamental reform would be the replacement of a progressive rate schedule with a flat tax.

The basic income flat tax proposal also involves a major reform of the benefit system. The proponents of a basic income flat tax argue that not only will the tax system be simplified with their proposal, but so will the benefit system. In addition to the introduction of a flat tax, the idea behind this type of flat tax reform is that all individuals are entitled to a basic income (where the amount might differ according to age) that will replace all social security benefits. This system is meant to replace the progressive income tax rate schedule and all personal income tax allowances. To the extent that all means-tested benefits and tax credits would effectively be abolished, this would obviously imply a major simplification of the tax and benefit administration systems in addition to the simplification as a result of the flat tax rate. It would also get rid of so-called poverty and unemployment traps, as there is only one effective tax rate on all income. On the other hand, as this

implies that everybody will receive a basic income independent of their income level, one would have to accept an increase in the average tax rate and/or a decrease in the level of benefits in order to finance such a move – although there would be large savings in administrative costs as well. An increase in the average personal tax rate would for most OECD countries imply that the flat tax rate on personal income will have to be higher than the corporate tax rate, or that the corporate tax rate would have to be increased if the flat rate is to be on both corporate and personal income. Having different rates on corporate and personal income creates income shifting opportunities, which is likely to be exploited by high-income individuals, and the present trend in OECD countries is to reduce and not increase corporate tax rates.

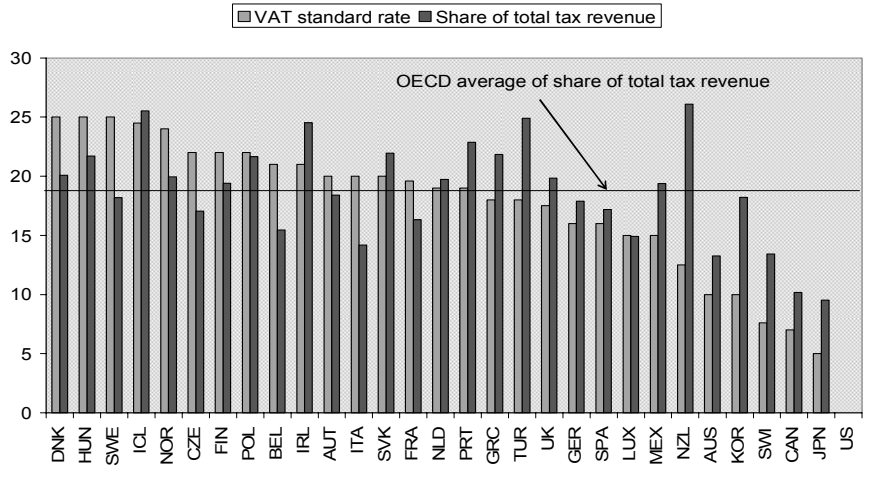
5. Expenditure taxation

Many economists have argued that expenditure taxation is a simpler and more effective way of taxation than income taxation.[12] The main efficiency argument in favour of expenditure (or consumption) taxation is that present and future consumption are taxed at the same rate[13], whereas income taxation implies that present consumption is taxed at a lower rate than future consumption (due to the taxation of income from savings). And although for reasons of second-best optimality it is not necessarily the case that the optimal tax rate on capital income should be zero given that there are unavoidable distortions in the labour market, no optimal tax model has yet been developed that gives the result that pure comprehensive income taxation is universally preferred over pure expenditure taxation for efficiency reasons. Another argument used in favour of expenditure taxation is that it is easier to measure its tax base than the comprehensive income tax base. A comprehensive income tax system requires the measurement of capital income and the return to human capital investments on an accruals basis, whereas this is not necessary in an expenditure tax system. The tax base is equal to total consumption, which can be measured as income on a cash-flow basis less savings. On the other hand, it might be argued that a progressive income tax system is more efficient at redistributing income than an expenditure tax system. While this may be true, this requires that high-income earners actually do pay income tax at progressive rates on all of their income. One should also keep in mind that expenditure taxation is not necessarily equivalent to excluding capital income

from the tax base, as all sources of income that finance consumption will eventually be taxed.[14] Another argument against expenditure taxation is that it may be difficult to raise a sufficient amount of tax revenues in a world where other countries use income taxation. Taxpayers may choose to consume part of their income abroad (or even decide to move abroad), which will reduce tax revenues for their national government.

This section will not include any further discussions of the pros and cons of expenditure taxation versus income taxation. From a theoretical perspective there are arguments in favour of both expenditure taxation and income taxation – and in fact often also for having a mix of consumption and income taxation. As no country has yet moved from an income tax system to an expenditure tax system, there is not much practical experience to draw on either.

Figure 4.4. Standard rates of value added tax and share of total tax revenue (2003)



Source: OECD Tax Database and Revenue Statistics 1965-2004.

On the other hand, the tax system of all OECD countries is in practice characterised by some elements of expenditure taxation. A majority of OECD countries uses for example EET (21 countries) or TEE (1 country) taxation with respect to private pension savings[15], which corresponds to expenditure tax treatment. And most remaining countries have other forms of preferential tax treatment of pension savings. In addition, several OECD countries have introduced tax

incentives for certain other savings, which in practice moves the income tax system a step closer to an expenditure tax system.

In addition, Figure 4.4 illustrates that most OECD countries rely heavily on value added taxes in their tax mix. On average in the OECD area, about 18 per cent of tax revenues came from value added taxes in 2003, and in some countries this share is close to or above 25 per cent. When including other types of consumption taxes (*e.g.*, excise and import duties), the overall revenue share from such taxes in the OECD area in 2003 amounted to about 30 per cent. This illustrates that OECD countries in practice use a mix of income and consumption taxes to finance their public expenditures. For this reason, the main relevance of academic discussions on the virtues of "pure" (comprehensive) income versus "pure" expenditure taxation probably lies in the guidance with respect to the effects of different tax systems on efficiency and equity, and not so much in the provision of a practical guide on which to base actual tax policy decisions.

Notes

1 On the other hand, many countries use property taxes and stamp duties instead.

2 For a schematic analysis: Sørensen, Peter Birch (2005a).

3 Several countries have for example lower tax rates on interest income from government bonds than from ordinary savings accounts.

4 Most countries have for example a favourable tax treatment of owner-occupied dwellings. In addition, many countries have favourable tax rates for pension savings and/or special tax incentives for certain types of savings accounts. In Korea there is a final withholding tax rate of 15 per cent (plus local income tax of 1.5 per cent) if the sum of dividend and interest income is below KRW 40 million (about EUR 33 000), but this income is taxed on a comprehensive basis if it exceeds this level (the latter assumption is used in Figure 4.1).

5 See Schratzenstaller (2004) for a similar exercise for (mainly) European countries. This paper also includes capital gains taxation, as well as a more detailed description of the taxation of dividend and interest income. See also Boadway, R. (2004) for a discussion on comprehensive income tax, dual income tax and 'compromise' tax systems.

6 E.g., while having higher taxes on domestic dividend income than on other forms of capital income probably affects portfolio choices made by domestic savers, such a tax structure is less likely to have any significant effects on domestic investments.

[7] As of 2000, corporate income tax is only taxed (at source) when distributed as dividends.

[8] For a discussion of the Russian flat tax: Ivanova, Keen and Klemm (2005). According to this paper, the flat tax had a positive impact on tax compliance. But the move to a flat tax can probably not explain the steep rise in tax revenues in Russia following the reform.

[9] Iceland also applies a flat income tax rate above a threshold (the rate was 37.73 per cent in 2005). However, they have an additional surtax of 2 per cent (which has been gradually reduced from 7 per cent in 2002) that is levied on income above a threshold level that is equal to about 150 per cent of average earnings.

[10] A similar system was also proposed by Milton Friedman in the 1940s.

[11] NOU 1999: 7 Flatere Skatt.

[12] Expenditure taxation was first proposed in Kaldor (1955). However, since then there have been several practical proposals and theoretical discussions of this concept. Examples of practical proposals are the Meade Committee (1978) and the flat tax proposed by Hall and Rabushka (1985, 1995). One of many theoretical discussions can be found in Atkinson and Sandmo (1980).

[13] This requires that the consumption tax rate is stable over time.

[14] Expenditure taxation and a zero tax rate on capital income is equivalent if there is no inherited capital (all savings comes from labour income) and no economic rent. Expenditure taxation implies on the other hand that economic rents and income from inherited capital will be taxed when that income is consumed, whereas this will not be the case if introducing a zero tax rate on capital income.

[15] EET (exempt, exempt, taxed) taxation implies that the taxation of pension savings is postponed until the pension is actually received by the taxpayer (tax deduction for pension savings and no taxation of the return on those savings). TEE (taxed, exempt, exempt) taxation implies that savings are made out of taxed earnings, but that there is no further taxation (no taxation of the return on pension savings or when the pension is received).

Chapter 5

Recent Proposals of Personal Income Tax Reform

This chapter presents some current issues related to dual and flat personal income tax reforms in a number of OECD countries and analyzes the impact of a change in the tax unit.

1. Flat tax issues

This section assesses the impact of the flat tax reform in Russia and in the Slovak Republic, and it presents and analyzes the debate on flat tax reform in Switzerland and Poland. The tax simulation model of Statistics Norway is used to simulate the effects of possible changes in the Norwegian personal income tax system.

The Russian experience

This section discusses the Russian flat personal income tax reform, which took effect on January 1, 2001.[1] Before the tax reform of 2001, the personal income tax system in Russia had three income brackets, with marginal personal income tax rates of 12 per cent – levied on income from about 12 per cent up to about 187 per cent of the average wage – 20 per cent and 30 per cent. The highest marginal income tax rate was levied on income in excess of about 560 per cent of the average wage. Dividends were taxed at a rate of 15 per cent.

Interest income was generally not taxed. Separate social security contributions were paid to the Pension Fund, the Social Insurance Fund, the Medical Insurance Fund and the Employment Fund, where the overall contribution rate equalled 38.5 per cent for the employer and 1 per cent for the employee. These rates were independent of taxpayer's income.

The Russian authorities broadened the personal income tax base by eliminating many deductions and exemptions. They also introduced a flat personal income tax rate of 13 per cent for income in excess of the basic allowance, which remained constant as a fraction of the average wage, even though it grew by 30 per cent in real terms between 2000 and 2001. The dividend tax rate increased to 30 per cent, which was accompanied by the introduction of a credit for the underlying corporate income tax paid. (The imputation credit was again abolished in 2002, but the dividend tax rate has been lowered to 6 per cent, and raised again to 9 per cent as from January 1, 2005). There is no withholding tax on interest payments at the personal level and there is no capital gains tax on the sale of Russian equities which have been held for more than 3 years. If capital gains are realized earlier, they are taxed as ordinary income at a rate of 13 per cent (KPMG (2000)).

After the tax reform, the social security contributions are levied differently. The employer's 'Unified Social Tax' replaces the separate contributions to the pension, social, medical and employment funds. The new tax is levied at rates that are decreasing with the employee's income, from 35.6 per cent (40 per cent in 2005 (KPMG (2005))) for low and average incomes to 5 per cent for very high incomes (the highest rate was reduced to 2 per cent in 2002). Employees' no longer have to contribute to these funds. Before the tax reform, the separate social security contributions applied different definitions of labour income. The 2001 tax reform resolved the resulting complexities as well.

Income from self-employment is taxed under the flat personal income tax. As from July 2, 2002, small firms with less than 100 employees and with limited turnover[2] can choose a special tax regime (the so-called 'Unified Tax') instead of being taxed under the corporate income tax. The Unified Tax substitutes for corporate income tax, VAT and Unified Social Tax (but not for obligatory pension insurance contributions). The tax rate is 6 per cent on

turnover or 15 per cent on profits (firms can choose the tax base and rate).

Both tax administration and tax enforcement rules were reformed, as the legal basis for tax collection and auditing before the 2001 tax reform was limited (Gaddy and Gale (2005)). For instance, taxpayers before the tax reform often negotiated tax payments independently of their obligations. Moreover, tax payments could be made in the form of goods. The very low salaries of tax officials before the tax reform contributed to the environment of corrupt practices, which then undermined respect for the authorities even further. The tax reform introduced a common taxpayer identification number and allowed taxes on all income to private individuals to be withheld at source. The State Tax Service could now assess tax liability indirectly, using the data on the taxpayer already in possession of the tax authority, and tax audits became possible when sufficient evidence of a tax crime was available.

The overall marginal rate of personal income tax and social security contributions fell by about 1.3 percentage points for taxpayers who before the tax reform paid personal income tax at the lower rate of 12 per cent. Prior to the tax reform, most Russian taxpayers faced an overall marginal rate of 37.1 per cent. After the reform, it was 35.8 per cent. Taxpayers with higher labour income realized a larger reduction in the overall rate. For instance, taxpayers with labour income in excess of 600,000 roubles faced an overall marginal tax rate of 50.2 per cent before the tax reform and 17.1 per cent after the tax reform (14.7 per cent as from 2002), which implies a reduction of more than 33 percentage points. Hence, the tax reform had a substantial direct impact on the very highly paid but a rather modest direct impact on the majority of the Russian personal income taxpayers.

Revenue from the personal income tax increased by about 20 per cent relative to GDP between 2000 and 2001. Revenue increased by about 46 per cent in nominal terms and by about 25 per cent in real terms. However, the analysis of Ivanova, Keen and Klemm (2005) demonstrates that the strongest growth in personal income tax payments came from the taxpayers that were little affected by the tax reform. Moreover, income shifting from the corporate to personal sectors did not occur. Nor is there any evidence of an increase in labour supply in 2001 among households that used to face high tax rates relative to households that faced the 12 per cent tax rate in

2000. Labour supply changes were essentially the same for both those affected and those unaffected by the tax reform. These authors therefore conclude that there is no strong evidence that the increase in the personal income tax revenues is caused by the 'flat tax' reform.

In fact, the authors demonstrate that the strong increase in real wage income during that period might explain the increase in personal income tax revenues to a large extent. After-tax real wage income grew by 18.5 per cent in 2001 and gross real wage income grew by 11.6 per cent – the difference reflecting the reduction in tax rates – but both exceeding the 5.1 per cent growth in GDP. On the other hand, the authors demonstrate that the increase in tax revenue is partly explained by the tighter tax enforcement and control and the reform of the Russian tax administration, as tax compliance of those who were affected by the tax reform increased considerably. Other possible explanations are the increase in energy (oil) prices and the mere fact that tax revenues returned to their equilibrium levels of before the 1998 crisis.

The Russian corporate tax rate increased from 30 per cent in 2000 to 35 per cent in 2001; it is 24 per cent since 2002. The dividend tax rose from 15 per cent in 2000 to 30 per cent in 2001. However, the tax reform decreased the burden on dividends as it introduced an imputation credit for the underlying corporate tax already paid. The tax burden on dividends has then remained constant until the beginning of 2005 – the abolition of the imputation credit in 2002 was compensated by a rate reduction to 6 per cent, making the Russian personal income tax system similar to a *semi-dual* income tax system. Recently, the tax burden on dividends increased as the tax rate has been raised to 9 per cent. The return on debt remains untaxed. Retained earnings are taxed under the corporate tax but the resulting capital gains escape from income taxation if the shares are held for more than three years. The tax burden on retained earnings then equals the corporate tax rate. Consequently, the Russian authorities distort the financing decisions of corporate firms in favour of debt, which is preferred to retained earnings as a source of finance. Newly issued equity is the corporate firm's least preferred source of finance.

The tax code continues to tax labour and capital income at different rates. The tax burden on labour income might exceed the tax burden on capital income for low-income taxpayers. However,

the opposite result seems to hold for taxpayers with high labour income, as the corporate tax rate exceeds the tax burden on their labour income (personal income tax plus social security contributions).

The special tax treatment of small firms attempts to improve incentives and compliance among these firms. However by creating this new type of firm, Russian authorities distort the choice of businesses regarding their legal form even more. Small firms might not have an incentive to hire more employees as they might lose their tax-favoured status. It also might give the self-employed a strong incentive to incorporate their business.

The tax reform might have increased income inequality as the reduction in the overall income tax rate (personal income tax and social security contributions) increased with taxpayers' income. In fact, the personal income tax rate rose slightly for low and average income taxpayers and decreased considerably for high-income taxpayers. Social security contributions decreased over the entire income range, but the decrease was larger for high-income taxpayers. However, this effect on income inequality might have been mitigated by the strong increase in tax compliance of high-income taxpayers (Ivanova, Keen and Klemm (2005)).

The Russian 2001 tax reform has made the tax system simpler and more transparent. The broadening of the tax base, and especially the replacement of the progressive tax rate schedule by a single 13 per cent tax rate, made it easier to comply with the tax code (even though social security contributions vary with income). Fairness of the tax system has also been improved by the stronger tax enforcement and by the reform of the Russian tax administration. In fact, it appears that these administrative reforms have had a more fundamental impact than the changes in the income tax rates (Ivanova, Keen and Klemm (2005)).

The Slovak experience

Before the tax reform of 2004, the personal income tax system in the Slovak Republic had five income brackets, with marginal tax rates varying from 10 per cent to 38 per cent (someone at average earnings of a production worker would face a marginal personal income tax rate of 20 per cent). The corporate tax rate was 25 per cent (29 per cent in 2000/2001 and 40 per cent before 2000).

Dividends were subject to a final withholding tax of 15 per cent, while the final withholding tax on interest payments equalled 25 per cent. The VAT had a standard rate of 20 per cent and a reduced rate of 14 per cent. The personal income tax system in the Slovak Republic before the tax reform was then in fact a semi-dual personal income tax system.

The broad objectives of the Slovak tax reform were the creation of a business and investment friendly environment for both individuals and companies, the elimination of tax distortions and the improvement of the fairness of the tax system by taxing all types and amounts of income equally (Brook and Leibfritz (2005)). More specifically, the authorities attempted to improve labour market flexibility and increase work incentives (reduce long-term unemployment) and to attract more foreign direct investment, under the condition that the tax reform had to be broadly budget neutral.[3]

As of 1 January 2004, there is a flat tax rate of 19 per cent on corporate and personal income. The personal income tax base includes the remuneration from employment, income from small businesses and net rental income. Interest payments have to be included, but not distributed dividends. Supplementary pension contributions, life insurance contributions and special-purpose savings can be deducted, when certain conditions are met, up to a limited amount.[4]

Also realized capital gains have to be included in the personal income tax base and are therefore taxed at the 19 per cent tax rate. However, certain capital gains realized by the individual are exempt, including the gain on the sale of the owner-occupied property that has been owned for more than two years. Gains on other immovable property that has been owned for at least five years are tax-exempt as well. Moreover, the gains when individuals sell their securities are exempt from tax if they don't exceed an amount equal to five times the subsistence level. Capital gains on shares that were bought before 2004 are tax-exempt if they were held for more than three years at the time of the sale (PWC (2005)).

The introduction of the flat rate was combined with certain base-broadening measures and with a large increase in the basic allowance[5] – it more than doubled and is now around 60 per cent of the average wage. The Slovak flat tax system is in other words an example of a flat tax type B system (see Figure 4.2) with a single rate on all positive income above a basic allowance. At the same time, the

government reduced social assistance benefits and shifted the tax burden from direct to indirect taxation. The value added tax rates of 14 and 20 per cent were replaced by a single 19 per cent tax rate and certain excise taxes were increased.[6]

The Slovak authorities continue to levy high health and social security contributions. The joint rate of employee health and social security contributions in 2005 is 13.4 per cent and is levied on gross wage income; the joint employer social security contributions are between 34.7 and 36.5 per cent of gross earnings. (In 2003, the rate of employee and employer social security contributions was respectively 12.8 per cent and 38 per cent). However, the health and social security contributions paid by the employee can be deducted from the personal income tax base. This implies that the personal income tax as a revenue source for the Slovak Republic is of minor importance both prior to and after the introduction of the flat tax. The heavy reliance on social security contributions also implies that labour income still is taxed more heavily than capital and corporate income. However, employee and employer social security contributions are subject to a ceiling of about 3 times the average production wage. Only labour income in excess of 3 times the average wage is therefore taxed at the flat 19 per cent rate, which is also levied on capital and corporate income.

Table 5.1. Average income tax and tax wedge as a per cent of gross earnings for a single individual, before and after Slovak reform

	67% of APW		100% of APW		167% of APW	
	2003	*2005*	*2003*	*2005*	*2003*	*2005*
Income tax	5.5	4.9	8.2	8.7	13.1	11.9
Tax wedge	40.9	35.3	42.9	38.3	46.3	40.3

Source: Taxing Wages 2004-2005.

Table 5.1 compares tax rates in 2003 and 2005 using the OECD's (2005b) Taxing Wages framework for single individuals at different income levels. It illustrates that the average income tax fell at 67 per cent and 167 per cent of APW earnings and that it increased at 100 per cent of APW earnings. The tax wedges strongly exceed the average income taxes due to the heavy reliance on social security contributions in the Slovak Republic. However, tax wedges decreased by 5.6, 4.6 and 6 percentage points for single individuals

at respectively 67 per cent, 100 per cent and 167 per cent of average production wage when 2003 and 2005 are compared. Table 5.2 presents a similar analysis for married couples with two dependent children. The negative average income tax rate for couples on low incomes results from the non-wastable child tax credit and the dependent spouse allowance.

Table 5.2. Average income tax and tax wedge as a per cent of gross earnings for a married couple (one partner earns 100% of APW, other partner earns 0%, 33% or 67% of APW) with two dependent children. Before and after Slovak reform (2003 versus 2005)

	0% of APW		33% of APW		67% of APW	
	2003	*2005*	*2003*	*2005*	*2003*	*2005*
Income tax	4.1	-3.4	4.1	2.2	5.1	4.6
Tax wedge	31.9	23.2	35.7	29.0	37.2	31.7

Source: Taxing Wages 2004-2005.

The tax reform turns out to be broadly revenue neutral as a result of the shift from direct to indirect taxation. A comparison of the estimated tax revenues that would have been received in 2004 in the absence of the tax reform and the actually received tax revenues in 2004 in per cent of GDP[7] demonstrates that the decline in personal income tax revenues (from an estimated 3.3 per cent of GDP to 2.5 per cent of GDP) and corporate income tax revenues (from an estimated 3.0 per cent of GDP to 2.2 per cent of GDP) has almost entirely been compensated by the increase in VAT revenues (from an estimated 7.2 per cent of GDP to 8.0 per cent of GDP) and excise revenues (from an estimated 2.8 per cent of GDP to 3.4 per cent of GDP).

Tables 5.1 and 5.2 imply that the reduction in the personal income tax rates have not caused the strong increase in incentives for unemployed people in the Slovak Republic to accept work. However, the Slovak government has also reduced social assistance benefits and introduced some other reforms that "make work pay".

Because of the high social security contributions, labour income continues to be taxed at higher rates than capital and corporate income. As a result, taxpayers continue to face incentives for shifting highly taxed labour income into lower taxed capital income. These incentives only disappear for labour income in excess of three times

the average production wage, as no additional social security contributions are levied on these earnings.

The Slovak tax reform increased the return to saving and investment by reducing the statutory tax rates on capital income (both the corporate tax rate and the tax rate on interest payments fell from 25 per cent to 19 per cent) and by abolishing the double taxation of distributed dividends. Moreover, the carrying forward of business losses has become easier and the deprecation allowances for industrial buildings have been increased.

The tax reform also reduced the distortion to financing decisions. As distributed dividends are no longer taxed at the household level and because the corporate tax rate is equal to the 19 per cent tax rate on interest payments, the tax reform resolves the distortion between newly issued equity and debt as tax-preferred source of finance. However, as retained earnings are taxed under the corporate tax and the resulting capital gains are taxed again at the household level when the shares are sold (if the gains exceed five times the subsistence level); the Slovak tax system distorts the choice between newly issued equity and retained earnings as source of finance even after the tax reform.

The tax reform, in addition to the reduction in social assistance benefits, has probably increased income inequality and reduced the redistributive effects of the tax system, but most likely not for families with children. The progressive rate schedule has been replaced by a proportional tax rate, which is lower than the previous highest marginal income tax rates. However, this effect on income inequality might be mitigated by the strong increase in the basic allowance. The reduction of the tax burden on dividends might favour especially the rich, as they probably receive more dividends than the poor. The increase in the basic VAT rate from 14 per cent to 19 per cent affects the poor relatively stronger as well.

The tax reform has made the tax system simpler and more transparent. Especially the broadening of the tax base and the replacement of the progressive tax rate schedule by a single rate makes it easier to comply with the tax code. However, the high (especially employer) social security contributions continue to contribute to informal employment.

The main advantages of the 2004 tax reform in the Slovak Republic are the strengthened incentives for investment and for

entrepreneurial activity in general, the fact that the allocation of capital is now distorted less and the efficiency gains due to a further broadening of the tax base. Although the flat rate on labour income obviously has its merits, it seems that these positive effects should not be exaggerated as the relevance of the personal income tax in the Slovak Republic remains low, especially in light of the high social security contributions and a relatively high VAT.

The debate on the flat tax in Switzerland[8]

In Switzerland, personal income is taxed under the Federal Direct Tax at progressive rates – there are nine income brackets – that range from zero per cent in the first income bracket to a maximum of 13.2 per cent, decreasing to a rate of 11.5 per cent in the last income bracket. Income of single persons below 16,100 CHF is free of tax. For married couples, income below 27,400 CHF is not taxed. There is an additional tax allowance of 5,600 CHF for every dependent child and a tax allowance of 7,000 CHF if both partners of a couple earn an income (the family is the tax unit). All 26 cantons and 2900 municipalities levy an income tax as well. Even though the general principles of taxation are the same, the amount of deductions and the (progressive) income tax rates vary across cantons. The communal income tax is levied mainly as a percentage or multiple of the basic cantonal income tax rate. On average, the combined cantonal and communal income tax is twice as high as the federal direct tax, which implies that the total marginal income tax rate may exceed 40 per cent for high-income earners.

In addition to the income taxes, employees pay social security contributions which amount to 10.05 per cent of gross wages for the old age contribution plus 1 per cent of gross wages (limited to the first 106,800 CHF) for the unemployment contribution. Employers pay the same contributions plus an additional child contribution of 2,623 CHF per dependent child per year.

Table 5.3 compares average income tax rates and tax wedges using the Taxing Wages framework for single individuals at different income levels. These numbers demonstrate that the tax wedges in Switzerland are relatively low and are in fact well below the OECD average (see Figure 1.3). However, the numbers also demonstrate the importance of social security contributions in the tax burden on labour income.

Table 5.3. Average income tax and tax wedge as a per cent of gross earnings for single individuals without children in Switzerland (2005)

	67% of APW	100% of APW	167% of APW
Income tax	7.6	10.7	15.7
Tax wedge	26.7	29.5	33.9

Source: Taxing Wages 2004-2005.

The complex tax treatment of personal income in Switzerland explains the interest in fundamental tax reform. The Swiss Federal Tax Administration studied the static effects of replacing the current personal income tax system with a flat personal income tax. All income above a basic allowance – 20,000 CHF for single persons and 40,000 CHF for a married couple plus 10,000 CHF for every dependent child – would be taxed at a flat rate. In order to guarantee the current personal income tax revenues for all government levels (federal, cantonal and communal level), a flat tax rate of 24 per cent would have to be levied.

For single taxpayers who live either in Zurich or Bern, the study demonstrates that, among single people, only very high-income earners gain from this flat personal income tax reform. Not only very high-income married couples without children, but also low-income couples without children would gain from the tax reform. All couples with two children that live in Bern would benefit. However, only lower income and very high-income couples with two children that live in Zurich would gain from the tax reform. In general, one might conclude that the gain in after-tax income for low and high-income households from the flat personal income tax reform is at the expense of after-tax income for middle-income households. Moreover, the lowest gains are observed for households without children.

This flat tax proposal simplifies the complex personal income tax system in Switzerland. However, the complexity that arises from the taxation of personal income at different government levels could be reduced by implementing other types of personal income tax systems as well; it does not require the implementation of a flat personal income tax. Moreover, the proposal does not align the corporate tax rate with the flat personal income tax rate.

The debate on the flat tax in Poland

During the last decade, the Polish personal (and corporate) income tax reforms aimed at reducing tax rates and broadening tax bases. The personal income tax base was broadened by the removal of a number of tax deductions and exemptions – in order to close tax loopholes – and by including fringe benefits and benefits in kind in taxable income. Moreover, the tax reform which came into force in 1999 lowered the personal income taxes but increased social security contributions.

In 2005, Poland had a *semi-dual* personal income tax system. Personal income, after a tax-free threshold, was taxed at progressive rates. There were three income tax brackets, with marginal personal income tax rates of 19 per cent, 30 per cent and 40 per cent (only taxpayers with personal income in excess of about 1.4 or 2.8 times the average production wage were taxed at the marginal tax rate of 30 or 40 per cent respectively). As from 1 January 2006, an additional marginal income tax rate of 50 per cent was introduced. A withholding tax rate of 19 per cent is levied on dividends, interest and capital gains. However, Poland has a 'classical' corporate income tax system, with a corporate income tax rate of 19 per cent.[9]

Employee social security contributions in 2005 (OECD (2005b)) amounted to 18.71 per cent of gross wages (contribution for the old age and disability insurance and health/maternity insurance). Employees also paid 8.5 per cent of their gross wages less the social security contributions described above as a contribution to the National Health Fund. However, a tax credit is provided that almost equals the contributions paid to this fund. Employers have an obligation to pay social security contributions equal to 20.43 per cent (on average) of gross wages.

Table 5.4. Average income tax and tax wedge as a per cent of gross earnings for single individuals without children in Poland (2005)

	67% of APW	100% of APW	167% of APW
Income tax	5.0	6.4	8.0
Tax wedge	42.4	43.6	44.8

Source: Taxing Wages 2004-2005.

Table 5.4 compares average income tax rates and tax wedges using the Taxing Wages framework for single individuals at different income levels. The results illustrate that the average income taxes are relatively low. However, due to the heavy reliance on employer and employee social security contributions, the tax wedges in Poland are high and exceed the OECD average (see Figure 1.3). Moreover, the average income taxes, and particularly the tax wedges, are relatively constant when they are compared at these different income levels.

The Polish government have been evaluating different flat tax proposals[10]. The Polish Ministry of Finance has simulated tax wedges under alternative flat tax systems (a 15.4 per cent flat tax rate with no basic allowance; a 20.5 per cent flat tax rate with a basic allowance). The simulations demonstrate that tax wedges, compared to the current situation, would hardly change for most taxpayers. The first reason is that income taxes constitute only a small part of the tax wedge, as compared to the social security contributions. The second reason is that the marginal income tax rates of 30 and especially of 40 per cent are levied only on large personal incomes. In fact, a move towards a flat personal income tax rate of 20.5 per cent would imply for most Polish taxpayers an increase in their tax wedge (ignoring the influence of changes in the basic tax-free allowance). However, even for high-income taxpayers, the tax wedge would barely fall below 34 per cent.

The tax reforms that were discussed in Poland did not alter the taxation of the return on capital income, which at the personal level is taxed at a flat rate of 19 per cent. However, the tax burden on equity-financed investment, as opposed to the tax burden on investment financed with debt, exceeds 19 per cent because the return on equity is taxed at the corporate tax rate as well. Because these tax reforms did not tackle the double taxation of equity income, the Polish 'flat' personal income tax system would continue to distort the financing and investment decisions of firms. Moreover, the tax code would continue to tax labour and capital income at different rates.

These flat tax reforms would have simplified and increased the transparency of the Polish personal income tax system. The introduction of a single tax rate and especially the broadening of the tax base – probably a necessary measure to compensate for the loss in tax revenue – would have made it easier to comply with the tax code and would increase efficiency. However, the flat tax reform

would have been at the expense of the tax system's equity as only high-income individuals would experience a decrease in their tax wedge. In fact, even after the introduction of a flat tax rate of 15.4 per cent or 20.5 per cent, the tax wedges would have remained at a high level due to the large social security contributions that would continue to be levied in Poland. Recently, the Polish government decided not to implement any of these flat personal income tax reforms.

Tax simulation model in Norway

Statistics Norway operates a static tax simulation model, which is based on information on personal taxpayers' actual income tax returns. This model, which includes a detailed description of the Norwegian dual income tax system, is used by the Ministry of Finance to calculate effects on tax revenues and income distribution of changes in the Norwegian personal income tax system. Statistics Norway and the Norwegian Ministry of Finance applied this model to calculate effects on tax rates and income distribution of moving from the Norwegian dual income tax system as of 2005 to a flat income tax system or to a comprehensive progressive income tax system within a revenue-neutral framework. Although there are some obvious weaknesses in using a static model where changes in the tax system are assumed not to affect behaviour, it does illustrate the first-order effects on tax rates and income distribution of such fundamental tax reforms.

Table 5.5. Statutory personal income tax rates in different personal income tax systems in Norway: simulations in a revenue-neutral framework

	Dual Income Tax	Flat Tax	Comprehensive Income Tax
Capital Income	• 28%, if above NOK 34,200	• 28.7%, if above NOK 66,000	• 26.4%, if above NOK 66,000
Wage Income[1]	• 28%, if above NOK 66,000 • 40%, if above NOK 381,000 • 43.5%, if above NOK 800,000		• 38.4%, if above NOK 381,000 • 41.9%, if above NOK 800,000

[1] In addition, social security contributions are levied on wage income. The rates are 7.8 per cent for employee and 14.1 per cent for employer social security contributions.

Source: Statistics Norway and the Norwegian Ministry of Finance.

The 2005 Norwegian *dual income tax* system implies that capital and wage income are taxed at the statutory tax rate on ordinary (net) income of 28 per cent up to a threshold of NOK 381,000[11], after which there is an additional tax of 12 per cent on gross labour income up to NOK 800,000. There is no double taxation of dividends and capital gains.

Table 5.5 illustrates the effects of moving from this dual income tax system to a system with a single rate on personal income (flat tax) or to a system where all types of income are taxed according to a progressive rate schedule (comprehensive income tax). The tax simulations have been based on the assumption that all income thresholds as well as the progressive tax rates (in case of the comprehensive income tax) are constant. The reforms are thereby financed by changes in the level of allowances and by changing the tax rate on ordinary (net) income. The main results of the simulations are discussed below.

- The *flat tax* system uses a single personal income tax rate above the basic allowance for income, with no double taxation of dividends and capital gains. The move is financed by abolishing all other allowances in the Norwegian tax system except for the deductibility of interest expenditures, and by increasing the tax rate on ordinary (net) income above its present level. About 70 per cent of the revenue loss from abolishing the progressive rate schedule is financed through base broadening.

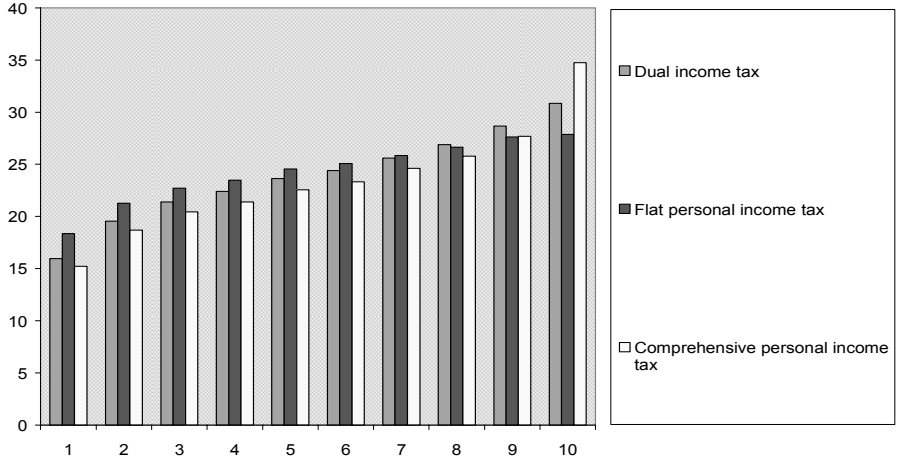
- The dual income tax system imposes a single tax rate on both corporate and personal capital income of 28 per cent. If the principle of using a single rate on corporate and personal income is kept, the move to a flat rate would also be partially financed by an increase in taxes on corporations. A single tax rate on corporate and personal income of 28.7 per cent would then be revenue-neutral. Social security contributions are levied on labour and not on capital income. If employee social security contributions (the rate on wage income is 7.8 per cent) are also included in the single rate on corporate and personal income, the revenue-neutral rate increases to 35.5 per cent. In other words, a move to a single tax rate schedule without employee social security contributions would largely

be financed by a significant increase in the tax rate on capital and corporate income.

- In the *comprehensive income tax* system it is assumed that all personal income is taxed according to a progressive rate schedule, but that the corporate income tax rate is kept at 28 per cent and that there are still no social security contributions levied on capital income. As comprehensive tax systems normally use tax reliefs more extensively than in dual income tax systems, the level of allowances (except the basic allowance and the allowance for interest expenditures) has been arbitrarily increased by 20 per cent. In addition, the full imputation method for dividends has been abolished. Including capital income in the progressive rate schedule results in a net increase in tax revenues, even if tax allowances are increased. These additional tax revenues finance a reduction in the tax rate on ordinary income from 28 per cent to 26.4 per cent.

These calculations indicate that moving from a dual income tax system to a flat tax system will not have a major effect on the tax rate on ordinary personal income in Norway. However, this result no longer holds if employee social security contributions will be incorporated in the flat tax rate as well, as this would imply a significant increase in the taxation of capital (and corporate) income compared to the present dual income tax system. Moving from a dual income tax system to a comprehensive income tax system will not have a major effect on the tax rates on wage income. However, the tax rate on capital income above the threshold of NOK 381,000 will increase significantly.

Figure 5.1. Effects on income distribution – measured by average tax rates



Source: Statistics Norway and the Norwegian Ministry of Finance.

Figure 5.1 illustrates the effects on the income distribution, measured as a change in the average tax rate in each income decile. A move from a dual to a flat tax system implies an increase in the average tax rate in the first 7 income deciles, and that the changes are largest in the lowest and the highest income deciles. A move to a comprehensive income tax system implies a reduction in the average tax rate compared to the present system in all income deciles but the highest, reflecting that capital income is heavily concentrated at the high end of the income scale. Moving from a flat tax to a comprehensive income tax increases the average tax rate in the top-income decile by almost 7 percentage points, while it decreases the average tax rate about 3 percentage points in the first income decile.

Not surprisingly, comprehensive income tax systems are somewhat more progressive than dual income tax systems, while flat tax systems are less progressive. However, the main picture is that for most income deciles the effects are not very large (ignoring the impact of the changes in tax allowances). One also needs to take into account that it is assumed that behaviour is unaffected by these reforms. The effects on income distribution would also be different if social security contributions had been included in the reforms and if the reforms were combined with an increase in the basic allowance (see chapter 3 for the impact of an increase in the basic allowance).

This analysis is therefore mainly an illustration of the possible first-order effects of the differences between dual, flat and comprehensive income tax systems in Norway.

2. The debate on the dual income tax in Germany[12]

From 1998 to 2005, the German government have been implementing substantial tax reforms, reducing tax rates significantly. The top marginal personal income tax rate was 53 per cent in 1998, and it is 42 per cent in 2005.[13] The starting marginal income tax rate has decreased from 25.9 per cent to 15 per cent in 2005, while the basic personal income allowance has increased from EUR 6,322 to EUR 7,664 over the same period. Moreover, the corporate income tax rate of 45 per cent on retained earnings and of 30 per cent on distributed profits has been replaced by a single corporate tax rate of 25 per cent. The full imputation system, on the other hand, has been replaced by the half-income method, which exempts 50 per cent of distributed dividends from personal income tax.

Despite the reduction in tax rates, Spengel and Wiegard (2004) point out that the subsequent tax reforms have increased the tax code's complexity. Moreover, they claim that the tax burden in Germany is too high from an international perspective, that the current tax code distorts the firm's finance and investment decisions more severely than in 1998, and that the differential tax treatment of corporate and unincorporated firms has increased over time as well.

In light of this analysis, these authors conclude that further tax reform might focus on reducing the complexity of the German tax system and the effective tax burden on the internationally mobile tax bases. Further tax reform might also try to make the tax system more neutral with respect to investment and financing decisions and with respect to the choice of the legal form of a business.

Recently, a variety of tax reforms have been proposed. According to Spengel and Wiegard (2004), most of these proposals concentrate on the taxation of individuals and do not account for the interaction between the corporate and personal income tax system. The flat tax proposal by the Academic Advisory Council to the Federal Ministry of Finance and the dual income tax proposal by the Council of Economic Experts are two of the exceptions.

The Academic Advisory Council to the Federal Ministry of Finance has proposed the introduction of a flat personal income tax rate of 30 per cent with an annual personal allowance of EUR 10,000. The current corporate tax rate would be increased to 30 per cent, but would operate as a final withholding tax on the return to capital. Put in other words, dividends and capital gains would no longer be taxed under the personal income tax. However, this tax reform would lead to a considerable loss in tax revenue of about EUR 13.2 billon.

The Council of Economic Experts has suggested introducing a dual personal income tax system, which is similar to the Norwegian 2006 dual income tax system. The primary aim of the reform is to improve Germany's attractiveness as a business location and to achieve neutrality with respect to finance and investment decisions (German Council of Economic Experts (2006)). According to the proposal, capital income in Germany will be divided into two kinds of profit: "normal profit" and "residual profit". The "normal profit" would be calculated by imputing an interest rate of 6 per cent to the equity capital of the company. The remaining profits will then be referred to as the "residual profit". Normal and residual profits of corporate companies would be taxed at the corporate level with a rate of 25 per cent. This rate would already include the solidarity surcharge. The Council has also suggested abolishing the current local business income tax. This reform would then strongly reduce the overall corporate income tax rate as the total national and local tax including the solidarity surcharge equals 38.9 per cent in 2005 (see OECD Tax Database, table II.1).

The proposed tax reform would not tax distributed normal profits again. Distributed residual profits would be taxed at the shareholder level with a rate of 25 per cent, which then would yield an overall tax burden on distributed residual profits of 43.75 per cent (0.25 + 0.25 * (1 – 0.25)). Realized capital gains would be taxed in the same way and interest payments would be taxed at a rate of 25 per cent as well. The tax proposal therefore ensures neutrality between debt and (the normal return on) equity. The tax burden on residual profits would roughly correspond to the current top income tax rate which, including the solidarity surcharge, equals 44.31 per cent (0.42 * (1 + 0.055)). The proposal therefore limits the incentives for income shifting – if the impact of social security contributions is not considered – between capital and labour income. The Council of

Economic Experts has also suggested that the tax on excess distributed profits and capital gains and on interest payments would be withheld at source, possibly coupled with a tax assessment option.

The proposal also changes the taxation of capital invested in the proprietorship. The normal return on the capital invested in the proprietorship would be taxed once at a proportional rate of 25 per cent. The proprietor's residual profits would be taxed as labour income under the progressive rate schedule with a maximum rate of 44.31 per cent. If the impact of social security contributions is not considered, these rules will then ensure neutrality with respect to the legal form of businesses as well.

3. The choice of the tax unit: stakes and consequences

The tax unit constitutes one of the key elements of an income tax system, as described in chapter 3. The fundamental choice is between individual-based (separate) taxation and family-based (joint) taxation. Between the two extremes, a variety of intermediate solutions, which include income-splitting formulas, are possible. This section illustrates the possible effects of shifting from a tax system comprising elements of family-based taxation to individualisation in Belgium and France using simulations.

Shifting from one system to another has major consequences, both from an overall redistributive standpoint and with regard to the effects on labour supply. The overall redistributive impact is determined by the highly differentiated effects on various types of households (single persons, single-earner couples, dual-income couples) that would be triggered by a shift from one system to another. The effects on labour supply stem from major changes in the average and marginal tax rates on the household's second income. In a joint tax system, the first euro of the second income is taxed at the marginal rate applicable to the last euro of the first income. As a result, the average rate and the marginal rate on the second income are higher in a family-based than in an individual-based tax system, which can discourage both the decision to enter the labour market and the number of hours worked. To shift from a system of joint taxation to one of separate taxation can therefore have favourable effects on the supply of labour, especially if the supply elasticity of labour is higher for the household's second income than for the first income. These effects on the labour supply would then alter the

overall redistributive effect of the change from a family-based to an individual-based tax system.

The current system in Belgium combines separate taxation and a marital quotient. This marital quotient is an income-splitting system that determines the proportion of the income of a sole-earner spouse that can be attributed to the non-earning spouse. The current system in Belgium applies a 70-30 marital quotient, which is subject to an indexed income-allocation ceiling of EUR 8 160 (for 2004), and allows for the transfer of tax exemptions between spouses. The simulations, which study the move towards full individualisation, eliminate both of these features.

The simulations were carried out using the SIRe model – a *static* micro-simulation model processing a sample of 24 000 tax returns. The model can be used to simulate most of the possible changes in tax legislation, indicating the fiscal yield of each change and the effects on various categories of households, on the basis of information taken from the tax returns. The SIRe model distinguishes between four types of households: single persons, single-earner couples, dual-income couples that are taxed separately and dual-income couples for whom the marital quotient is a more favourable option. This fourth category of household corresponds to situations in which one of the spouses contributes no more than 30 per cent of the couple's combined net earned income. It encompasses a large number of households in which one of the partners works part-time or is taking a career break.

Individualisation in Belgium has been simulated for 2000 income, according to the legislation for 2004, thus incorporating full application of the personal income tax reform that was adopted in 2001 and implemented between 2002 and 2004. Consequently, the simulation results reflect the impact of the 2001 tax reform if it had implied a move towards full individualisation as well. The concept of household is that of a "tax household"; it was not possible to reconstitute the results on the basis of a "sociological household" concept.

In the case of France, the simulated shift was from a pure marital quotient system to separate taxation. Here, the "couple" component of the family quotient – which aggregates the individual incomes of each spouse and splits the total 50-50, with no ceiling – would be eliminated. The rest of the family quotient system would remain intact.

The system currently in force in France creates a "marriage bonus" which increases as the difference between the spouses' incomes widens, as shown in Table 5.6. The marriage bonus is non-existent for couples whose respective earnings are equal, but it rises to 8.2 per cent of disposable income, for example, if one spouse earns EUR 80 000 and the other earns nothing.

Table 5.6. Marriage bonus as a % of disposable income, depending on the spouses' annual earnings
France - 2002

Lower earnings	Higher earnings				
	0	20 000	40 000	60 000	80 000
0	-	7.5%	8.0%	8.0%	8.2%
20 000		0.0%	0.8%	1.4%	2.5%
40 000			0.0%	0.3%	0.9%
60 000				0.0%	0.2%
80 000					0.0%

Note: Theoretical calculations using the 2002 income tax scales for a married couple with no children.

As with Belgium, the simulation model uses a detailed description of the tax legislation. The representative sample consists of 500 000 tax households. The model's specificity stems from the fact that the households are then reconstituted into sociological households. This change in concept is important, because it sheds an entirely different light on the effects of the reform, as we shall see below.

The overall redistributive effects of a shift to individualisation in Belgium

The introduction of a fully individualized tax system in Belgium would shift the tax burden between various types of households, as presented in Table 5.7.

Table 5.7. Individualisation in Belgium: results by type of household

Categories	Impact (EUR millions)	Average gain/loss		Number of units		
		Gain (EUR)	Loss (EUR)	Winners	Losers	Neutral
Single taxpayers	-97.90	0	-316	0	309 612	2 384 106
Married couples with separate taxation	24.27	229	-169	291 783	251 907	460 871
Dual-income couples with marital quotient	-506.94	185	-1 303	16 104	391 280	28 565
Single-earner married couples	-1 112.88	300	-2 160	8 052	562 669	64 990
Total	-1 793.45	229	-1 231	315 938	1 515 468	2 938 531

Source: Studies Department of the Belgian Ministry of Finance – SIRe micro-simulation model.

Nearly 90 per cent of dual-income couples currently taxed according to the marital quotient system would lose out, with the loss averaging EUR 1 300 per household. The results for couples that are already taxed separately are highly dependent on the assumptions that are made with respect to the division of joint income and deductions. Nearly 90 per cent of single-earner couples would also lose out, with the loss averaging EUR 2 160 per household. It is logical that their loss is higher, given that there is no second income to be taxed separately, whereas there would be in the case of dual-income couples who get the benefit of the marital quotient under the existing system.

The effects are not as great for single taxpayers. In the aggregate, single taxpayers would lose approximately EUR 100 million. This stems from the loss of the additional exemption for single taxpayers with dependent children, which was one of the new rules implemented by the 2001 tax reform. 11.5 per cent of single taxpayers would lose out, with a loss averaging EUR 316.

Table 5.8. Individualisation in Belgium: results by decile

Decile	Upper limit	Impact (EUR million)	Average gain / loss		Number of units		
			Gain (EUR)	Loss (EUR)	Winners	Losers	Neutral
1	6 948	-6.18	0	-576	0	10 736	466 047
2	10 526	-19.96	0	-293	0	68 057	408 917
3	12 781	-53.28	33	-461	767	115 601	360 607
4	15 242	-171.05	99	-973	4 601	176 181	296 192
5	16 570	-248.80	189	-1 320	7 477	189 601	279 897
6	17 949	-273.82	219	-1 414	20 513	196 886	259 575
7	21 171	-292.75	308	-1 508	33 358	200 912	242 705
8	25 407	-293.66	244	-1 462	66 715	212 031	198 228
9	32 020	-224.36	210	-1 378	94 896	177 332	204 746
10		-209.59	221	-1 362	87 611	168 130	221 617
Total		-1 793.45	229	-1 231	315 938	1 515 468	2 938 531

Source: Studies Department of the Belgian Ministry of Finance – SIRe micro-simulation model.

Both the average gain and the average loss increase as income rises (see Table 5.8), which is hardly surprising. It is more useful to express these results in relation to the average income of the decile or in relation to the average taxes paid by the decile under the existing system. Figure 5.2 presents those results.

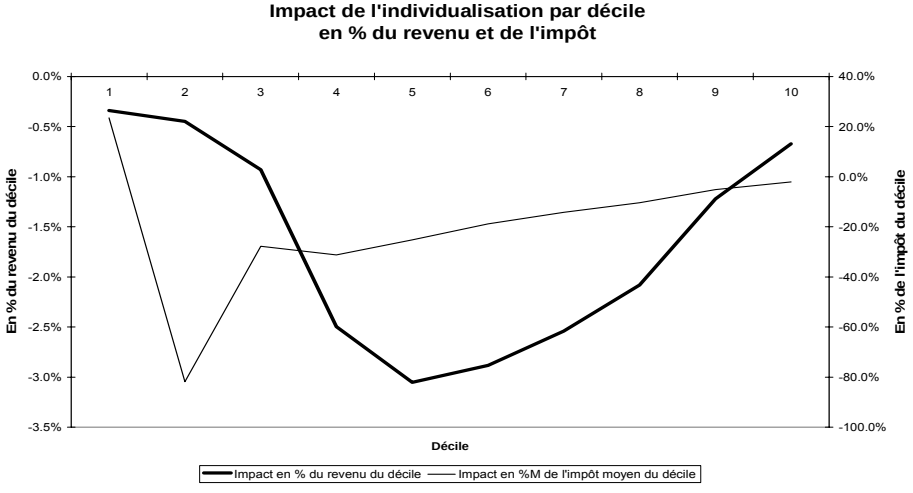
- The loss relative to income is concentrated in the middle classes of the distribution, where it is largest at 2.7 per cent of taxable income. It is minimal for low incomes (0.3 per cent loss in the first decile) and it is 1 per cent at the very top of the distribution. The same image emerges from Figure 5.3, which gives a more overall view of the dispersion of individualisation effects, as each point represents one household in the sample.
- The distribution of losses can be explained by the fact that the marital quotient and transfer of exemptions – the elimination of which accounts for a substantial share of the individualisation effects – do not have constant effects along the income axis. The benefits from the transfer of tax exemptions decline as a percentage of income. The advantage from the marital quotient first rises with income, then levels off, and finally decreases when the ceiling is reached. This relationship between benefits and income is clearly presented

in Figure 5.4 for single-earner couples, which constitute the category of households that, would be most affected by individualisation.

- The picture changes if the effect of individualisation is expressed as a percentage of the tax payable under the existing system. Figure 5.2 shows that the second and third deciles suffer the sharpest relative increase in tax burden.

The distribution of winners and losers is not uniform along the income axis. The proportion of losers increases up to the eighth decile and then decreases. The proportion of "neutrals" (those who would neither gain nor lose) decreases up to the eighth decile and then increases. The reason for this is that the distribution of the various types of households along the income axis is not very uniform, with single taxpayers concentrated towards the bottom of the income distribution.

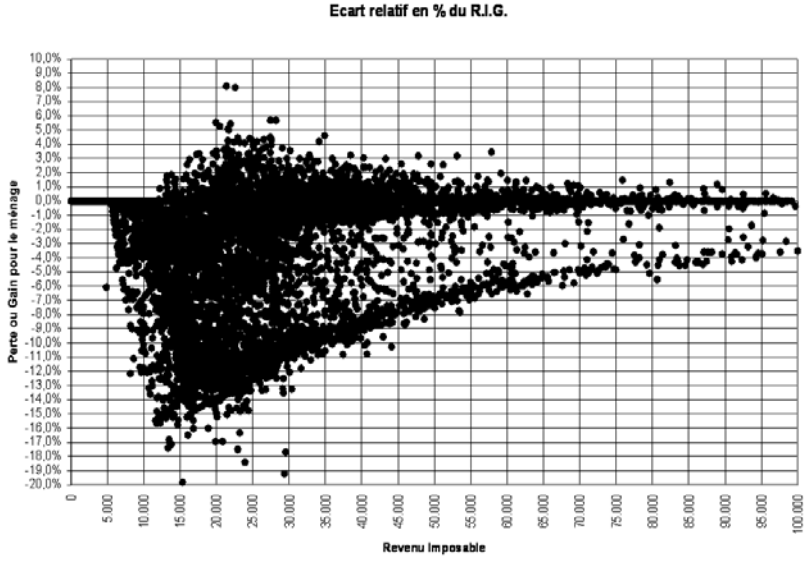
Figure 5.2. Impact of individualisation by decile as a % of income and of tax



Left axis and heavy line: Impact as a % of income

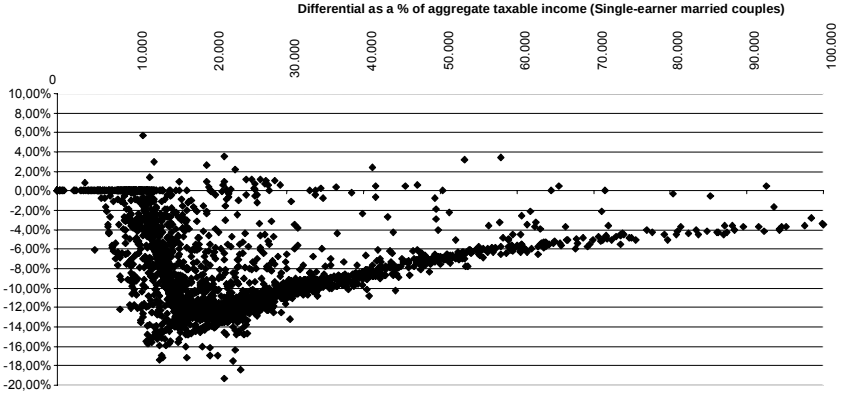
Right axis and light line: Impact as a % of tax.

Figure 5.3. Effects of individualisation, as a % of aggregate taxable income (in EUR)



Vertical axis: Loss or gain for the household; Horizontal axis: taxable income in EUR.

Figure 5.4. Effects of individualisation, as a % of aggregate taxable income (in EUR)
Single-earner couples



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The overall redistributive effects of a shift to individualisation in France

The simulation model used by France makes it possible to reconstitute tax households into sociological households. The individualisation effects appear very different, depending on which type of household is used.

Table 5.9. Distribution of individualisation costs by income decile - France

Decile of pre-tax income by consuming unit	Tax households (*)	Sociological households (**)
1	0%	0%
2	0%	1%
3	1%	3%
4	5%	5%
5	9%	6%
6	10%	7%
7	12%	7%
8	13%	10%
9	22%	16%
10	28%	45%
Total	100%	100%

* sample of 500 000 income tax returns for 2001; weighted results.

** 1999 Tax Revenue Survey, updated in 2002; weighted results.

Scope: the entire population (32.1 million tax households, 23.7 sociological households, in 2002).

If the population is broken down into households below and above the median income, the cost of individualisation (see Table 5.9) would be split in a similar manner: 15 per cent below and 85 per cent above the median for both household definitions. However, if we look more closely on the concentration of costs according to pre-tax disposable income, substantial differences appear. The last decile bears 28 per cent of the cost of the reform under a "tax household" approach versus 45 per cent under a "sociological household" approach. The costs are far more concentrated under the sociological household definition. It therefore is important, in analysing the redistributive effects of a tax reform, to go beyond a mere simulation on the basis of tax returns. Table 5.10 therefore presents the number of losers and winners in terms of living standards, which include benefits received and taxes levied. Keeping the labour supply unchanged, out of some 12.1 million married couples, roughly 5.5 million would lose, while 2.7 million would gain as a result of

the tax reform (because of the impact of certain tax measures, as the rebate mechanism, collection thresholds and special allowances). Approximately 3.9 million married couples would see no change in their situation.

Table 5.10. Individualisation in France: Post-reform winners and losers by living standard decile

Living standard decile	% Losers	Number of losers	Number of winners
1	7.1%	59 555	2 926
2	17.4%	177 916	10 387
3	30.3%	303 202	29 209
4	40.0%	438 379	127 853
5	47.1%	550 022	261 300
6	50.4%	640 612	410 637
7	48.3%	645 432	532 925
8	48.7%	679 698	551 876
9	64.2%	934 556	398 402
10	71.5%	1 100 990	329 463
Total	45.6%	5 530 362	2 654 979

Note: 1999 Tax Revenue Survey (updated in 2002); weighted results.

Scope: Married couples (12.1 million households in 2002).

The effect of individualisation on the effective tax rate on wages and on labour supply in Belgium

One effect of marital income-splitting under the current system in Belgium is that it creates a linkage between the respective tax rates of each partner. As a result, the return of one spouse to the labour market can influence the tax rate of the other spouse. Individualisation alters that situation by making the spouses' tax rates independent from each other. This aspect of individualisation is examined for typical cases defined by reference to the average wage in combination with a variety of working-hours assumptions. Table 5.11 presents the tax rates of partner 1 who returns to the labour market and Table 5.12 presents the tax rates of partner 2.

Table 5.11. Tax rates on partner 1's gross earnings
Current system and individualisation in Belgium

Partner 1's earnings % TW	Partner 1's working hours	Individual-isation	Partner 2's earnings as a % of the average Taxing Wages (TW) wage						
			0.50	0.60	0.67	0.70	0.80	0.90	1.00
0.50	50.0%	2.5%	14.8%	14.8%	14.8%	14.8%	14.8%	14.8%	19.0%
0.50	80.0%	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	13.8%	16.3%
0.50	100.0%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%	19.8%
0.60	50.0%	4.7%	13.5%	13.5%	13.5%	13.5%	13.5%	14.4%	18.2%
0.60	80.0%	17.4%	17.4%	17.4%	17.4%	17.4%	17.4%	17.4%	17.4%
0.60	100.0%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%	22.9%
0.70	50.0%	9.0%	11.4%	11.4%	11.4%	11.4%	11.4%	13.6%	17.1%
0.70	80.0%	21.4%	21.4%	21.4%	21.4%	21.4%	21.4%	21.4%	21.4%
0.70	100.0%	26.3%	26.3%	26.3%	26.3%	26.3%	26.3%	26.3%	26.3%

Table 5.12. Tax rates on partner 2's gross earnings
Current system and individualisation in Belgium

Partner 1's earnings % TW	Partner 1's working hours	Partner 2's earnings as a % of the average Taxing Wages (TW) wage						
		0.50	0.60	0.67	0.70	0.80	0.90	1.00
Individualisation		19.8%	22.9%	25.1%	26.3%	29.2%	31.5%	33.2%
0.50	50.0%	11.4%	15.7%	18.6%	19.9%	23.3%	26.2%	27.0%
0.50	80.0%	19.8%	22.9%	25.1%	26.3%	29.2%	31.5%	32.1%
0.50	100.0%	19.8%	22.9%	25.1%	26.3%	29.2%	31.5%	33.2%
0.60	50.0%	13.5%	17.4%	20.2%	21.4%	24.7%	27.1%	27.8%
0.60	80.0%	19.8%	22.9%	25.1%	26.3%	29.2%	31.5%	33.2%
0.60	100.0%	19.8%	22.9%	25.1%	26.3%	29.2%	31.5%	33.2%
0.70	50.0%	17.8%	21.2%	23.5%	24.7%	27.8%	29.0%	29.5%
0.70	80.0%	19.8%	22.9%	25.1%	26.3%	29.2%	31.5%	33.2%
0.70	100.0%	19.8%	22.9%	25.1%	26.3%	29.2%	31.5%	33.2%

Let us take, for example, the case of a couple in which partner 2 earns a salary equal to 50 per cent of the average wage and partner 1 is paid the same per hour but works half-time. Under the current system, given the income-splitting between spouses, partner 1's own earnings are taxed at an effective rate of 14.8 per cent while partner 2's tax corresponds to 11.4 per cent of his individual earnings

(average tax rates are expressed as percentage of the actual earned-income of the partner). The shift to individualisation totally eliminates income-splitting between spouses, so that each is taxed on his or her income alone. The effect of this would be to lower partner 1's tax rate to 2.5 per cent and raise partner 2's to 19.8 per cent.

It is essentially in respect of low-paying and part-time jobs that this type of effect emerges. Individualisation reduces the tax rate on the lesser income and increases the rate on the greater one. This is logical insofar as the current system's transfer of income between spouses narrows the gap between their respective incomes.

Assuming that the supply elasticity of labour is higher for the couple's second income, the effect of individualisation could thus be to expand total supply of labour.

The effect of individualisation on labour supply in France

The effect of the individualisation of the income tax would be a decrease in the average disposable income of households by EUR 225 (Table 5.14). There would be substantial variations in the losses, which would depend in particular on household income (Table 5.14) and how it is split between the two partners. Given the induced drop in the couple's marginal tax rates, the likely effect of the reform – assuming no change in wages – would be to increase the women's participation rate by six-tenths of a percentage point and would result in a maximum (*i.e.* with no constraints on the demand for labour) of some 80 000 additional jobs (Table 5.13). Twenty-one percent of the potential job creations would be concentrated in the last living standard decile; the participation rate of this decile would increase by 1.4 percentage points.

Table 5.13. Estimated participation rates of married women before and after individualisation in France

Living standard decile	Estimated pre-reform participation rate	Estimated post-reform participation rate	Change in participation rate because of reform	Increase in women's participation
1	41.4%	41.4%	+0.0%	+234
2	47.3%	47.5%	+0.1%	+1 630
3	55.7%	56.1%	+0.4%	+4 538
4	64.3%	65.0%	+0.7%	+7 334
5	72.1%	72.7%	+0.5%	+6 144
6	79.3%	80.1%	+0.8%	+9 896
7	83.7%	84.3%	+0.7%	+8 502
8	85.5%	86.3%	+0.9%	+11 231
9	88.7%	89.7%	+1.0%	+12 731
10	85.6%	87.0%	+1.4%	+16 762
Total	70.4%	71.0%	+0.6%	+79 003

Note: 1999 Tax Revenue Survey – updated in 2002; weighted results.

Scope: Married couples (12.1 million households in 2002).

Thus, the EUR 225 average drop in disposable income after the reform would ultimately amount to EUR 192 once the labour supply effects are factored in. Hence, nearly 15 per cent of the loss would be offset by effects on the labour supply (Table 5.14).

Table 5.14. Average loss/gain in disposable income as a result of individualisation

Living standard decile (after tax)	Loss of disposable income from shift to separate taxation	Gain in disposable income from rise in women's participation	Net loss
1	-10	+1	-9
2	-27	+4	-23
3	-60	+15	-45
4	-97	+20	-77
5	-128	+16	-111
6	-150	+34	-116
7	-165	+26	-139
8	-210	+44	-166
9	-358	+61	-297
10	-1044	+110	-934
Total	-225	+33	-192

Note: 1999 Tax Revenue Survey (updated in 2002); weighted results.

Scope: Entire population (23.7 million households in 2002).

Notes

1 This section's analysis is primarily based on Ivanova, Keen and Klemm (2005).

2 The firm's maximum turnover is 15,000,000 roubles.

3 Information provided by the Slovak Ministry of Finance.

4 SKK 12,000 in 2005.

5 The personal allowance is available to all individuals and equals 19.2 times the minimum subsistence amount and might be augmented with a dependent spouse allowance. The tax reform introduced an annual tax credit for every dependent child.

6 The inheritance and gift tax were abolished; the real estate transfer tax is abolished as from 1 January 2005.

7 Information provided by the Slovak Ministry of Finance.

8 This section is mainly based on information provided by the government of Switzerland.

9 The basic VAT rate is 22 per cent and there are reduced rates of 7 and 3 per cent.

10 These results were provided by the government of Poland.

11 This assumes that the taxpayer is earning enough wage income to claim the full basic allowance, as the basic allowance in Norway consists of two elements. One part of the basic allowance applies to all income, while the other one is only applicable to wage income. This explains why the basic allowance is different for capital and wage income.

12 This section does not focus on the Norwegian dual income tax reform, which was already discussed in chapter 4.

13 The analysis is partly based on information provided by the German government.

Chapter 6

Conclusion

In many OECD countries, personal income tax reform has been a long-standing topic on the political and economic agenda. For more than 15 years, there has been a tendency to reduce personal income tax rates in combination with extensive base broadening.

On average in the OECD area, the share of personal income tax as a percentage of both total tax revenue and GDP has remained relatively stable over time. However, the overall OECD average conceals large differences in tax policies between OECD countries, where countries differ on policies concerning both how much and how to tax personal income. The analysis in chapter 1 shows that there has been a reduction in the top marginal income tax rates. A similar trend towards lower rates is observed with respect to top marginal tax rates on dividend income. This is part of an overall trend of reducing tax rates at all income levels, but it also suggests a reduction in the use of high marginal rates for top-income earners as a vehicle for income redistribution. (In some OECD countries, income redistribution is strengthened by the introduction of in-work tax credits at the bottom of the income distribution). In fact, the distribution of income has become somewhat less equal over the last couple of decades in many OECD countries. On the other hand, the tax rates on labour income and the tax wedges have become slightly more progressive on average in the OECD area. However, the progressivity is significantly lower when comparing tax wedges than

when comparing income tax rates, which reflects the non-progressivity of social security contributions. Many countries have also reduced the number of tax brackets significantly during the 1980s and 1990s. This trend towards flatter tax systems – also caused by the reduction in top marginal income tax rates – has continued after 2000.

Recently, more fundamental personal income tax reforms have been considered in some OECD countries. The discussions in this report centre on the evaluation of three broad categories of personal income tax systems: the comprehensive personal income tax system, the dual income tax system and the flat personal income tax system.

Flat tax proposals typically combine the introduction of a single tax rate with extensive base-broadening initiatives, while progressivity is achieved by using a basic tax allowance. Dual income tax systems combine a single tax rate on capital income with a progressive rate schedule for labour income, typically with a broad tax base. Comprehensive income tax systems usually combine a progressive rate schedule for all sources of income with more extensive use of tax reliefs than in flat and dual income tax systems.

The following sections evaluate these personal income tax systems in terms of the fundamental principles of sound tax policy: simplification, efficiency, equity, tax compliance and tax revenue. This chapter concludes with some thoughts about the future of personal income tax reforms.

1. Simplification

A significant part of the political debate on tax reform in many countries is the need for simplification of the tax systems. Simple tax rules often allow for lower tax rates. Flat tax systems are considered to be simple tax systems as the introduction of a single rate is often combined with the abolition of all or most tax allowances and tax credits. Another argument used in favour of flat tax systems is that they reduce compliance costs for the taxpayers and are easier to administer for the authorities compared to comprehensive and dual income tax systems.

However, it is not easy to have simple tax systems in a complex economic environment. The analysis in chapter 2 pointed out that such complexities have probably increased significantly over the past

decades as a result of globalization and that, in order to meet these challenges, authorities might be forced to introduce new legislation that increases the complexity of the tax system even further. On the other hand, complexity might be caused by inefficiencies in the tax administration and by complications in the tax legislation that are in fact unnecessary to achieve the policymakers' objectives. Policymakers might therefore consider simplifying the tax legislation and enforcing the efficiency of the tax administration in order to reduce the complexity of the personal income tax system.

It is probably fair to say that the main complexities in the tax system arise from the definition of the tax base (*e.g.*, whether the income in question is taxable or not, as well as the use of special tax rates or tax reliefs for certain activities) and not from the rate structure itself. Once the tax base is defined, one may argue that it is not much more difficult to have a progressive rate schedule (with a limited number of tax brackets) than a single rate above a basic allowance.

Having a flat rate schedule for all types of personal and corporate income may, on the other hand, reduce problems of income shifting between the personal and the corporate sector, thus reducing complexity. Income shifting between different sources of income, which is a problem in dual and semi-dual income tax systems, is also avoided. This lack of tax-arbitrage opportunities in flat tax systems might strongly reduce the tax compliance, tax enforcement and tax administration costs. However, identical tax rates are not sufficient to avoid the incentives to shift income between the personal and corporate sector, as these incentives also depend on the definition of the tax bases. Moreover, social security contributions might imply that the incentives for income shifting continue to exist even in flat income tax systems.

2. Efficiency

The economic costs of distortions in personal income tax systems are driven by the level of the tax rates and by the differences in tax rates across saving, investment and labour market opportunities.

As the welfare costs of taxation tend to increase with the level of the tax rates and because lower tax rates reduce the incentives for tax avoidance and tax evasion, many OECD countries have decreased their personal income tax rates over the years. The increased

international mobility of tax bases and the tax competition between jurisdictions are additional drivers for the ongoing efforts to reduce tax rates on the most mobile tax bases. At first sight, introducing a low flat tax rate will then increase efficiency. However, moving from a progressive to a single rate system within a revenue-neutral perspective might imply that tax rates will increase for some taxpayers – for low-income taxpayers if the basic allowance is not increased and especially for middle-income taxpayers – and that they will be reduced for others, especially for high-income taxpayers. It then becomes an empirical question – if the progressive rate schedule is replaced by a single tax rate with constant tax revenues – whether the total economic costs of tax distortions will be reduced or not. An efficiency argument in favour of proportional (flat) tax rates is that progressive taxation discriminates against variable income, which might discourage seasonal work, investment in human capital and the demand for risky assets. Government's revenue needs make it often impossible that all tax rates are reduced. In that case, it might be more efficient to lower the tax rates on only the most mobile tax bases instead of not reducing tax rates at all. Even if a reduction in the tax rates on capital income induces individuals to have their income characterized as capital instead of labour income, this reduction might prevent that the revenue loss and the overall efficiency loss would be even larger as the mobile tax bases would otherwise be moved abroad. Dual income tax systems might then become an efficient solution to international tax avoidance and evasion problems.

It may be argued that some taxes and tax reliefs, *e.g.* environmental related taxes and tax relief for research and development, may increase economic efficiency if they help to internalize negative or positive externalities that may arise in the market economy. However, the underlying economic rationale for providing tax incentives is not always clear. Base broadening has been an underlying principle for tax reforms in New Zealand and in the Nordic countries. But other OECD countries, as for instance the Netherlands, have also broadened their personal income tax base in order to compensate for the revenue loss due to the reductions in tax rates and to reduce tax-induced distortions. Generally speaking, economic efficiency is best served by taxing all types of activities in a symmetrical and equal manner. Consequently, also base broadening is an important instrument in reducing tax distortions and making the tax system more efficient.

3. Equity

All OECD countries have progressive income tax systems, although they vary significantly with respect to the level of inequality, implying that income distribution through the tax system is an important policy objective in all OECD countries. Both horizontal equity and vertical equity are important criteria in the evaluation of personal income tax systems.

The tax system's horizontal equity – taxpayers in an equal situation being taxed in an equal manner – can be evaluated either on the basis of the taxpayer's year-to-year income or on the basis of the taxpayer's life-time income. Horizontal equity under the first approach implies that the tax burden on a given level of total income should be the same regardless of how this income is composed – as satisfied by comprehensive personal income tax systems and especially by flat personal income tax systems. However, (semi-) comprehensive progressive tax systems often violate this principle in practice through the extensive use of tax reliefs and special tax treatment for different types of income. Broadening the personal income tax base might then strengthen the horizontal equity of comprehensive personal income tax systems. Moreover, taxing year-to-year income might violate horizontal equity if taxpayers who have income that varies over time have to pay more taxes than taxpayers with a more constant stream of earnings. Progressive tax rate schedules (comprehensive and dual personal income tax systems) then violate the horizontal equity tax principle. Consequently, only flat personal income tax systems satisfy horizontal equity if year-to-year income is used as the evaluation criterion. However, horizontal equity which is evaluated on the basis of taxpayer's life-time income requires that capital income is taxed at lower rates than labour income. The life-time income approach then implies that only the dual income tax system satisfies the horizontal equity tax principle (although the progressive taxes on labour income continues to be horizontal inequitable).

A progressive income tax schedule in itself is more effective in achieving vertical equity – taxpayers with the better circumstances bearing a larger part of the tax burden as a proportion of their income – than proportional income tax schedules as, for instance, the flat tax system. Vertical equity then implies that the distribution of after-tax income should be narrower than the distribution of before-tax

income, or that the average tax rate should be increasing in income. This can be achieved by having a basic allowance, as is the case in the flat income tax system, but it will be achieved more accurately through a progressive tax rate schedule as in the comprehensive and dual personal income tax system. So the choice between progressive and flat tax rate schedules from an equity perspective depends in part on how to strike the balance between horizontal equity – under the year-to-year income approach – and vertical equity. Under the life-time income approach, dual income tax systems satisfy both the horizontal and vertical equity tax principle. On the other hand, our analysis in chapter 3 did demonstrate that a significant amount of progressivity can be achieved through the basic allowance, even under a flat personal income tax system (although the move from a progressive rate schedule to a flat tax rate may result in income gains for top-income earners and in increasing marginal tax rates for the middle class). Flat personal income tax systems then satisfy both horizontal equity – under the year-to-year income approach – and vertical equity. Moreover, a reduction in the number of tax brackets does not necessarily reduce the fairness of the tax system. A reduction in the number of rates still allows governments to redistribute income accurately.

Base broadening has an impact on income distribution. Besides improving efficiency, broadening of the tax base is likely to increase horizontal equity, as this implies that the preferential tax treatment of certain taxpayers will be abolished. It may also have a positive effect on vertical equity. Although certain types of tax allowances and tax credits favour low-income households, *e.g.* earned income tax credits, other types of allowances and credits are often in practice most widely used by high-income individuals, *e.g.* for savings, debt-financed investments in owner-occupied housing, educational and health expenses, and charitable donations. And even if such tax allowances are kept, a move from a progressive to a flat rate schedule implies that the value of such deductions decreases for high-income taxpayers and that their value becomes constant across income levels, which strengthens the fairness of the tax system.

4. Tax compliance

It is often argued that attitudes towards tax compliance are shifting, with an increasing number of taxpayers engaging in

aggressive tax planning and tax evasion – sometimes involving tax havens. This raises the question of how alternative personal income tax systems affect tax compliance.

The main factors explaining the level of voluntary tax compliance include the extent to which taxpayers are satisfied with how tax revenues are used, the perceived fairness of the tax system, whether or not it is easy to comply with the tax rules and the extent to which the tax code provides tax evasion opportunities. These factors, except for the first one, are influenced by both the rate structure and the tax base of the alternative personal income tax systems.

The tax system may be considered as unfair if there are extensive tax reliefs that imply that the tax system is far from accomplishing horizontal equity. An extensive use of tax reliefs will also make the tax system more complicated, and it provides taxpayers with more opportunities to engage in tax-planning activities. This may also have a negative effect on vertical equity, as high-income individuals are often engaging more actively in tax planning than low-income individuals. At the same time, incentives for engaging actively in tax planning are higher for high-income than for low-income individuals in a progressive income tax system. This then implies that base broadening may strongly improve the perceived fairness of the tax system and reduce the tax-arbitrage opportunities. Consequently, personal income tax systems with a broad base are more likely characterized by a higher degree of tax compliance.

Personal income tax systems that have low tax rates are more likely characterized by a higher degree of tax compliance as well. However, moving from a comprehensive tax system – characterized by a progressive rate schedule – towards a flat tax system might require that tax rates for low-income individuals are increased while they are reduced for high-income individuals. While such a move may have a positive impact on tax compliance by high-income individuals, it may have the opposite effect on low- and middle-income individuals. Again, it might be an option for governments to reduce the rates only on the tax bases that most easily can be avoided, which for instance is the case with capital in dual income tax systems.

5. Raising revenue in an international competitive environment

By reducing personal income tax rates, OECD countries may protect their revenue indirectly as the obstacles to job creation and people's willingness to work are reduced. By lowering tax rates, countries reduce the incentives for tax avoidance and tax evasion as well. Moreover, reducing the number of tax allowances and exemptions will increase tax revenue, which might provide room for additional tax rate reductions. Moving to a broad-base flat rate system might then effectively create positive dynamic economic effects.

International mobility puts a downward pressure on the amount of revenue that can be collected from the most mobile tax bases (corporate income, personal capital income and labour income from usually high-income individuals). In fact, the increased mobility of these tax bases has resulted in a lowering of the corresponding tax rates in order to prevent revenue losses from being even larger as otherwise these tax bases would have been moved abroad and would have generated no revenue at all. Introducing a flat rate on a broad base might imply that taxes will increase on the most mobile tax bases, which may then not necessarily have a positive impact on overall tax revenues.

6. Fundamental personal income tax reform: the road ahead

Even though deviating from it becomes a source of inefficiency and inequity, the implementation of a genuine comprehensive personal income tax system – following the Schanz-Haig-Simons definition – seems to be administratively extremely costly and politically infeasible. Moreover, it is doubtful whether a genuine comprehensive personal income tax system would be sustainable in an international competitive environment where tax bases are becoming increasingly mobile. As a result of these implementation difficulties, the personal income tax systems of many OECD countries are better characterized as being *semi*-comprehensive income tax systems. The problems with tax-arbitrage behaviour – individuals making use of differences in tax rules and rates and of tax exemptions and allowances – that are caused by these tax systems have led to the tax policies that focused on base broadening and a lowering of the tax rates. Dual and flat personal income tax reforms

are options for further tax reform. Which personal income tax system is preferred remains an open question and the answer is likely to vary between countries.

Dual personal income tax systems achieve horizontal equity in the taxation of capital income on the one hand and in the taxation of labour income on the other hand. Moreover, a low tax rate on capital income reduces not only the foregone tax revenue and efficiency costs of the deduction of interest expenses from taxable personal income (*e.g.*, the interest payments of debt-financed investment in owner-occupied housing), but it also mitigates the problem of possible capital losses as an investment's nominal instead of real return is taxed. However, it is especially from an international tax perspective that one can make a strong case for the taxation of capital income at a low rate, as it reduces the incentives for capital exports and tax avoidance/evasion strategies. Moreover, it allows the tax system to evolve in the direction of an expenditure type of tax system. On the other hand, the focus on redistribution and the need to raise a sufficient amount of tax revenue continue to explain the progressive tax rates on labour income in a dual income tax system.

However, taxpayers with a different mix of capital and labour income are taxed differently under a dual income tax system, which might be seen as violating horizontal equity (if year-to-year income is used as the basis for evaluation; if horizontal equity is evaluated on the basis of life-time income, the taxation of capital at a lower rate becomes a source of horizontal equity). The introduction of a lower proportional tax rate on capital income might undermine the tax code's vertical equity, especially because income from capital tends to be concentrated in the upper income brackets. Moreover, income shifting between low-taxed capital income and high-taxed labour income remains possible, for instance because individuals incorporate themselves, which reduces the tax system's horizontal and vertical equity.

No other OECD country has fully copied the Scandinavian dual income tax system. However, many countries did introduce *semi*-dual income taxation of personal capital income, in the sense that all or some personal capital income is taxed at lower rates than wage income.

The main problems with the 'pure' dual income tax system in Norway were twofold. First, dividends and capital gains on foreign shares were taxed more heavily than dividends and capital gains on

shares in Norwegian companies because the imputation system and the RISK scheme applied only to Norwegian shares. Second, the large difference in top marginal tax rates on labour and capital income gave taxpayers an incentive to define their income as capital rather than as labour income. In order to ensure an equal tax treatment of wage earners and the self-employed, the dual income tax system splits the income of the self-employed into a labour income component as a reward for work effort and a capital income component, which is the return to the savings invested in the proprietorship. The part considered as labour income is taxed according to the progressive rate schedule. The part considered as capital income is taxed at the flat rate. This approach is also used to avoid that active owners of closely-held corporations transform their highly taxed wages into lower taxed capital income. The fact that social security contributions are often levied only on labour income just strengthens the income shifting. However, shareholders were able to avoid income splitting by inviting 'passive' owners into the company.

The Norwegian government has attempted to tackle these problems by introducing a rate-of-return allowance, which is taxed at the corporate level with the corporate tax rate but is not taxed at the shareholder level. The proposal of the German Council of Economic Experts is similar to the Norwegian reform. In contrast, the Belgium government recently introduced an allowance-for-corporate equity tax system. The ACE tax system removes double taxation by exempting the normal return on equity from the corporate tax rate. The return on equity then continues to be taxed only at the shareholder level. It is however too early to assess the overall impact of these tax reforms.

Income-shifting problems are not encountered under a 'genuine' flat personal income tax system. The introduction of a flat tax is often combined with a significant reduction in tax allowances and credits. This base broadening renders the tax system more simple and easier to administer, and should increase efficiency.

One of the main disadvantages of flat personal income tax systems is that they limit the scope for a fair sharing of the tax burden, although our analysis demonstrates that a significant amount of progressivity can be achieved through the basic allowance. Moreover, in the presence of social security contributions which do not confer an actuarially fair entitlement to a possibly contingent

future social benefit, there continue to be gains from income shifting between capital and labour income, even under a flat personal income tax system. Flat tax systems then turn into (semi-) dual income tax systems with proportional instead of progressive taxation of labour income.

Because of governments' revenue needs, having a flat tax on capital and labour income might require a rather high tax rate. In fact, not levying social security contributions separately but incorporating them into the flat tax rate, might force authorities to levy an even higher tax rate. It remains to be seen if this would be sustainable in the presence of international mobile tax bases.

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OECD Tax Policy Studies

Fundamental Reform of Personal Income Tax

In a drive to encourage risk-taking, entrepreneurship and competitive fiscal advantage, many OECD countries have reformed their personal income tax system fundamentally over the last two decades. At the same time, governments are aware that they must maintain taxpayer's faith in the integrity of their tax systems to fund public spending. Fairness and simplicity have become the byword of reformers, but the double challenge has meant that no clear consensus has emerged on an ideal personal income tax.

Although there are large differences in tax policies between OECD countries, almost all the reforms of personal income tax in the last two decades can be characterised as rate reducing and base broadening. This study examines the general trends in the taxation of capital income and of wage income, and the most significant changes that have taken place. It looks closely at the main drivers of reform, the trade-offs between policy objectives, the guidelines, objectives and design features of tax reforms and why fundamental reform of personal income tax systems has been so high on the agenda.

The principal systems of taxes on personal capital income and wage income – comprehensive, dual and flat – are thoroughly examined and evaluated in the OECD countries that have adopted these different systems or a mix thereof. They are each assessed in terms of the fundamental principles of sound tax policy: simplification, efficiency, equity, tax compliance and tax revenue, and their main advantages and disadvantages are discussed. The general way ahead will be set by the degree of success of the multiple experiences and policy mixes described in this analytical and comprehensive study.

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