TAX REFORM IN OECD COUNTRIES:
MOTIVES. CONSTRAINTS AND PRACTICE

Robert P. Hagemann, Brian R. Jones and R. Bruce Montador

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INTRODUCTION

Tax reform has attracted a great deal of attention in the OECD area in recent years. Such broad interest reflects concern that the existing tax structures not only impose large costs on society by distorting economic decisions, but also that many are unfair, unnecessarily complex and too subject to avoidance and evasion. Moreover, a combination of already large tax revenues and highly distorting tax systems has made it difficult to increase taxes where necessary to face budgetary problems. Finally, part of the reason for the timing of the renewed interest in taxation is the belief that it may have helped increase the structural rigidities in the economy, a subject dealt with in some detail in Economic Performance and Structural Adjustment (OECD, 1987). Indeed, the emphasis on the role of taxes in influencing aggregate demand in Keynesian macroeconomic models may have led to a failure to anticipate the costs of high and variable marginal tax rates on macroeconomic performance.

The purpose of this paper is to investigate these issues in the light of the literature on the subject and the experience of OECD economies. The paper focuses principally on personal and corporate income taxes, social security contributions, and indirect taxes on goods and services. Section I considers the economic and other reasons for tax reform. In Section II are discussed the obstacles to reforming the existing tax system, while Section III reviews the actual tax reform to date.

I. THE RATIONALE FOR TAX REFORM

The traditional public finance principles underlying tax reform proposals include efficiency, simplicity and equity (i.e. fairness), although the relative importance of each varies across countries considering reform. This section looks in some detail at the extent to which existing tax systems have missed these goals, and considers the features of a desirable tax system.
A. Efficiency losses from tax-induced distortions

i) Sources of distortions

A tax distortion occurs whenever economic agents respond to changes in relative prices induced by taxation. Taxes create "wedges" between the before- and after-tax prices of goods, services, factors of production or activities, and when these wedges are of different sizes, relative prices change. As relative prices are altered, economic behaviour is modified in such a way that the proportions of the taxed items change, resulting in a reallocation of resources in the economy. Some of these tax-induced "distortions" may be desirable — as when polluting activities are taxed to ensure that users pay the full social costs. However, most of them are not; differential taxation of factors can lead to inefficient production methods and lower output, and differential tax rates on final goods and services will affect consumption patterns, generally reducing welfare.

Several types of tax distortions are particularly important as a source of welfare costs. First, taxation of labour income discourages labour supply relative to what it otherwise would be, because the after-tax return to the worker is less than the cost to the employer as measured by the marginal value product. This "tax wedge" exists whether wages are taxed directly or indirectly via a tax on the consumption of goods and services (which lowers the real after-tax wage), and is greater the higher the total marginal tax rate on labour income. Chart A illustrates how marginal tax rates on single workers vary with wages in major OECD countries, taking account of both income taxes and social security contributions (but not indirect taxes). It shows a broadly similar pattern of rising marginal rates (except for the United States after the recent reform), generally reaching levels well above 50 per cent. At lower incomes the pattern is often erratic, a situation that is made worse when the transfer system is taken into account. Table 1 shows how the marginal tax rates on labour, including indirect taxes, have evolved in recent years. They are typically very high and have shown a tendency to rise.

General income taxes impose a second distortion by driving a wedge between before- and after-tax returns on capital. This discourages saving by discriminating against future relative to current consumption, reducing welfare by leading to a sub-optimal level of intertemporal resource transfers, while tending to lower investment and thus the domestically-owned capital stock, potentially reducing productivity growth. Although technological change and the increase in labour supply determine the rate of economic growth in the long run, many believe it possible, by reducing the rates of capital taxation, to induce faster growth for a time through an increase in investment. The investment incentives that exist in many countries have been designed in part for this reason. In some countries, however, there is concern that these have gone too far, with capital being unduly favoured at the expense of labour so that investment has become labour replacing.
MARGINAL RATES OF OVERALL TAXATION ON WAGES AND SALARIES

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<td>&quot;Employer&quot; tax</td>
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CHART A

UNITED STATES (before tax reform)

UNITED STATES (after tax reform)

JAPAN

GERMANY

FRANCE

UNITED KINGDOM

ITALY

CANADA

Multiple of average wage
Table 1. Total marginal tax rates on labour use

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1. Calculated as a per cent of total compensation, including payroll taxes, for an average production worker. Recent tax reforms are unlikely to have changed the figures significantly, even for the United States.


Notes to Chart A

All calculations are based on a single individual for whom wages are the only source of income. Gross income includes employer social security contributions. The Chart shows the gap between the wage cost to the employer and the after-tax earnings of the employee.

Calculations are based on the taxes paid by someone earning income in 1986 which, in the case of France, means that the income taxes are those payable in 1987. For the United States, however, the pre-reform figure is for 1984 and the post-reform figures for 1988 (when the new scales will be in place). The average wage for 1988 is based on the projections in Economic Outlook 40. Recent post-1986 tax reform in Japan and Canada would significantly lower the marginal rate shown in the chart for these countries.

For the United States, state and local marginal income tax rates were assumed to be 14 per cent of those at the federal level. For Canada, the marginal tax rates for Ontario were used.

The non-refundable Italian tax credits mean that the marginal tax rate is zero for low-income earners.
Table 2. Estimated total marginal tax rates on capital

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<th>Financing by:</th>
<th>Zero inflation</th>
<th>Debt</th>
<th>New share issues</th>
<th>Retained earnings</th>
<th>10 per cent inflation</th>
<th>Debt</th>
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</table>

1. 1983 data. The total marginal tax rate on which would result from a hypothetical investment in the manufacturing sector which yielded a pretax real return of 10 percent. The investment is assumed to be made directly out of personal savings. - The effective tax rate would be lower if the investment were channelled via a tax-exempt financial institution. The estimates take account of both the corporate and personal tax systems (assuming that the investor has other income equal to the annual wage of an average production worker).

The third distortion frequently cited in the tax reform debate is associated with the wide dispersion in the effective marginal rates of taxation of capital income. The different characteristics of personal and business tax systems produce widely varying effective tax rates on capital. This has been well documented by a number of recent studies. Based on tax systems in effect in 1983, McKee et al. (1986) found considerable variation in tax rates across types of financing, sectors, and industries in all OECD countries. As evidenced in Table 2, corporate tax systems in many countries tend to favour short-lived over long-lived capital goods, financed by borrowing rather than new share issues or retained earnings. The dispersion of tax rates reflects the interaction of explicit investment incentives (such as selectively applied investment tax credits and accelerated depreciation), changes in expected inflation, and differences in financing patterns. Since the real after-tax rates of return to investment in alternative assets will tend to converge, a tax-induced misallocation of resources occurs and the capital stock is less productive than it would be under uniform taxation of all capital income.

Inflation compounds many of these problems. First, it pushes taxpayers into higher tax brackets (in unindexed income tax systems with rising marginal tax rates). Second, it more often than not increases the cost of capital to firms, as illustrated in Table 2, by inappropriate treatment of inventories and depreciation (using historic instead of replacement costs, with long-lived assets being the most affected). Third, it promotes consumption over saving where nominal interest income is taxed and/or interest costs are deductible.

ii) Factors influencing the size of distortions

The importance of distortions will depend on tax rates as well as on the elasticities of supply of and demand for goods and factors of production and the elasticities of substitution in production between factors. In fact, much of the debate about the choice of a tax base is in essence a discussion about the size of two specific elasticities: the elasticity of labour supply with respect to after-tax wages and the elasticity of savings with respect to the after-tax rate of return.

An increase in after-tax wage income will have both a substitution effect that raises labour supply and an income effect that lowers it. The net effect is indeterminate a priori and must therefore be assessed empirically. While early empirical studies tended to find the wage-sensitivity of labour supply was either small or non-existent, more recent research has found larger compensated labour supply elasticities for males and particularly for married women. This is particularly well-documented in Killingsworth (1983).

For many years economists generally believed that the compensated elasticity of demand for future consumption (or, equivalently, of supply of current savings) with respect to the interest rate was very low. In part this reflected the great stability of the savings rate over a long period. Relatively few earlier estimates of this
elasticity were made, however, and they often neglected the role of taxes. Recent estimates are higher, although they are very sensitive to several variables, notably the interest rate chosen, the definition of savings and the inflation expectations process assumed. It is important to note that the relative merits of alternative tax systems can depend critically on this parameter.

iii) Costs of distortions

Distortionary taxes result in welfare costs (often described as "excess burdens" or "deadweight losses") because they reduce income over and above the transfer of resources to the government. This aggregate loss is due to the fact that consumers and producers, responding to changes in relative prices, demand and supply goods and factors in different proportions than they would in the absence of taxes and, therefore, output and income are lower. The greater the responsiveness of consumers and producers to the tax-induced changes in relative prices, the greater the "deadweight" loss to the economy.

Recent empirical work suggests that the welfare losses associated with tax distortions are larger than previously thought, in part because of increased estimates of the elasticities of both labour supply (Ashworth and Ulph, 1981a, 1981b; Bloomquist, 1983; Stuart, 1984; Hansson, 1984; Hansson and Stuart, 1985; and Hausman, 1985) and savings (Boskin, 1978; Boskin and Lau, 1978; and Summers, 1983). Moreover, recent applications of applied general equilibrium models have reinforced the belief that wide dispersion in the taxation of capital income reduces output significantly. The increased refinement of the models has enabled investigators to account for more of the variation in tax treatment across individuals and businesses. For instance, whereas Harberger's (1962, 1966) pioneering work in the field included only two sectors — corporate and non-corporate — and a single consumer, more recent models generally have at least four industrial groups (Keller, 1980; Slemrod, 1980, 1983), and as many as 33 (Piggott and Whalley, 1982). Models are typically disaggregated into 9 to 12 households, with the Piggott and Whalley (1982) model distinguishing between as many as 100 income-occupation groups. Moreover, some recent models, notably Ballard et al. (1985), Daly et al. (1985), Fullerton and Henderson (1986) and Auerbach and Kotlikoff (1987) have also been able to include dynamic elements, and hence to assess long-run effects of alternative tax structures (i.e. allowing for induced changes in saving, investment and the capital stock).

Table 3 reports some estimates of the possible gains obtained from changes to the existing system. Although they vary substantially (from 0.16 per cent of GNP or less to 9 per cent), several observations can be made. First, whereas earlier estimates of welfare costs assumed the unacceptable alternative of lump-sum taxes, recent studies consider more realistic changes, such as integration of personal and corporate taxes or a switch to a consumption tax. Second, and in part
because they take account of most existing taxes, some recent estimates of static costs are generally higher than previously obtained, despite the assumption of realistic, and therefore also distorting, replacement taxes. Lastly, allowance for the dynamic effects of taxes substantially increases the welfare gains to be achieved from reform.

While it is important to quantify the total welfare costs of raising a given amount of tax revenue, the marginal welfare cost (MWC) of additional revenues may

### Table 3. Estimates of welfare gains from changes to existing tax systems

<table>
<thead>
<tr>
<th>Investigators</th>
<th>Country</th>
<th>Policy changes</th>
<th>Type of estimate</th>
<th>Welfare gains (% of GNP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harberger(^1)</td>
<td>United States</td>
<td>Lump-sum tax</td>
<td>Static</td>
<td>0.3–0.6</td>
</tr>
<tr>
<td>Shoven-Whalley(^2)</td>
<td>United States</td>
<td>Lump-sum tax</td>
<td>Static</td>
<td>0.4–0.7</td>
</tr>
<tr>
<td>Whalley(^3)</td>
<td>United Kingdom</td>
<td>Various plans including: Abolition of purchase tax, Elimination of selective employment tax, Introduction of a VAT, Changes to corporate taxes, Introduction of a unified income tax</td>
<td>Static</td>
<td>Negligible</td>
</tr>
<tr>
<td>Keller(^4)</td>
<td>Netherlands</td>
<td>Changes in marginal rates</td>
<td>Static</td>
<td>Negligible</td>
</tr>
<tr>
<td>Piggott(^5)</td>
<td>Australia</td>
<td>Abolition of sectoral specific tax expenditures and subsidies</td>
<td>Static</td>
<td>3.50</td>
</tr>
<tr>
<td>Slemrod(^6)</td>
<td>United States</td>
<td>Indexation</td>
<td>Static</td>
<td>0.48</td>
</tr>
<tr>
<td>Ballard et al.(^7)</td>
<td>United States</td>
<td>Full integration, Full integration, Progressive consumption tax, Consumption tax with integration</td>
<td>Static/Dynamic</td>
<td>0.16–0.71/0.63–1.42</td>
</tr>
<tr>
<td>Piggott and Whalley(^8)</td>
<td>United Kingdom</td>
<td>Various plans</td>
<td>Dynamic</td>
<td>6.00–9.00</td>
</tr>
<tr>
<td>Daly et al.(^9)</td>
<td>Canada</td>
<td>Elimination of dispersion of capital tax rates</td>
<td>Dynamic</td>
<td>2.0</td>
</tr>
<tr>
<td>Fullerton and Henderson(^10)</td>
<td>United States</td>
<td>1984 Treasury proposal, President's proposal</td>
<td>Dynamic/Dynamic</td>
<td>-0.1–1.2/-0.2–1.2</td>
</tr>
</tbody>
</table>

1. Assumes a compensated labour supply elasticity of 0.125.
2. Assumes a compensated labour supply elasticity of 0.125.
3. Assumes a compensated labour supply elasticity of 0.15, and savings elasticity to 0.4.
be more relevant. The MWC is the incremental excess burden of an additional unit of revenue for a given tax structure. It includes the extra tax collected and the marginal loss in welfare from the behavioural responses to it. Such estimates are useful indicators of the costs imposed by current tax systems and, in particular, of how expensive it may be to try to solve budget deficit problems or to undertake new spending programmes via an increase in existing taxes. The results of recent work are shown in Table 4 for tax systems as a whole and for some individual types of

<table>
<thead>
<tr>
<th>study</th>
<th>Country</th>
<th>Marginal cost of public funds</th>
<th>Compensated elasticity of</th>
<th>Source(s) of MWC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browning (1976)</td>
<td>United States</td>
<td>$1.09-$1.16</td>
<td>0.20</td>
<td>Federal personal income taxes, State and local personal income taxes, Social security contributions, Excise taxes</td>
</tr>
<tr>
<td>Browning (1987)</td>
<td>United States</td>
<td>$1.32-$1.47</td>
<td>0.30</td>
<td>Federal personal income taxes, State and local personal income taxes, Social security contributions, Excise taxes</td>
</tr>
<tr>
<td>Stuart (1984)</td>
<td>United States</td>
<td>$1.21-$1.33</td>
<td>0.20-0.64</td>
<td>Federal personal income taxes, State and local personal income taxes, Social security contributions, Excise taxes</td>
</tr>
<tr>
<td>Hansson (1984)</td>
<td>Sweden</td>
<td>0.98-7.20</td>
<td>0.10-0.38</td>
<td>Corporate and personal income taxes, Social security contributions, Indirect taxes, Wealth taxes</td>
</tr>
<tr>
<td>Hansson, Stuart (1985)</td>
<td>Sweden</td>
<td>0.67-4.51</td>
<td>-0.07-0.38</td>
<td>Corporate and personal income taxes, Social security contributions, Indirect taxes, Wealth taxes</td>
</tr>
<tr>
<td>Ballard et al. (1985)</td>
<td>United States</td>
<td>$1.17-$1.33</td>
<td>0.00-0.30</td>
<td>All major U.S. taxes, Tax on capital, Tax on labour, Consumer sales taxes, Income taxes, Output taxes</td>
</tr>
<tr>
<td>Fortin and Rousseau (1986)</td>
<td>Canada</td>
<td>$1.19-$1.55</td>
<td>0.15-0.20</td>
<td>All major Canadian taxes</td>
</tr>
</tbody>
</table>

1. The authors also compute MWC assuming a savings elasticity of 0.8, but do not report the associated estimates for individual taxes.
taxes. What emerges from the table is how often and by how much marginal welfare costs exceed the marginal revenue.

Because the welfare loss from taxes is sensitive to their level and dispersion, as well as to the responsiveness of economic agents, the effect of a tax increase will depend on the tax that is changed. One study (Ballard et al., 1985) reported in Table 4 provides estimates of the MWC for alternative tax sources. As can be seen, additional revenue from consumers’ sales taxes results in relatively lower MWC reflecting the fact that in the United States they are generally imposed at low rates. On the other hand, MWC from capital taxes (calculated at the industry level) are relatively large, owing to the high and variable rates of capital taxation then prevailing in the United States.

These general equilibrium model results are, of course, subject to several limitations. They depend on the choice of structure and parameter values of individual models. They compare equilibrium solutions, ignoring the consequences of initial disequilibrium. This presumes, as indeed does much of the case for tax reform, that long-run considerations are sufficiently important to outweigh any short-run aspects. Notwithstanding these caveats, the welfare losses appear to be potentially large, even on favourable assumptions about model structure and parameter values.

B. Other reasons for tax reform

i) Complexity of existing tax systems

One motivation for reform is the desire to eliminate unnecessary complexities from the tax system. Any tax system will be complicated, given the difficulties in drafting clear and economically sensible definitions and the inherent complexity of business practices. However, many complexities result from the use of the tax system for non-revenue purposes.

Complexities arise in all components of existing tax systems. Personal income taxation typically requires that the taxpayer know how to treat income of different types and periods, deductions, exemptions and tax credits. Business income taxation is exceedingly complicated, in part because of the sophistication of business finance, but also owing to the many schemes aimed at providing incentives for particular types of investments. In the case of indirect taxation, complexity is linked directly to differences in rates and variations in coverage, often aimed at increasing the progressivity of the tax system. The administrative complications arise from the need for regulations and rulings that allocate particular goods or services or stages of production to one or another tax rate category. For example, in Canada, there have been 22 000 administrative rulings defining the coverage of the manufacturers’ sales tax, and only 60 000 taxpaying companies.

Complexity creates costs in several ways. The direct costs are, in the first
instance, the real resources devoted to compliance and tax collection. As personal and business income taxes have become subject to a host of preferences, exclusions, deductions and credits, record-keeping and tax preparation have in turn become, at least in some countries, particularly costly activities. In many cases (about 40 per cent of taxpayers in both the United States and Canada), individuals have to pay for assistance. Although any tax system imposes complications, compliance costs of current systems appear unnecessarily high.

Complexity of the tax system also produces indirect costs because of the effort devoted to artificially rearranging one's affairs in such a way as to reduce a current tax liability. The time and money spent researching options and frequent need to employ consulting services result in a considerable diversion of resources into tax-related applications and away from more valuable endeavours.

ii) Inequities

Pressure for tax reform has also arisen from the growing conviction that present tax systems are unfair. Indeed, the concept of equity has perhaps been the predominant consideration in most recent reform proposals. Concerns about both horizontal equity (taxpayers in similar circumstances should be treated the same way) and vertical equity (high income taxpayers contribute relatively more to the operations of government) have motivated tax reform.

A lack of horizontal equity often reflects the use of the tax system for non-revenue-raising purposes. Also, some of the differences in tax treatment may be ex post (and thus not necessarily inequitable) rather than ex ante. Taxpayers make choices about work, investment or consumption despite the higher tax burden potentially generated by their particular decision; horizontal inequity arises only where the ability to choose tax-preferred income or consumption is restricted. Thus, for instance, wage earners are often less able than the self-employed to make use of tax-reducing schemes. Another horizontal inequity occurs when individuals face different time profiles of equal income (in present value terms) and yet pay different amounts of taxes over a lifetime.

Vertical equity requires that average tax rates rise with the ability to pay. Such a progressive tax structure has long been a social goal in many countries. Typically, countries use (often steeply) rising marginal income tax rates to achieve this, although a flat-rate tax combined with a basic exemption or a refundable tax credit can also produce rising average tax rates. In spite of steeply rising statutory marginal tax rates, often perceived as evidence of excessive redistribution, most studies of tax incidence conclude that actual tax systems do not in fact redistribute very much. This results from the effects of indirect and payroll taxes, flat rates and ceilings for social security contributions, as well as the extensive use of tax expenditures.

The problem is not one of too much progressivity per se. It is, first, that a given amount of redistribution requires a steeper income tax function than it would if the
income tax were the only source of revenue, and, second, that the resulting high tax rates themselves lead to pressures for additional deductions and exemptions and to avoidance. On the basis of these observations, tax reform could even provide an opportunity to restore progressivity to taxation as a whole, while also reducing excessive distortions. Tax reform can also be "distributionally neutral" with no loss of vertical equity overall. However, it should be noted that income redistribution cannot be assessed by looking at the tax system in isolation from transfers and direct public spending.

### iii) Social considerations

Finally, a focus for reform in some countries is the choice of tax-paying unit. The choice between the individual and the family suggests a conflict between equity considerations on the one hand and the need to accommodate the changing role of women in modern society on the other. Systems that assess tax on a family basis might appear more equitable, since total family income would determine tax liabilities. However, such systems may discourage women from playing a greater role in the economy, or even discourage marriage, since the earnings of married women are subject to a high marginal tax rate. Similarly, if taxation is on an individual basis with a married person's allowance geared to the spouse's income, women are discouraged from re-entering the labour force since the first income earned is implicitly taxed at the husband's marginal rate. The disincentive effect on labour supply disappears, however, once a wife's earnings are sufficient to eliminate her husband's married person's allowance. Many of the issues involved in this area of tax reform are essentially non-economic in nature, but they have been much discussed in some countries, notably the United Kingdom.

### C. Redesigning tax systems

The literature on optimal taxation does not provide any clear lessons for tax reform. It is generally recognized that the design of the optimal tax structure is a problem of second best in terms of efficiency. The socially optimal trade-off between efficiency and equity will depend crucially on the extent to which the government wishes to use the tax system to pursue social welfare objectives such as income redistribution. It is worth noting, however, that optimal tax design examines points on the "efficiency frontier" where there is a trade-off between equity and efficiency, whereas existing tax systems lie inside the efficiency frontier. Hence, it may be possible to improve both equity and efficiency. The optimal tax system thus depends explicitly on the government's social welfare function.

The major conceptual problem confronting tax design is the choice of tax base. In practice, it is generally held that this should reflect the "ability to pay", of which there are in principle two alternative measures, "comprehensive income" (consumption plus the change in wealth over a given accounting period) and consumption by
itself, the former often referred to as the "Haig-Simons" concept of income following the work of Haig (1921) and Simons (1938). Thus, the principal difference between comprehensive income and consumption as tax bases is the treatment of savings. With an income base, savings are subject to double taxation, whereas with a consumption base they are taxed only once, when consumed (providing bequests and gifts are treated as consumption). Both comprehensive income and consumption taxes discourage labour supply by leaving leisure untaxed, but an income tax implies a smaller labour-leisure distortion than a consumption tax to the extent that the broader base permits lower rates. Income taxation introduces a saving-consumption distortion, however. It is therefore necessary to evaluate the welfare costs of the two types of distortions, and in particular to know to what extent the double taxation of capital income inhibits saving, investment and economic growth. Many economists have grown to prefer a tax on consumption, partly because of concern about the adverse effects of capital taxation on capital formation, and partly because of the horizontal inequity associated with taxing the returns to savings.

There are three possible ways that consumption can be taxed: differential commodity taxation; a broad-based flat rate indirect tax; or a direct (possibly progressive) expenditure tax. The theoretical case for differential commodity taxation reflects three different arguments: (i) welfare losses can be minimised (under appropriate simplifying assumptions) if tax rates are inversely proportional to the corresponding elasticity of demand; (ii) commodity taxes can be made progressive by taxing necessities lightly and luxuries heavily; and (iii) leisure could be taxed indirectly via goods that are its complement. In practice, these arguments tend to be mutually exclusive. Commodity taxes that redistribute bear most heavily on luxuries, which tend to have high price elasticities of demand, so such taxation would maximise welfare losses of individuals. Moreover, in the absence of robust estimates of the relevant price elasticities, and given the administrative complications of multiple-rate systems, uniform taxation, preferably in the form of a broad-based consumption tax such as a value-added tax (VAT), is usually recommended as a practical approach. In fact, under some circumstances, it is optimal to tax wages alone and avoid commodity taxation, as shown by Atkinson and Stiglitz (1976).

Expenditure taxation is often thought to necessarily imply indirect taxation. However, it is possible to design a direct expenditure tax, which taxes income but exempts deposits to approved savings accounts. Such a tax could even be progressive via rising tax rates. But even a flat-rate consumption tax does not need to be regressive, if bequests are treated as consumption, since rich and poor each ultimately "consume" all their income over their lifetime. Withdrawals from these accounts for consumption, gifts or bequests would be taxed, but income earned on other savings (made out of after-tax income) would not be taxed. However, such an approach to taxation may lead to tax avoidance through misuse of the registered accounts mechanism, requiring an enforcement mechanism.
Although the literature on optimal taxation is ambiguous on the choice of a tax base, a generally recognized requirement of a well-designed tax system, albeit seldom satisfied, is the need for simplicity. It is also desirable that the tax system not create problems for macroeconomic stability and that it not conflict with accepted social values. And, importantly, a general prescription of the optimal tax literature is that since efficiency losses increase more than proportionately with the tax rate, a given amount of revenue should, other things being equal, best be raised by broadly-based taxes in order to ensure that the corresponding rates are as low as possible.

II. THE CONSTRAINTS ON TAX REFORM

Although the need for tax reform is widely recognized, actual reform has often been constrained by several factors, notably: the difficulties sometimes faced by governments in formulating a clear strategy; political and practical constraints; and the current macroeconomic environment (including international considerations). This section discusses how these factors constrain action to improve tax systems in OECD countries.

A. Competing goals

The desire for tax reform generally reflects the view that, despite uncertainty about what constitutes an optimal tax system, substantial efficiency and horizontal equity gains are possible relative to the existing tax system. Although opinions differ about the appropriateness of using taxation (as opposed to direct expenditure and transfers) for income redistribution, tax reform may also make it possible to increase the progressivity of the tax system relative to the current situation. However, in the limit, there is a clear trade-off between the competing goals of increased efficiency and greater vertical equity. Moreover, equity or efficiency goals often conflict with the need for simplicity in a tax system.

The nature of these trade-offs varies for different taxes. With an income tax (or a progressive consumption tax), a revenue-neutral increase in progressivity implies greater deadweight losses. Efficient commodity taxes, on the other hand, tend to be highly regressive, while those that attempt to be progressive can be highly inefficient. In either case the dispersion of tax rates violates the goal of simplicity.

Use of the tax system for economic and social policy goals other than income redistribution also gives rise to trade-offs between efficiency and these objectives. Favourable tax treatment of particular types of activities or groups of taxpayers, as a substitute for direct government expenditures, are frequently referred to as "tax expenditures." Their elimination may be desirable on tax reform grounds, but
objectionable if they are the best means of implementing a worthwhile government intervention, which may be the case since the marginal administrative costs involved may be low. Tax expenditures may also be more effective than direct spending for some specific purposes (for example, replacing direct benefits to low income groups, where the take-up rate is sometimes substantially less than 100 per cent).

Tax expenditures have a number of shortcomings, however. First, they are often poorly designed and targeted, and less scrutinized than a new expenditure programme with the same aims. Second, the revenue costs of tax expenditures are difficult to estimate and may be large in the aggregate. Third, while lack of transparency sometimes provides a political rationale for tax expenditures, it is also a major argument against them.

While the trade-offs between competing policy goals are a legitimate constraint on tax reform, much of the public debate arises from insufficient appreciation of the highly adverse consequences of some tax expenditures. Efforts to clarify public understanding of the true implications of existing tax policy might facilitate the path of reform. The sheer number of current tax expenditures also creates problems in preparing tax reform proposals. Thus, global tax reform sometimes starts from the premise that all existing tax expenditures be abolished, even if some are worthwhile, since examining them individually may delay the process of tax reform.

B. Political and practical constraints

Tax reform proposals in practice are seldom as far reaching as might appear desirable, reflecting both the nature of the political decision-making process and the practical difficulties of implementing major changes to existing regimes, including transition problems.

i) Political constraints

Tax reform is usually significantly constrained by the political context within which it must be carried out. Political factors having been important determinants of the existing system, concessions are naturally regarded as rights to be staunchly defended. Governments therefore fear the electoral consequences of repeal. Since tax privileges will typically be capitalized in asset prices, their removal can also raise important horizontal equity considerations.17

Perhaps the single most important impediment to revenue neutral tax reform is that there will inevitably be "losers" in the resultant income redistribution. Losses normally tend to be concentrated on relatively few "vocal" individuals or businesses, whereas the gains are distributed thinly over many taxpayers. Losses also tend to be immediate, whereas some indirect benefits may only accrue over time, making then less certain and visible. Appropriate compensation and transition provisions can
thus be particularly important in minimising political obstacles to tax reform. Clearly, tax changes may be potentially “Pareto optimal” if the gains exceed the losses. However, they will almost never be so in practice if they are revenue-neutral, as there will be practical limits to the amount of compensation.

Because the implications of tax reform are usually complex, far-reaching, and not well understood, any reform proposal must be “sold”. It is important to educate the public about the subtleties of taxes, and about the true and often perverse effects of tax expenditures in particular. For example, the deductibility of mortgage interest tends to increase the demand for and hence price of owner-occupied housing, so that the assistance to first-time home-buyers is at best much less than suggested by the tax saving. Similarly, there may be exaggerated expectations of the progressivity achieved by reforms that shift taxes from labour to capital income if it is not recognized that much capital is in fact owned by pension funds or mutual insurance companies, whose ultimate beneficiaries are not all wealthy.

**ii) Practical constraints**

Tax reform is also constrained by several practical obstacles. First, distinctions that make clear economic sense may be hard to translate into the tax code. For instance, definitions of business income are often complicated by the effects of inflation and the valuation of unrealized capital gains. Second, constitutional arrangements can limit the speed and extent of reform. For example, in both federations and unitary states a significant portion of total taxes is collected by regional, state, or local governments. Moreover, in many cases, tax-sharing between the central and other governments constrains the former’s ability to reform its tax structure.

The third and potentially most significant practical constraint is what may be called arithmetic reality. Given the often relatively large average level of tax receipts as a percent of GDP, significant distortions will remain unless total taxation is reduced; distortions can be shifted but not eliminated\(^\text{18}\). This is seen in Table 5 which shows the implied tax rates that would be required if all revenues were raised by a single proportional tax on income. While these appear very high relative to the average rates of personal income tax (also shown in Table 5), they are not when compared with the total tax wedge on labour income (including social security contributions and indirect taxes) shown in Table 1\(^\text{19}\).

The nature of this constraint is made evident where, as in many European economies, there is concern about the adverse labour market effects of taxes on labour. Significant reductions in the tax wedge on labour would require potentially punitive capital taxation because the capital income tax base is much smaller, and the scope for such shifts is further limited by the international mobility of capital. In the long run, it may not even be possible to tax income from labour and capital differently. The argument, based on work by Samuelson (1961), is that in the absence of other factors of production, increases in the price of labour, as a result for
Table 5. Income tax rates

<table>
<thead>
<tr>
<th>Country</th>
<th>Hypothetical comprehensive flat tax rate²</th>
<th>Actual average personal tax³</th>
<th>Average personal tax and social security rate⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>34.0</td>
<td>13.6</td>
<td>23.2</td>
</tr>
<tr>
<td>Japan</td>
<td>27.7</td>
<td>7.7</td>
<td>16.2</td>
</tr>
<tr>
<td>Germany</td>
<td>43.5</td>
<td>10.7</td>
<td>30.9</td>
</tr>
<tr>
<td>France</td>
<td>46.0</td>
<td>6.7</td>
<td>25.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>40.5</td>
<td>12.6</td>
<td>20.5</td>
</tr>
<tr>
<td>Italy</td>
<td>37.7</td>
<td>11.8</td>
<td>28.0</td>
</tr>
<tr>
<td>Canada</td>
<td>32.8</td>
<td>13.6</td>
<td>18.7</td>
</tr>
<tr>
<td>Australia</td>
<td>31.9⁵</td>
<td>16.6</td>
<td>16.6⁵</td>
</tr>
<tr>
<td>Austria</td>
<td>46.7</td>
<td>12.6*</td>
<td>25.5⁵</td>
</tr>
<tr>
<td>Belgium</td>
<td>40.0</td>
<td>15.1</td>
<td>28.8</td>
</tr>
<tr>
<td>Denmark</td>
<td>51.1</td>
<td>33.5</td>
<td>37.2</td>
</tr>
<tr>
<td>Finland</td>
<td>41.2</td>
<td>17.3</td>
<td>23.5</td>
</tr>
<tr>
<td>Greece</td>
<td>31.9</td>
<td>4.5</td>
<td>15.5</td>
</tr>
<tr>
<td>Netherlands</td>
<td>38.2</td>
<td>9.8*</td>
<td>29.8*</td>
</tr>
<tr>
<td>Norway</td>
<td>53.9</td>
<td>13.3</td>
<td>28.0</td>
</tr>
<tr>
<td>Spain</td>
<td>31.7</td>
<td>7.3*</td>
<td>23.4*</td>
</tr>
<tr>
<td>Sweden</td>
<td>53.2</td>
<td>20.7*</td>
<td>34.5*</td>
</tr>
<tr>
<td>Switzerland</td>
<td>32.2</td>
<td>13.5</td>
<td>23.9</td>
</tr>
</tbody>
</table>

1. 1985 data except where marked with an asterisk.
2. Total taxes divided by sum of net domestic product at factor cost and government transfers to persons (including debt interest).
3. Personal direct taxes divided by personal income.
4. Personal direct taxes and employer and employee contributions to social security, divided by personal income.
5. Estimates by the Australian authorities are somewhat higher; 38.2 and 22.7 per cent for the first and third columns, respectively.

Source: OECD.

example of payroll taxes will eventually be passed on to the price of capital, leaving relative factor prices unchanged.

**iii) Transition problems**

Tax reform may also be constrained by the need to design complex transition rules, given its substantial and sudden effects on income and wealth distribution. For instance, carryover problems occur where changes in the tax code affect the taxation of income earned in the past but not yet taxed (for example, capital gains are usually taxed only when realised), or income already taxed in the past, which may be subject to taxation a second time. Also, since asset prices capitalize expected future after-tax income, changes in relative asset prices occur when tax changes affect relative returns on different assets rather than affecting all assets equally. In particular, the abolition of the special concessions offered to some industries (such as real estate) or types of assets could lead to substantial falls in asset prices. To the
extent that the risk that loss of a special concession will be withdrawn is reflected in a higher rate of return on the relevant assets, compensation is not warranted. Moreover, calculation of the appropriate amount is difficult.

C. Macroeconomic and international considerations

In addition to the political and practical constraints discussed above, the timing and structure of tax reform are clearly conditioned by macroeconomic considerations. First, tax reform must consider the effects on aggregate activity of shifts in the burden of taxation. Even if tax reform is revenue neutral in every time period, aggregate demand may be affected by asymmetric short-run responses of winners and losers. Groups losing tax concessions may react more quickly (by reducing expenditure) than those benefiting from tax cuts. The macroeconomic effects of revenue-neutral tax reforms that shift the relative burden to corporations from households, as in the case of the reforms in the United States and Canada, may also be important considerations. Since investment is generally more volatile than consumption, it might be expected to react more quickly to increases in the cost of capital to the corporate sector than would consumption to the offsetting increase in disposable incomes. Furthermore, there is concern that the higher cost of capital will permanently lower investment, and hence longer-term growth prospects.

A tax reform designed to be revenue neutral on average over a particular horizon will not in general be so in each individual year. The pattern of fiscal stimulus and contraction resulting from tax changes may conflict with the macro-stabilisation policy objectives of the government. For instance, a reform that initially moved the budget towards surplus might increase the risk of recession if the economy were already expected to slow. In theory, varying the implementation dates of tax changes could influence the time profile for the budget deficit and economic activity. However, given the imperfect knowledge of the dynamics of the economy, such fine-tuning might be difficult to administer. More generally, the impact of a tax reform depends on the extent to which the long-run effects are recognized, and on the consequences of such changes in expectations for short-run behaviour. If necessary, the gradual implementation of its provisions should ensure that any short-term influences do not offset the gains expected in the long run.

The possible inflationary effects of tax reform are also of concern. While a revenue-neutral change to indirect tax rates could raise the price level if tax increases are passed through more fully than tax decreases, a tax reform which shifts burdens and alters relative prices should in principle have no long-run inflationary consequences. In practice, the effect of tax reform on inflation will depend importantly on monetary and competition policies (and, where relevant, incomes policies).
International linkages may also limit the ability of the authorities in one country to change their own tax system or force them to react to reforms elsewhere. Economic and political factors, as well as international tax treaty obligations, affect the extent to which a country's tax system can differ from that of its neighbours. Economic pressures can develop when the differences in tax systems affect international trade in goods and services and the flow of capital for investment purposes.

Such effects can arise via divergences in any of the major types of taxation. Marked differences in indirect tax rates across countries provide an incentive to purchase where tax rates are lowest. This distorts expenditure patterns while encouraging tax evasion. Different tax rates on goods and services can affect, for example, the position of the tourist industry (in particular a VAT usually covers services as well as goods) in neighbouring countries. International differences in personal taxation can also cause problems, even though the international mobility of labour is less than that of capital. Marked differences in marginal tax rates can induce highly skilled individuals to emigrate (a "brain drain").

Similarly, existing company tax structures vary widely across countries reflecting in part different treatment of depreciation, the existence of investment tax credits, etc. The practical consequences of company tax changes will be limited by international tax agreements, which prevent double taxation of corporate profits. For small countries this places a constraint on the incentive effect of a lower corporate tax. To the extent that revenues lost by the host government accrue to foreign treasuries, the effective after-tax cost of capital to industry will be unaffected. On the other hand, a reduction in tax rates abroad may force a similar move at home if, as a result, foreign investors are unable to claim all their tax paid as a credit against the taxes of the parent company, or if the country does not tax the foreign earnings of domestic companies.

Lastly, the consequences of a tax reform for the balance of payments will obviously reflect the changes to the savings-investment balance within the country. If the net effect is to encourage savings or to discourage investment, net capital inflows will be smaller and the current account balance will improve. Conversely, a tax reform that on balance encourages investment will lead to a capital inflow.

III. TAX REFORM IN PRACTICE

This section is an overview of some of the tax reform measures recently implemented or currently envisaged in OECD countries. Tax reform has usually been approached on a piecemeal basis, considering individual parts of the tax system and
particular problems sequentially, and even in isolation from changes that might be forthcoming in other areas. Recently, however, several governments, such as the United States, Japan, Germany, Canada, New Zealand and Australia have taken a more comprehensive approach to tax reform, with base broadening and rate reduction as a major theme. More fundamental changes have been adopted in some countries (the United Kingdom in 1979, New Zealand more recently), such as shifting (at least in part) their tax base towards consumption. While tax reform has focused on other specific problems, in most countries there are important areas that have gone without scrutiny.

A. Reform of direct taxation

Reform efforts include broadening the base of both personal and company tax, with a reduction in the level and dispersion of tax rates, and a "flattening of rate scales" for personal taxes. In some cases they have also addressed the integration of personal and corporate income taxes. The relative importance of these goals varies across countries according to circumstance. The United States, the United Kingdom, Australia, New Zealand and Denmark have already enacted significant changes to their income taxes, while several other countries (e.g. Austria, Germany, Japan, Canada and Sweden) are currently considering major reform proposals.

i) Personal income tax

A comprehensive income base, including accrued and realized income, is useful for analysis but has serious practical problems. Nevertheless, leakages from the tax base under existing personal income tax systems are extensive, and substantial opportunities for base broadening exist, either by reducing the amount of exempt income or by eliminating deductions from income in calculating taxable income.

Reducing exemptions

Fringe benefits, which are often fully or partly exempt from taxation, are increasingly used as a form of compensation in many countries, in part as a response to higher marginal tax rates on cash income. Many countries could enlarge the tax base by including a larger proportion of such benefits in taxable income. For example, in some countries subsidized mortgages or reduced prices for goods and services produced by the employer are still not taxed. In 1981, for example, the Canadian government moved to include most exempt benefits in taxable income as a means of financing part of the significant cuts in marginal tax rates on high incomes, and similar moves have been made in Finland. However, such changes are often difficult to achieve, as shown by the recent United States experience where, for
instance, political pressures prevented the incorporation in taxable income of employer-paid medical and life insurance, and employer contributions to retirement programmes. An alternative approach, one which taxes fringe benefits at the corporate level and at the corporate tax rate, has been in force in New Zealand since 1984 and in Australia since 1986.

Also prevalent are exemptions from capital income. For example, the imputed income or capital gains from owner-occupied housing (see below) and other capital gains are more often than not excluded from taxable income. Indeed, in some countries (e.g. Japan), a large portion of capital income is explicitly exempt from taxation, or taxed at a lower rate than ordinary income. However, as a result of the recent changes to the Japanese tax system, most interest income is subject to tax at generally the same rate as other income.

A comprehensive income tax should include the accrued real increases or decreases in the value of a taxpayer’s capital assets in the tax base. In practice, however, only realized capital gains are taxed, and in many countries even they are either partially or fully exempt. This is usually rationalized on three grounds: the fact that nominal capital gains have a large inflationary component, the lumpiness of realized gains, and the need to encourage risk taking. However, adjusting for inflation can be tackled directly by indexing the price of an asset for inflation-related increases in value, and the problem of the lumpiness with a progressive tax structure could be reduced by allowing income averaging. The distortions and avenues for possible tax avoidance created by exempting capital gains but not other forms of capital income may be more important than the increase in risk-taking that might occur as a result of such a partial move to exempt capital income.

Changes to capital gains taxation have been prominent in tax reform debates. For instance, in Australia, the real capital gains on assets held longer than twelve months are now taxed as income, with averaging over five years, although nominal gains for shorter holding periods are still taxed without adjustment for inflation. In the United States the Administration’s original reform proposal called for broadening the capital income tax base, while retaining the preferential (lower) tax rate for capital gains. However, the Tax Reform Act of 1986 raised tax rates on capital gains and failed to provide for any indexation of capital income for inflation.

Other important leakages from the income base in a number of countries are unemployment compensation, pensions and other transfer payments, as well as income in kind provided by governments. Even though many individual government benefits are subject to means-testing, the total value of benefits received may push beneficiaries above the threshold at which income becomes taxable. Where reasonably easy methods can be found for determining their value, they should be included in the income tax base. Thus the United States reform, for the first time in that country, subjects unemployment benefits to taxation.
Eliminating deductions

Much of the leakage from actual to taxable personal income arises from deductions based on specific tax-preferred uses of income. Base-broadening income tax reform requires the elimination of many of them if rates are to be reduced significantly, and virtually all countries undertaking reforms have scrutinized existing tax deductions and credits.

Most income tax systems allow some deductions for the costs of earning income. Although the exclusion of such costs from the tax base is justifiable, it is often difficult to distinguish between necessary and discretionary outlays. Moreover, in some countries, such as France, the ability of certain professions to make substantial employment expense deductions without substantiation has a significant revenue cost. Several recent income tax reforms have placed explicit limitations on what is allowable. For example, the United States reform allows miscellaneous work-related expenses only above a specified floor (2% of adjusted gross income). Australia now requires proof of employment-related expenditures, particularly automobile and travel costs. Many countries are also seeking to limit entertainment expenditures, which are open to much abuse. However, the ability of the self-employed to inflate their expenses and reduce their taxes remains a problem in most countries.

Interest deductions are a major problem because they erode the tax base and create distortions. Interest payments on loans are valid tax-deductible expense when the funds are used to generate taxable income. However, most countries provide some offset for interest costs incurred in the purchase of an owner-occupied dwelling, even though the associated income earned is taxed only partially or not at all. (The tax treatment of housing is discussed at greater length below.) Deductibility of consumer interest clearly distorts in favour of current consumption, compounding the problem created by taxing capital income. Concern about capital formation has led some governments to reform the tax system's treatment of non-mortgage interest. The United States, Ireland, and Denmark have recently reduced the tax-based incentive to use non-business interest other than for purchase and improvement on a principal residence.

An important deduction in some countries is the exclusion of a portion of income set aside for retirement in the form of contributions to pension programmes or individual retirement programmes, combined with a favourable treatment of the income earned on these funds. Some countries, such as the United States and Japan, have sought to reduce the base-narrowing effect of such deductions. On the other hand, others have increased such deductions, as in France, where tax-preferred individual retirement accounts have been created and in Canada, where the retirement saving tax shelter has been significantly expanded.

Finally, it should be noted that lower marginal tax rates, almost universally the most important objective of tax reform, are also an important complement to any
base broadening reform, since they greatly reduce the value of any remaining income leakage or tax deduction. In many countries reductions in marginal rates have concentrated on the highest rates, flattening the rate schedule. Table 6 shows the most recent reductions in top marginal tax rates.

An interesting feature of these reforms, however, is that in many cases only part of the rate reduction was achieved via base broadening. The total personal income tax burden was reduced in the United States via the shift to corporate taxation, in Australia and New Zealand via reduced total tax bills (and partial shifts to indirect taxation), in Canada through the abandonment of some of the base broadening measures that were the original offset to the 1981 reduction in marginal rates, and in the United Kingdom and (as proposed) Japan via a shift to indirect taxation.

Table 6. Recent and proposed changes in personal taxation systems

<table>
<thead>
<tr>
<th>Country</th>
<th>Overall taxation (Marginal tax rates on average wages under present tax systems)</th>
<th>Income tax (Top marginal rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Previous</td>
<td>Present</td>
</tr>
<tr>
<td>Australia</td>
<td>47.3</td>
<td>60.0</td>
</tr>
<tr>
<td>Austria</td>
<td>54.5</td>
<td>62.0</td>
</tr>
<tr>
<td>Belgium</td>
<td>63.2</td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>34.1</td>
<td>63.6</td>
</tr>
<tr>
<td>Denmark</td>
<td>62.4</td>
<td>73.0</td>
</tr>
<tr>
<td>Finland</td>
<td>53.2</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>51.2</td>
<td>65.0</td>
</tr>
<tr>
<td>Germany</td>
<td>62.7</td>
<td></td>
</tr>
<tr>
<td>Greece</td>
<td>40.1</td>
<td>60.0</td>
</tr>
<tr>
<td>Iceland</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>60.4</td>
<td>65.0</td>
</tr>
<tr>
<td>Italy</td>
<td>57.8</td>
<td>76.0</td>
</tr>
<tr>
<td>Japan</td>
<td>31.9</td>
<td></td>
</tr>
<tr>
<td>Luxembourg</td>
<td>53.6</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>61.9</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>30.0</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>60.1</td>
<td>71.0</td>
</tr>
<tr>
<td>Portugal</td>
<td>35.9</td>
<td>84.4</td>
</tr>
<tr>
<td>Spain</td>
<td>52.8</td>
<td>68.5</td>
</tr>
<tr>
<td>Sweden</td>
<td>62.0</td>
<td>87.7</td>
</tr>
<tr>
<td>Switzerland</td>
<td>39.4</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>n.a.</td>
<td>78.0</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>43.9</td>
<td>83.0</td>
</tr>
<tr>
<td>United States</td>
<td>40.9</td>
<td>75.0</td>
</tr>
</tbody>
</table>

1. Overall marginal tax rate for an average (unmarried) production worker, allowing for direct taxes at all levels of government, social security contributions by both employers and employees, and relevant tax concessions. The main data source is OECD (1986), The Tax/Benefit Position of Production Workers 1981-1985. The figures shown are estimates for 1986.

2. Global effective rate (excluding social security contributions), but allowing for deductibility of taxes paid to lower levels of government.
ii) Corporate income tax

The very large dispersion in effective marginal tax rates on income from new investments in many countries reflects, to a great extent, the tax treatment of depreciation as well as preferential treatment for specific activities, sectors or regions. Matching real depreciation with the associated real income is difficult, but many of the deficiencies of existing systems result from ad hoc rather than systematic procedures for dealing with the effects of inflation.

In many countries, base broadening for the corporate tax implies changes to the treatment of capital costs. The United States and Canada (to a large extent) have recently eliminated their investment tax credits, and have changed depreciation schedules to accord more with estimates of real economic depreciation rates. The United Kingdom also modified its corporate tax system in 1984, phasing out the 100 per cent first-year allowances for machinery and the 75 per cent ones for buildings. France abolished its accelerated depreciation allowances in 1982 and Australia abolished its investment allowance (but retained accelerated depreciation) in 1985. However, about half of OECD countries still have investment tax credits or allowances.

These changes to the taxable base allowed reductions in corporate tax rates in some countries. The corporate tax rate has been reduced in the United Kingdom from 52 per cent to 35 per cent, in the United States from 46 per cent to 34 per cent, and in Canada from 46 per cent to 28 per cent. Statutory corporate tax rates have been or will be reduced in many OECD countries. While the long-term effect of these measures is difficult to estimate, there is general agreement that where the marginal effective tax rates are now much more uniform across capital assets, substantial efficiency gains are realizable even though the average rate of tax is higher.

iii) Integration of personal and corporate taxes

Integration of personal and corporate income taxes is in some countries an important element of tax reform. Complete integration would eliminate any tax-induced bias against the corporate form of business organization, against equity financing, and in favour of profit retention. This could be achieved by abolishing the corporate income tax, with all (realized and accrued) corporate-source increases in wealth taxed at the individual level. Alternatively, tax paid at the corporate level on all income can be fully credited to shareholders. This method would tax income from profits as they accrue, and any additional income from capital gains on realization, with imputation credits available as an offset. (A simpler although less precise method is not to tax capital gains on equities.)

Few countries (Germany and Australia) come close to full integration of personal and corporate income taxes. Concern about administrative problems, the
Table 7. Integration of personal and corporate taxation

<table>
<thead>
<tr>
<th>Integration</th>
<th>Zero</th>
<th>Slight</th>
<th>Partial</th>
<th>High¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>United States</td>
<td>Luxembourg</td>
<td>Netherlands</td>
<td>Spain</td>
</tr>
<tr>
<td>At company level</td>
<td>Iceland</td>
<td>Sweden</td>
<td>Austria²</td>
<td>Greece</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Finland³</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Japan⁴</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Norway³</td>
<td></td>
</tr>
<tr>
<td>At shareholder level:</td>
<td>Denmark</td>
<td>France</td>
<td>Ireland</td>
<td>Italy</td>
</tr>
<tr>
<td>On tax paid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On tax deemed to have been paid</td>
<td>Belgium</td>
<td>Canada</td>
<td>New Zealand (from 1988)</td>
<td></td>
</tr>
</tbody>
</table>

1. Implies non-taxation of capital gains arising from non-distributed profits.
2. Austria operates a half-rate system for both company and individual taxation, which approximates to single taxation overall on dividends.
3. Also a small alleviation at shareholder level.
4. Japan proposes to remove the lower company tax rate for distributed profits, leaving a lower level of integration at the shareholder level.
5. Australia is introducing a "qualifying dividends" system of full imputation in 1987-88, whereby imputation credits apply only to dividends paid out of income on which company tax has been paid. In addition, where retained earnings are used to make a bonus share issue, this will be treated as a distribution and shareholders will have the benefit of available imputation credits.


revenue cost and the international implications are major factors explaining governments’ reluctance. Many countries relieve, or are proposing to, at least part of the double taxation of dividends, either at the company level or by providing a tax credit to shareholders receiving dividends for taxes already paid at the corporate level. Existing measures are deficient, however, taxing undistributed profits relatively heavily, exempting dividends paid to foreign shareholders, and taxing some tax-exempt domestic individuals or institutions²². The existing extent of integration in OECD countries is summarized in Table 7.

B. Reform of indirect taxation

Reform of indirect taxes has usually involved either changes in their mix (particularly shifts to broad-based consumption taxes such as VAT) or base
broadening and rationalization of rate structures to reduce distortions. In addition, a
number of countries have moved to increase the relative importance of indirect
taxes.\textsuperscript{23}

i) The different types of indirect taxes

In considering indirect tax systems, a few basic distinctions are useful. Such
taxes can be relatively general or restricted to specific commodities. Within general
consumption taxes there are single-stage taxes [such as the manufacturing sales tax
(MST), wholesale sales tax (WST), or retail sales tax (RST)] and multi-stage taxes
(mainly VAT in its various forms). The actual mix of indirect taxes varies significantly
across countries and over time. For instance, in some countries (France, Italy,
Germany, the Netherlands, New Zealand, Belgium and Austria), general consump-
tion taxes make up a large proportion of total taxes on goods and services, while in
others (Japan, United Kingdom, Australia and Ireland), taxes on specific commod-
ities are much more important.

A broad-based consumption tax (BBCT) is preferable since differential taxation
distorts consumption patterns. In practice, even so called broad-based taxes may
have a relatively narrow base and thus affect demand patterns. VAT in the United
Kingdom covers just over half of final consumption, mainly because of exemptions
for distributional reasons (especially food and fuel), but also because of practical
difficulties (in particular financial services, and owner-occupied housing and
construction)\textsuperscript{24}. In the United States, RST in most states exempts services and food
consumed at home.

The choice between single and multi-stage taxes as the preferred form of BBCT
has been the subject of some debate.\textsuperscript{25} There is general agreement that a
single-stage tax should preferably be levied on retail sales, which, by including
services and retailers' value added, is the widest base and thus allows the lowest
rate. Taxation at the manufacturers' or wholesale level creates major problems of
dispersion in effective tax rates and of tax avoidance or revenue losses as costs are
shifted forward in the production distribution chain. In fact, a VAT and a RST are very
similar in their economic consequences since each is a tax on domestic consumption,
and their total revenue and incidence should be identical given the same coverage
and rates. VAT can more easily exclude business inputs and exports from tax, and is
less vulnerable to evasion. Although a RST with the same coverage as a VAT, and
with the same tax base, could treat business inputs and exports in the same way,
RST systems in practice tend to exempt more consumer expenditure than VAT and
do not effectively exclude capital equipment and other business purchases.

The main arguments against VAT are its greater administration and compliance
costs. Administration costs are comparatively high because firms at all stages of
production, not just the final one, are involved\textsuperscript{26} and because of the need to verify
claims for credits and to monitor invoices. Indeed, there is a sizeable fixed
component of administration costs for a VAT, and hence it is often argued that VAT should not be levied at rates much less than 10 per cent. Extensive use of zero-rating and exemptions, as in the United Kingdom, can substantially increase the costs of VAT. Compliance costs can also be substantial, especially for small firms, and so VAT systems generally exempt small firms. However, as pointed out in New Zealand (1985b), the record-keeping required is probably no more than prudent management practice in any event. Such considerations can be important, as in the
United States and Australia, where start-up costs and lead-time argued against the introduction of VAT. In Europe, the need to repair existing multi-stage tax systems and the advantages of tax harmonisation within the EEC worked in favour of it.

VAT is usually incorporated in the final sales price, so that the amount of tax is relatively invisible, while a RST is generally added to the sales price. This difference is not inherent to the two systems, however. Whether transparency or a lack thereof is an advantage depends upon non-economic criteria. The Treasury Department's rejection in 1984 of a VAT for the United States reflected concern that its "invisibility" would make it too easy to raise taxes and thus government spending.

As can be seen in Table 8, all OECD countries except Japan and Australia now have some form of BBCT. In recent years, Turkey, Portugal, Spain, New Zealand and Greece have all introduced a VAT.

ii) Base broadening and the rationalization of rate scales

Despite the likely superiority of uniform indirect tax rates, systems in OECD countries typically have multiple rates and extensive exemptions, as shown in Table 8. The standard rate of VAT ranges from 10 to 25 per cent, while countries with RST generally have somewhat lower rates. Most countries have a luxury rate (in excess of 30 per cent) and/or a range of preferential rates.

Distributional objectives are the most important reasons for this dispersion, with low rates on "essentials", items consumed disproportionately by the poor, and high rates on "luxuries", items consumed more by the rich. Differential tax rates can sometimes be justified for other reasons, such as correcting externalities, while some exclusions from the tax base arise because of technical problems (such as difficulties of taxing financial and housing services).

While there is little evidence that VAT systems actually achieve progressivity, there has been little progress in rationalizing indirect tax rate structures. Only New Zealand, Denmark, Finland and Norway have a single VAT rate (although Norway has minor exceptions, and the Finnish VAT is fairly narrowly based). Half of the countries with VAT have three or more rates (not counting minor exceptions); France and Italy have 4 and Belgium 6. Changes to indirect tax systems over the years have mainly involved raising VAT rates and shifting goods and services between rate classes (an inevitable administrative cost of a multi-rate system, sometimes presented as removing anomalies).

iii) Increased overall reliance on indirect taxation

Lower personal income tax rates can be achieved by increased reliance on indirect taxes. In some countries, such a shift also reflects a number of other considerations: the inability to find politically feasible ways of broadening the income
tax base, a desire to reduce tax evasion and avoidance; and, finally, the fact that many indirect taxes tend to be less visible and thus politically attractive. For countries joining the EEC, the requirement to introduce VAT has also been relevant.

Distributional considerations have also been important in both shifts towards indirect tax and moves away from a multiple-rate structure. Hence, substantial changes to the indirect tax system have often been accompanied by explicit measures to offset adverse effects on poorer families (as in Australia, Canada and New Zealand). These can include changes to the income tax or the transfer system, or untargeted compensation (e.g. a universal refundable tax credit to offset the price increases for a given level of consumption) although these may themselves have undesirable effects (e.g. increased complexity of taxation).

Several concerns have limited moves towards indirect taxes. The United States Treasury (United States, 1984) argued that reform of the income tax was preferable to the introduction of a federal sales tax. The latter was considered too costly to replace only part of the income tax and too regressive to totally replace the income tax system. There was also fear that an indirect tax might be too efficient at raising revenue and hence facilitate growth of the public sector, and wariness about federal intrusion into what is for many states a primary source of revenue. In Japan, the public opposition to the introduction of VAT largely reflected fears about its effectiveness in reducing the tax evasion by small businesses.

C. Specific reforms and unresolved problems

In addition to basic changes to income and indirect taxes, reform in some countries has addressed more specific questions, notably social security contributions and the problem of family versus individual taxation. On the other hand, certain particularly sensitive or difficult aspects of taxation have been left untouched, even though they may create very significant distortions. This sub-section examines these issues.

i) Social security contributions

In many countries social security systems face major problems in the coming years as a result of ageing populations. As social security contributions become more significant parts of total revenue, they pose several problems. First and foremost, the already high contribution rates have increased the tax wedge on labour, with the efficiency consequences discussed earlier. Second, ceilings on the income subject to such taxes have created anomalies in the effective marginal tax rate structures in many countries. Third, the growing share of employers' contributions has meant that the cost of the system has been hidden from those
who benefit from it, and from those who pay for it (on the assumption that such taxes are eventually borne by workers).

These problems have drawn the attention of some governments. In the Netherlands (Netherlands, 1986), the Oort Commission has proposed that social security contributions be fully integrated with personal wage and income taxes, thus extending the base to all income. On the other hand, the United Kingdom Government (United Kingdom, 1986) considered a similar proposal in the recent Green Paper on taxation, but concluded that the benefits were unlikely to exceed the costs. It did, however, remove the ceiling on employers’ contributions in 1985. The problem of the lack of transparency was also tackled by the Oort Commission, which recommended eliminating firms’ contributions as such and providing a just-offsetting increase in wages and in employees’ contributions. Such a change would not affect the financial situation of any corporation or individual but it would make the true costs of social programmes fully visible.

ii) Family versus individual taxation

The choice of tax unit is often motivated by social concerns rather than problems of resource allocation. About half the OECD Member countries have individual taxation and half have joint taxation, but the distinction is not always clear-cut because of taxpayer options. Since the early 1970s, seven countries have moved to individual taxation and two others allowed an option. More recently, the United Kingdom (United Kingdom, 1986) proposed the creation of a system of transferable allowances designed to treat men and women equally, and to remove a possible tax penalty on marriage. As suggested by Symons and Walker (1986), this proposal would act as a significant deterrent to married women’s participation in the labour force. Although concern about marriage penalties has also been expressed in the United States, the recent tax reform repealed the two-earner deduction, a change justified by its poor design and by the reduction in the tax on marriage from a flatter rate structure. In Japan, the proposed tax reform would modify the spousal allowance to replace an effective lump-sum penalty on the participation of married women by a graduated tax.

iii) The tax treatment of housing

Most OECD countries have tax policies that are ostensibly aimed at favouring home-ownership. However, there is reason to think that those policies that are implemented via the tax system have been inadequately reassessed in much of the tax reform effort to date. Moreover, in many cases their impact on home-ownership is doubtful at best and possibly perverse (tax preferences get capitalized in home prices), and they can substantially reduce the progressivity of the tax system. Also, such policies have very high revenue costs. For instance, in the United States, the deductibility of mortgage interest for owner-occupied housing, equivalent to
approximately $31 billion in 1986, will still be around $20 billion in 1988 when the lower tax rates are fully phased in (United States, 1987).

Only Canada, Australia, New Zealand and Turkey, among OECD countries, have neither tax deductions nor tax credits for mortgage interest paid on owner-occupied housing. In ten countries (the United States, Spain, Switzerland, Portugal, Austria, Denmark, the Netherlands, Greece, Norway and Sweden), the tax deductions are unlimited, while in some others (the United Kingdom, Italy and Finland) they are subject to relatively high ceilings. In the United Kingdom, the ceilings on interest were raised to £30 000 in 1983, and in Finland to 25 000 markka (in interest) in 1986. The favourable treatment of housing also takes the form of either partial deductibility (Belgium, Luxembourg) or tax credits (Japan, France and, effectively, Ireland). Deductions for the cost of purchasing an asset would be legitimate if the income earned on the asset (including any real capital gains) were taxed. However, in some countries this is not the case even when the interest costs are fully deductible (e.g. in the United States and Austria) or deductible up to a high limit (e.g. the United Kingdom). Even when imputed income from owner-occupied housing is taxed, the method of calculation is usually such that the level of income subject to tax is well below market rates which, when combined with mortgage interest deductibility, provides a strong incentive to invest in housing. For example, in Denmark the imputed annual income is 2½ per cent, and in Sweden 2 per cent, of an assessed value, which is itself below market value.

iv) Inflation and indexation

The interactions between personal taxation and inflation have not received much attention in recent major tax reforms, due in part to a decline in inflation. Such interactions create problems, such as fiscal drag due to “bracket creep”, and the reduction in the real value of tax allowances, as inflation pushes taxpayers with unchanged real incomes further up a progressive income tax structure defined in nominal terms. This process generally increases total tax revenues and (up to a point) the progressivity of the tax system. Many observers suggest that this fiscal drag, by increasing taxes “invisibly” (i.e. without announced rises in rates), contributed to the growth of the public sector during the 1970s. Indexing the personal tax is thus viewed as necessary to arrest further growth.

Many countries had moved towards this goal starting with Luxembourg (1968), France (1969) and Denmark (1970) and, most recently, Switzerland and the United States (1981 with effect from 1985). Indexation provisions were often partial, and in recent years revenue needs have led some countries to abandon indexation wholly or in part (Australia in 1982, Denmark in 1983, Canada in 1983 and then from 1985). Moreover, the adjustments actually made were usually imperfect, while even countries without indexation made regular ad hoc changes to offset at least part of the fiscal drag.

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A related problem (a form of negative fiscal drag) has affected social security contributions when the income ceiling is fixed in nominal terms, and some indirect taxes, which are defined in specific rather than *ad valorem* terms. Most countries have taken steps to reduce these effects by indexing (systematically or on an *ad hoc* basis) the contribution limits in the case of social security and, in more recent years, by increasing the specific taxes on gasoline, tobacco and alcohol or by switching to *ad valorem* tax rates instead.

The second, more complicated and potentially more economically damaging consequence of inflation for the tax system concerns the measurement of capital income, at both firm and personal levels. The basic problem in this respect is the need to distinguish between the real and inflation related portions of interest, capital consumption and capital gains in arriving at a measure of economic income.

Business income taxes are levied in almost all countries on accounting profits defined without taking account of inflation. Rising prices distort measured profits, however, so that the effective tax rate may be very different from the statutory one. The three main reasons for this are the treatment of inventories, the use of historic cost in the calculation of capital consumption allowances and full deductibility of interest costs. Some countries (e.g. the United States, Japan, Italy and the Netherlands) allow inventories to be valued on a “last-in first-out” basis (LIFO), avoiding the distortion created by inflation-induced false profits. Iceland and Denmark index the depreciation base for inflation, but do not reduce the deductible amount of interest expenses by the inflation component. Neither question has been directly tackled in any of the major tax reforms, however. For example, the Canadian proposal for corporate tax reform specifically rejected indexation of capital costs or debt on the grounds that it was too complex, would introduce significant compliance costs, and was not really necessary since the interest and depreciation cost factors tend to offset each other, albeit crudely. It therefore concluded that only inventories are truly burdened by extra inflation, a problem that it felt could be remedied without indexation. The original proposal for United States tax reform did recommend the indexation of depreciation allowances, indebtedness and inventories, but this was not retained in the legislation adopted in late 1986.

Many of the specific tax provisions that generate a dispersion in effective tax rates were justified, when introduced, as *ad hoc* compensation for the effects of inflation. Indexation using aggregate price indices is also an imperfect solution, since price movements vary across capital goods, but it is presumably less imprecise than to assume a zero rate of increase for all goods. Full inflation adjustment for capital income would require that the personal tax system be indexed with respect to capital income, which is typically not the case. Indexation would make the tax system somewhat more complicated, although significantly fairer and more efficient.
CONCLUSIONS

Over the past decade or so, it became increasingly evident that the tax systems in many OECD countries were failing all the basic criteria against which they are typically judged. Policymakers became concerned about unfairness (especially tax avoidance), complexity, and the effects on economic efficiency. In particular, there was concern about the distortions created by the wide dispersion of the effective marginal tax rates for different types of labour, capital or goods, and the adverse impact of high taxation of wage and capital income on labour supply and saving. Significant improvements appear possible by reducing the dispersion of tax rates. It is also probable that a shift of the tax base from income to consumption would yield additional efficiency gains. Substantial welfare losses are, however, inevitable as long as total tax collections remain high. It is certainly not clear to what extent the effective progressivity of the tax system can be increased without incurring substantial efficiency costs.

Despite a number of political and practical constraints, several countries have already undertaken fairly comprehensive reform of their tax systems, while others have proposed or initiated more limited reforms. In the area of personal direct taxation, base broadening by reducing tax preferences and cuts in marginal rates, particularly for the upper tax brackets, have been the main features. It is notable, however, that these reforms have usually resulted in declines in average personal direct taxation, either by shifting taxes to business or by increasing indirect taxation. In some cases, taxes have been cut overall. Corporate tax reform has followed the same basic route, lower tax rates being made possible via reduced investment incentives and more realistic depreciation schedules.

Reform of indirect taxation has mainly concentrated on the introduction of VAT-type taxes, although a few countries have sought to correct anomalies in the structure of their existing consumption taxes by reducing the dispersion of tax rates across products. Several countries have increased the relative weight of indirect tax, although these moves have raised concerns about vertical equity.

Notwithstanding the substantial progress made in some countries, much remains to be done on broadening tax bases and reducing the dispersion of rates. Moreover, countries have generally not yet tackled the very important problem posed by the future increases in public pension payments, and thus in social security contribution rates, as populations age and retirement schemes mature. Other aspects of the tax system that appear in need of reform in most countries are the tax treatment of housing, the interaction of inflation and capital income and the integration of personal and corporate taxation. This last poses problems in part because of the increasing internationalization of capital markets and of individual investment portfolios. The harmonization of taxation across countries would be a further step towards international economic integration.
The reform of taxation can best be undertaken within the context of a clear strategy. Key choices that need to be made include: the extent to which governments wish to continue using the tax system for non-revenue purposes, the amount of progressivity they wish to have in the tax system as a whole, and the appropriate mix of income and consumption taxation. This last may depend on the adequacy of national savings, as well as on judgements about the extent to which savings are sensitive to the rate of return.

Once the decision to proceed with reform has been made, the presentation of the proposals becomes vital. For several reasons a single comprehensive tax reform package may be more politically feasible than piecemeal reform spread over some years. The major tactical advantage of comprehensive reform is that it permits a greater simultaneous reduction in general tax rates, making the gains more evident to beneficiaries. Comprehensive reform may also appear more equitable if all groups simultaneously give up their preferential treatment, while the fairness of partial reform will be less clear. Finally, a comprehensive reform should allow greater subsequent stability of the tax system, thereby reducing uncertainty for those making long-run plans.

On the other hand, comprehensive tax reform has the disadvantage that, with so many changes occurring at once, it is virtually impossible to predict its full economic consequences. This promotes fears about its distributional effects. There is also a risk that sweeping tax reform may pay insufficient attention to the detailed measures taken, given its focus on the medium to longer-term efficiency gains, requiring ex post corrections which could then set in motion a process of ad hoc measures leading back to a complicated tax system\textsuperscript{36}. A step-by-step reform of the tax system can be successful (as in the United Kingdom) but should be implemented within a systematic overall plan.
NOTES

1. For instance, the phase-out of welfare and other benefits as earned incomes rise creates a "poverty trap" where marginal tax rates exceed 100 per cent over some income ranges.

2. What is at issue is the economic growth accruing to domestic residents. In open economies the level of investment and of GDP growth may be sustained by capital inflows but the subsequent servicing costs will limit the growth in GNP.

3. As Fullerton and Lyon (1986) have shown, the more sensitive is the saving rate to changes in the rate of interest, the greater are the potential welfare gains from tax reforms which move toward increased reliance on consumption rather than income taxation. See Annex A of Hagemann, Jones and Montador (1987) for a longer discussion of these topics.

4. The deadweight losses of distortionary taxes are the utility lost because relative prices change (this applies whether the prices are of different goods, or of all goods on the one hand and leisure on the other). A lump-sum tax transfers resources from the taxpayer to the government, reducing utility as a result of the lost income, but a distortionary tax that yields equivalent revenue lowers utility more because behaviour changes. The difference between the new levels of utility under the lump-sum and distortionary taxes is the latter's deadweight loss. See Boadway (1979), Chapter 12.


6. For instance, Slomrod and Soram (1984) have estimated that direct costs of complying with the existing U.S. income tax, including expenditures associated with the Internal Revenue Service, could be as high as $30 billion (nearly 1 per cent of GNP).

7. Some economists, however, appear to feel that this type of tax structure cannot "redistribute enough", at least with tax credits of politically acceptable size. See A. Blinder’s discussion in Federal Reserve Bank of Boston (1986), pp. 92ff.

8. See the survey of national studies in Saunders and Klau (1985), Section VII.

9. The 1987 changes to the Canadian personal tax system, which switched most deductions to tax credits, are an example.

10. See, for example, David Bradford’s discussion in Federal Reserve Bank of Boston (1986).

11. See, for example, Aaron and Boskin (1980), Part Four.

12. There is a vast literature on optimal taxation. Useful surveys include Sandmo (1976) and Stern (1984), Stiglitz (1986) Chapter 19.

13. The horizontal inequity associated with an income tax arises from the fact that the income earner who saves will pay more lifetime taxes than the earner who does not.

14. Rudimentary forms exist in a number of countries, such as for instance in the United States, Japan, France, the United Kingdom and Canada. A complete direct expenditure tax was
considered in United States (1977), and was recommended in Ireland (1982). More recently, a somewhat similar lifetime income tax was proposed by the Economic Council of Canada (1987). See also, Aaron and Galper (1985), Bradford (1986), Beach, Badoxy and Bruce (1986).

15. An uncomplicated tax system has lower compliance costs, is less subject to tax avoidance and should, therefore, be more acceptable to the public. On the other hand, a complex system may be politically attractive because of a lack of transparency if particular groups wish the extent of government assistance they receive to be disguised.

16. Tax expenditures can take a number of forms: Exemptions of some types of income; deductions from gross income depending on the characteristics or behaviour of the taxpayer; tax credits and special rate reliefs; and preferential treatment of some commodities in indirect taxes. They may either reduce tax payable or defer tax. See OECD (1984).

17. In this respect, see Feldstein (1976), pp. 77-104, and United States (1977).

18. That is, there is no "free lunch", and shifting of bases will not reduce the total tax burden. A comprehensive proportional income tax is equivalent to a flat rate tax on total expenditure (including investment). Subject to some qualifications, a tax on wages (and inheritances) can be seen as roughly equivalent to a tax on consumer spending (and bequests). Thus, for example, a 20 per cent proportional labour income tax and a 20 per cent VAT-type consumption tax is no less distorting than a proportional labour income tax that generates the same revenue (approximately 40 per cent rate). Some support for the notion that lowering tax rates will raise tax revenues, at least when the rate was very high initially, was provided by the experience in the United States after 1981. See, for example, Lindsay (1985).

19. Increases in social security contributions have been seen as raising the cost of labour relative to capital and thus as a partial explanation for the rise in unemployment in many countries.

20. The recent changes in the United States, for example, clearly influenced the Japanese and Canadian perceptions of tax reform. See for example, Canada (1986), p. 7.

21. For a broad review of the recent tax reform in the United States, see Symposium on Tax Reform in the Journal of Economic Perspectives (Summer 1987).

22. For a more complete discussion of the different methods of integrating personal and corporate taxation, including questions of the pass-through of tax preferences and the treatment of tax-exempt institutions and foreign shareholders, see United States (1984) and Australia (1985).

23. See OECD (1986), Chapter 1, for a discussion of trends in indirect taxes since the 1960s.

24. See Davis and Kay (1985). Even the comprehensive VAT considered but rejected in the United States covered only 77 per cent of personal consumption expenditures. If food consumed at home were also excluded, the coverage would have been only 65 per cent.


26. However, experience with VAT suggests that the larger number of firms involved is not a significant problem (for developed countries at least). Indeed, in the United Kingdom, it was estimated that in 1979 RST would have involved 72 per cent of traders registered for VAT,
and 90 per cent of traders for the RST and VAT systems considered in United States (1984).

27. See Aaron (1981) for further details.

28. This appears to be the main argument for a more balanced tax system, as advocated in the United States (1984), p. 219; Japan (1986); Canada (1986), p. 10; Australia (1985), p. 116.

29. If transfer payments were made to all families below the poverty line and none to families above that level, then such transfers could be increased to exactly compensate low income families for the sales tax increase. Some phasing out would be required above the poverty line.

30. See, for example, the discussion in Chouraqui, Jones and Montador (1986).


32. When prices are rising, inflation-induced inventory profits and depreciation based on historic (acquisition) cost underestimate the cost of replacing capital and overestimate profits, raising the effective tax rate above the statutory one. Offsetting that, full deductibility of nominal interest costs, rather than just the real interest component, results in a lower effective rate of taxation for an indebted firm during inflationary periods (the inflation component of interest costs is effectively a repayment of principal). Thus a company may be undertaxed or overtaxed depending on the rate of inflation and the amount of its borrowing.


34. See United States (1984).

35. Sweden and Iceland provide full indexation for capital gains but not for interest receipts, as do Australia and Ireland for capital gains on assets held longer than one year.

36. For example, in the United States the Technical Amendments Bill of 1987 is approximately 500 pages long.
BIBLIOGRAPHY


Beach, C., R. Boadway and N. Bruce (1986), Taxation and Savings in Canada, A Study for the Economic Council of Canada.


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Canada (1985), The Corporate Income Tax System: A Direction for Change, Department of Finance (May).

Canada (1986), Guidelines for Tax Reform in Canada, Department of Finance (October).


Economic Council of Canada (1987), Road Map to Tax Reform.

Federal Reserve Bank of Boston (1985), Economic Consequences of Tax Simplification, Conference Series No. 29 (October).


Ireland (1982), Direct Taxation, Commission on Taxation, First Report.


New Zealand (1985a), Taxation and Benefit Reform, Statement to House of Representatives (August).

New Zealand (1985b), Working with GST, Inland Revenue.


United States (1977), *Blueprints for Basic Tax Reform*, Department of the Treasury, (known as Blueprints).


United States (1985), *The President’s Tax Proposals for Fairness, Growth and Simplicity*.

