Income Tax Reform for a Globalized World:

The Case for a Dual Income Tax

By

Robin Boadway, Queen’s University, Canada

boadwayr@qed.econ.queensu.ca

Prepared for the International Symposium of Tax Policy and Reform in Asian Countries, Hitotsubashi University, Tokyo, Japan, July 1-2, 2005

Address for Correspondence:

Department of Economics, Queen’s University
Kingston, Ontario K7L 3N6 Canada

Tel: 1 (613) 533-2266 Fax: 1 (613) 533-6668
ABSTRACT

Countries that are industrialized, or becoming so, must adopt tax systems that are capable of raising considerable amounts of revenue efficiently, equitably and with administrative simplicity, while at the same time coping with the competitive features of a globalized world economy. A component of that tax system will be direct taxation of households alongside general sales and payroll taxation. This paper addresses the role that capital income taxes should play in the income tax system. Arguments for the preferential treatment of capital income are summarized, and a case is made for adopting a schedular approach in which capital and labor income are taxed according to separate rate structures. The particular case of the dual income tax system used in the Nordic countries is proposed whereby capital income is taxed at a low, flat rate and non-capital income is taxed progressively. It is argued that this system best combines the objectives of a good tax system in an internationally competitive environment.
I. INTRODUCTION

As the world economy becomes increasingly interdependent, there is a corresponding need to adopt national tax systems to international circumstances. This requires, on the one hand, ensuring that taxation does not deter the competitiveness of national industries, and on the other, taking due account of the international mobility of products and factors of production and of financial capital. Moreover, in an Asian context, there is the additional consideration that many countries are rapidly being transformed from developing countries to industrialized ones. This inevitably carries with it an increased role for governments. In virtually all OECD countries, the proportion of national income being taken by the public sector is significantly higher than in developing countries. As per capita incomes rise, governments inevitably take responsibility for important social programs in areas like health, education and social services, as well as being more pro-active in redistribution and social insurance transfers, such as pensions, welfare and disability support and unemployment insurance.

These responsibilities, along with standard public expenditure programs involving defense and infrastructure that exist in all countries, imply that tax systems must be capable of raising significant amounts of revenues in ways that are efficient, fair and administratively feasible.

As OECD experience again tells us, this requires that the bulk of revenues be raised by broad-based taxes, which are the only ones capable of raising large
soms of revenues effectively.\footnote{Some authors have argued, to the contrary, that narrow-based trade taxes can be more efficient than broad options like the VAT in developing countries. Emran and Stiglitz (2005) derive conditions under which trade taxes can be welfare-superior to VATs in developing countries where there is a substantial underground economy. More generally, there may be a desire to seek tax systems that are evasion- and corruption-resistant, and that given the weak tax administrations in many developing countries, this can only be achieved by tax systems that can be easily administered by focusing on a small number of large taxpayers or transactions. In our view, this is a counsel of despair. Part of the effort of tax reform should be to build capacity for sound administration rather than to accept as given the existence of weak tax collection capacity and low compliance.} As discussed below, there are some well-established broad-based taxes that can be used, and tax systems will include a mix of these taxes. The broader question is what the appropriate mix should be and how should each component be designed. This paper considers some of the underlying issues that should inform the design of a good tax system for a global economy with special emphasis on the income tax component. Our approach is to draw on the vast literature on the theory of tax design for guidance, combined with innovations and experiences that have been observed in some OECD countries. We are particularly drawn to the so-called dual income approach to the design of the income tax system, which has been adopted in varying degrees in the Nordic countries. The dual income system essentially taxes different types of incomes on a schedular basis with difference tax schedules applying to each. The ultimate objective of the paper is to make the economic case for such an approach as a component of the broader tax system.

To set the context, it is useful first to establish the components that might be included in the tax system as a whole before turning to the principles that can be applied to the income or direct tax component. Most countries use a combination of three main broad-based taxes, along with some other more specific ones. The broad-based ones include the income tax, general consumption taxes (like the

VAT), and...
VAT), and payroll taxes. These may be supplemented by taxes on wealth (property taxes) or wealth transfers (inheritances), taxes on natural resources, and specific excise taxes. Resource taxes and excise taxes are relatively non-controversial and need not detain us long. The former are intended to give the public sector a share of the rents accruing from a nation’s natural endowment of resources. As such, they can be relatively efficient ways of raising revenues, and should be exploited accordingly.\textsuperscript{2} The latter are typically used for specific reasons, such as correcting externalities, discouraging certain forms of consumption or acting as user charges, rather than for revenue-raising. Our concern is more with the three broad-based ones and their wealth-based supplements.

An important feature of these broad-based taxes is that their tax bases overlap to a considerable extent. Consider first payroll taxes and consumption taxes. If these two bases were fully comprehensive—both in terms of their defined bases and the absence of evasion—their bases would be equivalent in present value terms as long as there were no net bequests or inheritances. For taxpayers that receive more in inheritances than they pass on in bequests, the consumption base is broader than the payroll base, and vice versa. The bases would also differ to the extent that the amount of evasion, whether through misreporting or underground activity, and the incidence across taxpayers differed between the two. Indeed, one reason for having both elements included in the tax mix is precisely to deal with evasion. Spreading the base between two elements

\textsuperscript{2} The principles involved with taxing natural resources are discussed in some detail in Boadway and Flatters (1993).
reduces the rate on each and reduces the incentive for evasion.\(^3\) As well, to the extent that there is not a perfect correlation between those who can evade each tax, the mix ensures that more people are brought into the taxpaying net. There are other distinctions between payroll taxes and consumption taxes in principle. For one, payroll taxes are sometimes earmarked for programs like pensions and unemployment insurance. For another, the timing of tax liabilities over a taxpayer’s life cycle differs under the two taxes and this can affect savings behavior. Finally, in an open economy, they can differ to the extent that consumption taxes are not levied on the same individuals as payroll taxes are (for example, because they can be avoided by cross-border transactions, or because some workers are non-residents). But for our purposes, the essential similarity between them as being taxes on labor—and therefore impinging on the labor-leisure choice—is the most important. It is this that determines their overall efficiency and equity effects.

Typical income taxes on the other hand include both labor and capital income to varying degrees. Thus, the income tax base is broader than consumption or labor income bases, and distorts another margin. Thus, in addition to distorting labor-leisure choice, the capital income component distorts the choice between present and future consumption. As well, the equity effects of income taxes can differ from the other two broad-based taxes. For one thing, asset ownership and therefore capital income accrues to better-off households. In addition, income taxes typically are levied on a direct basis and according to a progressive rate

\(^3\) In fact, reductions in the tax rate can have ambiguous effects on evasion as discussed in Slemrod and Yitzhaki (2002) depending on how penalties for evasion are defined. They can always be defined so that lower tax rates deter evasion.
structure so they can address equity concerns directly. Moreover, a concern for equity can be further pursued by wealth transfer taxes.

Much of our discussion in subsequent sections will focus on these main differences in bases among three types of tax, in particular their relative treatment of labor and capital income and the ability to apply a progressive rate structure under the income tax. Differential taxation of labor and capital income—or equivalently, present and future consumption—can be achieved by the appropriate choice of tax mix among the three taxes. Greater reliance on income taxes as conventionally defined implies relatively higher rates of taxation of future relative to present consumption, or capital income relative to labor income. However, there is another way to alter the mix of capital and labor income taxation and that is to apply a schedular approach to the income tax. This approach, which involves applying a separate tax schedule to labor and capital income, has an additional advantage in that it allows for different degrees of progressivity to apply to the two types of income. Part of the purpose of our analysis is to suggest that there are good economic as well as administrative arguments for taking this approach.

Finally, it is worth stressing administrative considerations in the design of a tax system. Theoretical considerations of optimal taxation must be tempered by the feasibility of applying the principles in practice. In the case of capital income, this is particularly important because of the mobility of the tax base, in financial if not physical terms. As well, implications for tax evasion and underground activity are important constraining factors. Inducing taxpayers into the informal sector can
have real efficiency effects since they may be deprived of the benefits of the financial system for their transactions as well as for raising credit. And, the taxation of personal capital income has implications for the taxation of corporate income. The benefit of harmonizing the two provides yet another argument for a schedular approach.

We begin with a discussion of the lessons that have been learned from the principles of tax design in the optimal tax literature and elsewhere. Although this literature can be quite technical, the key findings to date can be explained in intuitive terms.

II. ECONOMIC PRINCIPLES

A comprehensive income tax system is a system whose tax base includes both labor and capital income, or equivalently taxes future income at a rate higher than present income. Moreover, it typically applies the same rate structure on all forms of income. Such a system would distort both the labor-leisure decision and the saving decision, and it may well distort other decisions such as the decision to invest in human capital, the portfolio choice decision and the occupational choice decision. At the same time, since the base is very broad, a given amount of revenue can be raised using lower tax rates than would be the case for a narrower base that imposed fewer distortions, such as consumption or labor income. The case for taxing capital income is in fact very much concerned with the trade-off between a broader base that distorts more decision margins but at
lower tax rates versus a narrower base that has fewer distortions but higher rates. This is a classic second-best policy problem.

In practice, there are some factors that mitigate differences in the relative rate of taxation of labor versus capital income, or equivalently, present versus future consumption. One is that income tax systems are far from comprehensive: various types of capital income are sheltered either intentionally or unintentionally. As discussed further below, the list includes saving for retirement, imputed income from housing and other consumer durables, the return on human capital, and various hard-to-measure forms of capital income such as accrued capital gains and the returns from insurance wealth. Second, the tax mix normally includes general consumption taxation and payroll taxation, neither of which taxes future consumption differentially. Moreover, since these forms of tax are typically proportional, or even regressive in the case of payroll taxes, they reduce the redistributive consequences of the income tax.\textsuperscript{4} This is especially the case for those at the low end of the income spectrum who are not income taxpayers, but nonetheless pay consumption taxes on their purchases. Against this must be set the fact that some forms of capital income face special taxes elsewhere. For example, property taxes may apply to real property owned by households or their businesses. As well, some countries apply wealth or wealth transfer taxes. Overall, the picture tends to be one in which capital income is treated preferentially to labor income, but nonetheless faces significant tax rates.

\textsuperscript{4} It should also be noted that to the extent that payroll taxes finance social programs on a benefit basis, they may not even impose a distortion on the labor decision.
Moreover, to the extent that it is taxed under the income tax system, the same rate structure tends to apply.

The key question posed in public finance theory is whether capital income should be taxed at all, a perspective that follows naturally from the fact that capital taxation is equivalent to differential taxation of future relative to present consumption. This is a standard second-best policy question of the sort with which optimal tax theory is equipped to deal. As it turns out, that theory is relatively agnostic about the question of capital taxation, but it is agnostic in a way that renders it more difficult to make the case for capital taxation. The reason is that, as with much of second-best theory, anything can happen: it is as likely that present consumption be taxed higher than future consumption as the reverse.

The argument can best be seen in a simple setting in which a taxpayer’s time horizon can be divided into two (equal) periods, the present and the future, where the second period is thought of as retirement when no labor is supplied (King, 1980). In this setting, inspired by the famous Corlett and Hague (1953) theorem, there are three variable commodities—present consumption, future consumption and present leisure—but only the first two are taxable. Future consumption should be taxed at a higher rate than present consumption only if it is more complementary with leisure. In this context, it seems more reasonable that the opposite is the case (e.g., if one thinks that utility is additive in the two periods). Alternatively, if goods are separable in utility from leisure and preferences are homothetic in goods, it is efficient not to tax capital income. This agnosticism
extends to more general settings where leisure is variable in more than one period. The conditions for zero capital income taxation are more stringent now, but again if they are not satisfied it is not clear whether capital income should be taxed or subsidized (Boadway and Keen, 2003). Once one moves to an infinite-horizon model, even starker results apply. In a celebrated finding, Chamley (1986) showed that in a model with an infinitely lived representative agent, the capital tax rate should be zero in the long run. This result assumed that households obtained variable leisure and a composite consumption good in each period, and that preferences were additively separable over time. Moreover, there was perfect foresight and the government could set its tax policy over the indefinite future in the initial time period. Unfortunately, even with such a far-sighted rational government, the zero capital tax result need not apply in an overlapping-generations context. Erosa and Gervais (2001) show that the zero-capital-tax result will generally only apply if per-period preferences are of the following special form:

$$U(C_t, L_t) = C_t^\sigma - V(L_t), \quad \sigma \in (0, 1)$$

where $C_t$ is consumption and $L_t$ is labor supply. Again, however, if this does not apply, it is not clear whether the optimal capital income tax rate should be positive or negative.

These results from the optimal tax literature leave one with no strong case for taxing capital income. While it is true that the conditions for a zero tax rate typically involve special assumptions on preferences that are unlikely to be
satisfied, when these are violated, the optimal capital income tax rate could be either positive or negative. Given this, the principle of insufficient reason, combined with the fact that the welfare cost of taxation is strictly convex in the tax rate, leads one to the position that on standard efficiency grounds, capital income should not be taxed. These arguments are reinforced by other efficiency considerations outside the normal optimal tax setting, including the following:

1. As the endogenous growth literature has emphasized, there may be externalities associated with investment, such as innovation or learning by doing. To the extent that an increase in saving results in more investment, saving should be encouraged rather than discouraged by tax policy.

2. Recently, behavioral economics has emphasized that households may systematically under-save because of seemingly irrational preferences. Their preferences may be time-inconsistent because the weight they put on future consumption is systematically too low early in life (Strotz, 1956; Laibson, 1997) or simply because they are myopic. This leads them to regret later on that they had saved too little early in life, and a government may have good reason to encourage saving, albeit paternalistically.

3. At the other extreme, households may behave super strategically, anticipating that if they do not save for their own retirement, the government—like a ‘Good Samaritan’, to use the term of Coate (1995)—will come to their support. This is sometimes adduced as an argument for compulsory retirement saving schemes of the sort that many OECD countries have in place.
4. If capital is mobile, it may be difficult for the government to tax it even if capital income is taxed on a residence basis. That is because financial assets may be moved abroad where they cannot be readily detected.

5. Capital income taxes on business assets may be excessively high for time-consistency reasons, that is, because governments find it difficult not to tax physical assets once in place. In these circumstances, it may be reasonable to compensate by allowing personal capital income to be sheltered.

6. It might be argued that capital income taxation at the personal level discourages innovative or entrepreneurial initiatives that are inherently risky. These investments may face certain disadvantages in the marketplace because of informational asymmetries, and they may have significant externalities. Moreover, since it is difficult for governments to provide full loss offsetting in their tax systems, there is a case against taxing risky investments.\(^5\)

7. Finally, it can be argued that capital income taxation discriminates against households whose income fluctuates, and who therefore must use saving as a way of smoothing their consumption. To tax the returns to saving is to penalize persons whose income occurs relatively earlier in the life cycle.

All these arguments tend to buttress the case against taxing capital income. At the same time, it should be recognized that there are also some factors that work in the opposite direction. First, if households face capital market constraints that

\(^5\) On the other hand, the taxation of risky assets can encourage risk-taking to the extent that loss offsetting is possible, especially if the government is able to pool some risks that private markets cannot.
preclude them from borrowing early in life, they will end up borrowing too little, or equivalently saving too much (Hubbard and Judd, 1987). Thus, they may borrow too little to accumulate housing or human capital assets. In these circumstances, the taxation of capital income can enhance efficiency. Second, imperfections in annuity markets may result in excessive savings for precautionary purposes (Abel, 1985). In this case, the policy response is not necessarily to discourage saving, but to provide an annuity substitute, such as a public pension. Finally, a tax on capital income will cause households to arrange their asset portfolios away from taxable assets to non-taxable ones, such as human capital. Given that human capital can have externalities associated with it, this would support the case for capital taxation.

So far the discussion has centered on efficiency arguments, but equity may seem to be more relevant as a rationale for capital income taxation. The argument is simply that capital income as a proportion of total income rises with income, so it would seem equitable to tax it. As seductive as this argument seems at first sight, it is quite misleading. If these higher levels of capital income are eventually consumed, they will be appropriately taxed under a consumption tax system. Indeed, it was largely on equity grounds that Kaldor (1955) argued for a personal consumption or expenditure tax in his classic book. His argument was that one should tax persons according to what they take out of the 'social pot' (consumption) rather than what they contribute to it (income). And, any degree of vertical redistribution can be achieved with a personal consumption tax as one desires simply by choosing the appropriate rate structure.
Nowadays, we recognize that what persons take from the social pot includes leisure that might otherwise have been used in production. This implies that some of the same arguments that inform the efficiency argument for capital income taxation also inform the equity ones. In particular, to the extent that future consumption is complementary with leisure, taxing it differentially contributes to an equitable tax system. This can be formalized in a nonlinear income tax context (Stiglitz, 1985) to argue that if consumption goods are separable from leisure, there is no need to impose capital income taxes. Moreover, capital income taxation can lead to horizontal inequities to the extent that savings is largely for life-cycle smoothing: persons with different life-cycle profiles of earnings will pay systematically different taxes if capital income is taxed. Thus, on standard optimal redistributive tax grounds, the case for taxing capital income is not apparent.

There are other equity arguments that can be brought to bear in favor of capital income taxation. Perhaps the most telling one is that neither a labor income nor a personal consumption tax succeeds in taxing consumption financed out of inherited wealth. And, while an inheritance tax go some way to addressing that, it is an imperfect instrument since it inheritance taxes can be readily compromised by avoidance and evasion techniques. To put the argument slightly differently, a perfectly informed and benevolent government would tax households on the basis their exogenously given wealth, both their endowed human wealth and their asset wealth. In practice, these cannot be observed, so imperfect indicators of wealth must be used as a tax base. Labor income would be a good index of
native ability if labor supply were fixed and there were no human capital investment; and capital income would be a good index of inherited wealth if households kept the stock of their inherited wealth intact. But, labor income reflects variable effort as well as the return on investment in human capital, and capital income includes the return on life-cycle savings, so the optimal relation between labor and capital income taxation becomes a complicated second-best problem. If inherited asset wealth is accounted for by an inheritance tax, there would be no need for capital income taxation.

To the extent that inheritances could not be taxed, the case for taxing capital income would be enhanced. It would be difficult for a personal consumption tax to incorporate consumption out of inherited wealth. In these circumstances, capital income taxation can be partly presumptive in nature. This argument is strengthened by the fact that persons with more wealth may choose to take more leisure, in which case the capital income tax is an indirect way of taxing it. A further argument is that there may be limits to the progressivity of the personal tax. For example, highly progressive tax rates may induce avoidance via occupational choice or human capital investment decisions, or even outright evasion. This being the case, taxing capital income may be a way of obtaining greater progressivity.

All these efficiency and equity arguments taken together still leave one without a fully convincing case for taxing capital income. That is not to say a case cannot be mustered, but it is presumably one that calls for capital income taxes to apply at significantly lower rates than is the case for labor income (or consumption).
Nonetheless, virtually all countries do tax capital income for better or worse. Given that, a further question is whether the same tax rate structure should apply to the two forms of income.

The preferred rate structure for any given base involves trading off equity and efficiency considerations, and this trade-off is likely to differ among tax bases. An ideal progressive tax would be one that taxed endowments directly. However, since that is not possible, the deviation from the ideal will be higher the more does the tax base reflect rewards for discretionary use of one's endowments as opposed to the endowments themselves. Thus, in the case of labor income, the tax would be more progressive the less responsive are labor earnings to after-tax wages, and the greater is the differential in native abilities among the population. Responsiveness includes not only variable effort, but also occupational choice, labor market participation, migration and tax evasion. Analogously, the capital income tax would be more progressive the less responsive is asset accumulation to the after-tax return to saving, the more difficult it is to avoid or evade taxes, the more mobile is capital income abroad, and the more unequal is asset ownership in the population. Of course, the case for a progressive capital income tax will be mitigated to the extent that inheritance taxes are able to undo the more grievous inequalities in inherited wealth.

Progressivity of both labor and capital income taxes will also be affected by the variability of these sources of income, since a progressive tax system discriminates against variable income per se and can induce adverse selection effects as households try to exploit the tax system. For labor income, the
variability might be predictable, as in the case of seasonal work, or it might reflect riskiness associated with uncertainty of employment or earnings. The social insurance system may mitigate this variability, as might income averaging for tax purposes, but workers find it difficult to self-insure against variable incomes. For capital income, variability is more likely to be unpredictable and a source of risk for the taxpayer. Some of this uncertainty of asset returns can be pooled on capital markets, but some residual uncertainty will remain, and it will differ from asset to asset. A progressive tax system will discourage the demand for risky assets and will lead to horizontal inequity, but one might expect that the problem is less severe for capital income than for labor income, whose variability is especially harmful to the most vulnerable workers. Furthermore, the international mobility of the tax base and the ability to avoid or evade income is likely to be much higher for capital income than for labor income. The overall implication is that one might suppose that the tax on labor income should be more progressive than the tax on capital income, especially in the presence of taxes on wealth transfers between generations and a strong social safety net for the least well-off—or unluckiest—workers.

III. ADMINISTRATIVE ISSUES

Administrative considerations have played almost as important a role in arguments over the tax base as have economic and efficiency criteria. Part of the reason for this is that administrative arguments are very telling, and work strongly in favor of using consumption as the base for personal taxation. Various country commissions that have studied the issue have come down in favor of
consumption taxation, and administrative arguments inevitably tip the balance.\textsuperscript{6} Virtually all the arguments revolve around the difficulty of taxing capital income on a consistent basis for all forms of capital income.

To understand this, it is worth recounting what would be the basic features of a tax system that attempted to tax income on a fully comprehensive basis. All sources of income would have to be included as they accrue, both current labor income and income from the ownership of tangible and intangible assets. Thus, all wages and salaries would be included. Financial income in the form of interest, dividends and accrued capital gains (net of interest paid) would be included. Income from real assets, such as rental income and the imputed rent on owner-used consumer durables, would be included. Income earned from the ownership or sale of intangibles such as royalties on intellectual property, would be included. And, any profits from unincorporated business owned by the taxpayer either individually (proprietorship) or jointly (partnership) would be included. Accounting for these profits would involve identifying the true accrued return to equity held in these businesses. This is calculated by including all accrued revenues and deducting all current and capital costs. The former include accrued payments for such things as labor and intermediate inputs, as well as rent payments, insurance, fees and so on. Capital costs are somewhat more complex. The imputed costs of using the services of all kinds of capital should in principle be deducted. This includes depreciation due to obsolescence and wear and tear, capital losses on assets, financial costs associated with holding assets, including

\textsuperscript{6} Some examples include the US Treasury (1977) in the United States, the Meade Committee (1978) in the United Kingdom, and the Economic Council of Canada (1987) in Canada. In each case, the essence of their proposals was similar.
any premium for risk, depletion of natural resources. Intangible assets need to be
treated on a similar basis. Thus, advertising, research and development, and
human capital investment ought all to be treated as investments and costed as
such. That is, their costs ought to be accrued as they are used rather than on a
cash basis when they are acquired. Note the important point that human capital
investments by households in the form of education or training ought to be
treated as an investment for income tax purposes. Thus, the costs of education—
including forgone earnings—should not be deducted when they occur. Rather,
the costs of education should be imputed as the human capital is used. Finally,
asset income must be properly indexed for inflation. For example, nominal
interest receipts must be reduced by the rate of inflation to convert them to real
terms. The reason is that the inflationary component simply compensates for
reductions in the real value of assets due to inflation. This will apply whenever
the underlying asset value does not vary with inflation.

It is apparent that implementing a comprehensive income tax is very demanding,
which explains why income tax systems in practice are far from comprehensive.
Problems of measurement and of collection and compliance costs abound and
are immediately obvious from the above description. Some forms of capital
income are difficult, even in principle, to measure, especially those for which the
return is imputed rather than received in financial form. Consumer durables, such
as housing, yield their return in the form of imputed services to the household.
Capital gains on both financial and real assets can accrue without being realized.
The return on insurance assets involves the benefit of shedding risk which is
difficult to measure. Accounting for the proper return to equity in personal
businesses is difficult to do, and treating human capital accumulation as an asset
yielding a return is even more so. And, indexing asset returns to account for
inflation may be difficult, especially where the value of underlying assets is not
readily observable.

More generally, certain other forms of comprehensive income are difficult to
measure. Gifts and inheritances are examples, as are non-market uses of time,
including for household production or consumption and non-arms-length
transactions with others. These difficulties make compliance difficult to ensure.
Not only can individuals avoid taxes by substituting non-taxable activity for
taxable (e.g., household for market production), but they may evade taxation by
failing to report some of their income. Moreover, the extent and ease of evasion
may vary by types of income. For example, financial income will be easier to
evade than employment income. (In fact, the susceptibility to administrative
corruption may also vary by type of income.) Finally, unless an income averaging
system is implemented, a progressive tax system will lead to horizontal inequities,
and this will be greater for sources of income that are more variable.

It should be noted that the inability to tax income on a comprehensive basis will
inevitably lead to inefficiencies. Some assets will be treated differentially leading
to inefficient asset holdings. Accumulation of financial assets abroad can lead to
reductions in domestic investment. Evading taxes by operating in the informal
sector causes inefficient production. For example, the scale of operations may be
too small, or, as Gordon and Li (2005) have emphasized, disintermediation (the
shunning of the use of financial intermediation) restricts the ability to use both credit and banking payments mechanisms. Of course, comprehensive income taxation itself imposes certain inefficiencies, especially with respect to labor-leisure choices and savings. Indeed, the choice of comprehensive income as an ideal base is already contingent on an evaluation of these inefficiencies.

IV. ALTERNATIVE REFORM OPTIONS

It is apparent that comprehensive tax systems are simply not feasible, even if they are desirable. What alternatives are then open, and which should be pursued? In this section, three alternatives are discussed. The first is to design the income tax system in such a way as to minimize the deviations from comprehensive taxation. The second is to succumb to the administrative and perhaps economic arguments and design the personal tax system on a consumption basis rather than a comprehensive income basis. And, the third is to adopt a schedular or dual system that retains some of the perceived benefits of capital income taxation while avoiding some of its problems.

Reformed Income Taxation

Personal tax systems in most developed economies are based on income rather than consumption. However, the resulting tax systems are far from comprehensive income tax systems. For one thing, the income tax is part of a mix of taxes that includes general sales taxes (e.g., VAT) and payroll taxes. The latter are designed to exclude capital income from the tax base. In principle, it would be possible to impose a VAT on an income-equivalent base rather than on
consumption, but countries choose not to do this.\footnote{Differential tax rates could also be applied to different commodities under a VAT as the optimal tax literature might suggest, but most VAT systems tend to have few preferential rates.} As a result, the income tax, taken together with the general consumption and payroll taxes, results in capital income being taxed at a lower rate than labor income. Nonetheless, to the extent that capital income is taxed, it is generally included in the tax base on a par with labor income and taxed according to the same rate structure.

Apart from the fact that capital income is taxed preferentially in the tax system as a whole, capital income is taxed very imperfectly for the sorts of reasons mentioned above. Various forms of capital income are treated differently, either out of necessity or for discretionary reasons. Saving for retirement is typically sheltered, mainly to encourage such saving, but also to allow the household to average tax liabilities over the life cycle. The imputed income from most consumer durables goes untaxed, although some countries include a measure of imputed rent from owner-occupied housing. Human capital investment is typically taxed on a cash-flow basis (including forgone earnings, which are effectively immediately deducted), although again there may be policy reasons for encouraging investment in this form. Income earned in unincorporated businesses only very imperfectly reflects true capital income, largely because many items obtain generous write-offs and there is no indexing. Capital gains are taxed on a realization basis rather than on accrual, and they are often afforded special tax rates (often to roughly compensate for the absence of indexing). Indeed, the inability to tax capital gains on realization is one reason there is a need for a corporate tax. It serves as a device for withholding income earned on
behalf of shareholders who would otherwise be able to shelter corporate-source income within the corporation, allowing it to accumulate tax-free as long as it is retained in the corporation. The effectiveness of this device is however limited by the absence of full integration of corporate and personal income tax systems. More generally, capital gains on assets other than share ownership often go untaxed (even though in principle the tax system may require that they be reported).

The upshot is a complex system that favors some assets over others, and leads to opportunities for tax avoidance not only by tax planning but also by adjustments in asset holdings and investment plans. Moreover, opportunities for outright evasion exist.

It would be possible to reform personal income tax systems to overcome some of these problems. The sheltering of savings for retirement could be eliminated by taxing income on these savings as it accrues, and this could be done without undoing the averaging property. Imputed rent on housing, and perhaps other major durables, could be taxable, subject to measurement difficulties. Unincorporated business income could be reformed so that the tax base more closely reflects capital income, albeit imperfectly. Capital income could be indexed, and personal and business income could be more fully integrated.

---

8 Corporate taxes also serve other purposes, which confounds their use as withholding devices against income earned by domestic shareholders. They withhold also against foreign shareholders who may be able to claim a tax credit in their own country. They capture economic rents that accrue to some corporations, such as those in the resource sector. They may also be used for proactive industrial policy purposes, although the economic rationale for that is disputable.
Despite these potential reforms, problems would remain. The system would be complicated, and some assets would inevitably remain favored. Possibilities of avoidance and evasion would remain. And, capital income would still be subject to the same rate structure as labor income, and that may not be desired.

**Personal Consumption Taxation**

The most intractable problems with the comprehensive income tax involve the difficulty of taxing asset income. These can be largely avoided if the tax base is consumption rather than income. Moreover, for those who favor consumption as a base on economic grounds, there would be a ‘double dividend’ from moving to a personal consumption base: administration would be simplified and economic outcomes would be improved.

In practice a personal consumption base would include a number of elements. The most important has to do with the treatment of assets. Assets can be treated in one of two broad ways, which correspond roughly to the difference between labor income and consumption. One method is the *tax-prepaid method* according to which asset income is simply exempted from the tax base. When the asset is acquired, no deduction is allowed, and when it is sold or run down for consumption, no adjustment is made to the base. In other words, from the point of view of the tax system, the acquisition of tax-prepaid assets has no tax consequences. Moreover, no record need be kept of these assets. The second method is called the *designated-asset method*. In this case, when assets are acquired, they are deducted from the tax base, and their principal and interest remain sheltered from the tax until they are run down and used for consumption.
In this case, a record must be kept of assets held in the designated form. These two approaches are equivalent in the sense that the tax base has the same present value under the two approaches. But, they give rise to different time profiles of taxable income since the designated-asset method essentially postpones tax liabilities.

The two methods are suited to different types of assets. The tax-prepaid method is appropriate when asset returns are difficult to measure, such as with consumer durables and insurance policies. The designated-asset approach is suitable when the costs of asset acquisition are more difficult to measure. It is the preferred method to deal with human capital accumulation and unincorporated business income. For some assets—such as interest-bearing assets or shares—either approach would be suitable. Administrative costs can be avoided by using the tax-prepaid method, but designated assets may be useful for spreading tax liabilities uniformly over the lifecycle for tax averaging purposes. Thus, proposals for personal consumption taxation typically suggest allowing taxpayers some discretion over the choice of tax-prepaid or designated-asset treatment for any given asset.

Personal consumption taxation has a number of administrative advantages. In addition to avoiding the need to measure all forms of asset income, it also eliminates the need to index capital income.\footnote{Indexing of the rate structure may still be needed to prevent bracket creep, but that can be done centrally rather than by individual taxpayers.} Tax accounting can be done on a cash-flow basis, including for unincorporated business income. There is no longer any need to use the corporate tax as a withholding device against
personal corporate-source income, although it may still be required if foreign
countries do not adopt personal consumption taxes. If no withholding against
foreign source income were required, a cash-flow tax could be adopted for
corporations in order to capture pure economic rents and to serve as a risk-
sharing device. And, equity objectives can be achieved by making the rate
structure as progressive as one wants.

Of course, personal consumption taxation is not perfect. Although the
administrative problems are much reduced compared with the comprehensive
income tax approach, there is still a need to keep accurate accounts of
designated assets, and that requires cooperative financial institutions. Problems
of evasion and avoidance remain. Households may be able to avoid paying taxes
on their designated assets by moving abroad later in life. Given the cash-flow
procedure used for personal businesses, there will be an incentive to
masquerade personal labor income as an expense since wages paid to owners
for their time and effort are not at arms length. Personal consumption taxation will
still provide an incentive for households to avoid taxation by substituting non-
market uses of time for market labor, and the incentive will be greater for the
consumption tax since its rates will be higher because of its base being smaller
than comprehensive income. Since no country has a personal consumption tax in
place, there will be transitional issues involved with implementing one. Perhaps
most important, personal consumption taxation will not succeed in capturing any
of the benefits of inherited wealth except to the extent that an inheritance tax
exists alongside the consumption tax. But then, some of the benefits of avoiding
the taxation of capital income will be lost, especially those that rely on eliminating the distortion on saving.

For whatever reason, all OECD countries tax capital income to a greater or lesser extent. This may be based on normative arguments about the need to include capital income on equity grounds, such as the limited scope of the inheritance tax. Or it may be based on political economy arguments of a familiar sort. For example, governments may face insuperable time-consistency problems, even if they are otherwise farsighted and benevolent. As Fischer (1980) observed, if a stock of previously accumulated wealth exists, governments will always have an incentive to tax that stock if they have been unable to commit to tax rates in the past. Moreover, governments who respond to the desires of voters may be led to tax capital income as a way of redistributing towards decisive voters. For whatever reason, if we take as given that governments are going to want to tax capital income, a relevant tax design issue is how to tax that capital income.

Finally, tax compliance may be more difficult with capital income than with labor income. It relies more on self-reporting (as opposed to withholding at source), and verification may be more difficult for the authorities, especially if foreign assets are held. This problem can be mitigated by requiring financial institutions—including foreign ones, by international agreement—to withhold taxes on capital income paid to creditors. This too will be administratively more difficult if different households pay different tax rates on capital income.
Schedular Income Taxation

An alternative exists to taxing capital income as a component of an income tax system which simply aggregates capital and labor income. That alternative is to implement a separate tax schedule for capital than for labor income. This is referred to as schedular income taxation, the general term for a system whereby different components of income are subject to different schedules. In principle, different schedules could apply to many different components of income such as employment income, income from self-employment, business income, asset income, and so on. We shall concentrate below on a simple dichotomous schedular system, one that treats capital or asset income separately from labor income. The basic argument is that the case for a schedular approach is much stronger for capital versus labor income than for different components within these two categories. In the next section, we shall consider a specific proposal for a schedular approach, the so-called dual income tax system, also referred to as the Nordic tax system because of its adoption in the Nordic countries.

The general argument for schedular income taxation is partly based on economic considerations and partly on administrative considerations. The economic considerations follow from the argument that the preferred amount of progressivity may vary by source of income. If one source if income is more elastic than another, or if it fluctuates more, a case can be made for its rate structure being flatter. Against this, if one base more closely reflects a household’s underlying potential productivity, it should be more progressive on equity grounds. Administrative considerations arise because of differences in the
measurability of the tax base or differences in the ability to hide income through under-reporting or moving it abroad.

These differences apply particularly to capital versus labor income. Capital income may well be more elastic than labor income, as well as being more variable. The inability to tax all forms of capital income easily leads to arbitrage possibilities that become more attractive the higher are tax rates. Capital income is likely riskier than labor income, which militates against progressive taxation so as not to discourage risk-taking. Moreover, capital income is perhaps easier to evade than labor income, despite the possibilities of underground labor activity. These considerations point to an argument for a rate structure that is less progressive for capital income than for labor income. This will especially be the case to the extent that inheritances are taxed, at least those in the hands of high-wealth persons.

V. THE DUAL INCOME TAX SYSTEM

The dual income tax system—or Nordic tax system—is a particular form of schedular taxation applying to capital income and labor income that has a number of attractive properties. We begin with a brief discussion of its main features before turning to an assessment of its efficacy. The features are necessarily stylized since the extent to which the system has been adopted in the four Nordic countries varies. Nonetheless, the same ideal can be espoused.

---

10 Comprehensive reviews of the Nordic tax system and its effects may be found in Sørensen (1994), Neilsen and Sørensen (1997) and Sørensen (1998). For a recent overview, see Boadway (2004), from which some of the following arguments are developed. Eggert and Genser (2005) suggest that income tax systems in many EU countries are approaching dual income tax systems.
The characteristics of a dual income are very straightforward. Separate tax bases are reported for capital income and non-capital income. Capital income includes capital income from all sources, at least to the extent that it can be measured. This includes interest, dividends and capital gains from financial assets; the imputed rent on owner-occupied housing, the accrued returns on pension savings done by the taxpayer or on the taxpayers behalf by the employer; and profits from personal businesses. These components include the items that can feasibly be included in the tax base. They are more than are normally included in income tax systems, but not fully comprehensive for the reasons outlined earlier. Non-capital income includes labor income from employment and self-employment, as well as transfers received from the government, including public pensions.

These two tax bases are then subject to separate rate schedules. The non-capital income base is subject to a progressive rate structure, which can include a series of tax brackets as well as various deductions and/or credits intended to achieve the desired amount of horizontal and vertical equity. On the other hand, capital income is taxed at a single proportional rate corresponding with the lowest marginal tax rate on non-capital income. Moreover, it is not subject to credits or deductions. This dual personal income tax system is then accompanied by a corporation income tax whose rate is that applied to personal capital income. The corporate tax is then fully integrated with the personal tax. Since corporate and personal capital income tax rates are identical, integration is facilitated. Uniform taxation ensures that full integration can be achieved so double taxation is
eliminated. The actual method of integration can vary. One possibility is the imputation method whereby domestic shareholders receive credit for corporate taxes paid on their corporate source income. Of course, corporate taxation collected from foreign-owned corporations is not subject to integration. In addition, dual income taxation may be complemented by a tax on inheritances, although this is subject to the usual administrative complications that limit its scope.

Overall, this dual income tax system results in significantly lower taxation of capital income than labor income in the tax system as a whole. Moreover, the tax is less progressive than non-capital income taxation, although to the extent that inheritance taxes apply, progressivity can be enhanced.

The advantages of this dual income tax system relative to ordinary single-schedule income tax systems are many. The broadening of the capital income tax base combined with the single low rate reduces the distortions involved in differential taxation of different sources of income. These distortions can arise from actual avoidance activities involving changes in the portfolio of asset holdings, but also simple but costly tax planning activities that involve a nominal relabelling of income source. And, even though some types of capital income remain beyond the reach of the tax system, the use of a low rate reduces the size of the inter-asset distortion. The use of a single rate also makes it feasible to use financial institutions as vehicles for withholding tax at source thereby reducing compliance costs. Moreover, if the capital tax rate is the same as the corporate tax rate, not only is full integration feasible, but also tax incentives for choosing between corporate and non-corporate organizational forms are absent.
The main disadvantage of the dual system is the use of a single uniform tax rate applied to capital income. This may be regarded as inequitable, but several considerations mitigate that view, many of which have been referred to above. For one, the vertical equity consequences of flat rate capital taxation can be muted by three features that could accompany a dual income package: a) the rate structure on non-capital income can be made reasonably progressive; b) an inheritance tax can address equity concerns at the top end of the wealth distribution, and c) if refundability exists for negative tax liabilities at the bottom end of the non-capital income schedule, equity for the lower end is fostered. The argument that capital income accrues mainly to high-income earners is a bit misleading once one considers that a considerable amount of income inequality reflects differences in income over the life cycle rather than lifetime differences. Since capital income to some extent mirrors that phenomenon, the correlation between capital income and total income overstates its distributive relevance. On the contrary, if capital income is a consequence of life-cycle smoothing, a proportional tax avoids the horizontal inequities that would arise by imposing a higher tax rate on those who choose to save more. By the same token, a proportional tax does not discriminate against those who choose to hold risky assets, and does not discourage the demand for risky assets. Finally, a flat tax structure can be partly seen as a response to the mobility of capital and the ability of asset owners to avoid and even evade capital income tax by holding their wealth abroad. Of course, as long as capital taxes exist and opportunities exist for avoiding domestic taxes by holding wealth abroad, this will be a problem.
The best that can be done is to mitigate the incentive by keeping tax rates reasonably low.

VI. FURTHER ISSUES

There is no such thing as a foolproof tax system, and the dual income tax system is no exception. Although it has certain advantages relative to the current income tax system both from an economic and from an administrative point of view, some difficulties remain. Some of these could be avoided by moving all the way top a consumption-based system, and this may be a very attractive option if the concerns of consuming out of inherited wealth were surmounted. But, given the unlikelihood of that occurring, the dual income tax system remains one of the best ways of designing a tax system in which capital income continues to play a part. In this final section, some of the outstanding important issues in the design of a dual income tax system are addressed, or in some cases reiterated.

Any tax system that includes capital income as an element will run into similar problems as a comprehensive non-schedular income tax system. Some types of capital income are difficult, if not impossible, to measure, especially those whose return is imputed. Examples include the accrued return on human capital investment, the imputed return on consumer durables, the return on investment in personal businesses, and accrued capital gains on all types of assets, including private pensions. Even for those whose returns can be measured, there is the need to index rates of return to convert them to real returns. The use of a single rate means that other problems with taxing capital income are reduced,
such as the need to average income and the effect of capital income taxation on risk-taking. The upshot is that uniform capital income taxation cannot be achieved. There will be inter-asset distortions and some incentives to avoid or evade, but at least these will be mitigated by a relatively low tax rate.

Part of the purpose of dual income taxation is to reduce the problems associated with the international mobility of capital income. Taxpayers will have an incentive to move assets abroad if by doing so they can escape reporting them for tax purposes. Of course, assuming that the dual income tax is levied on a residence basis, it would be illegal not to report capital income earned abroad. But, in the absence of cooperation by international financial institutions, this would be difficult to police. One way that this problem could ultimately be addressed is by a system of withholding taxes collected by financial institutions at source and implemented by international tax agreement among nations. A dual income system would facilitate the operation of such a system, but would not by itself initiate it. Still, the lowering of capital tax rates in a dual income tax system can be seen as a reaction to the incentives that would exist under an ordinary tax income system to engage in tax evasion by holding assets abroad. The incentive to do that would be blunted.

Administrative issues also exist with respect to the relation between the single rate capital tax on the one hand and the taxes on no-capital income and corporation income on the other. The dual income tax requires distinguishing between capital and labor income, and that is very difficult for the case of personal businesses. The owner-manager of such a business commits both
financial resources and effort into the firm, but the return to the owner-manager comes as a single aggregate amount. Since the tax rate on labor income will typically be higher than that on capital income, the taxpayer will have an incentive to report as high a proportion of the profits as possible as capital income. In practice, this can be addressed by administrative income-splitting rules, as is done in the Nordic countries, but the result is bound to be imperfect.\textsuperscript{11}

The problem is particularly relevant for personal businesses that are in a loss position. Should the loss be treated as a loss attributable to labor income or to capital income? Which one is preferable to the business owner depends upon the refundability provisions that apply in the capital income and non-capital income tax systems. In a single-schedule income tax system, the allocation of business income between categories is not relevant. Indeed, the fact that capital and labor income are aggregated can work to the advantage of personal business owners to the extent that they can claim losses in their businesses against labor earnings elsewhere. Cullen and Gordon (2005) argue that this feature of the income tax has an important bearing on the decision of businesses to incorporate.

The relation between the capital income tax and the corporation income tax is also relevant. The fact that the tax rates on capital income and corporation income are identical makes it easier to integrate the two taxes. Integration involves eliminating the double taxation of corporate-source income while at the same time ensuring that the corporate tax serves as an effective withholding

\textsuperscript{11} Christiansen (2005) argues that in the case of the Norwegian dual income tax system, this has been a major problem.
device. In an open economy setting, a system of imputation is the method of choice since then only domestic shareholders receive the credit for corporate taxes paid.\footnote{On the other hand, the case for integration of personal and corporate taxes is considerably reduced in an open economy. As Boadway and Bruce (1992) argue, in an open economy, investment and savings decisions become separated so that the tax imposed on investment is shifted back to non-capital factors of production. The case for using the corporate tax as a withholding device is therefore compromised.} Since all owners pay a common tax rate on their corporate-source earnings, the rate of imputation is unambiguous. Nonetheless, there are some problems. For one, the integration of capital gains is complicated. One must ensure that the same corporate tax is only credited once, whether to dividends or capital gains or both. From an economic point of view, while tying the corporate tax rate to the tax rate on labor income is useful from the point of view of integration and avoiding incentives to incorporate, it also implies that countries cannot respond to competitive pressures from abroad to reduce their corporate tax rates. This can be a serious drawback for a highly open economy since differences in corporate tax rates can have an important incentive effect not only on investment but also on profit shifting among jurisdictions.

More generally, refundability of losses is an important feature of any direct tax system, and certainly for the dual income tax system. Refundability of negative tax liabilities in the non-capital part of the tax system is very important for pursuing equity, and has become an important element in the tax systems of some OECD countries. Its feasibility has been achieved through the computerization of tax collections. It has the additional advantage in a dual income tax system of retaining vertical equity in a system in which capital income is no longer subject to progressive rates. Refundability in the capital income tax
system is equally important. It fosters the neutrality of the tax system with respect to saving, investing and risk-taking by individuals.

Finally, a schedular income tax structure facilitates tax assignment in a decentralized setting, such as a federation, or even a unitary nation in which regional or local governments have fiscal responsibilities. In such a context, it is useful for sub-national governments to have access to a broad-based source of revenue. A direct tax on non-capital income has advantages over a general indirect consumption tax on administrative grounds. A dual income tax enables sub-national governments to have joint access to the non-capital income component while leaving the capital income tax to the central government. This avoids the problems that can otherwise arise if sub-national governments try to impose a tax on a base that is mobile.

Analogous arguments can be made in an economic union context, such as the European Union. If a dual income tax structure were adopted by all members, they could choose their own rate structure for the non-capital income portion. The capital income tax could then be coordinated and, assuming a common rate is chosen, collection and compliance would be facilitated, possibly using a withholding mechanism.

REFERENCES

DICE REPORT, Journal for Institutional Comparisons 2, 3-8.

Boadway, R. and Bruce, N. 1992. “Problems with Integrating Corporate and
Personal Taxes in an Open Economy,” Journal of Public Economics 48, 39-
66.

Boadway, R. and Flatters, F. 1993. The Taxation of Natural Resources:

Taxation of Capital Income and Financial Services,” in P. Honohan (ed.),
Taxation of Financial Intermediation: Theory and Practice for Emerging


Coate, S. 1995. “Altruism, the Samaritan's Dilemma, and Government Transfer


Cullen, J. and Gordon, R. 2005. “Taxes and Entrepreneurial Activity; Theory and
Evidence for the U.S.,” University of California at San Diego, mimeo.

of Supply and Services.


