

A Progressive Direct Expenditure Tax*

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Abstract

Australians are again looking at the possibility of major tax reform, including a reexamination of options once taboo, such as the GST. But there is, in fact, a wider range of possible tax systems available to us. One major option not so far considered is the 'direct expenditure tax'. As a concept it is not new, although it is not familiar in the Australian debate. This is surprising, as it has strong potential benefits to offer.

A progressive direct expenditure tax would replace the so-called 'income' tax currently levied on individuals and business enterprises. The sum to be taxed would be a measure of expenditure on final consumption. In effect, then, savings would be exempt from taxation. But when the savings, and the returns earned on them, were ultimately spent, they would be taxed. A progressive tax rate schedule, which reflected both capacity to pay and family circumstances, would be applied to individuals and perhaps also to business enterprises, to calculate tax payable.

This proposal is not, in fact, as radical as it might first seem. Income from labour would be taxed as now. And even under the current system, much saving, and investment is effectively given an expenditure tax treatment-such as the treatment of owner-occupied housing, and business expenditure on human capital and on research and development. The current tax treatment of superannuation and accelerated depreciation allowances are as much an expenditure tax as an income tax.

This expenditure tax offers two alternative options under its direct taxation scheme: the 'cash-flow' and the 'yield-exempt' options. Illustrative simplified tax forms for individuals and for business enterprises using both options are presented, discussed, and compared with the present 'income' tax forms. In order to collect the same revenue as the current 'income' tax system it would replace, a direct expenditure tax would require higher tax rates. This is because the tax base would not include savings which are now subject to income tax. A slight increase in the degree of progressiveness of the current tax rate schedule would also be required, to maintain current notions of equity between richer and poorer taxpayers.

1. Introduction

What is a direct expenditure tax, how might it operate in Australia, and what are its advantages and disadvantages? These are the questions addressed in this paper.

A direct expenditure tax would replace the present 'income' tax system for individuals and for business enterprises. The taxable sum, or tax base, is expenditure on final goods and services - that is, on income minus saving. ('Final' here means that the goods and services involved are for consumption, and are not to be used as inputs into further production.) A progressive tax-rate schedule would be applied to the expenditure base to determine tax payable. A direct expenditure tax system would mean consistently lower and more uniform effective taxation of different saving and investment options than occurs with the present 'income' tax system.

The paper begins in Section 2 with a brief definition of some basic tax concepts and terminologies highlighting the key differences between a comprehensive income tax, a comprehensive direct expenditure tax and an indirect consumption tax. Section 3 discusses the alternative models of expenditure tax systems. Section 4 shows that the present so-called 'income' tax system in fact incorporates components of the different tax systems, and can hence be thought of as a mixed or a hybrid tax system.

With the aid of illustrative tax forms for individuals and for business enterprises, Section 5 provides details of how the cash-flow and capital yield-exempt versions of a direct expenditure tax would operate. The properties of the direct expenditure tax system are described - in comparison with the present 'income' tax system which it would replace - in Section 6. The comparisons are made in terms of revenue collected, the efficiency and productivity of the economy, tax equity, simplicity, and Federal-State relations. Section 7 discusses a number of transitional issues associated with a shift from the current 'income' tax system to the alternative direct expenditure tax models. Attendant distributional and compensation issues are likewise discussed. A final section draws together the key results.

2. Basic Concepts and Terminologies

In this section, we briefly discuss some basic taxation concepts and present useful terminologies in order to facilitate meaningful discussion of the alternative taxation systems and the associated issues.

Income is defined as the sum of all additions or increments to wealth during a period. It is useful to think of income as “supplied” by either labour or capital. *Labour income* consists wages, salaries and labour income in kind such as superannuation and fringe benefits. *Capital income* includes such things as interest, dividends and rents. Income can also be viewed from the “uses” side. Income is thus either used to finance consumption or saved. *Consumption* is revealed by the amount of expenditures incurred on household goods and services - so in tax terms, consumption and expenditure are used synonymously. The term *savings*, meanwhile, is used to refer to the net change in resources invested in immediate and long run investments¹. It is also useful to note that savings can take various forms as in interest-bearing bank accounts, managed trusts, equity, shares, superannuation funds (financial properties), as well as real estate, buildings and equipment (fixed capital).

Tax systems are differentiated from each other by their *tax bases*, or taxable sum, and in terms of the tax *rate* schedule applied to that tax base. At the conceptual level, the tax base can be *income*. (And sometimes it is useful to distinguish between a *real income* base and a *nominal income* base - where the latter uses historical costs and prices, and the former uses prices adjusted for inflation). The tax base may also be *consumption/expenditure* or *wealth*. A comprehensive income base taxes all income from whatever source while a comprehensive expenditure base taxes only that part of income spent on consumption. The consumption base, however, does not incorporate income that is saved, until a later date when that income is consumed. Accordingly, if income Y is expressed as the sum of consumption, C , and savings, S , i.e. $Y = C + S$, then the difference between the income tax base and the consumption tax base is the flow or amount of savings over the period in question.

¹We say a person saves if the net change to resources is positive; otherwise, he/she dissaves.

Direct taxation refers to the situation where the tax base can be measured for individual taxpayers. Then, a tax rate schedule can be applied, with the average and marginal tax rates varying according to the level of the taxable sum for each individual and with certain chosen social circumstances (such as having a non-working spouse, or the number of children). Here, a progressive tax rate schedule, under which the average tax rate rises with income or expenditure, can be applied. By contrast, *indirect* taxes are levied on the sale of goods and services and as such allows for only a single or flat rate of tax per unit of consumption. So, under a sales or indirect tax system, all buyers of new cars for example have to pay the same rate of tax irrespective of their individual circumstances. In practice, most governments raise tax revenue from a combination of direct and indirect taxation, and the right *tax mix* is almost always a contentious political issue.

Taxes and their properties are evaluated against a set of standard criteria that are derived from fundamental axioms of justice and the basic premises of our economic and political system. In the tax literature, these criteria are commonly considered under the general headings of efficiency, equity and simplicity. Taxes are considered *efficient* or *neutral*, if they do not distort market prices causing people to prefer one course of action for another. In most circumstances, neutral taxes are preferred because they promote efficiency in the economy i.e. the tax does not unduly interfere with the workings of the market economy. Non-neutral taxes cause inefficiencies in the economy if they influence the choice of individuals and business as to what to buy, how to allocate productive resources, how hard to work, how much to save, where to live and so forth². The equity criteria try to address the question ‘Is the tax fair?’ while simplicity criteria ensures that the tax is easy to implement and does not incur large compliance costs. In practice, economists have been generally concerned with neutrality and efficiency issues, while public discussions about tax proposals almost always focus on equity issues.

² In special cases of external costs, or spillover effects, non-neutral taxation of the externality by reducing production and consumption can increase efficiency. This argument is often made for taxes on pollution and tobacco, for example.

3. Alternative Expenditure Tax Models

Consumption or expenditure taxes can be collected either under a direct or an indirect taxation approach. This section provides a detailed examination of the alternative tax models with special emphasis given to options under a direct expenditure tax system. For a thorough discussion of the indirect expenditure tax system with special reference to Australia, the reader is referred to Johnson, et.al. (1998).

There are two alternative ways of implementing a direct expenditure tax: the *cash-flow* tax and the *yield-exempt* or prepaid consumption tax. In the cash-flow tax method, a personal consumption tax is imposed only on that part of an individual's income that is used for consumption; savings is tax-exempt until such time they are withdrawn and spent. All interest and other returns from savings are likewise taxed at the time they are spent. In the yield-exempt method, all forms of labour income are subject to tax, while earnings derived from the stock of capital (or capital income) is tax-exempt. For example, interest gained from that part of saved income is not subject to tax under a yield-exempt method.

The differences between the pure income tax, cash-flow, yield-exempt and indirect expenditure taxes are illustrated in Table 1 below. The hatched area denotes the tax base or sum at which the particular tax is levied.

Table 1 first highlights the important distinction that with direct tax approaches (i.e. income, cash-flow and yield-exempt taxes), the individual or business is the unit of taxation, while with indirect (expenditure) taxes, the unit of taxation is the commodity, both goods and services. The implication is that the three alternative direct tax modes can be designed to have varying tax rates which depend on one's level of income or expenditure and on family circumstances such as number of children (i.e. can be progressive by design), while the indirect system has no such capacity.

Table 1. Basic differences of alternative expenditure tax systems

Tax Model	Tax Unit	Tax Base (shaded)		Return on Savings (r)	
		Sources of income	Uses of income		
Income Tax	Individual/business	$\boxed{W} + \boxed{R}$	Y	C + S	taxable
Cash-flow Tax	Individual/business	W + R	Y	$\boxed{C} + S$	taxable if spent
Yield-exempt Tax	Individual/business	$\boxed{W} + R$	Y	C + S	exempt
Indirect Expenditure Tax	Commodity	W + R	Y	$\boxed{C} + S$	taxable if spent

NB: Y – Total income
W – Labour income
C – Consumption
R – Capital Income
S – Savings
r – return on accumulated stock of saving

The major differences between the alternative tax systems considered here arise by viewing income either from a ‘sources’ side or a ‘uses’ side. From the ‘sources’ side, income Y is earned from labour income W (e.g. wages) and capital income R (e.g. interest). Alternatively, income Y can be used either for consumption C or savings S. It is seen, from Table 1, that a pure income base taxes all income irrespective of its source or use. The cash-flow method exempts all savings and uses consumption on the ‘uses’ side as its tax base. The yield-exempt method uses wages on the ‘sources’ side as its tax base. From column four, it is also seen that returns on accumulated savings or capital income are subject to tax under the cash-flow system if they are spent, while these are not taxed under the yield-exempt system. These two tax options are crucially different in the timing of their tax payments. They result in the same amount of tax liability in present value terms when the rate of interest is equal to the discount rate and the tax rate is constant. Sometimes the yield-exempt system is referred to as a prepaid consumption tax.

Effectively, the yield-exempt approach permits all investments to be expensed or written off in the year of purchase. In the literature, the yield-exempt tax is alternatively called a wage tax because it essentially uses labour income as the tax base. Both models of direct expenditure tax entail no capital gains taxation. A progressive tax rate schedule can be applied in both cases to the taxable sum as measured for each individual (or corporate entity).

A useful illustration of the different tax systems is provided by considering the possible tax options for superannuation. An income tax system, such as the one that operates for New Zealand, would tax income at the personal rate when deposited, the earnings each year would be taxed at the personal rate, and withdrawals would be tax exempt. A cash-flow expenditure system, which essentially operated in Australia prior to 1988, would exempt both deposits into superannuation and fund earnings from taxation, but withdrawals of funds from superannuation would be taxed. Under a yield-exempt system, funds deposited into superannuation would come from after-tax income, the earnings would be exempt and the earnings from superannuation would face no tax. Australia's current taxation system for superannuation is a hybrid of these three models, with taxation of funds on entry (at 15 per cent with a 15 per cent surcharge for high income taxpayers), a flat 15 per cent tax on fund earnings, and some taxation of withdrawals depending on whether they are taken as a lump sum or as an annuity.

A numerical illustration of the timing effects of tax payments of a comprehensive income tax system, a cash-flow direct expenditure tax system, a yield-exempt direct expenditure tax system, and an indirect consumption tax system is shown in Table 2. For the sake of simplicity, consider the case of the various taxes applied over just two years. In year 1, a taxpayer receives income Y of \$50,000 of which \$10,000 is saved (S) and the rest is spent on consumption (C_1), and a tax rate of 20 per cent is applied under each option. In year 2, the saving \$10,000 plus the return on savings R of \$1,000 or 10 per cent, is consumed or spent. That is, $C_2 = S + R$. (For the purposes of this illustration, we disregard non-savings income for the second year.)

Table 2. Numerical Illustration: taxation under the alternative tax models

Tax Model	Year 1	Year 2	Total Tax liability*
Income Tax System	\$10,000	\$200	\$10,182
Cash-flow Tax System	\$8,000	\$2,200	\$10,000
Yield-exempt Tax System	\$10,000	[nil]	\$10,000
Indirect Tax System**	\$8,000	\$2,200	\$10,000

Notes:

* expressed in dollars of year 1, with a discount rate of 10 per cent.

**where there is a single tax rate, the indirect tax delivers the same result as the cash-flow expenditure taxes.

The comprehensive income tax system levies tax on the income Y in year 1 ($0.20 \times Y = \$10,000$) and on the return on the saving R ($0.20 \times \$1,000 = \200) in period 2. The cash-flow expenditure tax system levies tax only on funds consumed each tax period, that is, C_1 in period 1 ($0.20 \times C_1 = \$8,000$), and $C_2 = S + R$ in period 2 ($0.20 \times C_2 = \$2,200$). Relative to the income tax, taxation of savings is deferred until it is spent on consumption. With the yield-exempt tax system, all income in the first period is taxable, but the return on savings, R , is not taxed in the second period. Relative to the cash-flow expenditure tax, the yield-exempt expenditure tax brings forward the time at which the tax is paid³. With the indirect consumption tax, actual expenditures on consumption are taxed each period, but only a flat-rate tax can be applied.

The examples in these tables highlight three key points of distinction between the various tax systems. First, the income tax essentially taxes saving twice, because all income is taxed, irrespective of its origin or the use to which it is put; so tax is paid first on the income diverted to saving, and second on the returns obtained on that saving. The expenditure tax systems – both direct and indirect consumption tax options - do not involve such double taxation of saving. Second, and related, the tax base or taxable sum will be less than the income tax system under both the expenditure tax options and the indirect tax option. A higher tax rate schedule will, therefore, be required to collect the same tax revenue. Third, while the indirect tax system exempts saving, only a flat tax can be applied. By contrast, the direct expenditure taxes allow for a progressive tax rate schedule. The indirect tax system will result in a one-off increase in consumer prices against constant nominal income, whereas the direct approaches have no consumer price effect, but reduce the effective spending capacity via taxes on outlays or income.

4. Australia's Current 'Income' Tax

The major components of taxation revenue collected in Australia are reported in national accounts. Table 3 below reports the main components for 1996-97 according to whether the

³ The equivalence of the cash flow and yield exempt options holds only under the very strict assumptions of no pre-existing savings, a common tax rate in both periods, and no windfall gains or losses on future savings.

taxes are levied by the Commonwealth, by the state or by the local government. The contribution of the taxes to total revenue of all governments is shown in the final column.

Table 3. Major component of total tax revenue, Australia, 1996-97

	Commonwealth \$billion	State & local \$billion	Total \$billion	Contribution to Total percent
1. Direct income taxes ⁺	91.5		91.5	57.3
* Personal income tax	66.3		66.3	41.5
* Company tax	24.0		24.0	15.0
2. Indirect expenditure taxes	30.8	29.6	68.3	37.8
3. Wealth taxes	.9	7	7.9	4.9
Total taxes, fees & fines	123.2	36.5	159.7	100.0

⁺Includes fringe benefits tax and taxes on non-resident

Sources: ABS (1997) Catalogue 5506.0 and Treasury Budget statements.

Australian governments derive 57.3 percent of their total revenue from the income taxes paid by individuals, business enterprises and non-residents. Taxes are levied at prescribed rates that depend on the level of income of the individual. The Commonwealth government attracts all the revenue from direct taxes which comprise 74.3 per cent of its total revenues, while state and local governments draw income only from indirect expenditure and wealth taxes. Because Australia's current income taxation system uses personal income as its direct tax base, it has become acceptable to refer to the current system as an income tax system. However, a closer examination of the current 'income' tax system shows that for the taxation of savings and capital, it is a hybrid or mixed system in that it has elements of nominal income, real income, cash-flow and yield-exempt tax base components.

The yield-exempt method, for instance, is currently applied to saving and investment in owner-occupied housing and consumer durables, in that imputed rent and capital gains are non-taxable. Many areas of business investment, on the other hand, are expensed in the year of outlay - including research and development, human capital development, all repairs and maintenance and promotion - as under a cash-flow tax. Further, accelerated depreciation on plant and equipment and buildings is partway between the immediate expensing characteristic of a cash-flow tax, and the deductions for economic depreciation over the effective life of the capital asset under a comprehensive income tax.

Taxation of capital gains on a realised sale basis, rather than on the accruals basis required of an income tax, is part-way to an expenditure base tax⁴. Savings placed in superannuation funds were given a cash-flow treatment prior to the 1988 reforms (with tax-deductibility on entry, no tax on investment returns, and tax on funds withdrawn); and the subsequent changes have introduced a low flat income tax of 15 per cent on fund earnings. For middle- and high-income earners, the present arrangements for the taxation of superannuation are closer to a cash-flow tax than an income tax. Only savings in the form of financial deposits and debentures are given the comprehensive income base tax treatment.

The hybrid nature of the 'income' tax system directly causes several of the difficulties of the present taxation system. First, the different tax bases and different tax rates for different saving and investment options result in diverse effective tax burdens on the different saving and investment options. Pender and Ross (1993) and others have shown that effective tax rates differ by tens of percentage points for investment in different capital items (including owner-occupied homes, machinery, real estate and inventories), for different business organisations (including corporates and noncorporates), for different ways of financing investment (including debt, new equity, and retained earnings) and for different locations (including domestic and overseas). With no market failure or other logical justification for the effective tax differences, savings and investment decisions are severely distorted and result in less national value or productivity per investment dollar.

Second, the different tax rates are inequitable. Very largely, the better-off more effectively and consistently place their savings in the lower-taxed options than do those on lower incomes. In particular, those on low incomes are much more reliant on the excessively-taxed financial deposits than are the better-off. Third, different tax systems and tax rates provide incentives and opportunities for elaborate tax avoidance arrangements and they add to complexity and costs. Replacing the present hybrid 'income' tax system with a comprehensive expenditure base tax system (or a comprehensive income base tax system) therefore provides one option for modifying the many anomalies of the current tax system.

⁴ Under a pure income tax, capital gains on holdings of wealth would be taxed as accrued even if the asset were not realised since income is imputed from the change in value of the asset.

5. Implementing the Direct Expenditure Tax Systems

The general idea of a direct expenditure tax system can be traced at least as far back as John Stuart Mill (1895) and Irving Fisher (1937). In recent times, it has been advocated by a number of public inquiries into taxation, including the Meade Committee (1978) for the UK, US Treasury Blueprints (1977) for the US, Lodin (1978) for Sweden, and the Irish Commission on Tax (1982), and by many in the academic literature. Different versions of a broad based consumption tax were hot topics in the 1996 Presidential primaries season in the US, but ultimately nothing came of the proposals. Yet no significant reform for an extended period involving implementation of a comprehensive expenditure tax has been implemented. Attempts in Sri Lanka and in one Indian state were halfhearted and short-lived.

Here two sets of recent proposals are outlined. They are based on the cash-flow expenditure tax as described in Aaron and Galpher (1985) and in Kay and King (1990), and the exempt capital income tax as described in Hall and Rabushka (1983). Both make compromises, and both propose the taxation of business enterprises as well as the taxation of individuals (or families).

5.1 Cash-flow Expenditure Tax

The general goal here is to measure expenditure on consumption in terms of income as adjusted for net changes in expenditure and receipts on business assets, and for net changes in funds invested in registered saving accounts. Records on cash receipts and outlays are used to calculate the taxable sum for each individual and business. A progressive tax schedule is then used to determine tax payable, although the business tax rate may well be set at a flat rate close to the maximum individual rate.

Calculation of the cash-flow taxable sum is shown in Table 4 for individuals and in Table 5 for business enterprises (which include self-employment, partnerships, trusts, other

unincorporated businesses and all incorporated businesses). Parts of the forms are identical to the present 'income' tax system, and other parts are quite different.

Labour income is taxable for the individual and deductible for the business enterprise for both the income base and expenditure base systems. A cash-flow tax system would retain the PAYE system and probably also the existing FBT. As now, social security income is taxable for the individual, as are business income receipts. Also, for practical reasons, owner-occupied dwellings and consumer durables continue to be given a yield-exempt treatment as at present. Business investments in plant, equipment and buildings are fully deductible, or immediately expensed, with a cash-flow tax, rather than being deducted over time after the manner of the accelerated depreciation under the current 'income' tax system.

The capital gains tax of the present tax system is abolished. It is replaced with item 4 of Tables 4 and 5, measuring the net cash proceeds from the purchase and sale of old and new business assets including shares. For the individual, items 5 and 6 of Table 5 represent new entries for the cash-flow tax, to calculate savings through measuring net changes in additions to and withdrawals from registered accounts. A net increase denotes positive saving, and hence non-consumption, which is deductible. By contrast, a net decrease denotes a run-down of savings and an increase in consumption, which is taxable. The registered accounts, in addition to superannuation and life assurance, would include medium- and long-term deposit accounts with banks and other financial institutions, but probably would not include current accounts used for day-to-day transactions. Only the net change in balances over the taxation period would be required.

In Table 4, gifts and bequests have been included as a taxable receipt. Of course, if such receipts were saved, they would earn a concurrent deduction as the purchase of business assets (item 4), of superannuation (item 5) or as a deposit in a registered account (item 6). If, on the other hand, gifts and bequests were to be excluded from taxation, then their use as a deduction must also be denied.

The taxation treatment of business enterprises in Table 5 could follow one of two options. The real cash-flow tax base involves the first four items only. A financial cash-flow tax

would include the fifth item. The latter option is required for business enterprises in the finance sector, and would probably provide a more even pattern of taxable sums over time than would the real cash-flow base. In essence, the cash-flow tax on business enterprises imposes a tax only on above-normal returns, and normal returns are tax-free. Tax neutrality requires that measured tax losses be carried forward, indexed by a long-term nominal bond rate, or be tradable.

The cash-flow expenditure tax, unlike the present ‘income’ tax system, provides identical treatment of different ways of financing investment, including debt capital versus equity capital, and it provides identical treatment of different forms of business organisation, including corporates and non-corporates.

For revenue reasons and because of the different debatable positions regarding the appropriate taxation of foreign investment income, withholding taxes would continue to be applied to business income, interest and dividends sent to overseas investors.

Table 4: Example of Tax Form for an Individual Under a Cash-flow Direct Expenditure Tax

Source	Particulars
1: Earnings from employment	- add all wages, salaries and supplements - deduct admissible expenses connected with employment
2: Social security	- add benefits, pensions and allowances
3: Business income	- add interest, dividends, rent, income distributed by owned business and partnerships
4: Proceeds of purchase and sale of business assets	- add sales proceeds of business assets owned or operated - deduct outlays on purchases of business assets to be owned or operated
5: Superannuation and life assurance	- add payments received - deduct contributions
6: Transactions with registered accounts	- add withdrawals - deduct deposits
7: Gifts and bequests	- add gifts and bequests exceeding \$X

Table 5: Example of Tax Form for all Business Enterprises Under a Cash-flow Direct Expenditure Tax

Source	Particulars
1: Receipts	- add gross receipts from sales of goods and services
2: Operating expenses:	- deduct labour costs - deduct materials and services
3: Plant, equipment and buildings	- deduct gross expenses
4: Physical asset transactions	- add proceeds - deduct purchases (other than those in item 3)
5: Financial transactions	- add borrowings, new equity raised, interest and dividends received - deduct repayments, interest and dividends paid

A progressive tax rate schedule with different thresholds and rates varying with family and other circumstances would then be applied to the taxable sum from Table 4 for individuals. It would be possible to apply a progressive tax rate schedule to business enterprises' taxable sum in Table 5. Alternatively, as now, a flat tax rate, close to and preferably at the maximum individual rate, would be applied. Small businesses would distribute returns, either as wages or as business income, to gain lower taxation at the individual level.

5.2 Yield-exempt Expenditure Tax

The yield-exempt or prepaid consumption tax essentially is a tax on labour income. Operational proposals, and in particular the Hall and Rabushka (1995) proposal, envisage a labour income tax on individuals and a cash-flow tax on business enterprises. Taxation of the individual would be simple. Taxable income is labour income, item 1 of Table 4, plus social security income, item 2. Some, but not all, have argued for inclusion of gifts and bequests, item 7. All forms of capital income, representing the return on savings, would be tax-exempt, as is currently the case for imputed rent and capital gains on owner-occupied housing. A progressive tax rate schedule would be applied to the measured taxable sum to determine tax payable.

A cash-flow tax on business enterprises forms part of workable proposals for at least three reasons. First, with the unincorporated business sector it is nearly impossible to separate income into taxable labour income and tax-exempt capital income. A business cash-flow tax catches avoidance through this avenue. Second, a cash-flow tax captures above-normal returns, and adds an element of equity to the tax system. Third, a business tax helps collect revenue from overseas investors. Hall and Rabushka propose only a real cash-flow business tax, that is, only the first four items of Table 5. However, given the importance of financial enterprises, the financial cash-flow tax base using all five items of Table 5 is proposed. A withholding tax on foreign-bound interest and dividend income would continue.

6. Relative Properties

A principal source of real income growth, and the principal rationale for replacing the present ‘income’ tax system, is the improvement in efficiency with which Australia's limited saving and investment resources are allocated. Further, greater tax simplicity will release resources now wasted on complex tax compliance tasks for the production of goods and services desired by individuals.

6.1 Taxation Neutrality and Economic Efficiency

The beneficial effects from greater neutrality and positive efficiency which would arise from shifting to a direct expenditure tax are associated with investment and savings decisions. First, the expenditure tax will eliminate the double taxation of savings experienced by both individuals and business under the current ‘income’ tax. The double taxation, as collected from individual savings and capital gains, essentially penalises savers and investors and, as such, hinders the growth of the necessary domestic capital that is required to fuel the growth of the economy. The double taxation of savings imposes a tax wedge between the pre-tax return investors in plant, equipment, buildings, etc. have to earn and the after-tax return received by savers who have to forego consumption today for high future consumption. By removing most of the tax wedge, a shift from the current income tax to an expenditure tax would drive the difference between investor required pre-tax returns and saver after-tax

returns close to zero. In essence, the expenditure tax will raise returns to savers and reduce the required return for investors.

There is considerable debate and much uncertainty about the likely magnitude of the response of aggregate savings to a shift to an expenditure tax. In theory, the net effect is ambiguous because the substitution effects of higher returns favour more future consumption and less today, hence more savings, while the income effects of higher returns favour more consumption today (and in the future), hence less savings. Resolving these effects is an empirical issue and almost all studies for various countries find a very low, if not zero, net effect of returns on savings. In part, the low response reflects the fact that much saving, more than a half, already receives a consumption tax treatment and would not be taxed differently with a shift to a consumption tax than now. Further, much saving is for precautionary purposes (including employment uncertainty, uncertainty about time of death) which seems to be little influenced by concerns about rates of return on savings, rather than issues of spreading one's income across a lifetime. Most analysts in the US tax debate conclude that a shift from the present hybrid income tax to a consumption tax would have a small effect only on aggregate savings (see, for example, Ballard (1997) and Engen and Gale (1997)).

On the other hand, lower taxation of saving and investment with a consumption tax system, by lowering the required pre-tax rate of return, may stimulate aggregate investment. While the direction of effect is clearly positive, there is uncertainty about the magnitude of the response. The resulting capital intensification process, which might take at least a decade (Hall, 1997), in time means more capital per worker, higher real wages and higher real GDP in the future.

In the context of Australia as a small open economy, the effects of a shift to a consumption tax system raising domestic investment by more than domestic savings means, at least in the early years after the change, a greater draw on foreign savings. In turn, this means a larger net foreign capital inflow and a larger current account deficit than otherwise. Of course, if the funds are invested wisely, the larger current account deficit need not be of concern.

Second, and probably more important, an expenditure tax will reduce most of the differences in effective tax rates on different saving and investment choice options. The current 'income' tax system, for example, favours investment in owner-occupied housing over business investment in plant and equipment; it favours saving placed in options earning capital gains over those returning annual incomes; it favours repairs over new machines; and so forth - and often effective tax rates on the different options vary by tens of percentage points. Returns to the nation in tax-favoured options are very much less than those gained on the heavily taxed options. A direct expenditure tax, by reducing these non-neutralities, would mean a more productive mix of investment options, thereby allowing investment to flow to its most constructive endeavours rather than into unproductive tax shelters. The present 'income' tax system also distorts decisions on the form of business structure, such as partnership, trust and corporation, the financing sources, including debt, retained earnings and new equity, and dividend pay-out rates because of different tax rates on different choice options. These financing distinctions impose agency and monitoring costs for shareholders, debt lenders, boards and managers. Removing the distinctions of the present hybrid 'income' tax system of the US by either a comprehensive income tax or a comprehensive consumption tax are estimated to improve efficiency by between 2 per cent to 5 per cent of GDP (Auerbach (1996), Jorgensen (1996) and Hubbard (1997)). The Australian and US tax systems have important differences in the taxation of investment of savings. For example, the US still has a classical system of company taxation compared with our imputation system, mortgage interest is deductible for individuals in the US but not in Australia, and Australia but not the US allows for inflation in measuring assessable capital gains. Nevertheless, they share the difficulties brought about by a mixed form of taxation, and it is likely that benefits estimated for the US would roughly apply to Australia. The magnitude of the expected gains for Australia requires further extensive quantitative analysis.

Third, relative to a nominal income tax base - which significantly distorts decisions in the event of inflation, even when inflation is as low as a few percentage points - a direct expenditure base tax system does not lead to distortions, even at very high rates of inflation.

The negative set of effects due to an expenditure tax arise from the fact that it is essentially a tax on labour. The common view is that expenditure taxes encourage savings at the cost of further distorting work versus leisure decisions and in discouraging labour supply. Auerbach (1997) shows that, taking a lifetime perspective, the real wage depends not only on the tax rates imposed on labour income, it also depends on the tax rate imposed on capital income. In essence, an expenditure tax is a labour tax. This will be a problem in that, for revenue-neutrality reasons, tax rates under an expenditure base will have to be higher than those under the present 'income' tax system. Distortions to work versus leisure decisions have large efficiency costs. Campbell and Bond (1997), for example, estimate the marginal cost of an extra dollar of revenue from taxation of labour at between \$1.19 and \$1.24.

6.2 Simplicity and Costs of Tax Compliance and Administration

Tax compliance costs incurred by individual and business taxpayers in Australia are high, both absolutely and relative to other countries (Pope (1993) and Evans, et.al. (1997)). Once the transitional changeover period has passed - a period in which inevitable costs of change and adjustment will be incurred - a direct expenditure tax should lead to simplicity and lower tax compliance costs. First, the direct expenditure tax will be simple to administer because it only requires the readily available data on actual financial transactions. The savings deduction system introduces additional complexity with the system of registered accounts. The capital income exempt system would be the simplest option.

Second, by treating all forms of saving and investment the same, a comprehensive expenditure tax removes incentives and rewards for creative tax avoidance schemes that are rampant under the current 'income' tax system. The different tax treatments of different saving and investment options under the current 'income' tax underlie much of the complexity which is a principal source of high monitoring costs between tax collector and taxpayer. With an expenditure tax, simplicity will be gained with the removal of the complexities due to the capital gains taxation of the 'income' tax. Other complexities that include the fringe benefits tax and the distinction between business expenses and consumption outlays, however, remain with an expenditure tax.

6.3 Federal-State Financial Relations

The current ‘income’ tax is a federal tax. In the first instance, it is envisaged that a replacement direct expenditure tax also would be a federal tax. In principle, though, just as there have been proposals for returning income tax powers to the States, similar proposals could be extended to a replacement direct expenditure tax. The most satisfactory technical strategy would have common definitions of the tax base, or taxable sum, with the Commonwealth and States imposing their own tax rate schedules to the common base. Alternatively, one level of government could collect all the revenue and a specific share would be directed to the other level.

6.4 Distributional Effects and Equity

Changing the tax base from income to expenditure inevitably will redistribute some of the tax burden. Essentially, those who save and have capital income will gain and those who dissave and have little or no capital income lose. Likely losers include young families who tend to consume more than they earn and self-supporting older people who mostly consume out of their savings. It is argued that these effects will be greater in the short run than in the longer-run lifetime context, and they will be partly cushioned by the reality that the current ‘income’ tax is partly an expenditure tax already.

In the short run, however, and in the early years of a switchover from an income base to an expenditure base, an expenditure tax will redistribute the tax burden from those with positive savings ratios to those with negative savings. This arises because the tax change exempts savings from taxation. But, because the well-off already avail themselves of low-taxed saving and investment options and that these options will benefit little from the base change, the magnitude of changes assessed against capacity to pay requires careful quantification. Nevertheless, it is very likely that higher-income individuals will on average gain at the expense of low-income individuals. In that case, maintenance of the current distributive

pattern would require that the direct expenditure tax rate schedule be more progressive than the current 'income' tax rate schedule.

6.5 Revenue and Rate Scales

Shifting from the present 'income' tax base to a direct expenditure tax base while retaining current tax rate schedules would collect less revenue. As explained above, the revenue shortfall arises because all saving is exempt from taxation. While the present 'income' tax exempts some saving, including owner-occupied housing, it cash-flow taxes some investment, including business investment in human capital, and it concessionally taxes other saving, including superannuation and capital gains, much business saving and investment is income taxed. In short, tax rates will need to be increased to collect the same revenue.

Replacing the present 'income' tax system in a revenue-neutral way with a direct expenditure tax will have a mixed pattern of effects on the supply of factor inputs and their productivity. The higher tax rates on labour will reduce the willingness to participate in the workforce, but this effect will be small, given the low response elasticities and rate changes. Investment and capital formation will rise. In particular, the lower tax burden on business income will lower the pre-tax return required by overseas investors, and allow more projects to jump the funding hurdle. Part of the increased investment will be funded by higher domestic saving, stimulated by the falling tax burden on savings. That is, the introduction of a progressive expenditure tax would encourage a more capital-intensive economy, and ultimately higher real wages. In due course, a large economy means a larger tax base than otherwise which can collect a given revenue target at a lower tax rate.

7. Transitional Issues and Implications

In replacing the current 'income' tax system with a broad-based expenditure tax system, there are important transition issues that will have to be addressed. This section discusses these issues, the associated distributional and efficiency effects, and the arguments for and against compensation for transitional losers.

7.1 Change to a Cash-flow Expenditure Tax System

For the switchover period when the tax system is changed from the current ‘income’ tax system to a consumption tax system, a question arises about the treatment of households who have accumulated savings prior to the tax shift. Under the new arrangement, past savings become liable for tax when they are spent, i.e. they get taxed a second time, since the savings come from taxed income. Consider the case of a retired school teacher who worked hard over the years for his keep and managed to accumulate a sizable amount of savings “to bank on” during his retirement years. Like many savers, he saved out of after-tax wages under the current hybrid tax system. Now, with a consumption tax, his savings become subject to tax again each time he withdraws money to finance his consumption. To him and to many who are in the same situation, this form of double taxation is even more disadvantageous than the double taxation under the old ‘income’ tax system because the second time around, the new system cash-flow taxes the entire amount (principal plus earnings) of the accumulated savings, whereas before, under the old ‘income’ tax system, tax was levied only on the interest earned on that stock of capital or principal. To these people, therefore, the tax shift implies an economic loss. From this perspective, a change in the taxation system would be seen to be grossly unfair, particularly for the elderly members of the population who own a disproportionately large share of the stock of capital.

However, from an efficiency perspective, the taxation of past savings when they are spent has advantages. The savings decisions already have been made and cannot be reversed. That is, the double taxation of these savings does not alter decisions and therefore does not incur efficiency losses. The revenue so gained can be used to fund taxation reductions on other decisions which can be changed and thereby incur efficiency losses. Then, shifting from the current ‘income’ taxation system to a cash-flow expenditure tax system, by double taxing past savings, can significantly disadvantage those with savings, but this redistributive effect is associated also with a significant one-off efficiency gain.

Another problem during the transition period concerns the treatment of fixed capital e.g. plant and equipment, buildings that have not been fully depreciated at the time of the tax switch. Under the current arrangement, owners of fixed capital enjoy a depreciation allowance i.e. depreciation costs are tax-deductible at a prescribed percentage of the value of the fixed capital every year, mostly straight line depreciation over the taxable life. Many firms have made decisions to purchase fixed capital with the expectation that they are able to recoup the total cost of said capital after some years, when it has fully depreciated. In contrast, under a consumption tax, all new capital investments are immediately expensed i.e. they are written-off at the time of purchase. Consequently, there is no arrangement for claiming depreciation allowances. At the time of the tax switch, there will be individuals and businesses who own fixed capital that have only partially depreciated. To these entities, the tax shift will mean a loss equal to the cost of the residual depreciable amount of their capital.

Because of these transitional issues, arguments for and against compensation have been advanced. For the case of the asset-rich individuals with large savings, in one form or another, only compensation of some form will make a tax shift seem fair and acceptable. Tax-exempting accumulated savings of these people might sound like an equitable arrangement but this would only incur greater inefficiencies in the system with the large administration costs required and increased opportunities for tax avoidance. Special one-off tax rebates are more feasible alternatives.

The compensation payments however come at a cost. They have to be financed by higher tax elsewhere, for example, a higher expenditure tax rate. Others pay these higher taxes and lose relative to a no compensation case. Also, these higher tax rates cause greater distortions to other economic decisions, with consequent enlarged efficiency losses. Studies for the US 1996 proposals find that compensation would reduce at least half and up to all of the potential efficiency gains of moving to an expenditure tax system (Zodrow (1997), Engen and Gale (1997), Taylor (1997) and Auerbach (1997)). No estimates are available for Australia, but it is likely that they would be comparable to the US numbers. Then, compensation requires a careful balancing of efficiency losses versus redistributive equity considerations.

For the case of transitional losers due to undepreciated fixed capital, there are three possible post-tax change scenarios. First, the government can simply write-off previous investments completely and forgive depreciation owed. Second, the government may make arrangements for a one-off grant to owners of such fixed capital for the remaining sum to be depreciated. Third, the government may allow the current 'depreciation' arrangements to continue for these owners until such time as the capital is fully depreciated. For the first scenario, there is zero loss on both (tax) revenue and efficiency grounds. It is however highly inequitable as these owners will suffer large losses equivalent to the total cost of the existing stock of undepreciated capital. The two other options, on the other hand, appear to be more equitable in that they essentially make compromises by minimising the losses incurred by the owners of such fixed capital. In doing so, however, both of these options will cost a large amount of revenue causing other taxes to rise and, effectively, incurring large efficiency costs.

7.2 Change to a Yield-exempt Tax System

A shift from the current 'income' tax system to a yield-exempt tax system will not cause owners of accumulated savings any losses. The yield-exempt model of expenditure tax does not impose tax on any returns on savings and investment. A tax shift towards such system will free up private savers, notably the elderly, from the double-taxation problem that exists under the current 'income' system. Unlike the cash-flow tax system, therefore, those with accumulated savings are winners and no transitional and distributional issue arises in this regard. But, just as the yield-exempt tax benefits savers, it incurs short-term transition efficiency losses. Under the current 'income' tax system, past savings decisions have already been made and cannot be reversed. Reducing tax on the earnings of past savings decisions takes away a tax that has low efficiency costs. The revenue shortfall has to be matched by higher taxes on labour, and these higher labour taxes have large efficiency costs (Campbell and Bond, 1997).

The problem regarding the second transitional issue mentioned above also occurs with a change to the yield-exempt option. As with the change to the cash-flow tax, owners of capital that have not fully depreciated will no longer be able to reduce their tax liability

through the deduction of capital depreciation. The same arguments for and against compensation apply in this case.

7.3 Comparison of the Two Options

On the grounds of simplicity, the yield-exempt option clearly wins over the cash-flow option. Many commentators who have reservations about the cash-flow tax point to the untried registered accounts system. Some argue that the accounts will be a source of tax avoidance; if borrowed funds from unregistered accounts, which have no implications for taxation, are used as deposits in tax-deductible registered accounts. But these funds represent a deposit for someone else, and ultimately they have to be repaid.

The cash-flow tax does, however, have some advantages. In terms of the transition process and revenue effects, the yield-exempt option reduces the tax burden on all capital income, that is, on the returns from past as well as current saving. By contrast, the cash-flow tax reduces taxation only for current saving. The cash-flow tax story is likely to be more attractive on revenue, efficiency and equity grounds. In the long-run, because the cash-flow tax falls on above-normal returns and allows deductions for below-normal returns, it is likely to be seen as more equitable than the yield-exempt option which, with its *ex-ante* application, presumes normal returns for all investments. Finally, a labour tax, with capital income exempt, is less appealing politically than a tax which taxes consumption and exempts saving.

Other implementation complexities affecting the cash-flow and yield-exempt tax models are briefly outlined as follows. First, with regards to the treatment of owner occupied houses and consumer durables, the only feasible option is to exempt capital through a yield-exempt or prepaid consumption tax option as service consumption flows (such as imputed rent on own homes) are not easily measured. Another option would be to treat the initial purchase as a consumption outlay. Second, concerning income earned by the self-employed (e.g. sole employees, partnerships and probably many trusts), it is very difficult to implement a yield-exempt tax model. Measured income is a mix of returns to labour, management and capital. While imputation procedures to measure returns to labour and returns to capital may be

devised, such procedures have in practice provided conflicting measures. The third item concerns investment in human capital. Investment costs are wages forgone (in the case of a student), productivity forgone (in the case of employee's time in training) and actual course fees incurred. Generally, it is not possible to measure the first two items. Also, available data is not sufficient to provide reliable measures of net additional returns to human capital. For instance, no company information will satisfactorily provide reliable estimates on what additional part of business returns and employee wages is due to training. Thus, the capital income exempt model would not be applicable. For this case, it appears that the cash-flow model is the only feasible alternative. Forgone wages, losses in productivity during training and fees would be deductible as incurred, and extra returns as higher wages and high business receipts should become taxable when generated. That is, the feasible choice is not really between a cash-flow expenditure tax and a capital income yield-exempt expenditure tax, but rather a mixture of the two.

8. Concluding Comments

Many of the inefficiencies and high compliance costs, and some of the inequities, of the current Australian 'income' tax system arise because it is not a comprehensive income tax system, but rather a mix or hybrid of different tax systems. One solution is to move to a comprehensive consumption base. The direct expenditure tax is one way of achieving greater tax neutrality in the taxation of saving and investment in a way which can be revenue-neutral and roughly distributionally neutral in the longer run. Since the current 'income' tax system is about half-and-half an income base and an expenditure base, the introduction of a direct expenditure tax is less radical than first impressions suggest.

Only a comprehensive shift to a direct expenditure tax system will bring forth the benefits of change. Part-adoption would simply perpetuate the current hybrid system with all its distortions.

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