
Part

9

**Taxation
in
Practice**

Taxation of Personal Income

Bachelors should be taxed heavily. It is not fair that some men should be happier than others.

Oscar Wilde

Basic Income Tax Concepts ♦ Personal Income Taxation in Australia ♦ General Issues in Personal Income Taxation ♦ Taxation of Labour Income ♦ Taxation of Income from Capital ♦ International Issues

Income is a commonly used word with many different meanings. In particular, legal and accounting definitions of income almost always differ from economic definitions. Because income tax is based on legislation, we need to know the legal definition of income (in any given country) as well as the economic definition. Accordingly this chapter starts with a discussion of the nature of taxable income and other basic income tax concepts.

In the second section we describe the main features of the Australian personal income tax system. The third section discusses general issues in personal income taxation. The fourth and fifth sections discuss more specific issues associated with the taxation of income from labour and capital. The last section discusses international taxation issues: the treatment of foreign income accruing to local residents and local income accruing to non-residents. While the chapter discusses mainly Australian tax practices, international examples are also cited. In any case, most of the issues discussed are common to most economies.

Basic Income Tax Concepts

There are four common elements to personal taxation—the tax base, the tax rate, the tax unit and the period. Here we focus on the tax base. Later sections discuss the other elements.

Economic income

The value of goods that can be consumed in any period without any change in net wealth

Economic income. Economists usually adopt the Haig–Simons definition of an individual's income as the value of goods that can be consumed in a given period without any change in net wealth.¹ This is equivalent to the sum of income from all sources inclusive of any changes in the value of assets held. Thus this definition includes all income from labour (including income in kind), in principle home-produced goods, income from capital including unrealised capital gains and imputed rents from ownership of assets (including owner-occupied homes), income from government and private bequests. It also includes income from all countries.

¹ Simons (1938, p. 50) defined personal income as the algebraic sum of (1) the market rights exercised in consumption and (2) the change in the value of the store of property rights between the beginning and end of the period. The origin of the concept is sometimes credited to a German legal scholar, Schanz (1896).

Some further points may be noted. First, this definition of an individual's income focuses on their access to consumption goods in any period and thus refers implicitly to an individual's net income (i.e. income after any costs associated with earning it are deducted). Second, the definition is based on accrued rather than realised income. Income includes unrealised increases in the value of assets. Third, with this definition, we are interested in real income (the amount of goods that can be consumed) rather than nominal income. Real income is measured in constant prices. If money income or asset values rise simply with general prices, real income has not changed.

Although this comprehensive concept of income is a useful benchmark against which to evaluate income for tax purposes, it has two main limitations. The first is a practical one. It is difficult to track and measure some components of income, for example unrealised changes in asset values, imputed rents and gifts. Such components are generally excluded from definitions of taxable income. However, some governments attempt to tax some forms of income in kind, for example provision of motor vehicles to employees, to ensure that employees do not escape tax by substituting goods for cash. The second issue is community acceptance of the components of income that should be taxed. Many societies are reluctant to tax services from a house (imputed rents) that have been purchased from income on which tax has been paid or to tax gifts provided from after-tax income.

Notions of what income should be taxed depend both on what is measurable and on social norms. Defining taxable income lies at the heart of debates about income taxation.

Taxable personal income. This can be defined as:

$$\text{Taxable personal income} = \text{assessable income} - \text{allowable deductions} \quad (30.1)$$

Note that we are assuming here that the tax unit is the individual. This is the practice in most countries. However, as we will see, household composition can affect an individual's tax liability even when the tax unit is the individual.

Assessable income is the gross income of an individual that is subject to tax. This is defined in relevant tax legislation. In practice, the legislation is subject to ongoing interpretation by accountants, tax authorities, and ultimately the courts. Assessable income is almost always based on income from legal market activities and on realised rather than accrued income. But realised capital gains are often treated differently from other forms of income. And, income in some savings vehicles, such as superannuation (or retirement) funds, is often treated differently from other forms of income.

To determine taxable income, most governments allow individuals to deduct both work-related and some personal expenses from assessable income. Work-related expenses are expenditures required to earn income. They are inputs to business, not final consumption goods. Turning to personal expenses, many governments allow specified expenses to be deducted for social objectives. For example, the US government allows a range of deductions for medical expenses, mortgage interest, state and local taxes, and charitable contributions. Some Australian deductions are discussed below.

Personal income tax. This can be expressed as:

$$\text{Personal income tax} = (\text{taxable personal income} \times \text{average tax rate}) - \text{tax offsets} \quad (30.2)$$

Tax offsets are deductions from tax liability as distinct from deductions from assessable income. Tax offsets are generally designed to provide targeted tax relief to people in need, for example individuals with dependents or with a high cost of living or for some other reason. For instance, a taxpayer might be allowed to reduce their tax liability by \$X for each child under a certain age. A general feature of tax offsets is that each taxpayer receives the same dollar reduction in tax *independently* of their marginal tax rate. However, refunds are paid

$$\begin{array}{c} \text{Taxable personal} \\ \text{income} \\ \text{Legally assessed} \\ \text{income less} \\ \text{allowable deductions} \end{array}$$

$$\begin{array}{c} \text{Personal income} \\ \text{tax} \\ \text{The product of} \\ \text{taxable personal} \\ \text{income and the} \\ \text{relevant average tax} \\ \text{rate less tax offsets} \end{array}$$

only against tax liability and someone who pays little or no tax receives little or no benefit from the tax offset.

Another kind of tax offset is the tax credit that arises when another party has pre-paid tax on an individual's income. Employers may pay taxes on gross wages, financial institutions may pay tax on the gross interest payable to a lender and companies may pay taxes on profit attributable to shareholders. In these cases, individuals can reduce their personal tax liability by the amount of tax already paid.

Close substitutes to personal income tax. Many governments impose compulsory levies that are similar to personal income taxes. These include social security (national insurance) contributions, the superannuation guarantee levy in Australia and payroll taxes. A levy may be regarded as an income tax if (1) a change in the relevant levy rate would change the take-home pay of an employee and (2) there is no required benefit.

Many OECD countries levy a **social security contribution** as a proportion of gross wages paid. These levies are payable for each *individual* worker whether employed or self-employed. Statutory responsibility for payment may lie with the employer or employee but, in most cases, employers deduct the levied amounts from earnings. Critically, the payments are based on individual earnings and a change in the social security contribution rate would generally result in a change in an employee's take-home pay. Turning to the second test, there is a required benefit in that the social security schemes provide benefits in the case of unemployment, sickness or retirement that are usually related to contributions. However, the connection between benefits and contributions is often tenuous and the contributions are widely regarded as a form of tax (James and Nobes, 2002).

The superannuation guarantee levy in Australia is a little different in that there is a directly required benefit. Since 1992 employers have been required to pay a minimum of 9 per cent (now 9.5 per cent) of an employee's gross wage into a superannuation fund of the employee's choice. Because there is a direct nexus between this contribution and the subsequent benefit, and because the payment is not made to government, the superannuation guarantee levy is not a tax.² It is a mandated private expenditure levied on individual earnings that is a close substitute for a tax. Also, a change in the levy rate would change the take-home pay of employees.

A payroll tax is a levy on the *aggregate* labour payroll of firms, paid by the firm. The levy is a tax because the income accrues to consolidated revenue; there is no required benefit. As we saw in Chapter 26, if the supply of labour is relatively inelastic a payroll tax is borne mainly by labour generally in the form of lower after-tax wages. However, because the tax is based on the aggregate payroll of a firm it has a negligible effect on an individual's take-home pay when his or her personal gross income changes.

Personal Income Taxation in Australia

In Australia, the *Income Tax Assessment Act* (ITAA) determines provisions for income tax. The ITAA was first passed in 1936. Much of this Act still stands but it has been revised and expanded many times since then. It has also been supplemented, for example with the *Fringe Benefits Tax Assessment Act 1986*. Although the states have the statutory power to raise income tax, in practice they cannot do so without the agreement of the Commonwealth.

Australian personal income tax is based on both the residence of the taxpayer and the geographical source of the income. Australia asserts jurisdiction to tax residents of Australia on their worldwide income. However, Australia recognises the right of other countries to tax Australian residents for any income earned in or from their country. Under double-taxation

² There is a direct nexus (required benefit) in accumulation retirement funds, but not in defined benefit schemes.

Social security contributions

Charges levied on individuals or their employers to pay for social security benefits

Payroll tax

A tax on the wages paid by an employer

agreements, Australian residents are generally entitled to a tax credit on tax paid to another jurisdiction. For example, if an Australian resident earns \$10 000 from another country and pays \$2000 tax to that country and has a tax liability of \$4000 on this income to the Australian government, she would usually receive a credit for the \$2000 tax paid and pay the \$2000 balance to the Australian government. Non-residents who earn income in Australia are also generally required to pay tax on this income to the Australian government.

Box 30.1 provides some summary data on Australian personal income tax collected. There is no separate social security levy. However, employers are required to contribute for each employee to a superannuation (retirement) fund. As discussed below, income contributed to superannuation funds is treated differently from normal income. Also, most Australian states levy a payroll tax of about 6 per cent on employee payrolls over about half a million dollars.

Assessable personal income

Assessable personal income is derived from labour, capital and government benefits.

Income from labour. This embraces monetary earnings for any services rendered, including wages and salaries, director's fees, allowances and bonuses including tips. Most lump sum payments made in lieu of income (e.g. lump sum payments for unused long service leave accrued after 1978) are also treated as income. However, redundancy payments are generally exempt. Income from labour also includes net income (gross income less expenses) from carrying on a business. This includes net income from sole trading, trusts and partnerships conducting businesses and other businesses.³

Individuals must also report the gross value of in-kind (fringe) benefits received from employers inclusive of the top marginal tax rate and the Medicare levy. Actually, employers pay the tax and levy. The reportable fringe benefit amount is not part of an individual's assessable income, but the net amount after tax is usually included in means-tested transfers.

Income from capital. The main forms of income from capital are interest payments from cash loans and bank accounts, dividends and capital gains from equities, and net rents and capital gains from property. It may be noted all these forms of income are nominal income uncorrected for inflation. Income from capital may accrue to individuals directly or through some investment vehicle such as partnerships or trusts including family trusts and managed funds. Few trusts or partnerships pay tax. Rather, they distribute all their income to various entities, which are then responsible for the relevant tax.

Box 30.1 Personal income tax in Australia in 2008-09

Personal income tax accounts for nearly 50 per cent of all Commonwealth tax revenue.

The Australian Taxation Office (2011) reported that 12.3 million taxpayers lodged personal income tax returns in 2008-09. Seventy-one per cent of these returns were submitted by tax agents. Taxpayers declared a total income of \$539 billion. This was after net rental income losses of \$6.5 billion.

Taxpayers claimed deductions of \$31.7 billion including \$16.4 billion in work-related expenses. In addition, 10.7 million

individuals claimed tax offsets and credits totalling \$24.7 billion, including \$12.4 billion in refundable tax credits and offsets.

Overall, individuals had assessed taxable income of \$554.2 billion and net tax payable of \$115.7 billion plus \$1.2 billion payable for higher education in loan repayments. These figures do not include taxes on incomes in superannuation funds (\$5.7 billion) or fringe benefit taxes (\$3.4 billion) that employers pay for goods-in-kind, primarily motor vehicles, provided to employees.

³ This income is sometimes described as 'personal services income' and may include a return on capital invested in a business.

When a taxpayer has provided their tax file number to the relevant financial institution, the institution pays the gross interest with no tax withheld.

Dividends may be 'franked' or 'unfranked'. A franked dividend indicates that the company has paid tax on the income stream providing the dividends. This tax becomes a tax credit. Taxpayers who receive dividends report the gross amount (the dividends plus tax credit) as income. The tax liability is calculated on the gross amount, but the taxpayer receives the tax credit. The taxpayer pays extra tax if their marginal tax rate (MTR) is greater than the company tax rate and receives a rebate if their MTR is lower than the company tax rate.

The taxable income from property is the gross rent less all outgoings including maintenance and repairs, council rates, interest payments and depreciation of fixtures and fittings. Capital gains are taxed only when realised. As some of the return from housing is deferred until realisation, in some cases deductions may exceed gross rents, particularly when interest deductions are claimed. This is known as **negative gearing** because the interest on the property loan creates a negative net income return. Taxpayers can deduct this net loss from other taxable income. Suppose that a property investor records a net loss of \$6000, has a MTR of 40 per cent and an unrealised capital gain of \$10 000. The taxpayer reduces her tax liability by \$2400 (= \$6000 × 0.4). Before tax, the investor has a net gain of \$10 000 - \$6000 = \$4000 over the year. After tax, her gain rises to \$6400 = \$10 000 - \$6000 + \$2400 over the year. Of course, an additional tax liability arises when the capital gain is realised.

Taxation of capital gains is complicated because many assets are exempt and because of the way that tax is estimated. For most purposes Australian tax applies to half of the nominal capital gains when certain assets are sold, including sales of shares, units in managed funds and land and buildings other than the primary home. Capital losses can be deducted from capital gains when the net gain is still positive. Otherwise losses can be carried forward until they can be offset against a gain. Capital gains tax does not apply to the family home, cars and assets for personal use or to sales of equities by retirement funds providing pensions.

In determining assessable income, the ITAA distinguishes between income that is taxable and capital payments that are not. For example, interest on capital is assessable income, but capital receipts such as a loan or loan repayment are not income. Periodical payments to replace lost income due to workers compensation are assessable income. On the other hand, a lump sum payment representing loss of earning capacity is deemed to be a capital payment and is not assessable.

Government benefits. Most income support payments are taxable. For example, the Newstart (unemployment) Allowance, the Age Pension and the Parenting Payment, as well as youth and sickness allowances are part of assessable income. However, the pensioner and beneficiary offsets remove most of the tax liabilities. Also, family assistance payments that are designed to meet specific costs, including the Family Tax Benefit Part A, Child Care Benefit and Child Care Rebate are not taxable.

In summary. Like most tax systems, the Australian income tax system is a hybrid system. Assessable income is quite comprehensive. It includes most forms of money income (wages, salaries and income-in-kind), most government transfers and some forms of income from capital (although tax treatments vary across savings vehicles). However, assessable income falls well short of the full Haig–Simons definition of income. It does not include imputed rents and capital gains from home ownership. Nominal capital gains are taxed at half the marginal rate of other forms of income and only when realised. Income earned in retirement funds before individuals retire is taxed at a concessional (15 per cent) rate. Following retirement, the earnings of retirement funds from capital up to \$1.6 million in value and pensions from the funds are tax free. Also, bequests from estates and other gifts are largely exempt from taxation. Thus, the tax base exempts various activities from tax and taxes some

Negative gearing

Occurs when the interest payment on a property loan creates a negative net income from property

forms of income from capital at lower rates, often at much lower rates, than income from labour.

Other features of Australian personal income tax

Allowable deductions. The two main kinds of allowable deductions from assessable income are work-related expenses and contributions to approved organisations. Taxpayers can also claim for the costs of managing their tax affairs.

Work-related expenses are approved expenses that contribute to earnings in an existing occupation. They include travel expenses on business, self-education expenses relating to income from current work, and various other expenses such as tools of trade, conferences, references, computers, telephone and home office expenses. They exclude journey to work expenses, self-education expenses relating to possible future income or child care expenses. Donations to eligible Australian charities, overseas aid agencies, school building funds and approved environmental and cultural organisations are also allowed as tax deductions, providing the taxpayer does not receive anything in return such as a raffle ticket or dinner.

Importantly, taxpayers can also reduce their taxable income by nominating that part of their earnings be directed into a retirement fund *before* assessable income is estimated. This is known as ‘salary sacrificing’. The rules change frequently. Recently contributions have been tightened significantly. Currently individuals can salary sacrifice up to \$25 000. If an individual of any age earns say \$60,000 and elects to salary sacrifice \$25 000, she pays income tax on only \$35 000 and the pension fund pays a concessional rate of tax (currently 15 per cent) on the income paid into the fund.

Tax rates. Table 30.1 shows the Australian tax rate structure for an Australian resident in 2017-18 along with average tax rates. The government changes these tax rates at its discretion. Australian tax rates are not indexed. That is, the income brackets do not rise automatically with inflation.

In addition, a Medicare Levy is raised at the rate of 2% on taxable incomes over \$26 668. Although revenue from the levy is earmarked for health expenditure, it pays for only a small part of Medicare, and is essentially a tax on income that accrues to consolidated revenue.

Also, these rates do not include the superannuation guarantee charge. Employers must pay 9.5% of the ordinary time earnings of their employees into a complying superannuation fund or a retirement savings account. Employees here include all part-time and casual employees, who are aged over 18 and who are paid \$450 or more before tax per month,

On the other hand, in 2017-18 the low-income tax offset (LITO) provides a small tax offset of up to \$445 for all taxpayers with incomes of \$37 000 or less. This amount is reduced by 1.5 cents for each dollar over \$37 000.

Table 30.1 Australian income tax rates in 2017-18

<i>Taxable income (\$)</i>	<i>Income tax^a</i>	<i>Average tax rate (a)</i>
1 - 18,200	Nil	0%
18,201 - 37 000	19 cents for each \$1 over \$18 200	0 - 9.65%
37 001 - 87 000	\$3572 + 32.5 cents for each \$1 over \$37 000	9.65 - 22.78%
87 001 - 180 000	\$19 822 + 37 cents for each \$1 over \$87 000	22.78 - 30.13%
Over 180 000	\$54 232 + 45 cents for each \$1 over \$180 000	30.13% and upwards

(a) These average tax rates do not include the Medicare Levy, the superannuation guarantee charge or the low-income tax offset.

International comparisons of income tax rates. Comparisons of international income tax rates are complicated by the variety of income tax systems, tax bases and close substitutes. Some countries, for example Canada and the United States, have sub-national as well as national income tax systems. There is also a strong case for including social security schemes and the superannuation guarantee levy, and possibly even payroll taxes, in international comparisons. A further complexity is the variety of income bands and tax rates. One country may tax some income levels heavily and others lightly. Also, high-income tax rates may be offset by a narrow tax base. Thus, selective quotation of tax rates can be misleading. Another factor that complicates comparisons is the interaction of tax systems with welfare benefits. Individuals may face low nominal marginal tax rates but high implicit marginal tax rates as they lose benefits as incomes rise.

The Australian Treasury (2006) found that Australia was generally in the middle of OECD practice. For the OECD countries overall, contributions from personal income tax, social security and payroll taxes average 15 per cent of GDP. In Australia the comparable figure was 14 per cent, but this excluded the superannuation levy. In 2005–06, Australia's highest marginal tax rate (then 48.5 per cent) was eleventh highest of the 30 OECD countries examined. A marginal tax rate of just over 30 per cent on average weekly earnings was also close to the median OECD experience for such earnings inclusive of social security contributions. Again, this excluded the superannuation levy.

Tax offsets. Pattugalan and Ellis (2010) reported that at that time over 40 tax offsets existed in the Australian tax system. In addition to the LITO (then higher than now), these included:

1. The pension tax offset and the beneficiary tax offset to ensure that tax is not paid on certain transfer payments
2. Provisions for tax relief for personal circumstances. These include tax offsets for low-income taxpayers with dependent spouses or housekeepers, and for all taxpayers who live in 'remote' or 'special' areas (including Alice Springs, Darwin, Cairns, Airlie Beach and Lord Howe Island).
3. Tax offsets that provide incentives of various kinds, for example for mature age workers (over 55) to encourage workforce participation and for private health insurance.
4. Credits for a tax that has already been paid, for example credits for franked dividends and foreign tax.

Except for health insurance and tax credits, the offsets can only reduce tax paid to zero.

General Issues in Personal Income Taxation

We discuss below some issues with respect to the tax unit, the tax base, allowable deductions, the structure of tax rates, tax offsets, indexation and tax administration. Where previously discussed, the discussion below is brief.

The tax unit. The main general issues concerning the tax unit were discussed in Chapter 25. In Australia, as in most tax systems, taxation is based on the individual taxpayer. This is simpler and more transparent than taxation based on family units of different sizes. It also lowers the MTR for the second earner. Accordingly, the Henry Tax Review (2010) recommended that the tax unit remain the individual.

However, some social security benefits such as family payments, some tax offsets and the Medicare levy depend on family income, with individuals losing significant benefits as their partner's income rises. While such income grants are often regarded as part of the welfare system rather than the tax system, the distinction is somewhat arbitrary when income grants may be viewed as negative taxes. Viewing tax and welfare systems as an integrated system

has led some commentators such as Apps (2010) to describe the Australian tax-welfare system as based in effect on families rather than on individuals. Some people consider this is equitable. Apps (*ibid*) argues that this is inequitable because it creates a high effective MTR for the lower-income partner who pays tax and loses income grants as his or her income rises. It is also inefficient because second income earners generally face a high effective MTR and have a more elastic labour supply response.

The tax base. Two main issues arise with respect to the personal income tax base. One issue is the breadth of the tax base. A broad definition of taxable income is generally efficient because the wider the tax base, the lower can be marginal tax rates. It is also fair because all sources of income are treated equally. As we have seen, the Australian tax base is quite broad, with the exception of some forms of capital income. To increase the breadth and equity of the system, the Henry Tax Review (2010) proposed that all forms of work remuneration, including employer contributions to superannuation schemes and the main fringe benefits, should be included in the personal income tax base.

The second main issue is the quarantining of personal income in vehicles such as incorporated companies, trusts and superannuation funds. In 2008–09, 732 000 companies, 660 000 trusts, 419 000 partnerships and 332 000 self-managed superannuation funds submitted tax returns in Australia. These vehicles may allow individuals (often high-income individuals) to significantly reduce, or even escape, personal income tax. In 2018, most companies and superannuation funds pay tax rates of 30 per cent and 15 per cent respectively on income earned, compared with marginal tax rates of 45 per cent for high-income individuals. Individuals can also split income, usually but not only between family members, via trusts or partnerships and so utilise the lower marginal tax rates associated with lower incomes in the family. Covick (2004) and Pope (2005) argue that these arbitraging opportunities are a major breach of the principle of horizontal equity

Allowable deductions. The case for allowing work-related deductions is strong on efficiency and equity grounds. Firms and sole traders are allowed to deduct such expenses from gross income. Disallowing work-related expenses for employees would encourage excessive incorporation and be unfair. However, defining work expenses is not easy. For example, in Australia travel on business is allowed as a business expense, but commuting to work is not allowed. Other examples of grey areas include expenditure on child care, home computers and mobile phones. Some of these expenditures may be necessary to earn income, but also have a consumption element. Of course, similar issues apply in the corporate sector. In order to simplify arguments and bookkeeping, the Australian Tax Office (ATO) declared an automatic deduction (with no documentation) of \$1000 from July 2012. But following a blow-out in work-related claims, the ATO now requires claims to be documented.

On the other hand, various issues arise with deductions for personal expenditures, such as private health care expenditures or interest payments for home mortgages (as allowed in the United States for example). First, the choice of type and amount of deductions is a political rather than a technical judgement. Many people might agree that some medical expenses should be subsidised, but precisely which expenses should be tax deductible involves a normative judgement. Second, deductions for personal expenditures change relative prices and so may distort expenditure patterns. Suppose that a taxpayer has a marginal tax rate of 33 per cent and spends \$3000 on an allowable deduction, say a medical treatment. Their taxable income falls by \$3000 and the tax liability by \$1000. The after-tax cost of this expenditure is only \$2000. The deductions may create deadweight losses (DWLs) as individuals consume goods that they would not purchase in the absence of a subsidy. Third, allowable deductions are not equitable. For any given deduction, income earners in higher marginal income tax brackets receive a larger reduction in tax liability. Alternatively, government could subsidise

the consumption of medical services by direct payments, which would be more transparent and could be more equitable.

Tax deductions for donations to government-recognised charities raise further issues. To exemplify these issues, suppose that someone with a MTR of 40 per cent contributes \$1000 to a recognised charity. In effect, she gives \$600 and the taxpayer contributes \$400. This is efficient if the donor and government would have jointly contributed \$1000 to this charity in the absence of the tax incentives. But, if they would have done so, the tax deduction is unnecessary. If they would not have done so, the tax deduction may be regarded as inefficient. Again, there are equity issues. Charities favoured by high-income earners (e.g. environmental causes) implicitly attract more government support for each private dollar contributed than do charitable institutions favoured by lower-income contributors (e.g. churches).

Tax structures

We discussed the optimal tax rate structure in Chapter 28. This included a discussion of the choice between a linear and a non-linear tax structure and the optimal MTRs for both systems. An important part of this discussion was the inclusion of income grants with taxes on earned income. Although the income grants were not themselves taxed, the withdrawal of the grants as earned income rose created an effective marginal tax rate on earned income. This is an important practical issue because sharp withdrawals of grants (or tapering of grants) with increases in income from other sources often creates a higher effective MTR than the official tax rates on personal income. We now note a couple of other points that are sometimes overlooked in the technical literature on optimal tax structures.

First, this literature tends to be based on a personal income tax system in which all income accrues directly to individuals. In practice, the intermediation of companies, trusts and other legal vehicles allows income splitting between family members or other persons. Where there are several MTRs, some individuals can split their income to minimise their MTRs and total income tax liability. This is inconsistent with vertical and horizontal equity. The proliferation of MTRs in Australia (and elsewhere) is also inefficient because many taxpayers choose their income and investment vehicles to maximise their after-tax income rather than their pre-tax income. The proliferation also creates high compliance costs. Reducing the number of personal income tax rates and aligning them more closely with rates in other legal vehicles, such as the corporate tax rate, would reduce these inequities and inefficiencies.

Second, and partly related to this, is the level of the tax threshold, which is the income level at which some tax starts to be paid. A high tax threshold significantly reduces the number of tax returns required and the associated compliance and administration costs. Also, it would simplify the tax-welfare benefit system. With a low threshold, large numbers of people concurrently pay tax and receive benefits. In line with this thinking, the Henry Tax Review (2010) recommended that the tax threshold should be raised radically from then \$6000 to about \$25 000 and that government grants not be taxed. On the other hand, a low threshold increases the revenue collected from middle- and high-income individuals and so allows for lower marginal tax rates for these income groups. It also discourages income splitting. Thus, there are some advantages in a high threshold for low-income earners and a zero threshold for high-income earners. The LITO is a modest attempt to achieve this kind of dual system.

Tax offsets. Tax offsets add additional complexity to the tax-transfer system. Thus, the Henry Tax Review (2010) recommended (1) that all structural tax offsets—LITO, senior Australians, pensioners and beneficiary tax offsets—should be incorporated into the personal income tax rate scale and (2) that all the many concessional tax offsets should be removed, rationalised or replaced by outlays as appropriate in each case.

Indexation. When there is inflation, nominal incomes may rise with inflation but with no increase in purchasing power. When tax rates increase with the level of income and government does not adjust tax rates with inflation, individuals face higher marginal and average tax rates when their real income has not risen. This phenomenon, known as ‘fiscal drag’ or ‘bracket creep’, is often cited as a reason why taxes tend to rise as a proportion of GDP.

Unless income and asset values are adjusted for rising prices, inflation also produces a bias against income from capital. Interest earned on capital includes a real and a nominal component. Suppose that an investment of \$100 is worth \$107 at the end of a year and that inflation is 3 per cent. The return includes a real component of about 4 per cent and a nominal component of 3 per cent. Capital gains likewise contain real and nominal components. Clearly, governments can adjust tax rates for inflation and tax real income from capital rather than nominal income. This process is known as indexation. However, the Australian tax system, like many others, makes no such allowance for inflation. In the United States, the tax threshold, tax bracket widths and standard deductions are indexed, but there is no indexing of income from capital.

Administration costs. The personal income tax system in Australia is extraordinarily complex. The basic tax book of instructions runs to over 100 detailed A4 pages plus supplementary instructions dealing with special issues. The complexity of the tax system reflects in large part attempts to deal fairly with a very large number of special cases. But over 70 per cent of taxpayers employ tax agents and the personal and professional costs of compliance with the tax system are high.

Taxation of Labour Income

We have discussed various issues in the taxation of income from in previous chapters. Here we briefly pick up on some specific issues.

The major efficiency issue for taxation of labour income is the effect of tax rates on labour supply. This includes not only the effect of taxation on total labour hours, but the effects on acquisition of human capital, the nature of the work and the amount of effort put into work. High MTRs may reduce the return from training, encourage individuals to switch from high-value-added employment to lower value-adding activities with higher amenity and reduce the amount of effort per hour.⁴

Tax rates also affect government revenue. Although government revenue will generally rise with tax rates, at high tax rates revenue may fall with an increase in rates. This may occur not only because individuals substitute leisure for work but also because people find ways to earn income that reduce or escape payments of taxes.

As we saw in Chapter 27, the effect of personal income tax on labour supply depends on the overall labour supply elasticity that includes income and substitution effects. These effects often work in opposite directions. The income effect encourages most people to work more hours because they have a lower after-tax income and demand less leisure. The substitution effect of a tax on labour increases the price of market goods and services purchased from after-tax income relative to an unchanged price of leisure and home production which are tax free. This encourages people to do more home production and take more leisure because the relative price has fallen. Overall a change in income tax rates often has only a small effect on total labour supply, but there is a lot of variation in responses by different kinds of workers.

Tax indexation

Adjusting tax thresholds and tax brackets for changes in the nominal value of money (inflation)

⁴ These impacts depend on the substitution effect of higher tax rates dominating the income effect.

On the other hand, the DWL of income taxation depends only on substitution effects. As we saw in Chapter 27, assuming a linear compensated labour supply curve, the compensating variation measure of the DWL of taxation can be expressed as:

$$DWL = 0.5 Q_1 w_1 \eta_{cs} t^2 \quad (30.3)$$

where Q_1 and w_1 are the initial amounts of labour and wages, η_{cs} is the elasticity of the compensated labour supply and t is the tax rate.

The implications may be illustrated by an example. Suppose that initial gross wage payments sum to \$100 million and the tax rate is increased from 30 to 35 per cent. Suppose also that labour hours are constant because the uncompensated labour supply curve is perfectly inelastic, but the compensated labour supply elasticity is 0.4 (reflecting the substitution effect). Tax revenue rises by \$5 million from \$30 million to \$35 million. Drawing on Equation 30.3, the DWL rises from \$1.8 million to \$2.45 million, which is an increase of \$0.65 million. The loss would be \$0.13 for every dollar of tax raised.

As reviewed in Chapter 27, these labour supply elasticities are quite representative. The ordinary labour supply elasticity of full-time males is close to zero and the compensated supply elasticity is typically about 0.3. On the other hand, the ordinary labour supply elasticity for part-time workers varies from about 0.5 to over 1.0 and the compensated supply elasticity may be some 0.3 points higher.

Given that high-income earners are usually full-time workers, high MTRs for high-income earners may have little effect on labour supply. But tax rate increases for part-time or secondary earners with high labour supply elasticities are likely to generate significant changes in work hours and deadweight losses. Accordingly, the Mirrlees Review (2011) recommended that individuals near retirement and mothers with young children, with presumably higher labour supply elasticities, should be taxed at lower marginal rates.

Taxation of Income from Capital

A tax on income from capital also has income and substitution effects. The income effect reduces both current and future consumption. This increases savings. The substitution effect shows up via an increase in the price of future consumption relative to present consumption, which encourages people to substitute present for future consumption and so reduce savings.

To assess the DWL of taxation for savers, we consider only the substitution effect holding real income constant. But, if tax rates reduce savings, the rate of interest may rise and this may create a DWL for firms employing capital. This is illustrated in Figure 30.1, where a tax on capital income shifts the supply of savings from S_1 to S_2 , savings fall from Q_1 to Q_2 and the pre-tax interest rate rises from r_1 to r_2 . Consequently, the marginal rate at which firms can transform present goods into future goods exceeds the marginal rate at which households are willing to exchange present for future consumption ($MRT > MRS$). The total DWL equals area ABC . Firms experience a DWL of ABE . Savers have a loss of area BCE if the supply curve is a compensated supply curve.

In econometric models, the quantity of saving (by households or nationally) is the dependent variable, and explanatory variables include the real rate of return on saving, disposable income and other potentially significant variables. If the coefficient on the rate of return is positive, it may be concluded that taxes on income from capital (which decrease the rate of return) reduce saving. A problem with these studies is that the expected real rate of return equals the nominal rate of return less the expected inflation rate, but the latter is not observed and must be based on assumptions of some kind.

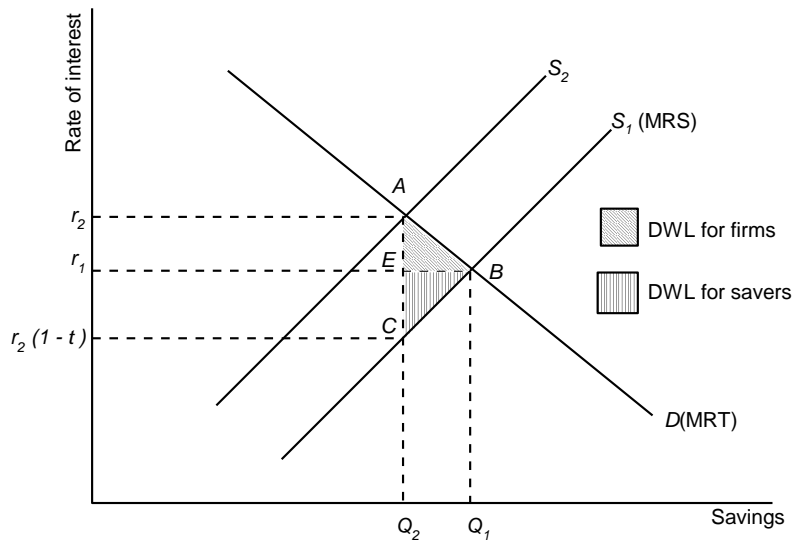


Figure 30.1 Deadweight loss of tax on income from capital

In a survey of the literature on savings, Bernheim (2002) concluded that the overall elasticity of savings with respect to interest rates is close to zero because the income and substitution effects cancel out. This implies that a tax on income from capital has little effect on borrowing costs or investment. However, a low overall elasticity of savings with respect to the after-tax interest rate may co-exist with a significant substitution effect of, say, 0.3. So there will be a DWL for savers as well as unequal treatment of inter-temporal consumption.

For and against uniform taxation of labour and capital income

Efficiency arguments for a uniform tax rate of taxation of labour and capital income are (1) that a broad definition of income with minimal tax base exemptions leads to lower MTRs and (2) that differential rates may distort the use of labour and capital inputs to production. Regarding equity, a dollar of income from either source has the same power over consumption. Also, the capacity of some individuals to choose whether to take income in the form of a payment for labour or capital would allow them to minimise their tax liability.

However, there are several complications. First, the principles of efficient taxation suggest that, to obtain a given tax revenue, DWL is minimised by relatively high taxes on factors of production in inelastic supply and low taxes on factors that are mobile and in more elastic supply. This usually implies higher tax rates on labour, land and natural resources and a low tax rate on other forms of capital. Second, taxing income from capital is effectively double taxation of savings, which distorts decisions on the timing of consumption and is unfair to savers.⁵ Third, nominal returns to savings include an inflation component. Fourth, tax on internationally mobile capital reduces capital inflow in the long run. This reduces the capital–labour ratio, productivity and real wages. Thus, the tax is borne by local labour.

As we saw in Chapter 28, both the Mirrlees Review (MR, 2011) and the Henry Tax Review (HTR, 2010) recommended taxing most income from labour and capital at the same rate, with the MR favouring a more comprehensive definition of income. But MR then proposed other

⁵ On the other hand many governments discriminate in favour of low labour earnings by providing earned income tax credits for low earnings but not for low income from capital (see Chapter 30).

ways to compensate for the double taxation and inflation issues associated with saving. MR suggested that only the net return to capital should be taxed after subtracting the risk-free opportunity cost of capital from the gross return. This would be a tax on super-profits (or equivalently, economic rents). HTR proposed that lifetime savings in owner-occupied housing should be free of tax, income in super funds should be taxed at 7.5 per cent and that to allow for inflation there should be a 40 per cent discount for interest, net residential rents and capital gains associated with personal savings. HTR also proposed that the corporate tax rate should be reduced gradually to 25 per cent. On the other hand, HTR recommended that there be an annual wealth tax on land, which is an immobile resource.

Differential capital income taxes

In Australia, tax rates on income from capital vary greatly by source of the income.

- At the high end of the spectrum, interest income and dividends are taxed at MTRs for individuals and include a tax on the nominal as well as the real components.
- On the other hand, only 50 per cent of capital gains on bonds or shares or most other marketable assets, including investment properties, are taxed.⁶ Moreover these gains are taxed only when realised, not when accrued. Thus, asset owners gain tax-free interest income from their capital gain prior to sale.
- Moving further down the tax scale, all income accruing to individuals within retirement (superannuation) funds from whatever source is taxed at only 15 per cent and at 10 per cent for capital gains.⁷ After retirement, no tax is paid on income earned on \$1.6 million in assets or on any payments from retirement funds.
- Finally, homeowners pay no tax on imputed rents or on capital gains from the sale of their house. Nor do owners of consumer durables generally (including luxury boats and cars) pay tax on the imputed rents or capital gains. But housing is by far the most important source of imputed rents and capital gains.

There are various reasons for these differentials. Imputed rents are hard to measure and are taxed in very few countries (the Netherlands is an exception). And there has long been a community preference for favouring home ownership. Retirement funds are encouraged to reduce the long-term burden of retirement pensions on public finances. But, overall, *ad hoc* political decision making has resulted in an inconsistent approach to taxation of capital.

Capital income tax differentials create an inefficient allocation of capital because investors aim to maximise the after-tax return from capital rather than the gross return. This diverts capital from more productive uses to less productive ones, including from industry to housing. Also, some individuals may have better access to tax-preferred savings vehicles such as personal retirement funds or owner-occupied housing than others do, thus creating vertical and horizontal inequity. The HTR recommendation for a 40 per cent discount on returns on some higher taxed items (interest, residential rents and capital gains) would reduce these differentials.

International Issues

As we have noted, Australian residents are taxed on their worldwide income, but non-residents are taxed in Australia only on their local Australian income. This illustrates the two principles of international taxation: income can be taxed at the destination or at the source of

⁶ Contrary to some popular opinion, 50 per cent tax on nominal capital gains is often higher than 100 per cent tax on real capital gains.

⁷ This is a good deal for middle and high-income earners but makes little difference for low income earners.

the income (or at both). Under the pure destination principle (also known as the residency or global principle), governments tax the worldwide income of their residents uniformly regardless of where the income has come from. The tax base here is net national income. Under the pure source of income principle (also known as the territorial system of taxation), governments tax all income earned in their territory regardless of the residence of the income recipient. In this case, the tax base is net domestic product. Residents of the home country are taxed on foreign income at source in the foreign country.

Two questions are of special interest: (1) What taxation system, if any, would achieve an efficient international allocation of resources? (2) What taxation system would maximise national income? Not surprisingly, if the answer to (2) is different to that for (1), in most cases (2) prevails. We focus mainly on allocation of capital, which is more mobile than labour, but talk briefly about taxation of labour income at the end.

Efficient international taxation. Key features of any efficient economy are that investors choose investments that maximise the gross rate of return (efficient investment) and that savings are made by individuals who are most willing to forgo consumption (efficient savings). These principles of efficient investment and efficient saving apply to international economies as to national ones.

Efficient international investment can be achieved with a uniform source-based tax along with various destination (resident) taxes. When people are taxed at their residence on their total worldwide income and there are no differential source-of-income taxes, individuals will aim to invest in the territory and projects that provide the highest marginal gross return.

If source tax rates vary, to allow for equality of after-tax returns, the before-tax rates of return must vary and there is inefficient allocation of capital investment. Suppose that country *A* taxes income at source at 30 per cent and that country *B* taxes income at source at 20 per cent. International investors who seek to maximise their after-tax return may invest in *B* even when the gross return on investment is lower in *B* than in *A*. This inefficiency is avoided if all countries adopt a residence tax principle (and there are no source-based taxes).

However, if countries adopt differential residency tax rates, the after-tax return could differ between countries. In so far as tax rates affect the volume of saving, there would then be inefficient worldwide savings.

Efficient international savings can be achieved with a uniform residence tax and various source-based taxes in each country. From any investment non-residents would receive the same income as residents. Because residents everywhere invest to maximise returns after tax, after-tax returns from any investment are equal to all savers. Accordingly, international savings would be efficient, even if source tax rates vary. But international investment would not be efficient.

It follows that the most efficient international tax system would be a single uniform tax rate applied by all countries either at source or at residence, or at both (with no differential taxes). As in a closed economy, there would be a wedge between the marginal rate at which firms could transform resources into goods between periods and the marginal rate at which individuals wanted to substitute consumption of goods between periods. However, with a uniform source or residence tax, the allocation of resources between countries would be efficient and savings would be supplied by those who were most willing to save. These results are summarised in Table 30.2 overleaf.

If some countries tax at source and others at residence, but all countries adopt the same tax rate, efficiency of investment and savings can be maintained by tax credits. Residents would be fully credited for taxes paid at source.

However, problems arise when some countries tax at source and others at residence and tax rates differ. In this case efficient investment can still be achieved with full tax credits, inclusive of negative credits. To illustrate this, suppose that the income tax rate is 30 per cent

**International
taxation:
destination of
income principle**
Income is taxed where
it is received

**International
taxation: source
of income
principle**
Income is taxed
where it is earned

Table 30.2 Taxation conditions for efficient international investment and savings

<i>Tax scenario</i>		<i>Investment impact</i>	<i>Savings impact</i>
<i>Residence tax</i>	<i>Source tax</i>		
Uniform	None or uniform	Efficient	Efficient
Variable	None or uniform	Efficient	Not efficient
None or uniform	Uniform	Efficient	Efficient
None or uniform	Variable	Not efficient	Efficient
Variable	Variable	Not efficient	Not efficient

in country *A* and 20 per cent in country *B*. Individuals from *A* that invest in *B* would get a 20 per cent credit and pay an extra 10 per cent in country *A*. Residents of *A* would choose neutrally between investing in *A* and *B* and maximise the before-tax return. However, residents in *B* who invest in *A* would typically get only 20 per cent credit rather than 30 per cent and have an incentive to invest in *B* rather than in *A*. The allocation of world investment would be more efficient if country *B* provided an additional negative credit of 10 per cent to local residents who invested in country *A*. Capital would then flow to locations where the return is highest. However, because an individual in *B* would have more incentive to save than an individual in *A*, both the level and the allocation of world savings may be inefficient.

Fiscal externalities. Further problems arise with fiscal externalities. These arise because a change in the tax rate in one country may alter the value of the tax base in another country. Thus, a reduction of a tax rate in country *A* may cause capital or labour to leave country *B* and so reduce the tax base in *B*. Generally, this would reduce real income in *B* and therefore be a negative externality. To maintain its tax base, country *B* would have to reduce its tax rates. This would create in turn a negative externality for *A*. Although the tax bases may now be as they were before the tax changes, both countries may be applying lower income tax rates than they would wish.

Coordination of income tax rates, either formally or informally, would avoid or at least mitigate these negative externalities. Thus, cooperation may be Pareto improving.

However, countries may differ in their tax requirements and preferences, so harmonisation is not necessarily welfare enhancing for all countries. Moreover, tax coordination would be a form of cartel activity that could encourage an inefficiently high level of taxes. Tax competition encourages resources to flow to countries with lower tax structures (for any given level of public goods). There is no simple optimal policy for this issue of fiscal externalities, which also arises with international tax treatments of corporations and of consumption.

National policies. In practice, most countries apply both source and destination taxes. Also, although most countries provide tax credits up to local tax rates, few (if any) pay negative tax credits to attempt to level up uneven country tax rates. Typically, then, two main questions arise, in both cases assuming a country seeks to maximise its national income. First, how should a country treat the income of residents that has been taxed at source by a foreign country? Second, how should a country treat income earned locally by non-residents when it will be taxed in the home of the non-resident?

Regarding the foreign earnings of residents, the provision of tax credits up to the local tax rate enables residents to maximise their worldwide income after local tax. However, the provision of tax credits may not maximise the income of the destination country *inclusive* of the return to government. As discussed in the next chapter, local income is maximised by treating the foreign tax as a deduction from local taxable income rather than as a tax credit. Local residents would then direct their resources to countries where they can obtain the

highest return after payment of the foreign tax (but before payment of the local tax). This is not consistent with efficient international investment.

Turning to non-residents, in a textbook small open economy with a perfectly elastic supply of international labour and capital and no costs of movement, there would be little (if any) gain from taxing either their labour or capital income. The after-tax income required by this labour or the after-tax return required on capital is set by the international labour and capital markets respectively. In this case, local taxes are borne by the local economy. If an overseas worker requires an after-tax income of \$60 000 and there is no tax, the cost to the local employer is \$60 000. If the average tax rate is 25 per cent, the cost to the local employer rises to \$80 000. If the employer is not willing to bear this cost the economy loses a worker whose productivity may exceed their wage cost.

However, this argument and conclusion assumes a perfect international labour market without any local economic rents. Many people come to work in Australia because they can achieve employment or income (or both) that they cannot obtain in other countries. Others come for personal or lifestyle reasons. Whenever such persons gain economic rent, their income can be taxed with no impact on the labour supply. Similar arguments apply to the cost and supply of international capital where there may also be economic rents, which is a story we take up in more detail in the next chapter.

Summary

- Personal income tax is a function of assessable personal income, allowable deductions, the tax rate structure, and tax offsets.
- Assessable personal income is based on the statutory definition of income in the relevant jurisdiction. Although statutory definitions usually include labour and capital income and some government benefits, they are invariably narrower than the economic (Haig-Simons) definition of income.
- Allowable deductions from assessable income usually include work-related expenses and some socially desired expenses such as health care expenses or contributions to charities.
- In Australia, taxable income includes most forms of monetary income including most government benefits, though not all forms of capital income. There are many tax deductions, a complex tax rate structure and differential treatments of capital income.
- Taxation issues include the choice of the tax unit, the width of the tax base, income splitting, tax rate structures, tax offsets, indexation, and differential treatment of different kinds of capital income.
- The taxation of labour income affects not only the labour supply (total hours worked) but also investment in education, occupation and location choices, and attitudes to effort and risk.
- Taxation of capital income probably has only a small impact on the amount of savings. However, differential tax rates may significantly affect the allocation of capital.
- International taxes produce further distortions. To achieve efficient international investment and savings, a uniform personal income tax rate would be applied by all countries either at source of income or at destination.
- However, national tax rates vary and most countries apply taxes at source and destination. When this is the case, national interest may imply different tax policies to internationally efficient policies.

Questions

1. It is sometimes argued that it is impossible for any tax system to achieve the following three principles simultaneously.
 - The income tax structure should incorporate rising marginal tax rates for individuals.
 - Families with equal incomes and other similar attributes should pay equal taxes.
 - The tax system should not distort family formation or labour supply.
 Is this true? Explain why or why not.
2. Are deductions for work expenses (i) definable and (ii) equitable? Give examples of possible anomalies.
3. What are the comparative merits or otherwise of (i) allowable deductions and (ii) tax offsets?
4. Is it desirable to have higher-income tax thresholds for low-income individuals and lower-income tax thresholds for medium- and high-income individuals?
5. What would indexation of personal income tax require? Is indexation desirable?
6. What are the differences between a capital gains tax on real gains and a tax on half the nominal gains? Which kind of tax would have lower deadweight costs?
7. Should income from labour and capital be taxed at the same marginal rates?
8. The Henry Tax Review proposed that income from interest, net residential rents and capital gains receive a 40 per cent discount before tax. What are the arguments for and against this recommendation?
9. What are the full labour supply effects of personal income taxation? And, how would you determine these effects? What would the deadweight losses be in each case?
10. From a national perspective what is the optimal tax treatment of (i) foreign earned income by residents and (ii) income earned by non-resident labour working in the host country? Does this conflict with efficient international investment or savings?

Further Reading

- Auerbach, A.J. (2006) 'The future of capital income taxation', *Fiscal Studies*, 27, 399–420.
- Australian Taxation Office, annual, *Taxation Statistics*.
- Henry (Chair) Tax Review (2010) *Australia's Future Tax System*, Part Two, Volume One, pp. 3–94, 'Personal Income Tax'.
- Musgrave, R.A. and Musgrave, P.G. (1989) *Public Finance in Theory and Practice*, Chapters 19 and 20, McGraw-Hill, New York.
- Pope, J. (2005) 'Reform of the personal income tax system in Australia', *Economic Papers*, 24, 316–331.
- Rosen, H. and Gayer, T. (2014) *Public Finance*, 10th ed., Chapters 17 and 18, McGraw-Hill, New York.
- Warren, N. (2004) *Tax: Facts Fiction and Reform*, Chapters 8 and 9, Australian Tax Research Foundation, Research Study 41, Sydney.